

# Contributing to a Sustainable Global Environment

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Lintec. Climate change mitigation and adaptation

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## Lintec Group's Approach

The domestic Lintec Group is committed to carrying out various environmental activities to mitigate climate change and other environmental issues that impose risks on the continuity of its business.

## Lintec Group Quality, Environmental and Business Continuity Policy

The Lintec Group sets forth its Basic Policy in the Lintec Group Quality, Environmental and Business Continuity Policy. To practice specific activities, the Group has drawn up a Quality Policy, Environmental Policy, and Business Continuity Policy, as well as Action Guidelines for each. For climate change mitigation and adaptation, based on the Action Guidelines for Environmental Policy, we promote the development of environmentally friendly products at the research division, and work to reduce VOC<sup>\*1</sup> and CO<sub>2</sub> emissions, energy (electricity and fuel) usage, and waste discharge, among others, at the production division.

## Environmental Management System

Based on the Lintec Group Quality, Environmental and Business Continuity Policy, the Lintec Group proactively works on conservation of the global environment. With regard to worldwide integrated ISO 14001 certification, in fiscal 2020 we underwent a renewal audit and received a certificate of approval (issue 14). We have been promoting information sharing among 12 domestic sites and 10 overseas sites covered by the integrated certification. We also underwent third-party verification regarding electric power purchased, production water usage, CO<sub>2</sub> emissions, waste discharge, and VOC emissions. The verification found no important issues requiring correction. For biodiversity conservation, we continue to engage in relevant activities, such as tree planting and beach cleanups. To reduce marine plastic waste, LINTEC Corporation has also been a member of CLOMA<sup>\*2</sup> and is making efforts as a corporate citizen to propose and promote environmentally friendly products.

## Efforts to Address Climate Change

In fiscal 2021, total energy use (crude oil equivalent, covered by the Energy Conservation Act) for the Lintec Group in Japan<sup>\*3</sup> increased by 5.2% from the previous year due to an increase in production volume. Energy use per unit of production was 0.306 kl per ton. CO<sub>2</sub> emissions were 159 thousand tons in fiscal 2021, up from 148 thousand tons in fiscal 2020. In fiscal 2022, Lintec aims to reduce its CO<sub>2</sub> emissions and electricity consumption by 1.0% each on a per-unit-of-production basis compared to fiscal 2021 by facilitating the use of low-carbon electric power.

## Medium-Term Targets (2020 to 2022) and Results

In fiscal 2021, production increased with the launch of new equipment but energy use per unit of production remained at the same level as the previous year.

The amount of water used for washing increased to fulfill orders for a wide variety of products sought in small quantities. Despite difficulties caused by production adjustment due to a water shortage, water usage per unit of production improved by 1.2% compared to the previous year. We will redouble our reduction efforts by devising a better method of reusing water used in manufacturing one product for producing another product. We aim to reduce waste discharge by making improvements to increase the yield rate and ensuring comprehensive classification. In addition, we aim to improve the final disposal rate through the effective use of waste.

In fiscal 2021, which is the first year of the medium-term business plan under the long-term vision for the period up to fiscal 2030, we are making efforts in line with the basic approach of the long-term vision: to solve social issues through our business activities.

Scope: Lintec Corp.

Item	Target	FY2021 results (year-on-year reduction)
CO <sub>2</sub> emissions	1% reduction from the previous year (per unit of production)	0.02% increase <span style="background-color: #cccccc;">Not achieved</span>
Electric power consumption	1% reduction from the previous year (per unit of production)	0.82% increase <span style="background-color: #cccccc;">Not achieved</span>
Production water usage	1% reduction from the previous year (per unit of production) (Paper production at the Mishima and Kumagaya plants)	1.2% improvement <span style="background-color: #c8e6c9;">Achieved</span>
Waste discharge	0.1% reduction from the previous year	5.9% increase <span style="background-color: #cccccc;">Not achieved</span>

