

# Environmental Activities "Brother Group's environmental activity report"



The Brother Group helps society achieve sustainable development, by positively and continuously considering the environmental impact of all aspects of our business operations.

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- PDF** Nijyu-maru Project registration certificate [PDF/20MB]  
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- PDF** Brother Industries, Ltd. FY2014-FY2018 balance of substances subject to PRTR [PDF/411KB]  
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# Environmental Activities "Brother Group's environmental activity report"



The Brother Group helps society achieve sustainable development, by positively and continuously considering the environmental impact of all aspects of our business operations.

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Scope of report: Brother Industries, Ltd. and its global group companies (including those in Japan)  
Covered period: April 1, 2018 to March 31, 2019  
Guideline used as a reference: GRI's "Sustainability Reporting Standards"

## Environmental Strategy and Management

# Message from the Management (Environment)

### Toward achieving a sustainable society

The Brother Group has been offering a variety of products during the course of a history of more than 100 years, in response to the changing needs of customers and society. Our mission is to continuously provide "superior value" in order to meet our customers' and social demands.

The global community has been steadily shifting toward a carbon-free society through various measures for climate change. Efforts are being made to achieve a sustainable society by minimizing the impact on the global environment while maintaining economic growth.

International frameworks such as the Sustainable Development Goals (SDGs) and the Paris Agreement (an international agreement for mitigating climate change) have been established, and the Osaka Blue Ocean Vision\* was also shared.

The Brother Group recognizes the urgency of such measures for international environmental issues as well as the significance of addressing ESG (Environmental, Social and Governance) for its sustainable growth.

\*: This world vision was shared at the G20 Osaka Summit, aiming for global economic stability and growth, to reduce additional pollution by marine plastic litter to zero by 2050.



### Strengthen activities based on the "Brother Group Environmental Vision 2050"

Environmental, social, and economic systems have been undergoing sweeping changes. The social environment has also been changing significantly. Against this backdrop, the Brother Group Environmental Vision 2050 was formulated in March 2018 to contribute to solving social issues, such as climate change, and create a sustainable society in line with the Brother Group Environmental Policy. Based on this environmental vision, the Brother Group will strengthen its activities related to "CO<sub>2</sub> emissions reduction", "resource circulation", and "biodiversity conservation". As for the reduction of CO<sub>2</sub> emissions in the entire Brother Group (Scope 1 & 2) in particular, steady results have been produced, by continuing energy-saving activities and changing materials used in manufacturing facilities outside Japan. A reduction of 28% was achieved toward the FY2050 target of 30% cut from FY2015. The Brother Group will undertake new initiatives such as resource recycling in the value chain by improving the system and continuously promoting activities.

### Promising active and continuous efforts to accelerate environmental activities

In the Brother Group Global Charter that provides the foundation for all of the Brother Group's activities, the Brother Group promises to play its part to help society achieve sustainable development by actively and continuously considering the environmental impact of all aspects of its operations. Under the "Brother Earth" slogan, the Brother Group has been accelerating environmental activities with stakeholders based on a unified message of "Working with you for a better environment."



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## Environmental Strategy and Management

# Message from the Management (Environment)

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### Gaining public trust

The Brother Group considers that customers' issues can be solved by meeting the requirements and standards set by environmental labels in respective countries. To this end, the Brother Group has been working hard to develop environmentally friendly products, which enables us to solve social issues and also gain trust from customers.

I believe that each employee of the Brother Group should recognize that social demand reflects customers' needs, and create products and services through the company, which acts as 'amplifiers'. I, as management, will make the utmost of efforts to make it happen and gain long-term trust from society.

**Ichiro Sasaki**

**Representative Director & President  
Brother Industries, Ltd.  
September 2019**

## Environmental Strategy and Management

# Environmental Policy and Management Structure



## Brother Group's Environmental policy

**The Brother Group helps society achieve sustainable development, by positively and continuously considering the environmental impact of all aspects of our business operations.**

The Brother Group's mission is to place our customers first everywhere, every time, and provide them with superior value, by quickly creating and delivering high-quality products and services. To fulfill the mission, it is essential to help society achieve sustainable development, by positively and continuously considering the environmental impact of all aspects of our business operations. This is the basic principle of the Brother Group Environmental Policy, and is set out in the Brother Group Global Charter, originally published in 1999, that provides the foundation for all Brother Group activities in the global marketplace. The Charter has been translated into 27 languages and been shared with all our employees in order to create a system that is appropriate for a global company transcending differences in culture and customs.

