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Environment

Environmental Policy

Environmental Principle

Amano Corporation recognizes we have a social responsibility to contribute to the creation of a “sustainable society” that balances both the environment and economy under the theme of “People and Time” and “People and Air”. We will promote business activities and environmental management that always consider environmental conservation from a broad-ranging perspective.

Environmental Policy

Basic policy

Based on our "Environmental Principle", from research & development to production, sales and services, Amano will endeavor to achieve and maintain high environmental qualities across all levels of business activities.

Conduct guidelines

1. Amano will establish an environmental management system that will be continuously maintained and improved by restructuring our organization and operations to practice environment-conscious business activities.
2. All employees of the Amano Group will adhere to all environment related laws, regulations, and internal standards.
3. Effective use of resources environmentally friendly will be practiced by reducing, reusing and recycling, etc. We will promote efficiency and rationalization at all levels of business activities, namely, production, sales, and services.
4. Amano will endeavor to research, develop, and produce products, which are environmentally friendly to reduce environmental impact.
5. All employees of the Amano Group will be subject to environment education and will strive to raise environmental consciousness.
6. All employees of the Amano Group will be notified of this "Environmental Policy", and will be made available on demand by the public.

Established: March 10, 2004

Revised: April 20, 2023

Responding to Climate Change



The Amano Group recognizes that addressing environmental issues, including climate change, is one of the most important management issues for solving social issues and improving corporate value, and has established an environmental policy. Going forward, we will continue to strengthen our environmental protection activities to mitigate climate change risks in all of our business activities, and we will strive to proactively disclose information in accordance with the TCFD information disclosure framework.

Endorsement of the TCFD (Task Force on Climate-related Financial Disclosures)

Amano discloses its evaluation of the impact of climate change on our business in four areas: Governance, Strategy, Risk Management, and Metrics and Objectives, compliant with the TCFD Recommended Framework. Considering the response to climate change to be an important issue, we expressed our endorsement of the TCFD recommendations in October 2022. We will continue our efforts to address climate change and disclose information based on the TCFD recommendations.

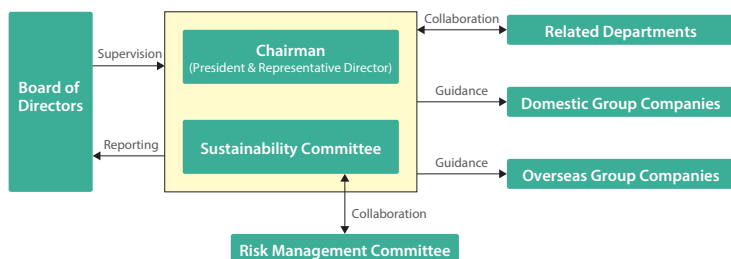


Corporate Governance

In order to respond to environmental issues such as climate change, the Amano Group has created an Environmental Management Committee and implemented initiatives such as reducing CO₂ emissions, etc. In addition, in April 2022, we created the Sustainability Committee, which encompasses the Environmental Management Committee, to promote efforts to both achieve a sustainable society and improve corporate value.

In cooperation with relevant departments and the Risk Management Committee, the Committee has formulated a basic policy for responding to climate change, activity goals, and practical issues, and has also expanded them to our Group companies. In addition, the Board of Directors receives a report at least once a year on the basic policies and activity goals examined by the Committee regarding how our business contributes to the realization of a sustainable society and environmental issues such as reductions of CO₂ emissions to respond to climate change, evaluates their progress, approves the effectiveness of the activity policies, and provides monitoring and supervision.

Climate Change Governance Structure



Strategy

At the Amano Group, the Sustainability Committee works to identify and evaluate climate change scenario analysis and the financial impact of risks and opportunities for each business. Currently, in the Group, which develops, manufactures, and sells products in Time Information System business and Environment System business, the risks and opportunities common to all businesses are identified as follows.

Risk Management

In consultation with the relevant departments, the Sustainability Committee annually identifies sustainability risks, including climate-related risks, and conducts scenario analyses and financial impact assessments as appropriate. The Sustainability Committee and the Risk Management Committee that manages risks discuss and review the strategy for responding to the significant risks identified. The identified key risks and response policies are to be reported to the executives in charge of risk management via the Risk Management Committee and approval is obtained.

Metrics and Targets

We have selected CO₂ emissions as a metric for assessing climate change risks, and we disclose the target values and results on page 17 of this report, “Initiatives to Reduce our Environmental Burden,” and on our website.

Items to be disclosed in the future

Disclosure of Scope 3 CO₂ emissions will be considered in the future.

