[Environmental Report]

<Piolax Global Environmental Policy>

The Piolax Group has updated the Global Environmental Policy. The new Environmental Policy declares initiatives for SDGs, as well as energy conservation, compliance with environmental laws and regulations, and environmental protection in all business fields including the medical device business. This policy aims to minimize the impact of corporate activities on the global environment.

Basic Policy

Through our business activities of developing, manufacturing, and selling of our products based on our core technology of "elasticity", Piolax Group will pursue the realization of a "sustainable society" in which the environment, society, and economy are well balanced.

Slogan

We aim for more balance and harmony with the environment.

Action Guideline

All Piolax Group will work on environmental protection and prevention of environmental pollution in all business areas while continuously improving our management systems and environmental performance.

<Major Actions>

- ① Promote environmental improvement activities in line with the President's policy.
- 2 Contribute to Sustainable Development Goals (SDGs).
- ③ Make efficient use of energy and effective use of sustainable resources.
- ④ Practice 3R activities (Reduce, Reuse, and Recycle) for the recycling-oriented society.
- 5 Comply with environmental laws and regulations and customer requirements.
- 6 Engage in environmental social contribution activities.

<Piolax Environmental Promotion System>

A promotion headquarters having a site's environmental manager and secretariat is organized at each Piolax business site and its domestic subsidiaries to operate the ISO14001: 2015 environmental management system. Piolax Medical Devices joined this system in FY2020.



<International Certification of Global Environmental Management>

Piolax obtained the international certification of ISO14001 in April 2002, and now six sites in Japan and seven sites overseas get certified for ISO14001: 2015. We will promote our activities to increase the number of certified sites systematically.

<Sites which get certified for ISO14001>

Japan	Head Office	Moka Plant	Fuji Plant	
	Yokohama Technical Center	Shonan Center	Nishi-Nihon Center	

	PIOLAX CORPORATION (U.S.)	PIOLAX LTD. (U.K.)	PIOLAX CO., LTD. (Korea)
Overseas	PIOLAX (THAILAND) LTD.	DONGGUAN PIOLAX CO., LTD.	
	PT. PIOLAX INDONESIA	WUHAN PIOLAX CO., LTD.	

<Compliance with Environmental Laws and Regulations>

In the past three years, the Piolax Group has not violated any laws or regulations, paid any fines or penalties, or violated any spills relating to a significant environmental impact. No environmental complaint against us has been filed with a court.

PCB (high concentration: 4.16 kg) used in the ballasts of the former Yokohama Technical Center is stored in accordance with the Law Concerning Special Measures Against PCB Waste. We are planning to dispose of the PCB in FY2021 as specially controlled industrial waste.

< Important Environmental Issues>

Environmental risks, internal/external changes, and environmental performance are reported during an environmental management review (held annually). "Energy, emissions into the air, and waste" addressed in the materiality analysis are positioned as important environmental issues for the Piolax Group. We will work on 3Rs (Reduce, Reuse and Recycle) in our business activities, strive to achieve the target for reducing greenhouse gas (GHG) and waste throughout the supply chain, mitigate climate change, and effectively utilize water and other resources. In FY2020, we set a target for reducing CO2 emissions in Japan and began efforts toward a decarbonized society. * Details are indicated in the environmental performance data.

<Activities at Production Sites>

Energy-saving improvement

Piolax and its group companies in Japan have introduced LED lighting equipment and adopted high-efficiency motors and inverter control for their plant and production facilities to implement energy management aimed at energy saving.





High-efficiency motor, inverter control compressor, cooling chiller

<Wastewater Improvement and Biodiversity>

In response to the establishment of environmental standards for nitrate nitrogen contained in wastewater from the heat treatment process, Moka Plant changed its wastewater treatment facility from that using a conventional acid-alkali treatment to that using a biological denitrification method that can remove nitrogen compounds by the action of microorganisms.

This contributes to environmental protection and biodiversity in the plant's watershed (the Kinugawa River system). The new facility saves approximately 170 tons of water per day compared to the conventional one, reducing the impact on water resources.