## Guidelines and Development of environmental activities

Concern for the environment shall be the cornerstone of all operations. Safety and environmental impact shall be prime considerations at every stage of a product's life cycle, from design, development, manufacturing, customer usage, and disposal, to reuse and recycling. Based on the above, environmental activities have been developed in accordance with the guidelines below.

## Environmental Strategy and Management

# Environmental Policy and Management Structure



## Brother Group's Environmental policy

Guidelines	Development of environmental activities
1. We will set environmental targets in all areas (manufacturing, production, and service) and continuously improve their environmental aspects.	Both manufacturing and sales facilities work to acquire ISO 14001 certification, and strive to reduce environmental impact by conserving energy and reducing CO2 emissions.
2. We will not limit our activities to the observation of laws and regulations in all countries where we conduct business, but will also act with a strong moral responsibility to prevent pollution and reduce environmental impact.	A rigorous management framework ensures compliance with environmental laws and regulations in respective countries, prevents oversight and omissions, and enables a quick response.
3. We will always consider waste reduction by more efficient use of resources and recycling of products, and will also avoid creating contamination by hazardous substances when designing and developing both technologies and products.	In developing products, eco-consciousness is considered in various aspects (e.g. energy conservation performance, use of hazardous chemical substances, and ease of recycling).
4. While respecting voluntary activities by each company of the Brother Group, we will also exercise our environmental duties as a united group.	Activities are promoted based on the Brother Group Mid-term Environmental Action Plan, which is the plan for the entire group.
5. We will enhance the environmental understanding and awareness of all employees through activities such as environmental education and PR.	Various educational opportunities are offered to enhance eco-consciousness (including training programs for new employees, technical training programs for engineers, and e-learning programs for all employees).
6. We will actively disclose our environmental efforts to our customers, local communities, and other interested parties to further foster understanding.	Proactive efforts are made to publicize Brother's activities, such as touring facilities with environmental features, participating in exhibitions, offering lessons at elementary schools and other educational institutions, and planting seedlings.
7. We will endeavor to reduce our impact on the ecosystem and to conserve biodiversity in all our operations.	Biodiversity conservation activities include the procurement of biodiversity-conscious raw materials and the use of FSC-certified paper. Projects for the restoration/conservation of forests or other natural habitats are promoted.



## Environmental Strategy and Management

# Environmental Policy and Management Structure



## Brother Group's biodiversity conservation policy

### Basic policy

To help build a sustainable society, the Brother Group will endeavor to reduce the impact of its operations on biodiversity and ensure biodiversity conservation through environmental and social contribution activities.

#### 1. Challenges in management

- The Brother Group recognizes biodiversity conservation as an important challenge for corporate survival, and works on environmental management.

#### 2. Business operations

- The Brother Group identifies the impact of all its operations (including procurement of raw materials) on biodiversity, and constantly endeavors to reduce the impact.

#### 3. R&D activities

- The Brother Group gathers information and acquires technologies regarding conservation and sustainable use of biodiversity, and promotes technological development.

#### 4. Social contribution activities

- The Brother Group works on biodiversity conservation activities in collaboration with stakeholders including government organizations, local residents, and NGOs.

#### 5. Activities involving all employees

- Actions are led by top management, and measures are taken throughout the company to help all employees increase their knowledge about biodiversity and encourage them to work voluntarily on conservation activities.

#### 6. Communication

- Details of activities are actively disclosed in and outside the company to raise awareness of biodiversity conservation activities.

## Environmental Strategy and Management

# Environmental Policy and Management Structure



## Brother Earth environmental slogan

To boost our environmental activities, the Brother Group created the "Brother Earth" logo and slogan in 2010 to symbolize our efforts. Under Brother Earth, each Brother Group employee has been further committed to various activities based on a unified message of "Working with you for a better environment."

In 2012, the Brother Group Principles of Social Responsibility were established to define the responsibilities that group companies are expected to assume and the fundamental concept of action for environmental conservation.

To appeal to society at large, Brother Earth, Brother's special website on the environment, was launched to simply present Brother's wish and the activities it does to protect the earth.



Working with you for a better environment

## "5R" concept – the key to reducing environmental impact

From 1999, the Brother Group has been conducting environmental activities based on the "5Rs," which adds "Refuse" and "Reform" to the "Reduce," "Reuse" and "Recycle" 3Rs as the basis for establishing a sound material-cycle society. "Reform" in particular is an original idea from Brother for creating value by introducing novel approaches and ideas for changing the state of a waste material.