Climate change risks and opportunities

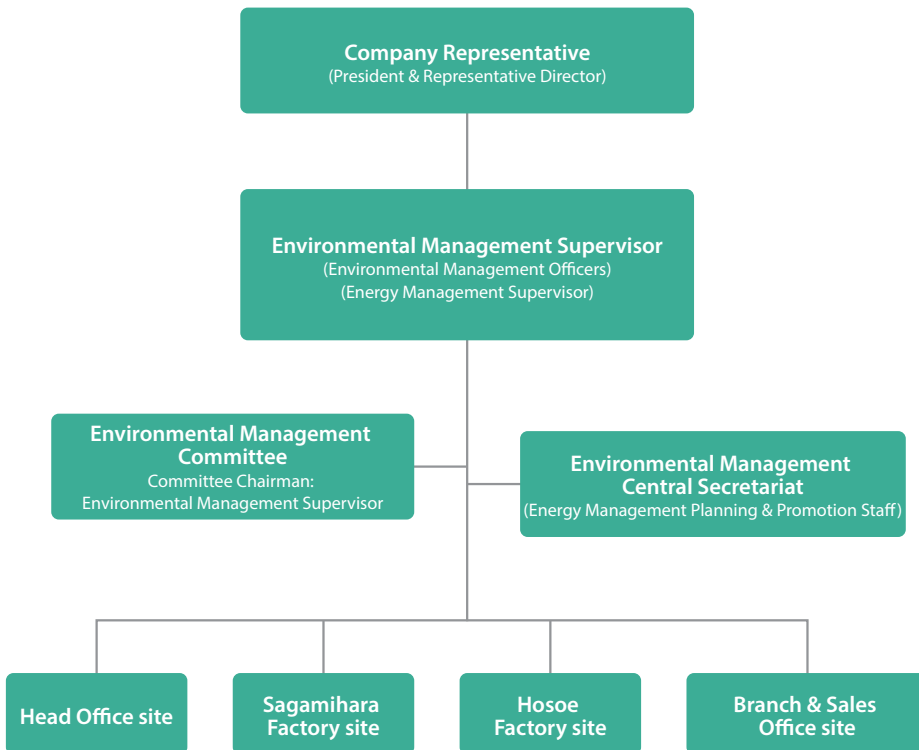
Category	Evaluation item		Assumptions	Risks and Opportunities (R & O)			Impact High, Medium, Low	Measures & Actions
	Main Classification	Sub Classification		Specific Examples	R	O		
Transition scenario (temperature rise of 2°C)	Policies, Laws & Reulations	CO ₂ Emission Restrictions	Strengthening energy-saving standards for buildings (i.e. mandatory compliance with ZEB ^(*)) <small>*ZEB: Abbreviation for Net Zero Energy Building (a building that aims to achieve a comfortable indoor environment while reducing the annual primary energy consumption of the building to zero.)</small>	• Increase in capital investment costs for energy-saving measures in self-owned factories and offices	○		M	• Expand adoption of renewable energy such as solar power generation, invest more to energy-saving facilities • Relocate branches and offices to buildings with high energy-saving performance
		Implementation of Carbon Tax	Implementation of carbon tax and adoption of emissions trading (carbon pricing)	• Increase in raw material procurement costs due to carbon taxes imposed on emission at suppliers and passed on to purchase prices	○		H	• Negotiate to pass on the increase in material costs to sales prices • Find new procurement sources / investigate alternatives • Modify design to reduce materials with high CO ₂ emissions • Shift to materials and parts with low carbon emissions
				• Increased tax costs due to the burden of carbon tax imposed on own CO ₂ emissions • Increased costs of own emissions trading and purchase of certificates (credits)	○		H	• Promote energy-saving measures and expand adoption of renewable energy for self-consumption
	Market	Changes in the Energy Mix	Promoting the adoption of expensive clean energy (renewable energy and hydrogen)	• Increased production costs due to rising energy bills	○		L-M	• Reduce energy costs by promoting energy-saving activities • Renew or modify the facilities that use energy sources with high CO ₂ emissions • Negotiate to pass on cost increases to selling prices
	Technology	Changes in Demand and Consumer Intentions	Research and development associated with transition to low-carbon technology	• Increased introduction and development costs for CO ₂ capture, utilization, and storage technology (CCUS)	○		M	• Technical cooperation with advanced low-carbon technology companies
				• Increase in R&D expenses and capital investment costs to expand the development of environmentally friendly products (other than CCUS)	○		M	• Develop energy and resource saving products that meet customer needs
	Reputation	Changes in Consumer Behavior	In order to utilize resources more efficiently, recycling and circular economy are making progress	• Reduced product manufacturing costs and waste disposal costs associated with progress in recycling-oriented (manufacture ⇒ use ⇒ retrieve ⇒ manufacture) economy and processes		○	—*	• Initiatives to retrieve usable materials from discarded products
Due to the growing demand for low-carbon products and services, environmentally friendly products and services are expanding to meet that demand			• Increase in sales by selling products that contribute to a low-carbon society as well as environmentally friendly products and services		○	M-H	• Develop energy efficient products which reduce environmental burden to meet customer needs • Expand the use of recycled materials	
Physical scenario (temperature rise over 4°C)	Acute	Intensification of Extreme Weather Conditions	Severity and frequency of natural disasters/ extreme weather due to extreme temperature changes (heavy rain, floods, typhoons, etc.)	• Loss of sales opportunities and increased recovery costs due to damage to self-owned factories, etc.	○		H	• Continuous review of BCP • Strengthen the capability of mutual alternative production between the factories
				• Loss of sales opportunities and decreased sales due to damage to the suppliers' production equipment	○		H	• Thoroughly practice multi-company purchasing
	Chronic	Rise in Average Temperatures and Extreme Weather	Improving the working environment and considerations given for health risks	• Increase in employee health maintenance and air conditioning costs due to rising average temperatures • Reduced work efficiency due to restrictions on outdoor work hours and time zones due to extreme weather conditions (heatwave, heavy rain, etc.)	○		M	• Improve the work environment and upkeep the infrastructure • Promote work efficiency to shorten the work time
			Spread of infectious diseases such as viruses and outbreaks of pandemics	• Loss of sales opportunities and decreased sales due to factory shutdowns caused by the spread of infectious diseases • Loss of sales opportunities and decreased sales due to stagnated operations arising from shortages of parts and supplies caused by the spread of infectious diseases	○		M-H	• Constrain losses through damage prevention measures in line with the guidelines and policies of each country

