Environment

Environmental Management / Climate Change Initiatives / Minimize Environmental Impact

Climate Change Initiatives

We recognize climate change to be one of the issues that confront us on a global scale, and that it presents us with major risks as well as major opportunities. As a responsibility of a global company, with the aim of achieving carbon neutrality, we will formulate medium- and long-term targets that are less than 1.5°C and realize a business model that contributes to climate change measures from the perspectives of both products and production.

Responding to the TCFD Recommendations

We have been proactively moving forward with the disclosure of information in line with the Task Force on Climate-related Financial Disclosure (TCFD)* Recommendations since we announced our endorsement in 2022.

TASK FORCE ON TCFD CLIMATE-RELATED FINANCIAL DISCLOSURES

*The Financial Stability Board (FSB) established in 2015 at the request of the G20. The Task Force recommends that companies evaluate any financial impact that climate change risks and opportunities might pose to their business operations, and disclose their governance, strategy, risk management, and metrics and targets.

Governance

YAMASHIN-FILTER CORP. has established a system of governance centering on the YSS Committee, the body designed to discuss sustainability issues including climate change. The YSS committee is chaired by the head of the Management Planning Office, who also serves as an executive officer, and consisting of all executive officers (approximately 20 members in total, including the Representative Director/President, the Director/Senior Managing Executive Officers, as well as the Director/Managing Executive Officers.) The committee, which meets monthly, is tasked with holding discussions of risks and opportunities, formulating responsive policies and setting KPIs, as well as monitoring KPIs and each of the related measures. It reports the content of its discussions to the Management Conference and Board of Directors. The responsive policies that the committee thus deliberates are reflected in decisions made by the Board of Directors and the Management Conference. They are also put into practice in business operations through the executive officer representing each department, thereby integrating them into corporate management.

Sustainability Promotion System

External Feedback



Risk Management

Through the YAMASHIN-FILTER CORP. risk management process, we classified the items according to the categories compiled by the TCFD, including transition risk, physical risk, and opportunity. In assessing the risks and opportunities, we carried out a quantitative assessment based on a total of six criteria: frequency of occurrence, duration of impact, extent of impact, impact on core business, likelihood of manifestation, and the time of manifestation. In light of the results of these steps, we deliberate and confirm the value of the financial impact, considering net sales, etc.

We then consider countermeasures for the risks we identify, in keeping with climate change-related strategy policies, and carry out risk avoidance, mitigation and management. These countermeasures are put forward by the YSS Committee, whereupon the Board of Directors and Management Conference deliberate and decide on those that require organizational decisions. Countermeasures that can be put into operation immediately are implemented by the executive officer representing each department in order to incorporate them into business operations.

Strategy

In line with the TCFD categories, we specified climate change-related risks and opportunities facing the YAMASHIN-FILTER Group, and carried out a scenario analysis according to the 4°C Scenario*1 from the Intergovernmental Panel on Climate Change (IPCC) and the 1.5°C/2°C Scenario*² of the International Energy Agency (IEA).

*1 4°C scenario: IPCC RCP8.5, IEA STEPS

*2 1.5°C/2°C scenario: IPCC RCP1.9/RCP2.6, IEA SDS/NZE2050



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Climate-related Risks and Opportunities

	Category	Risk and opportunity	Time	lmpa busi	ct on ness
			axis	1.5°C	4°C
	Policy and	Increased response costs resulting from taxation of the company's own emissions due to introduction of a carbon tax	Long-term	Small	Small
H	regulation	An increase in costs relating to the imposition of an EU Carbon Border Tax in Europe targeting filter products whose main raw materials are aluminum and steel, which are responsible for the highest share of greenhouse gas emissions	Medium- term	Small	Small
ransition	Technology	An increase in raw material costs resulting from the conversion of existing raw materials for filtration media (from petroleum-derived plastics to non- petroleum-derived materials)	Long-term	Medium	Small
risk	Market	The automotive industry's accelerating shift to EVs as a measure against climate change could result in drastic increases in the price of aluminum, a key raw material in filter products	Long-term	Medium	Medium
	Assessment	Stricter trade conditions imposed by customers such as mining-related companies could reduce demand for products that lack evident potential to reduce CO ₂ emissions	Long-term	_	_
Ph	Acute (typhoon, etc.)	Supply chain disruptions or shutdowns resulting from cyclones, typhoons, etc., could reduce production capacity	Short- term	Small	Small
iysical risk	Chronic (climate change, increase in average temperatures, sea level rise)	A rise in atmospheric temperatures could increase the costs of coping with the resulting worsening work environments in factories and the impact on the supply chain	Long-term	Small	Small
		Expanded opportunities to manufacture and sell long-life filters for construction machinery	Long-term	Large	Large
0	Products and	Expanded opportunities for $NanoWHELP^{\circledast}$ manufacturing and sales	Medium- term	Large	Large
pportu	services	Expanded opportunities in business related to masks to counter the spread of infectious disease accompanied by rising atmospheric temperatures	Long-term	Medium	Medium
nity		Expanded opportunities to manufacture and sell high-performance filter products for construction machinery that comply with exhaust gas regulations	Short- term	Large	Large
	Assessment	Increased investment in plant and equipment resulting from expanded financing opportunities through Sustainable FITs, etc.	Long-term	_	_

