

E Environment

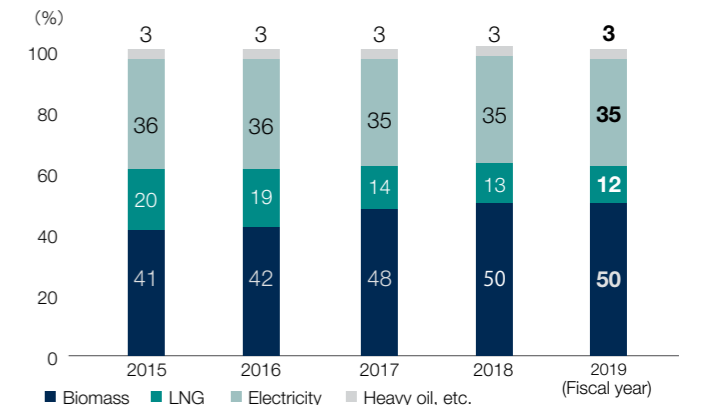
Initiatives Based on The Fifth Medium-Term Management Plan (Fiscal 2017 - 2019)

	Theme and content		Goal	Result
			Fiscal 2019	Fiscal 2019
Eco-friendly products	Contribution for achieving sales targets in the final year of the medium-term plan (fiscal 2019) by expanding ecofriendly products and their sales	Development of ecofriendly products that contribute to reducing the environmental burden	Number of new products five items/year	8 items
	Introduce carbon fixation by using wood	Fixation through the supply of recycled wood boards	Volume of carbon fixation (CO ₂ equivalent) 800,000 t-CO ₂ /year	998,000t-CO ₂ /year (breakdown) MDF: 859,000 t-CO ₂ /year IB: 139,000t-CO ₂ /year
Contribution for building a low-carbon society	Reduce CO ₂ * emissions from energy sources *CO ₂ emitted by the combustion of fuels or the use of electricity or heat supplied by a third party	Reduction of emissions by the domestic production sites	Discharge rate 62.5 (t-CO ₂ /¥100 million) or below (CO ₂ emission factors from electricity generation is fixed at the value of fiscal 2014)	55.0 (t-CO ₂ /¥100 million) (CO ₂ emission factor for electric power is fixed at the value of fiscal 2014)
		Promotion of energy savings through the introduction of energy-saving equipment and improvement of efficiency in equipment operation	Total emissions 110,000 t-CO ₂ or below/year (CO ₂ emission factors from electricity generation are fixed at the value of fiscal 2014)	100,600t-CO ₂ (CO ₂ emission factors from electricity generation are fixed at the value of fiscal 2014)
		Reduction of emissions from logistics and transport divisions (Improved modal shift rate and loading rate)	Unit of energy use 44.7 kl/million ton-kilo or below (reduction by more than 1% in annual average)	50.2 kl/million ton-kilo
		Reduction of emissions from sales and administrative divisions (Thorough implementation of energy-saving measures)	CO ₂ emissions 1,500 t-CO ₂ or below	1,760t-CO ₂
Contribution to creating a recycling oriented society	Promote the 3Rs* to reduce the volume of waste destined for final disposal *Reduce, Reuse, and Recycle	Promotion of recycle and conversion of waste into valuables	Final disposal rate (ratio of volume disposed of in landfill outside the company): 5% or below	7.6%
	Introduce the cascading use of wood	Material recycle of construction waste wood	Ratio of old material: 90%	90%
		Use of wood biomass energy (internal use)	Input amount of woody biomass energy 1,350×10 ¹² J Use of fuel chip 95,000 t/year	1,440×10 ¹² J 100,000 t/year
Contribution for biodiversity	Procure wood in a biodiversity friendly way	Improvement in the rate of use of certified wood, domestically produced wood, planted trees, and recycled board, etc.	Use rate of non-certified natural plywood: 15% or below	11.3%
	Strengthen cooperation with supply chains	Dissemination and proper management of green procurement in the supply chain	Coverage of applicable companies (consent acquisition rate) 100%	99%
Strengthen environmental risk management	Identify, prevent, and minimize environmental risks	Operation and continuous improvement of environment management system	Environmental accident/violation: 0	0
		Environmental education	Industrial waste training session e-learning by year	Completion of implementation
	Improve our ability to satisfy regulations governing chemical substances	Establishment and operation of a system for appropriate management of chemical substances (The introduction of a management system is considered)	System operation	Introduced a management system and started operation with the new system

Initiatives for prevention of global warming

In the past, the Daiken Group has shifted from fossil fuels, such as heavy oil, to biomass energy fueled by wood chips derived from building scraps in order to reduce greenhouse gas emissions. We also installed our largest biomass boiler at the Okayama plant in July 2016 leading to an increase in biomass energy to 50% of the total energy used in the production sites in Japan for fiscal 2019. With these efforts, we were able to reduce greenhouse gas emissions by 23% compared with fiscal 2014.