*No significant financial impact is expected within the scope of current initiatives.

Initiatives toward Environmental Management

Amano recognizes that our social responsibility is to contribute to the formation of a “sustainable society” that balances the environment and the economy. All business activities at Amano will always take into consideration environmental protection and will actively promote environmental management. In order to do this, we have acquired the international certification “ISO14001” for environmental management.

● Overall Company Environmental Management Structure



ISO14001 Certification

August	1999	Acquired by the Hosoe Factory
January	2000	Acquired by the Sagamihara Factory
April	2007	Acquired by the former Miyakoda Factory and a group subsidiary, the Environmental Technology Co., Ltd. located at the same premises.
April	2014	With the restructuring of the factories, the Hosoe Factory and the Sagamihara Factory acquired ISO14001:2004
July	2017	The Hosoe Factory and the Sagamihara Factory updated to ISO14001:2015

● Certifications obtained at each factory

Factory	Certification standard	Certifying Institution	Examination registration No.	Initial registration date	Renewal date	Expiration date
Sagamihara Factory	ISO14001:2015	SGS	JP00/017315	2000/01/24	2023/07/03	2026/07/03
	Certification scope : "Manufacture of Parking System" "Manufacture of Time Recorders and Products for Time Information System"					
Hosoe Factory	ISO14001:2015	SGS	JP99/016547	1999/08/13	2023/07/05	2026/07/05
	Certification scope : "The design and manufacture of dust collection systems, pneumatic powder conveyance systems and floor cleaners" "Manufacture of electrolytic water generator " "Measurements for working environment"					

Initiatives to Reduce our Environmental Burden



CO₂ Emission Reduction Targets

In December 2021, Amano formulated CO₂ emission reduction targets to help reduce greenhouse gas emissions. To prevent global warming, we will continue efforts to reduce CO₂ emissions.

CO₂ emission reduction targets: a 46% reduction in FY2030 compared with levels in FY2013.

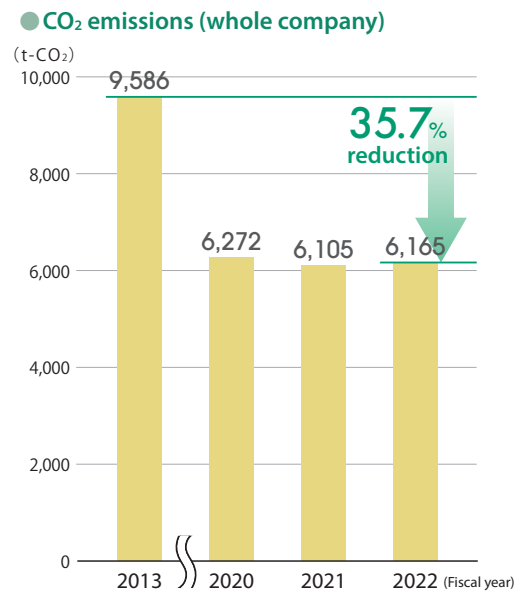
Note: These targets concern Scope 1 and 2 corporate emissions.

Energy Saving Initiatives

In order to reduce CO₂ emissions, Amano is promoting energy-saving activities at each business site. As reducing electricity and gasoline consumption is the most effective way to reduce energy consumption, to achieve this, each business site is making continuous efforts by sharing and applying ideas.