### "5R" Concept



- **Refuse:** Avoid purchase of environmentally burdensome materials whenever possible
- **Reduce:** Reduce waste material
- **Reuse:** Reuse waste material without processing
- **Reform:** Reuse materials in a different form
- **Recycle:** Reuse materials as resources



## Environmental Strategy and Management

# Environmental Policy and Management Structure

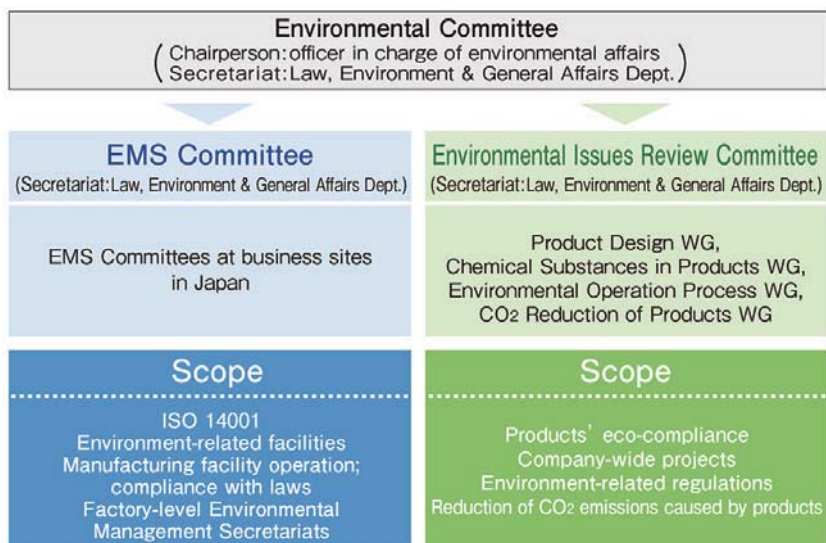


## Environmental management framework

Globally managing environmental issues throughout the group, led by the Environmental Committee

The Brother Group promotes global environmental management according to the Brother Group Environmental Policy. Specifically, the officer in charge of environmental affairs instructs respective departments at head office as well as divisions and function centers through the Environmental Committee (the supreme committee responsible for promoting environmental management) to determine policies and implement measures.

### Brother Group environmental management framework



## Environmental Strategy and Management

# Environmental Policy and Management Structure



## Environmental management framework

### Environmental Committee

The Environmental Committee is the decision-making body responsible for environmental risks such as climate change and environmental issues of the Brother Group. It is chaired by the officer in charge of environmental affairs and other executive officers responsible for function centers, new business, and general affairs. Committee meetings are held twice a year, and extraordinary meetings are held as necessary.

Critical environmental risks and issues related to climate change or environmental laws and regulations in the Environmental Committee meetings are reported to the Risk Management Committee chaired by the representative director and president. Furthermore, the most important issues are reported to the Board of Directors, and we receive instruction or are subject to oversight by the management.

As in previous years, there were no serious accidents or environmental penalties (without payment) in FY2018.

▶ Brother Industries, Ltd. Governance Structure  
[https://global.brother/en/corporate/governance/structure#org\\_chart](https://global.brother/en/corporate/governance/structure#org_chart)

### EMS (environmental management system) Committee (secretariat: Law, Environment & General Affairs Dept.)

This committee has control over the EMS subcommittees set up in head office and manufacturing facilities in Japan. The committee monitors ISO 14001 operations at these facilities and compliance with laws and regulations in Japan, while constantly following up improvement activities.

#### Respective business sites and major group companies

These entities have dedicated staff responsible for environmental management activities. The staff identify and report (i) progress in fulfilling specific policies and targets set by the Environmental Committee and (ii) compliance with rules for environmental management.

## Environmental Strategy and Management

# Environmental Policy and Management Structure



## Environmental management framework

### Environmental Issues Review Committee

(secretariat: Law, Environment & General Affairs Dept.)

This committee draws up and reviews specific policies and measures relating to products' eco-compliance, companywide projects, and environment-related regulations.

#### Working Groups (WGs)

The following working groups in Japan serve as task forces responsible for their respective themes.

- Product Design WG: Reviews and determines various standards for eco-friendly product design.
- Chemical Substances in Products WG: Ensures compliance with regulations on chemical substances contained in products, primarily the RoHS Directive.
- Environmental Operation Process WG: Addresses the establishment of environmental eco-compliance operation and environmental information systems for the entire group.

## Environmental communication promotion framework

The Brother Group established "working on activities to enhance the environmental brand image under the environmental slogan 'Brother Earth'" as the basic policy for environmental communication in the Brother Group Environmental Action Plan 2018 (2016-2018). The CSR & Corporate Communication Dept. takes the initiative to promote environmental activities at facilities around the world.