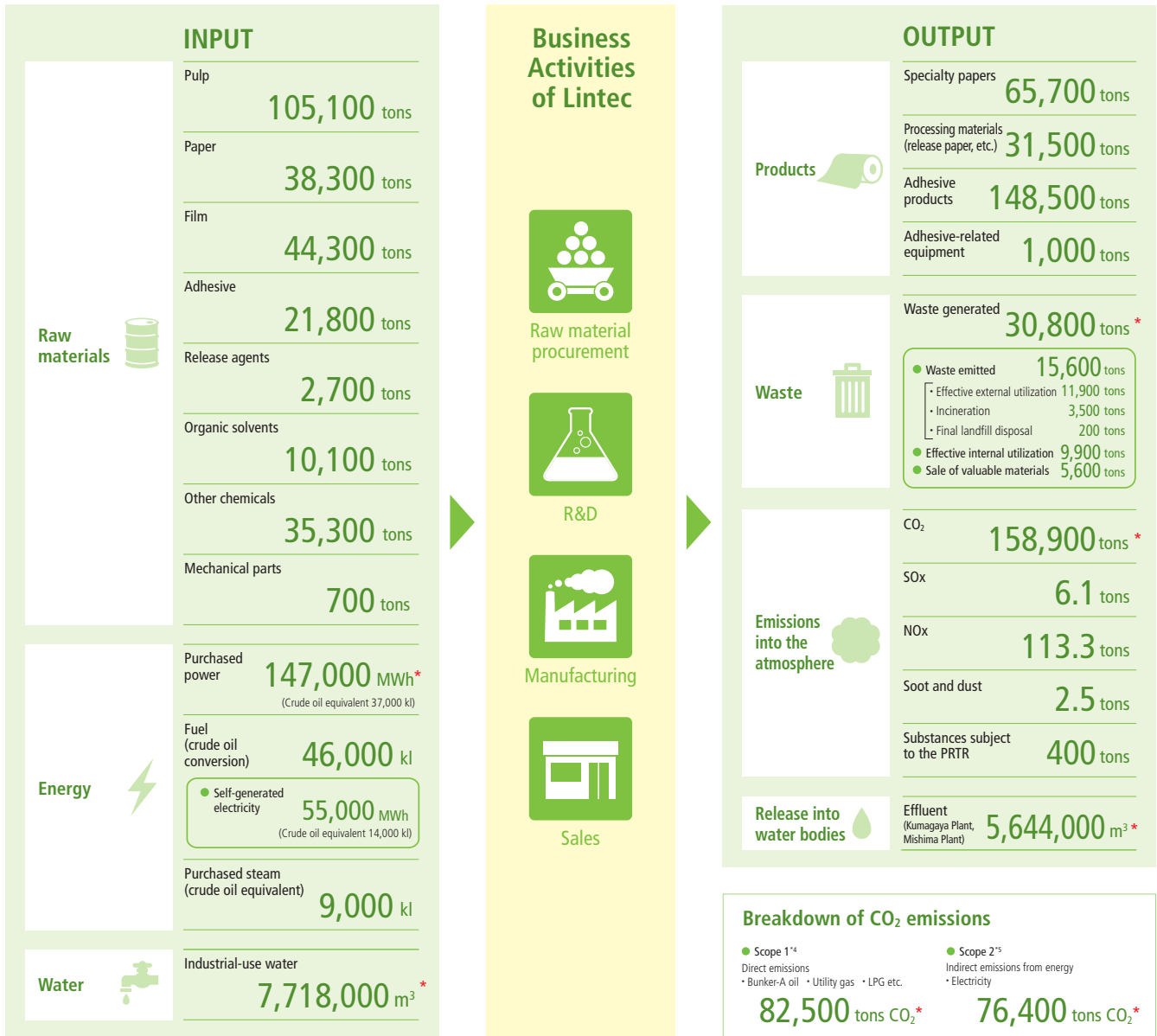
## Product Development Initiatives

Energy use by the entire Lintec Group in Japan exceeds 1,500 kl of crude oil equivalent each year. As a result, the Group was designated as a "specified business operator," pursuant to the provisions of the Act on the Rational Use of Energy ("Energy Conservation Act") in Japan, and is required to improve its energy use per production unit as well as its weighted electricity use per production unit (for reducing peak hour demand) by 1% per year. In fiscal 2021, the Lintec Group in Japan implemented a variety of energy-saving measures, such as effective operation of production facilities and boilers, air-conditioning control, and promoting the introduction of LED lighting. Due to the progress in energy saving, some business sites that have been designated as "specified business locations" may be reclassified to a different designation category or removed from the designation.