Energy reduction measures that are common among the sites are as follows:

- Appropriate air-conditioner temperature settings (implementation of Cool Biz and Warm Biz)
- LED lighting and power saving
- Reducing water consumption (Proper management of turning faucets on and off)
- Turning off unnecessary computers
- Implementation energy saving measures and modification facility equipment
- Change to energy-saving multifunctional copiers upon renewal intervals
- Give environmental lectures (garbage sorting, water draining, etc.) to cleaning contractors
- Promoting company-wide energy saving campaigns
- Reducing standby power consumption during long vacations



*Targets Scope 1 and 2



Renewed air conditioners (Head office)



New LED lamps (Head office)



Renewal of laser beam machines (Hosoe Factory)



Renewal of substation facilities (Hosoe Factory)



New LED lamps (Hosoe Factory)



Renewal of energy-saving injection molding machines (Sagamihara Factory)

Water Reduction Target

Since water is an indispensable resource in manufacturing activities, we will set new goals to reduce environmental impact, avoid risks, and achieve sustainable water use, in order to use limited water resources efficiently and appropriately.

Water reduction target

Reduce water usage by 1% compared to the previous year. (Targets are Head Office, Sagami-hara Factory, and Hosoe Factory sites)

Criteria for Water

At the Hosoe Factory, we regularly measure the water quality of wastewater and manage it so that it does not discharge outside the factory, and there are no items that do not meet the current emission standards.

Item	Drainage reference value (mg/l)	Voluntary reference value (mg/l)	FY2022			
			Wastewater outlet 1(mg/l)	Wastewater outlet 2(mg/l)	Wastewater outlet 3(mg/l)	
pH	5.8 to 8.6	6.1 to 8.2	6.7 to 7.1	7.0 to 7.8	6.9 to 7.6	
BOD (maximum value)	30	27 (daily average 20)	18	Less than 2.0	24.0	
COD (maximum value)	30	27 (daily average 20)	12	9.3	26	
SS (maximum value)	40	36 (daily average 30)	11	2.3	7.8	
n-Hexane extractants (mineral oil content)	5.0	4.5	Less than 1.0	Less than 1.0	—*	
Phenols	1	0.9	Less than 0.5	Less than 0.5	Less than 0.5	
Copper	1	0.9	Less than 0.1	Less than 0.1	Less than 0.1	
Zinc	2	1.8	Less than 0.20	Less than 0.2	—*	
Total iron	10	9	Less than 0.30	Less than 0.3	—*	
Total chromium	2	1.8	Less than 0.05	Less than 0.05	Less than 0.05	
Total nitrogen	120	108	13	61	89	
Total phosphorus	16	14.4	2.4	Less than 0.80	7.2	
Number of coliform bacteria	3,000	2,700	1,400	44	48	
Hazardous substances	Cadmium	0.002	0.0018	Less than 0.0002	Less than 0.0002	Less than 0.0002
	Cyanogen	1	0.9	Less than 0.1	Less than 0.1	Less than 0.1
	Organic phosphorus	0.1	0.09	Less than 0.01	Less than 0.01	Less than 0.01
	Lead and its compounds	0.1	0.09	Less than 0.01	Less than 0.01	Less than 0.01
	Fluorine compounds	8	7.2	Less than 0.80	Less than 0.80	Less than 0.80
	Arsenic and its compounds	0.001	0.0009	0.0005	Less than 0.0003	0.0004
	Trichloroethylene	0.3	0.27	Less than 0.005	Less than 0.005	Less than 0.005
	Tetrachloroethylene	0.1	0.09	Less than 0.005	Less than 0.005	Less than 0.005
	Dichloromethane	0.2	0.18	Less than 0.02	Less than 0.02	Less than 0.02

* Drainage outlet 3 is excluded from measurement since it is used for septic tank drainage.

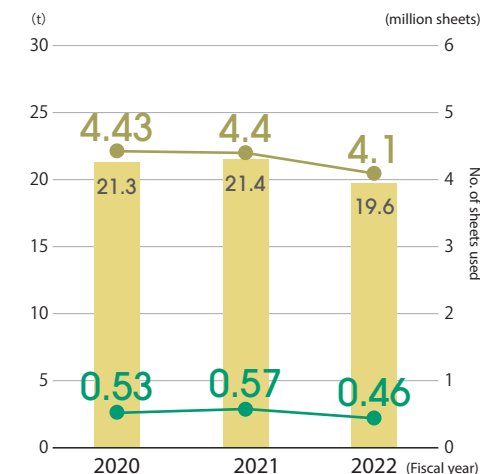
Reducing the Consumption of Copy Paper

In an effort to reduce the amount of paper used, the three sites (Head Office, Sagami-hara Factory, and Hosoe Factory) are continuing their efforts to “not increase paper usage over the previous fiscal year”, such as by reducing paper distribution by promoting paperless meetings, double-sided printing, and using projectors. In addition, we are upgrading our conventional printers and copiers to multifunction machines, and striving to reduce paper by digitizing documents.