Trends in the energy used in production sites in Japan

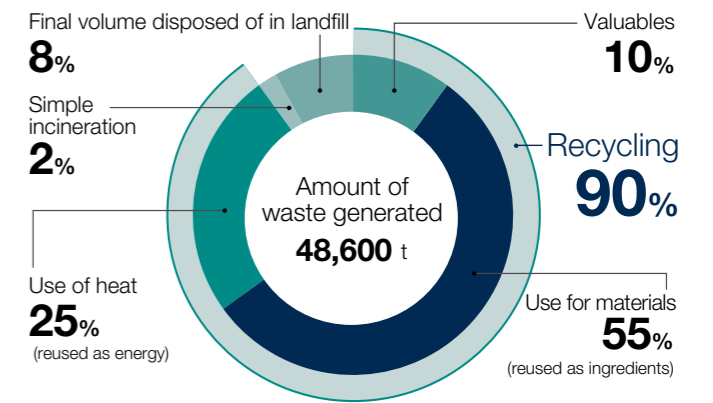


Recycling of waste materials

The Daiken Group aims to realize a recycling-oriented society and puts effort into recycling the waste, such as re-using defectives, generated in the manufacturing process as product materials, using those that cannot be used for product materials for heat. With these efforts, the amount of waste generated in fiscal 2019 was 48,600 tons and the recycling rate was 90%. We continue to further improve the recycling rate.

(Note) Recycling rate = Amount of recycled resources/Total amount of waste generated x 100(%)
Amount of recycled resources = Valuable + Use for materials + Use for heat

Breakdown of waste processing



Environmental education

To appropriately conduct waste management without legal violations from the perspective of strengthening environmental compliance and risk management, the Daiken Group periodically holds the Basic Waste Management Seminar by inviting an external lecturer. In fiscal 2019, a total of 92 persons in charge of waste management from each department participated in the seminar. Also, we have been continuously implementing the e-learning type training on the Waste Management and Public Cleansing Law intended for the employees with up to 5 years of employment every year. We will establish appropriate waste management.



The scene of the Basic waste management seminar

Special feature

Pursue new possibilities of the industrial materials business by comprehensively using wood in cooperation with local communities

Our company was established and started wood processing in 1945, and from 1958, we have been manufacturing the wood fiberboard Insulation board for which wood chips, such as residual wood offcuts, are effectively used in order to fully use wood as the precious resource at our flagship Okayama plant. We have been developing business activities centered on the industrial materials business that uses the wood resource as the raw material, such as developing MDF in the overseas plants in Malaysia and New Zealand.

By taking the opportunity of the 70th anniversary of its foundation in 2015, we upheld "Contribute to the building of a sustainable society by efficiently using limited resources" as one of the elements in the significance of our existence philosophy for the long-term vision GP25 in which our vision in 2025 was drawn, have been actively promoting the use of domestic timbers that are particularly requested by the state policy, and pursuing the possibilities of new use application development through the comprehensive use of wood toward the expansion of the industrial materials business.

As one of these initiatives, we established the Nichinan Total Cascading Use of Wood commercialization study project in November 2016 with Nichinan, Tottori Prefecture, that has been actively putting effort into the forestry industry and the wood processing industry, Nichinan Forestry Cooperative, and Orochi Co., Ltd., which is a local LVL manufacturer. As the first business project, we developed a soil improvement additive DW fiber and started proposing it in May 2017. Furthermore, as the second business project, we established Nichinan Daiken Co., Ltd. in March 2019, which is a company to process veneers for LVL, and started new development.

First project May 2017 Developed a soil improvement additive DW fiber and started proposing it

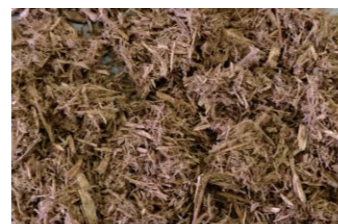
A soil improvement additive DW fiber is a soil improvement additive made of timber offcuts (wood chips) that are generated in manufacturing LVL by Orochi Co., Ltd., using wood that the Nichinan forestry cooperative hewed out and that are fibrillated and to which fulvic acid is added. It contributes to the greening of the soil and crop growth promotion, as well as post-disaster reconstruction, such as greening of the inclined plane after landslides and the regeneration of protective forest from tides and salty winds.



Case of greening by DW fiber



After about six months



Soil improvement additive DW fiber

Second project March 2019 Established Nichinan Daiken Co., Ltd., a company that processes veneer for LVL

At Nichinan Daiken Co., Ltd., a plant will be newly established in Nichinan and business to give rot-proof and ant-proof treatment to veneers to be used for LVL as the previous process for LVL to be manufactured by Orochi Co., Ltd., will start. In the future, we will consider introducing facilities for non-combustible LVL and non-combustible wood, further develop use applications, and expand the industrial materials business. With these business deployments, we will enhance cooperation with local communities and contribute to revitalization of the local industry.



The scene of a signing ceremony for an agreement on the establishment (The second person from the right is President Okuda)

Development image of the total use of wood through regional cooperation