[Time axis] Short term: 0-3 years, medium term: 3-10 years, long term: 10+ years

[Financial impact] The degree of impact (small, medium, large) is calculated in accordance with the rules for extraordinary report. Please see the CDP response for more details.

In order to avoid risks, it is incumbent upon us to do our part in helping to keep the average global temperature to 1.5°C or less. This effort includes developing and supplying products that apply our technological capabilities to meeting decarbonization and environmental conservation needs so that we can exert a major social impact, giving rise to growth and profit opportunities for our company, which is our medium- to long-term strategic policy.

Risk and Opportunity Mapping

	Raw materials procurement	Filter production	Integration into customer products	Market, end user	Headquarters, Administration	
	Of the raw materials that go into filter products, 60% are derived from aluminum, steel, and petroleum	The Saga Plant in Japan and the Cebu Plant in the Philippines comprise our main production bases	Construction machinery filters Air filters	Construction machinery, industry, building construction, etc., general consumers	Corporate management Business management	
To be	Risk of increased costs own emissions and pro tax, etc.	from the company's ducts due to carbon	Opportunity to expand sales of NanoWHELP [®] , featuring long service life and low pressure loss	Opportunity for increased demand due to tightening of regulations in emerging countries	Opportunity for financing through Sustainable FITs, etc.	
a world aiming for 1.5°C	Risk of increase in raw material prices due to carbon taxes, etc.	Risk of increase in costs for developing filter media using non-petroleum- derived raw materials	Opportunity to gain first-mover advantage through early development of technologies for long-life filters, etc.	Risk of decline in sales of products lacking environmental friendliness due to stricter trade conditions imposed by customers		
To be maximized in a world of 4°C or more	Risk of a reduction in operations from supply chain disruptions due to major typhoons, etc.	Risk of increased cost of responding to worsening work environments due to heat waves and rising atmospheric temperatures		Opportunity to expand mask business sales due to increase in infectious diseases	Risk of business sites, etc. being impacted by rising sea levels	

Risks Opportunities

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Metrics and Targets

In FY2023, our group's total emissions from Scope 1 (direct emissions from in-house sources), Scope 2 (indirect emissions from electric power use, etc.), and Scope 3 (emissions occurring throughout the value chain) were 74,082 t-CO₂. Scope 1 and 2 emissions amounted to 2,928 t-CO₂, down by 17.1% from FY2022.

In 2024, we submitted a commitment letter to the SBT initiative. Based on the SBT concept, our group will aim for 1.5°C level approval for Scope 1 and 2 and WB 2°C (well below 2°C) level approval for Scope 3.

Initiatives and Results

Each of our plants is considering the formulation of medium- to long-term reduction targets as they take steps to further reduce CO_2 emissions.

Using renewable energy

In FY2023, we used 2,513 MWh of electric power derived from renewable energy sources, and our group-wide implementation rate was 43.9%. The Saga Branch Office, which began operating in October 2021, has been designed to enable all electric power used in the plant to be supplied from renewable energy sources. Moreover, we have added visibility to the site's electric power use

by installing an electric power monitoring system to oversee the status of power use by each individual line. To advance energy conservation still further, we reuse exhaust heat from the nanofiber production area during winter to heat the warehouse. The Yokosuka Innovation Center and AQC Corporation began using electricity from renewable energy sources in FY2023. Each of these initiatives is to be implemented at domestic and overseas sites.