In FY2022, we were able to reduce paper usage by 8.6% compared to the previous year. We are using laptops to reduce the use of paper for meeting materials and improve the digitization of inspection table data, etc.



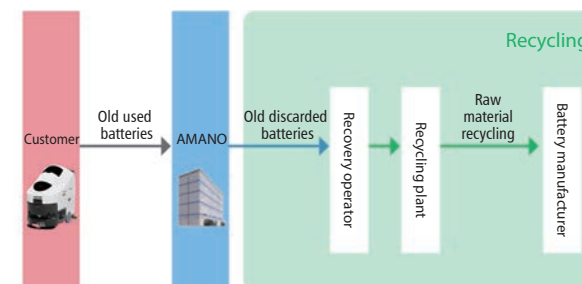
Paper usage(copy paper + computer paper)



■ Paper usage (3 sites total)
● Copy paper consumption (A4 equivalent)
● Computer paper consumption

Battery Recycling

Since December 2012, Amano has been promoting initiatives that contribute to the creation of a recycling-oriented society by recycling all the batteries extracted from cleaning products. In FY2022, 94.8 tons (approximately 3,388 batteries) were recycled.



Initiatives at Branches and Sales Offices

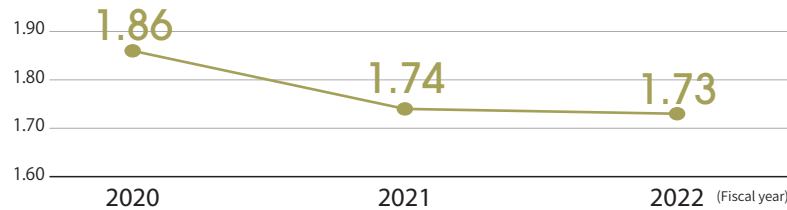


Energy-saving measures of Sales and Service offices

Since FY2007, Amano sales and service offices have begun collecting data on environmental burden (consumption of electricity, gas, gasoline and other fuel, and water, etc.) from each regional office.

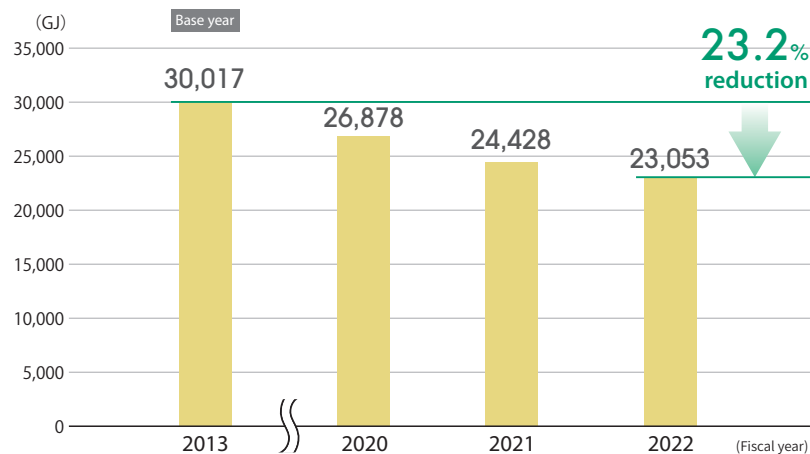
Since the ratio of electricity consumption to total energy consumption at branches and sales offices is the majority in terms of crude oil equivalent, we are implementing power saving and energy efficiency at these locations daily.

● Energy consumption per unit (total for all branches and sales offices operations)



* Calculated based on the Energy Conservation Act (Act on Rationalizing Energy Use and Shifting to Non-fossil Energy). (Energy consumption/total floor area)

● Purchased electrical power (total for all branches and sales offices operations)