<Disaster Risk Preparedness>

To respond to climate change, Piolax's Moka Plant, Fuji Plant, Shonan Logistic Center, and Piolax Medical Devices have installed generators, as part of a plan to continue basic functions of the plants in the event of long power outages due to natural disasters. To minimize the risk of power outages, Moka Plant has prepared to supply power during power outages to the heat treatment line and the water supply system, and Fuji Plant to the plant's office and part of the production facilities, Shonan Logistic Center to the order-receiving system, and Piolax Medical Devices to the logistics activities and sterilization rooms.

In addition, Moka and Fuji Plants have installed adjustment ponds as a countermeasure against the risk of flood damage, which has been increasing in recent years.



<Efforts by Logistics Departments>

As an effort to reduce greenhouse gas emissions during product transportation to our customers, we have implemented a modal shift by ferry for logistics between our production plants in Honshu (the main island of Japan) and our customers in the Chugoku and Kyushu regions. In FY2020, we reduced CO₂ emissions by 377 tons.

In addition, we have reduced the number of containers (transportation frequency) by increasing the number of products put in a packing box, and for overseas exports by increasing the number of products put in a container and by using high-cube containers.





<Efforts by Design and Development Departments>

Survey of environmentally hazardous substances

Yokohama Technical Center tracks revisions to each country's laws and regulations and customer requirements related to environmentally hazardous substances and compiles the information into a database for use by development and production engineering sections in an effort to provide our customers with safe products.

Our environmentally conscious products

Yokohama Technical Center takes the lead in developing products that contribute to the environment. They include standardized and lightweight fasteners, powertrain units with reduced environmental impact, shared components for improved in-car convenience, and fuel system parts complying with fuel regulations in each country.

Fasteners - Weight reduction and integration of clips for fixing automobile piping

With regard to clips for fixing integrated piping under the car floor and inside the engine room, we have developed clips with a structure that does not transmit vibrations to the car body and have redesigned clips to eliminate the need to use different clips for different piping diameters. These efforts have realized weight reduction of the clips and higher operation efficiency at customers.



Weight of vibration isolators reduced by 70%



Weight reduced by 4%, piping diameter absorption margin increased by 35%

Powertrain parts - Oil injection and drain tube with an automatic adjustment of drained oil

The automatic transmission connected to the engine uses a special oil different from the engine oil.

When the oil was changed, it was all disposed of in the past. By developing a tube with a valve function that minimizes the amount of oil required for oil change according to the condition of the oil, we have reduced the amount of waste oil and environmental burdens.

Turn the knob. ↓ The amount of drained oil is determined by the valve position.

Oil drain and injection

Fuel system parts - 2K* parts for automotive fuel tanks

Fuel evaporative emissions that permeate fuel tanks are a cause of photochemical oxidants. To reduce the permeation amount of these emissions, we have developed a series of fuel tank parts using 2K technology that comply with fuel permeation regulations being strengthened in various countries.

* 2K indicates two-color molding technology which uses adhesive resins.

This term comes from a German word "2 komponente" (two components).



<u>Open and close mechanism parts - Shared components of compartment door latches for</u> <u>passenger seats</u>

Compartment door latches, which have been improved to be easily operated from both driver's and passenger's sides, contribute to the reduction of greenhouse gas emissions from a productivity perspective by standardizing the basic mechanism parts other than the design part and operating rods.



<Environmental Performance Data>

Greenhouse gases from corporate activities

The Piolax Group collects data on greenhouse gas emissions generated by our business activities in association with the following: direct emissions (Scope 1), energy-derived indirect emissions (electricity) (Scope 2), and other indirect emissions (Scope 3) in the supply chain. Direct emissions Scope 1 and direct discharged energy consumption trace back to 2016, and kerosene was additionally calculated.

Scope 1 and Scope 2

(Unit: t-CO2e)

Classification		FY2016	FY2017	FY2018	FY2019	FY2020
Total emissions in the supply chain	Scopes 1+2	50,328	49,903	49,402	47,772	42,933
Direct emissions (Gas, kerosene)	Scope 1	1,730	1,864	2,073	2,756	2,544
Indirect emissions (Electricity)	Scope 2	48,598	48,039	47,329	45,016	40,389

- Scope 1: For emission factors in Japan, the emissions basic unit database (ver. 3.1) which is provided by the Ministry of the Environment for accounting for an organization's greenhouse gas emissions, etc. throughout its supply chain is referred to.