Renewable energy introduction rate (group)



Reducing energy consumption

Our energy consumption in FY2023 was 1,589kl, resulting in a 21.9% year-on-year reduction.

Scope 1 and 2 emissions

The YAMASHIN-FILTER Group has set medium- to long-term CO₂ emission reduction targets and undertakes efforts to realize carbon neutrality by 2050.

As mentioned above, our Scope 1 and 2 emissions for FY2023 have been reduced by 17.1% compared to the previous fiscal year, mainly due to the use of renewable energy and reduced energy consumption.



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Energy consumption *1*2

Scope	FY2019	FY2020	FY2021	FY2022	FY2023
Group	1,797	2,252	2,550	2,034 🏈	1,589 🍼
Overseas sites	1,027	1,225	1,621	1,174 ^{*3}	934* ³
Domestic sites	770	1,028	929	859	655

Scope 1 and 2 emissions^{*1} breakdown/intensity

	Unit	Scope	FY2019	FY2020	FY2021	FY2022	FY2023
		Group	3,815	4,499	5,235	3,532 🏈	2,928 🏈
Scope 1, 2 total	t-CO2	Overseas sites	2,601	3,096	4,098	3,051 ^{*3}	2,700*3
		Domestic sites	1,214	1,404	1,137	481	229
CO ₂ emission intensity per net sales	t-CO2/million yen	Group	0.301	0.308	0.278	0.190	0.162

Note: Data marked with 🔗 has third-party assurance

*1 Includes greenhouse gases not derived from energy

*2 Crude oil equivalent

*3 Overseas sales offices (Belgium, United States, and Thailand) are excluded from the total due to their small percentage of total CO₂ emissions.

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Scope 3 emissions

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In order to ascertain the environmental burden throughout our value chain, since FY2022, the YAMASHIN-FILTER Group has calculated Scope 3 emissions based on the GHG Protocol, which is an international standard for calculating greenhouse gases. Of the Scope 3 emissions for FY2023, purchased products and services (category 1) accounted for 73.8% of the total, which was the most of any category. This was followed by the disposal of products sold (category 12), which was responsible for 16.8% of Scope 3 emissions. In FY2023, we reduced our emissions in almost all categories bar category 1.

Scope 3 emissions (group)*1

		Item	FY2023 (t-CO₂e)	Composition ratio (%)
Sco	ope 3 Total		71,154 🤣	100
	Cat.1	Products, services purchased	52,531	73.8
	Cat.2	Capital goods	1,802	2.5
	Cat.3	Fuel and energy activities not included in Scope 1 and 2	589	0.8
	Cat.4	Transportation, delivery (upstream)	3,351	4.7
	Cat.5	Waste from business operations	347	0.5
	Cat.6	Business travel	143	0.2
	Cat.7	Employee commuting	446	0.6
	Cat.8	Leased assets (upstream)	Included in Scope 1 and 2 calculations	_
	Cat.9	Transportation, delivery (downstream)	Not included in calculation	-
	Cat.10	Processing of products sold	Not included in calculation	-
	Cat.11	Use of products sold	Not included in calculation	-
	Cat.12	Disposal of products sold	11,945	16.8
	Cat.13	Leased assets (downstream)	Not included in calculation	-
	Cat.14	Franchise	Not included in calculation	_
	Cat.15	Investment	Not included in calculation	_

Note: Data marked with not has third-party assurance *1 Scope of data: Consolidated group

GHG emissions (group)



Making a contribution through our products

Every day, we make progress in addressing climate change through our filter products, centering on nanofiber technologies with less environmental impact.

Products, etc.	Summary
Large construction machinery return filters and line filters	Major improvement in long-life products helps control \mbox{CO}_2 emissions by reducing waste
Air filter product "NanoWHELP®"	Received high marks for making it possible to reduce CO_2 emissions by 23% per year compared to our conventional products
Mask products	Developing products that can be reused helps conserve resources and reduce waste
Transmission filters	Changes in materials used for parts have enabled weight reduction, helping reduce CO ₂ emissions that occur during the transportation of raw materials and products
Filtration media materials	Advancement of research on reducing waste emissions throughout the life cycle by using biomass materials as filtration media