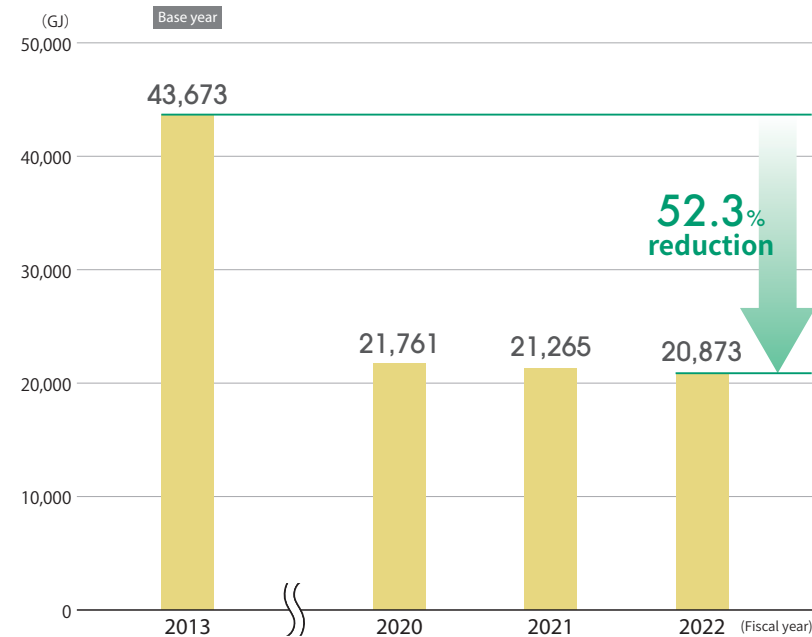


Initiatives for company Car Usage

Regarding gasoline and diesel fuel for company vehicles running on public roads, the General Affairs division posts fuel prices on the electronic company bulletin board for all employees every month, in order to foster cost awareness. Since August 2018, we have begun introducing the telematics* systems for approximately 700 company vehicles to visualize driving status such as rapid starts, sudden decelerations, and excessive speed, etc. aiming to improve driving manners (eliminate accidents) and to raise awareness of eco-driving. In particular, for eco-driving, we are also conducting educational activities by incorporating “10 eco-driving recommendations” into all employee training.

* Telematics: A system where the person in charge is able to remotely grasp the driving status of a vehicles through an electronic module equipped with GPS communication capability, which is installed in the vehicles.

● Fuel consumption by company vehicles (total for all branches and sales offices)



Initiatives to Reduce Waste Material

Waste Reduction Target

Due to the increase in efforts to promote a circular economy in recent years, we have set specific numerical targets for waste emissions, considering that it is necessary to reduce waste in the future and make efforts not to generate waste.

Waste reduction target: Reduce total waste emissions intensity by 1% from the previous year. (Targets are Head Office, Sagami-hara Factory, and Hosoe Factory sites)

Reducing the Total Amount of Industrial Waste

The total amount of industrial waste emitted from our 3 sites (Head Office, Sagami-hara Factory, and Hosoe Factory) in FY2022 was 1,748.1 tons, which was 2% less than the previous year. Owing to thorough sorting of waste, we maintain a 98.5% recycling rate. We will continue to practice appropriate waste sorting aiming to reduce waste emissions and improve the recycling rate.

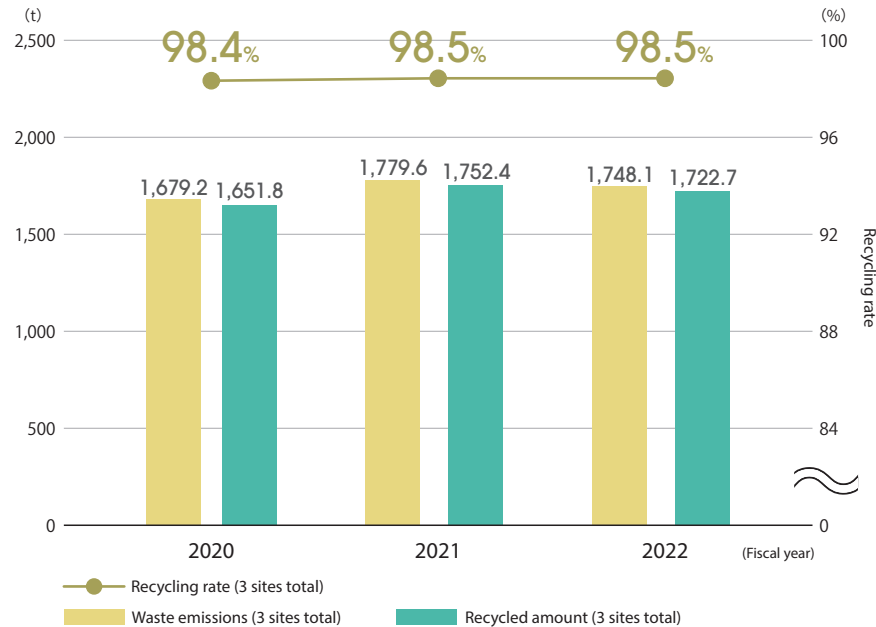


Subdivision of dry battery separation (Sagami-hara)