"List of calculation methods and emission factors in calculation, reporting, and publication systems" (Exhibit 2, emission factors related to fuel use)

For overseas, contracted companies' values are used.

- Scope 2: Emission factors are calculated using the standard values for the locations.

Japan: National average factor = A value for general electricity transmission and distribution business operators excluding Okinawa

Overseas: IGES, carbon footprints, Climate Transparency, UK Government GHG conversion factors.





- Japan: Piolax Medical Devices is included since FY2019.

- The unit of energy usage is unified to MWh.
- Kerosene is added, tracing back to FY2016.



- Japan: Piolax Medical Devices is included since FY2019.

- Scope 2: Emission factors in Japan and overseas are calculated using the standard values for the locations.

<u>Scope 3</u>			(Unit: t-CO2e)
Category	Contents	FY2020	Remarks
1	Purchased products and services	37,077	Materials procured: Piolax Group Others: Excluding overseas sites
2	Capital goods	9,220	Equipment and mold investment: Piolax Group
3	Activities related to fuel and energy not included in Scopes 1 and 2	5,515	Electricity, gas and kerosene: Piolax Group
4	Transportation and delivery (Upstream)	1,174	(Ton-kilometer method): Excluding overseas sites
5	Waste from business activities	275	Industrial and general waste: Excluding overseas sites
6	Business trips	46	Excluding overseas sites
7	Employee commuting	455	Excluding overseas sites
8	Lease assets (Upstream)	2,300	Contract warehouses for production plants in Japan
9	Transportation and delivery (Downstream)	2,589	(Ton-kilometer method): Excluding overseas sites
10	Processing of products sold	NA	No data obtained
11	Use of products sold	NA	No data obtained
12	Disposal of products sold	NA	No data obtained
13	Lease assets (Downstream)	59	1st floor of the Head Office
14	Franchise	NA	NA
15	Investment	NA	NA
Total		58,710	

- Scope 3: The basic guidelines on accounting for greenhouse gas emissions throughout the supply chain (Ver. 2.3) are referred to.

For emission factors in Japan, the emissions basic unit database (ver. 3.1) which is provided by the Ministry of the Environment for accounting for an organization's greenhouse gas emissions, etc. throughout its supply chain is referred to.

LCI database IDEAv2 (for calculating greenhouse gas emissions from the supply chain).

(Among purchased products in Category 1, data on Japanese subsidiaries' products included in Scope 1 or 2 was reviewed and deleted.)

Medium-term environmental targets and results

Piolax and its Japanese subsidiaries have been carrying out activities by setting a 10% reduction in CO2 emissions from electric energy, a 3% reduction in total energy usage, a 3% reduction in energy usage per unit of production (production output: 1 million pieces) by production plants (except Piolax Medical Devices and PMT), and a 6% reduction in the total amount of waste, as the 7th medium-term environmental targets for the three-year plan until FY2022 with FY2019 as the benchmark. In FY2020, CO2 emissions, the total energy usage, and the total amount of waste reduced by 14%, 10%, and 14% respectively from the FY2019 levels, whereas the energy usage per unit of production increased by 6%. This data reflects the impact of the COVID-19 pandemic.





- Usage of indirect energy per unit of production: Piolax and its three domestic subsidiaries (excluding Piolax Medical Devices and PMT)

Approaches to renewable energy

PIOLAX LTD. In the U.K. started self-supply of renewable energy by solar panels in 2017, followed by PIOLAX (THAILAND) LTD. in 2020. The effect of greenhouse gas emission reduction in FY2020 was 416 (t-CO2) compared to the market standard.





Approaches to carbon offset

Piolax and its domestic subsidiaries purchase carbon-offset uniforms (work clothes). In 2020, carbon credits for the uniforms contributed to an energy-saving project in which heat-recovery heat pumps were introduced in Nagoya University Hospital.





Water intake data

The Piolax Group keeps track of water intake data for water management. In FY2020, the water intake reduced by 6% from the FY2019 level. In FY2020, we used a third-party water source and renewable groundwater as water intake sources at a ratio of 50:50.

Furthermore, as a water-related risk in FY2020, the amount of water taken from water stress areas (Mexico and India according to the WRI AQUEDUCT Water Risk Atlas (Water Stress Area Extremely High)) is 4,428 m³ (Mexico: groundwater 2,626 m³, India: industrial water for industrial complex 1,802 m³), which is 1.5% of the total water intake of the Piolax Group.