## Environmental Strategy and Management

# Environmental Policy and Management Structure



## Environmental management system

### Practicing the PDCA (Plan - Do - Check - Act) cycle in line with ISO 14001

Under our mid-term management plan, the Brother Group creates the Brother Group Environmental Action Plan every three to five years, based on which Brother Industries, Ltd. (BIL) and manufacturing and sales facilities in respective countries set annual plans and carry out environmental activities as part of their business operations. The progress and performance (results) of plans are checked based on reports and internal audits from each facility, and the findings are then reflected when planning for the following year.

In operating the environmental management system for environmental protection activities, compliance with laws, regulations, and standards is ensured, and the ISO 14001-based PDCA (Plan - Do - Check - Act) cycle is practiced.

ISO 14001 certification has been obtained by all group manufacturing facilities\*, with Brother Industries (U.K.) Ltd. being the first to be certified in 1996. Brother U.K. Ltd., a sales facility in U.K., obtained certification in 2005, followed by other many sales facilities.

\*: When a new business site is established, activities are implemented in compliance with ISO 14001 upon commencement of operations, and ISO 14001 certification is immediately obtained.

**PDF** List of ISO 14001-certified facilities [PDF/272KB]  
<https://global.brother/-/media/global/eco/pdf/data/en/iso14001.ashx>

## Environmental Strategy and Management

# Environmental Policy and Management Structure



## Environmental management system

### Internal audit and external review

The Brother Group annually conducts internal audits to confirm that manufacturing facilities in and outside Japan effectively follow the environmental management system in conformance with ISO 14001. The Brother Group is also subject to external review for ISO 14001 (environmental management system) certification.

For facilities in Japan, internal audits are conducted by the Law, Environment & General Affairs Dept. of BIL. For overseas facilities, internal audits are conducted by departments in charge of environmental affairs at the respective facilities to check compliance with relevant laws and regulations, the progress of annual plans, the effectiveness of the environmental management system, and consistency with ISO standards. Corrective measures are implemented immediately when any nonconformance is found, and the effectiveness of such corrective measures is checked by follow-up audits. Audit results in Japan, together with the status of legal compliance and performance (results), are presented to the Environmental Committee.

In the annual internal audit and external review, it was confirmed that the PDCA cycle is properly practiced.

### Environmental training for employees

The Brother Group's ISO 14001-certified facilities offer environmental training programs for all employees as well as job specific training related to specific tasks and functions.

Essential environmental training is provided every year to raise eco-awareness and facilitate operations. Examples include environmental training programs for all new recruits joining Brother; e-learning-based training programs for all employees; training programs for production and procurement staff at manufacturing facilities in and outside of Japan, for example, the management of chemical substances contained in products, process control guidance and auditing at suppliers.

## Environmental Strategy and Management

# Environmental Action Plan



## Brother Group Environmental Vision 2050

In March 2018, the Brother Group formulated the Brother Group Environmental Vision 2050 as a new long-term target of the Brother Group to contribute to resolving global environmental issues under the slogan “Brother Earth,” and established a mid-term target for FY2030 as a milestone.

The goals are set for CO<sub>2</sub> emissions reduction, resource circulation, and biodiversity conservation. The mid-term target for FY2030 for CO<sub>2</sub> emissions reduction has been recognized as a target based on scientific evidence by Science Based Targets (SBT), an international initiative established to help achieve greenhouse gas emission reduction targets.

▶ Toward a Sustainable Society  
<https://global.brother/en/eco/sustainable-society>

▶ Brother Became the First Company in the Chubu Region to Have CO<sub>2</sub> Emissions Reduction Targets Approved by the “Science Based Targets Initiative”  
<https://global.brother/en/news/2018/sbt>

\*: The mid-term target for FY2030 has been recognized as a target based on scientific evidence by Science Based Targets (SBT), an international initiative established to help achieve greenhouse gas emission reduction targets.

\*: Click the link above to read a press release.