\*1 VOC: VOC stands for volatile organic compounds. VOC collectively refers to organic compounds that become gas in the atmosphere.

\*2 CLOMA: CLOMA stands for Clean Ocean Material Alliance. It is a platform to promote the sustainable use of plastic products and development and introduction of plastic alternatives, and to accelerate innovation through public-private partnerships, toward the reduction of marine plastic litter. CLOMA was established under the initiative of the Ministry of Economy, Trade and Industry.

\*3 For the Lintec Group in Japan, see page 17.



### Efforts in Distribution

In fiscal 2021, the volume of transportation increased by 11.0% (9,845 ton-kilometers<sup>6</sup>) from the previous year. Accordingly, CO<sub>2</sub> emissions increased by 8.5% (823 t-CO<sub>2</sub>). Average energy use per unit of transportation over the past five years decreased by about 1.1%. Meanwhile, Lintec declared its voluntary commitment to the White Logistics Movement promoted by the Ministry of Land, Infrastructure, Transport and Tourism of Japan.

We will further reinforce our collaboration with logistics service providers, related companies, and our plants for the optimization of transport efficiency and modal shift.

### Response to TCFD Recommendations

For the continuation of sustainable business activities, we established the TCFD Subcommittee under the Environmental Committee and worked on identifying risks and opportunities related to climate change. In assessing impacts of risks and opportunities, we particularly focused on identifying those that may have a big impact on our business under the 4°C scenario, where physical impacts of climate change become prominent, and for the 2°C or lower scenario, where climate change countermeasures in line with the Paris Agreement are accelerated. In June 2022, we disclosed on our website details about our governance, strategy, risk management, and metrics and targets in accordance with the TCFD recommendations. In fiscal 2022, we will add new subcommittee members from across the organization to further delve into the identified risks and opportunities.

\*4 Scope 1: Direct CO<sub>2</sub> or other greenhouse gas emissions from the consumption of purchased gas and liquid fuels, such as liquid natural gas (LNG), liquid petroleum gas (LPG), utility gas, kerosene, light oil, and gasoline

\*5 Scope 2: CO<sub>2</sub> or other greenhouse gas emissions generated by other companies in the production of energy, such as electricity and steam, purchased by the reporting company

\*6 Ton-kilometers: A unit of cargo transport amounts, computed by multiplying the cargo tonnage by the transportation distance. Transporting 1 ton of cargo over a distance of one kilometer equals one ton-kilometer.

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Lintec Environmental Data of Group Companies Outside of Japan



## Lintec Group's Approach

In order to help realize a recycling-oriented society, the Lintec Group is working to reduce waste. It is also striving to save water, reuse waste water, while complying with the effluent control regulations and improving the quality of effluent generated.

## Development of a Recycling-Oriented World

To build a recycling-oriented world in which limited resources are used effectively through recycling, we continue to work on the 3Rs (reduce, reuse, and recycle) of waste. At the same time, we promote the introduction of electronic manifestos and ensure the thorough classification of waste at our plants and sales offices. As for waste generated from our business activities, we will make efforts to reduce the amount generated and promote its more effective use to reduce the amount of landfill disposal.