[Quality Report]

<Piolax Global Quality Policy>

As an expected company, the Piolax Group will step up stable manufacturing aiming to further improve customer satisfaction and increase corporate value.

Basic policy

Deliver quality of the greatest satisfaction to customers.

Action guidelines

Seven Action Guidelines are set in order of major manufacturing processes from design development to production.

- 1. Meet customer needs by achieving robust design.
- 2. Build high quality process to secure design quality.
- 3. Enforce 5S and create a clean and safe work environment.
- 4. All good parts by following work standards and procedures.
- 5. Quality check is mandatory when trouble or change occurs.
- 6. Train operators to be keen and alert to "quality issues".
- 7. Continuous quality improvement by all employees

<International Certification of Global Quality Management>

Piolax has continued its efforts to obtain international certifications of quality management: it obtained QS9000 in 2001, followed by ISO9001, ISO/TS16949, and IATF16949: 2016 in 2017. Its ten overseas subsidiaries have all obtained IATF16949: 2016. Concerning the domestic subsidiaries for production, Piolax Kyushu, Piolax HFS, and PNS have got certified for ISO9001: 2015. Also, Piolax Medical Devices has got certified for ISO13485: 2016 (medical devices quality management system). Piolax will endeavor to raise the level of international quality standards systematically as a group.

<Quality Management System>

Piolax and its domestic subsidiaries have established a quality management system led by the Chief Quality Assurance Officer, the Deputy Chief Quality Assurance Officer, and Global Quality Management Department as described in the Piolax domestic quality assurance system diagram for the purpose of taking action by Product SBUs, Purchase Department, and production subsidiaries with expertise specific to product characteristics. Also, the integrated quality assurance system from production to delivery is in place including Customer Support Department which delivers products to our customers.

Piolax quality assurance system diagram in Japan



<Global Quality Meeting>

Global Quality Management Department holds the Global Quality Meeting four times a year to raise the level of quality assurance operations at overseas bases. In FY2020, we shared all information with overseas sites through online meetings. With regard to operations that require on-site inspections, such as process audits, in particular, we can now provide appropriate advice from Japan in a timely manner by utilizing videos and distributing live videos.





[Value Chain Engagement]

<Global Engineering Standards>

Since 2006, Piolax has been establishing the Piolax Engineering Standards (P-ES) based on the idea of the Japanese Industrial Standards (JIS) with a view to build and specify expertise.

For its operation, Piolax Engineering Standards Committee and seven working teams are set up. They create new standards and review the existing standards annually. So far, 148 standards have been prepared.



<Education for Next-generation Engineers>

Design Department holds a monthly education program to develop young engineers in all departments related to products. The education curriculum covers a wide range of themes, including design support tools, quality engineering, automotive structures, environmentally hazardous substances, the latest

automotive technologies, and laws and regulations. In FY2020, 12 lectures were given online, and a total of about 1,600 people from Japan and overseas attended.



<Yamabiko Kaizen Activity>

The Yamabiko Kaizen Activity is a general term for monthly improvement activities that have continued since 2007 at Moka and Fuji Plants. This activity is named hoping that improvements will be made at the speed of sound, not the speed of light, and that the effects will propagate like mountain echoes ("yamabiko" in Japanese). In this activity, employees report production site improvement and production management status, and the Chief Quality Officer, the Deputy Chief Quality Officer, and Board Members in charge review the report on the spot. The employees can get quick and appropriate responses, which raises their motivation. This activity has been expanded to group companies in Japan, and overseas production sites are also making similar improvement efforts to improve on-site capabilities and quality. In FY2020, this activity was conducted online in Japan and on worksites in overseas companies with measures taken against infectious diseases.



Moka Plant (Due to the COVID-19 pandemic, no field tour was conducted, and training was held in multiple meeting rooms to avoid close contact and crowded places.)