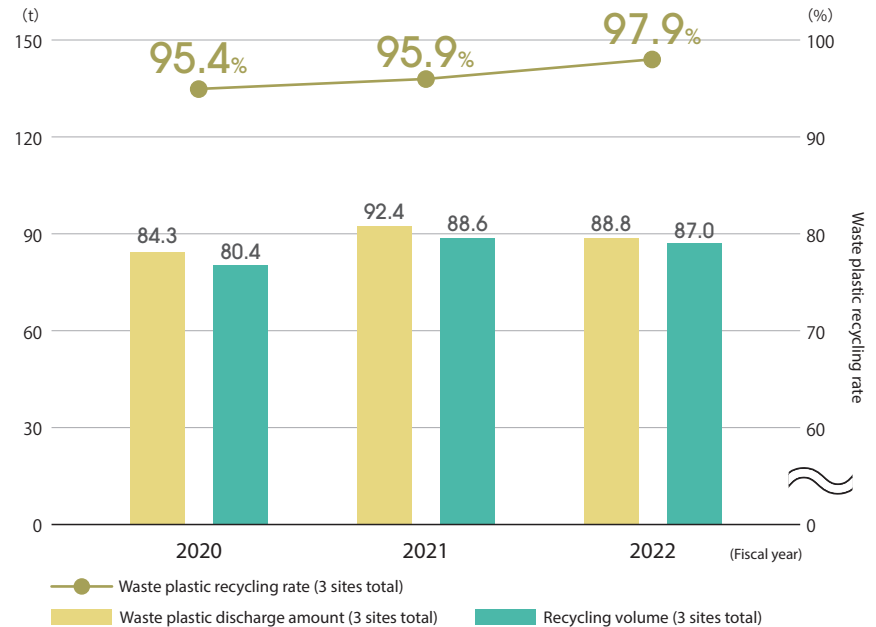
Promoting waste plastic recycling

The total amount of plastics waste from our 3 sites (Head Office, Sagami-hara Factory, and Hosoe Factory) was 88.8 tons in FY2022, which was 4% less than the previous year. Owing to thorough sorting, the recycling rate increased by 2% to 97.9%. We will continue to strive to reduce waste plastic discharge and promote recycling through employee education, etc.

Total waste emissions and recycled amount



Total amount of plastic waste and recycled amount

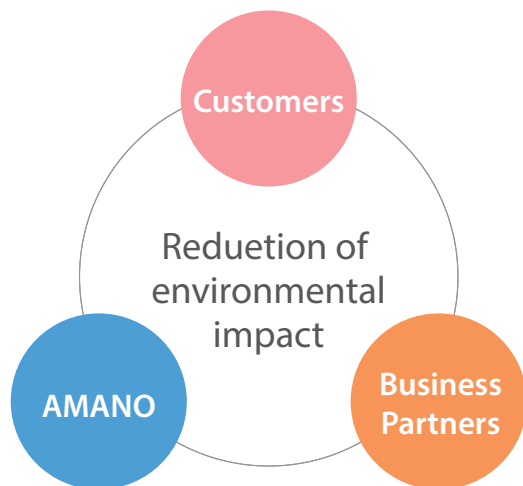


Green Procurement Initiatives

Promotion of Green Procurement (Green Procurement Guidelines)

We are advocating “promotion of green procurement” in line with the environmental management system “Environmental Action Guidelines”. With a view to reducing environmental stress in our supply chain, we formulated the “Amano Corporation Green Procurement Guidelines.” Based on these guidelines, we conduct surveys on raw & product materials, parts, and halffinished products including component units, delivered by our business partners to check whether they contain any substances that we designate as hazardous. We ask our suppliers to comply with the following requirements:

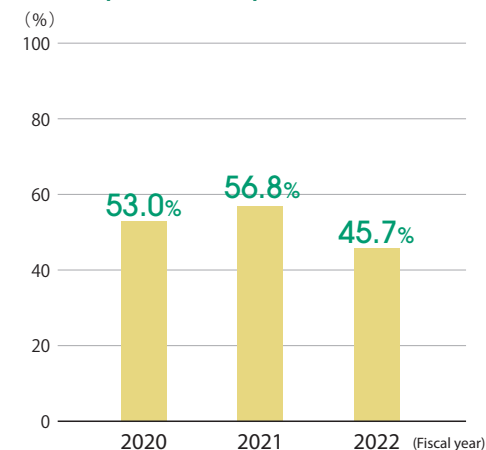
- Conduct a content test of regulated chemical substances for each batch of raw material and parts we procure. (submission of a chemSHERPA file)
- In our manufacturing processes, we do not use substances that Amano has designated as being banned from use in production processes. (submission of a certificate of non-use)



Green Purchasing and Procurement Activities

- Regarding the equipment and supplies managed by General Affairs Department, since 1999, Amano has been promoting the purchase of “eco-mark” products and energy saving equipment along with “green” office supplies. We are continuing to switch to “Green” products for stationery, office supplies, and other purchases. The “Green” product purchasing rate in FY 2022 was 45.7% (among stationery office supplies).
- We will select and purchase products that have been adequately considered for recycling after disposal.
- For electronic devices with high energy consumption, such as multifunctional copiers, we will carefully compare the functionalities and energy consumption levels and select models that are superior in terms of cost performance. We will then promote device renewals.
- We repair usable equipment and supplies as much as possible to extend their lifetime in order to reduce disposals from simple renewals.
- When renewing machinery, materials and office equipment, we will select those which are environmentally friendly.
- When purchasing items for production, we implement measures to reduce waste, such as returning and reusing wooden frames and pallets for heavy parts, reusing packaging materials, and introducing returnable boxes, etc.
- We have improved traditional quotation methods (using paper forms) by promoting a system for supplier quotations using electronic estimations.