## Circular Economy

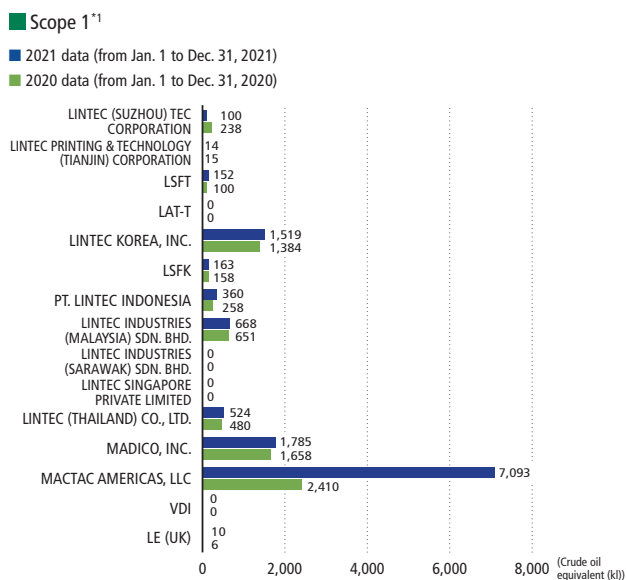
To achieve a sustainable economy and sustainable environments, we are promoting a transition to a circular economy, in which resources are circulated from product production to product use and then to recycling, with product design that limits the generation of waste and pollution from products and production, and the effective use of recycled materials to reduce consumption of new resources. In response to the April 2022 enforcement of the Plastic Resource Circulation Act, which responds to the issues of marine plastic waste, climate change, and tightened regulations on waste imports in other countries, we will work on initiatives to reduce the amount of plastic used at the stages of design and manufacturing, reduce the amount discharged, and recycle plastic.

## Sustainable Raw Material Procurement

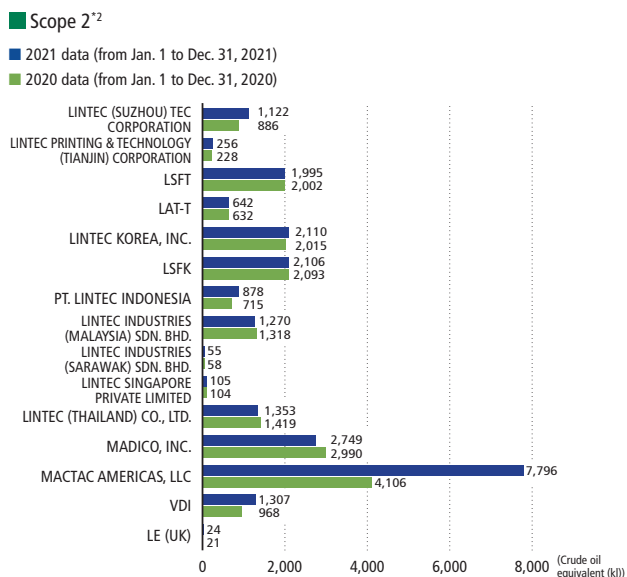
We conduct sustainable raw material procurement based on the Lintec Procurement Policy. This means we ask suppliers to confirm the stability of supply through surveys. In fiscal 2021, we asked 118 raw material suppliers (150 departments) in Japan to complete a self-evaluation questionnaire, which included items on BCP\*3 and services, with 109 companies (141 departments) responding. We are also researching and organizing data on the production of around 3,700 raw materials. In the event of an incident, we will use the research results to promptly identify raw materials that may be affected and make efforts to avoid disruptions to raw material procurement.

## Environmental Data of Group Companies Outside of Japan

Environmental data for 15 group companies outside of Japan in 2021 are as follows.



(Note) LSFT: Lintec Specialty Films (Taiwan), Inc.; LAT-T: Lintec Advanced Technologies (Taiwan), Inc.; LSFK: Lintec Specialty Films (Korea), Inc.; LE (UK): Lintec Europe (UK) Limited



\*1 Scope 1: See page 19.

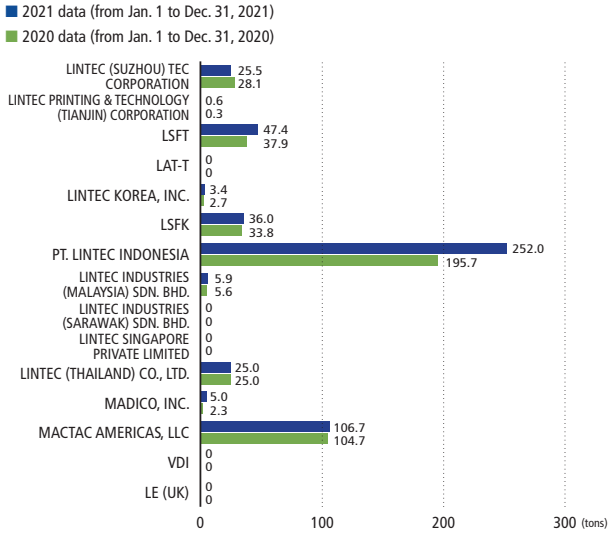
\*2 Scope 2: See page 19.