Improvement of 100% inspection at Piolax Thailand

<Global Production Meeting>

The Piolax Group holds an annual technology-exchange meeting for manufacturing sections of production sites in Japan and overseas. It aims to increase the levels of quality and technologies through activities such as providing advice for equipment design (e.g. labor saving, automation), giving on-site guidance for process improvement methods, and conducting an injection molding skill test for overseas members. In FY2020, the exchange meeting was delayed and held online on May 28, 2021, with a participation of a little under 60 people in Japan, China, Indonesia, India, South Korea, Thailand, etc. For overseas sites that were unable to participate due to time differences, we will separately hold follow-up meetings and distribute videos of the meeting.



Report from participants



On-site explanation for improvement



Injection molding skill test (Practical test)



On-site lecture for improvement with actual items



Mold disassembling training



Injection molding skill test (Written test)

<Global Report Meeting of Small Group Activity>

Since 1979, Piolax has continued to hold an annual report meeting for improvement activity led by each workplace. It provides employees with opportunities to report their improvement activity directly to the management and thereby raises their awareness for improvement. It works as employee training and contributes to enhance the level of on-site capabilities. Overseas subsidiaries have joined this meeting since 2012, and the name of meeting has been changed to the current one. This is a meaningful activity where overseas participants can directly experience Japanese "kaizen" and take it back to their workplaces to make further "kaizen".

In FY2020, the annual meeting, which usually takes place in January, was held in July and August 2021, and a reporting method was changed from a conventional presentation style to a review style of materials with audio.

<Supplier Engagement>

For suppliers from which we purchase products and materials, we hold an annual policy meeting (in March) and an interim report meeting (in November). These meetings include an explanation of the Piolax President's policies and purchasing policies as well as lectures about quality and provide a forum to have a dialogue about annual activity plan and its progress and to strengthen the relationship of trust. In the annual policy meeting, excellent suppliers according to the annual QCD evaluation system are awarded. In FY2020, both meetings were canceled due to the COVID-19 pandemic.

<Quality Control Standards>

Purchase Department provides each supplier with the "Quality Evaluation Standards for Suppliers" that reflect the requirements of the IATF16949: 2016 in order to clearly indicate our quality control standards. As an example of our efforts, we have established an inspector certification system for inspectors engaging in the suppliers' final shipment inspection with an aim to enhance product assurance. As of 2020, 457 people of 49 suppliers are registered as certified inspectors.



<Working with Suppliers to Comply with Environmental Regulations>

We annually distribute the latest version of the Piolax Engineering Standard (P-ES) summarizing the requirements for environmentally hazardous substances, and we conduct surveys of such substances and conflict minerals in regard to deliveries to Piolax, such as materials and parts. The results of the FY2020 survey of environmentally hazardous substances are all in compliance with the in-house standards. Concerning the survey of conflict minerals, we cooperate with suppliers to improve the response rate and investigation accuracy for minerals of concern.

[Safety and Health]

<Concept of Safety and Health>

The source of vitality that supports our management environment is "human resources", or employees and their families. Enhancing employees' safety and health is one of our most important management goals. We aim to create a safe and comfortable workplace free from occupational accidents, traffic accidents, and occupational diseases.

<Structure for Occupational Safety and Health Activities>

Piolax is operating the occupational safety and health management system through coalition of the Central Safety and Health Committee and local safety and health committees at respective business sites and plants. The Central Safety and Health Committee is chaired by the President and consists of members of local safety and health committees, industrial physicians, persons recommended by the labor union, and other appropriate persons, and the ratio of labor to management is the same.

It aims to secure employees' safety and health in workplaces and ensure smooth operations and productivity improvement by defining items to be observed in the "Safety and Health Management Regulations" and by sharing information. A focus is also put in training special qualified personnel.







* Scope: PIOLAX, INC.

<Elimination of Occupational Injuries>

Occupational injuries are reported in Management Meetings to share the information, and, in order to prevent similar injuries, the heads of respective sites disseminate the information throughout their sites and departments for improvement.

<Elimination of Automobile Accidents>

From FY2014, we invite an outside lecturer from the police station or an insurance company every year to hold a traffic safety lecture for the purpose of preventing accidents. In FY2020, we provided safety education through video distribution including domestic subsidiaries.

Company vehicles are equipped with safety devices such as a drive recorder and automatic braking.

<First Aid Training>

We have installed AEDs (automated external defibrillator) in our sites in Japan and provide first aid training during disaster drills so that more employees can use AEDs.

In case of emergency, we lend the AEDs to neighborhood people.