● Green procurement purchase rate



Simplify product packaging



Reuse of cushioning material

Initiatives for Biodiversity



Kanagawa Reforestation Partner System

In April 2020, Amano became a partner in a system sponsored by Kanagawa Prefecture that supports and cooperates with forest restoration and conservation projects through donations and forest volunteering by employees of partner companies. As part of the development of Kanagawa water resources, we provide public management and support of private forests (forests owned by forest cooperatives, etc.) in the target areas, mainly within the prefecture. In July 2023, we held events such as nature walks and woodworking in the prefectural 21st century forest as an environmental activity event for Amano Group employees and their families.



Green Fundraising

At the Sagami-hara Factory, we participate in green fundraising sponsored by the Kanagawa Trust Midori Foundation Prefectural North District Promotion Council. In FY2022, donations and sales of green products totaled 68,014 yen.



Purchasing Eco-friendly Uniforms

We have adopted an eco-marked unisex work wear that uses at least 50% recycled PET fiber. In addition, for each work wear purchased about two saplings are donated to the Green Belt Campaign to plant trees around the foothills of Kenya.



Compliance Management concerning Air Pollution and Wastewater Standards

Since 2016, We have not used heavy-oil-fired boilers at any sites. We have no facilities that fall under the Air Pollution Control Act. We have measured levels of water pollutants, and there are no reports of any legal or regulatory values being exceeded.

Environmentally Friendly Products



Amano is actively promoting environmentally friendly product designs by incorporating energy efficiency, resource efficiency (Reduce, Reuse, and Recycle), safety, and rigid control of environmentally burdensome substances when developing and modifying its products.

Electric Dust Collector "MR series"

Filterless mist collector "MR series" collects water-soluble mist generated in metal cutting processes, which is global specification mist collector with long-life capture performance, energy-saving effect, and enhanced maintainability compared to the conventional "MJ series". By newly designing PM motor and inverter respectively, we have achieved global specifications that comply with high-efficiency regulations in various countries and the CE standard, while reducing CO₂ emissions.



Small Robotic Floor Scrubber "HAPiBOT"/ Electrolyzed Water Unit

Released "HAPiBOT", a small robotic floor scrubber targeting small and medium-sized facilities such as supermarkets. The conventional autonomous driving technology is equipped with AI image technology, making it possible to clean complex and narrow areas. In addition, by installing an electrolyzed water unit, it is possible to generate and use washing water that does not contain surfactants without the need for an electrolyzed water generator, water softener, or water storage tank, etc. In this way, there are no CO₂ emissions in the wastewater treatment process after use, which contributes to reducing the environmental impact.



Chemical Management



RoHS*2 Compliant Products

Europe enacted the RoHS2 Directive, which restricts the use of certain hazardous substances in electrical and electronic equipment in order to prevent adverse effects on people and the environment during the recycling and disposal of such equipment. A total of 10 substances namely, cadmium, mercury, lead, hexavalent chromium, PBB (polybrominated biphenyls), PBDE (polybrominated diphenyl ethers), the 4 Phthalate ester substances namely DEHP (bis-2-ethylhexyl phthalate), BBP (benzyl butyl phthalate), DBP (dibutyl phthalate), and DIBP (diisobutyl phthalate) have been specified as specific harmful substances. In line with this, we are working towards the total abolition of these 10 substances.

We have also established “RoHS Regulation Management Provisions” to be included in our Environmental in-house guidelines to monitor and confirm the progress towards RoHS2 compliancy.

*RoHS: Restriction of the use of certain Hazardous Substances in electrical and electronic equipment

RoHS2-compliant products (partial)



The Management of PRTR Designated Chemical Substances

In accordance with the PRTR Act*1, we carefully monitor the types of notifiable chemical substances that are discharged and the amount handled, and aggregate the totals each month. In FY2022, the total volume handled by the three sites was 21.8 tons, a reduction of 29.9% from the previous year. We will continue to promote the reduction of emissions by replacing target substances and parts.

Of the target substances, the following three substances were notifiable substances under the PRTR Act and had a handling volume of 1 ton or more. We notified and reported these substances to the local government.

Substances subject to PRTR	FY2022 handling volume (t)
Xylene	9.4
Toluene	6.4
Ethylbenzene	5.4

With regard to the reduction of VOC*2, in FY2022, we continued to build and promote a system for proper ordering of organic paints and thinners (diversion through high repeatability bespoke paint inventory management) and proper use (reduction in the number of paint color changes, reuse of thinners for cleaning).

*1 PRTR Act: "Act on the Assessment of Releases of Specified Chemical Substances in the Environment and the Promotion of Management Improvement". A law that requires companies to monitor and control the amount of harmful chemicals that are emitted and transferred.

*2 VOC: Volatile Organic Compounds

The trend of PRTR substances handled