\*3 BCP: See page 31.

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Lintec Reducing Waste  Search Lintec Water Usage  Search

**VOC emissions**



**Reducing Water Usage and Effluent**

In fiscal 2021, Lintec used 7,718 thousand m<sup>3</sup> of water. Of this amount, about 87% was used by the Kumagaya and Mishima plants, which comprise Lintec’s Fine & Paper Products Operations. In fiscal 2021, the water usage per unit of paper production was 50.43 m<sup>3</sup>/t, which achieved the target of a 1% reduction on a year-on-year basis. The target in fiscal 2022 is a 1% reduction per unit of production from the previous year. To achieve the target, the plants will make continued efforts to reduce water usage and effluent discharge in each process and prevent water leaks. Moreover, plants that have paper machines are regulated by the Water Pollution Prevention Act. Additionally, the Mishima Plant, sited alongside the Akanoi river in Ehime Prefecture, is regulated by the Act on Special Measures for Conservation of the Environment of the Seto Inland Sea (Seto Inland Sea Act), while the Kumagaya Plant, situated next to the Arakawa river in Saitama Prefecture, is regulated by the Saitama Prefectural Ordinance for Environmental Preservation. Both satisfy effluent standards in their region.

**Water usage and effluent discharge**

Category	FY2021 (1,000 m <sup>3</sup> )
Total water usage (calculated by source)	7,718
● Tap water	509
● Industrial water	3,715
● Groundwater	3,494
Effluent	6,630

\* Water usage is a total of tap water, industrial water, and groundwater.

**Efforts for Zero Emissions\*4**

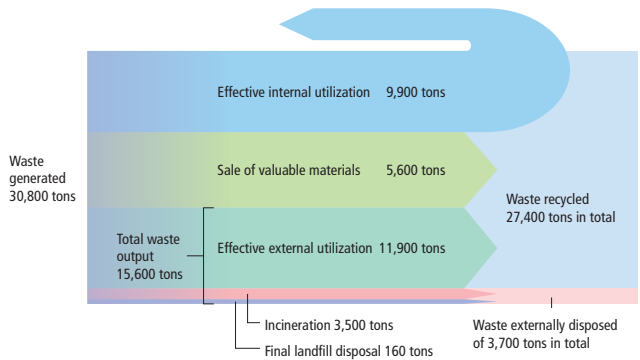
In fiscal 2021, waste generated, including valuable materials, at Lintec amounted to 30.8 thousand tons. The amount of valuable materials and waste effectively used in or outside Lintec was 27.4 thousand tons, 89% of which was recycled.

Ash left after incineration is effectively used as a raw material for concrete.

The final landfill disposal rate\*5 for fiscal 2021 was 0.51%, achieving the target final landfill disposal rate of 1.0% or less, and a 0.03% reduction from fiscal 2020 (0.54%).

**Flow of waste (FY2021)**

Organizations covered: LINTEC Corporation (Head Office, 10 production sites, and Research Center) and Tokyo Lintec Kako, Inc.



**Biodiversity Conservation**

Upholding biodiversity conservation in the Lintec Group Quality, Environmental and Business Continuity Policy, the Lintec Group accordingly conducts biodiversity conservation activities in and outside of Japan.

The Tatsuno Plant in Japan maintains and monitors conservation-listed deep-veined maple trees and uses red robin trees for greening purposes. The Chiba Plant covered the west wall of its warehouse with a green curtain as an immediate measure against global warming.



Deep-veined maple

As for the quality of effluent discharged into rivers, our plants with paper machines satisfy regional effluent standards, and monitor the status of water bodies and related habitats in Japan with regard to their designation as conservation areas.

\*4 Zero emission: Lintec’s standard is a final landfill disposal rate of one percent or less.

\*5 The final landfill disposal rate is a value found using the following formula: Final landfill disposal rate = Final landfill disposal amount/Amount of waste generated × 100.