## Brother Group Mid-term Environmental Action Plan 2021 (2019~2021)

### Basic policy

The Brother Group shall proactively promote the following initiatives with its stakeholders to solve the priority items set in the Brother Group Environmental Vision 2050:

- Create eco-conscious products
- Reduce CO<sub>2</sub> emissions in the whole value chain
- Expand resource circulation in our business activities
- Reduce the business impact on the ecosystem and increase Biodiversity conservation
- Respond to legal and social demands

### 1. Reduction of environmental impacts of Brother facilities

- 1-1 CO<sub>2</sub> emissions reduction (Scope 1, 2)
- 1-2 Reduction of water consumption
- 1-3 Waste reduction
- 1-4 Obtainment of ISO 14001 certification and reconstruction of the environment management system
- 1-5 Compliance and response to social requirements
- 1-6 Assessment of ecosystem effect
- 1-7 Biodiversity conservation



## Environmental Strategy and Management

# Environmental Action Plan



## Brother Group Mid-term Environmental Action Plan 2021 (2019~2021)

### 2. Environmental considerations in Products

- 2-1 CO<sub>2</sub> emissions reduction (Scope 3)
- 2-2 Promotion of reuse and recycle
- 2-3 Promotion of environmentally-friendly design
- 2-4 Compliance and response to social requirements

### 3. Approach to stakeholder engagement

- 3-1 Information disclosure
- 3-2 Collaboration with suppliers
- 3-3 Environmental education

## Brother Group Mid-term Environmental Action Plan 2018 (2016~2018)

The Brother Group aims to improve the value of the Brother brand which is trusted by customers and to build a strong sense of pride among employees of the group. To this end, the Brother Group will continuously strengthen the foundation established through the previous Environmental Action Plan and implement and fulfill the Brother Group Environmental Action Plan 2018 (2016-2018).

### Basic policy

1. Create eco-conscious products
2. Cut CO<sub>2</sub> emissions from the group as a three-year target toward achieving the mid-term targets by FY2020 (April 1, 2020-March 31, 2021)
3. Maintain regulatory compliance for all product categories
4. Support activities for continuous improvement under our philosophy of "Brother Earth"
5. Support biodiversity conservation in total Brother group under the COP10 Aichi Biodiversity Targets

## Environmental Strategy and Management

# Environmental Action Plan



## Brother Group Mid-term Environmental Action Plan 2018 (2016~2018)

### Mid-term targets by FY2020 to reduce the CO2 emissions

As a global company developing its business in different countries and regions across the world, the Brother Group recognizes its commitment to prevent global warming as a top priority to be addressed. In June 2009, CO2 reduction targets to be achieved by FY2020 were added to the Brother Group Environmental Action Plan, and active efforts have been made to achieve those targets.

### Mid-term targets by FY2020

- (1) Cut total CO2 emissions by 30% from FY1990 levels at eight business sites\*1 in Japan by FY2020 (absolute value)
- (2) Cut CO2 emissions by 20% (per unit of sales) from FY2006 levels at manufacturing facilities outside Japan (except the USA)\*2 by FY2020

\*1: The eight business sites in Japan are the head office of Brother Industries, Ltd., Mizuho Manufacturing Facility, Hoshizaki Manufacturing Facility, Minato Manufacturing Facility, Momozono Manufacturing Facility, Kariya Manufacturing Facility, Research & Development Center, and Logistics Center.

\*2: USA (a manufacturing facility outside Japan) constitutes part of a sales facility. Thus, the CO2 emissions are included in the results of the sales facility.

## Environmental targets based on the basic policy (2016-2018) and achievements in FY2018

### 1. Creation of eco-conscious products

- 1-1 Continue research and development of products that achieve the best environmental performance in each applicable market
- 1-2 Reduce the carbon footprint of products
- 1-3 Promote the use of recycled materials in products

## Environmental Strategy and Management

# Environmental Action Plan



## Environmental targets based on the basic policy (2016-2018) and achievements in FY2018

\*: The numbers in "Environmental targets" in the chart below correspond to the numbers in the text above.

Environmental targets*	Achievements in FY2018	Self-evaluation
1-1	For the models of products in the communication and printing equipment field, FY2018 new sales models met the environmentally conscious product standards such as the Blue Angel in Germany, Eco Mark in Japan and EPEAT in the U.S.A. after we promoted eco-friendly design and managed to meet environmental label standards from the early stages of product design and development. We also launched registration for inkjet products in the silver rank of EPEAT.	Significantly achieved
1-2	For the models products in the communication and printing equipment field, FY2018 all the new sales models were developed to be complied with the International ENERGY STAR Program and we attempted to reduce CFP to lower power consumption while developing products complied with the standards of consumed power of the Blue Angel requirements. We worked on the products under development to meet the new rigorous standard of international Energy Star Program that comes into force FY2019. And in accordance with the EcoLeaf, we provided objective and transparent LCA information to our stakeholders and encouraged the reduction of our environmental impact for newly developed products to review the environmental impact for the visualized products.	Significantly achieved
1-3	For the product models in the communication and printing equipment field, the use of post-consumer material increased 2.3 times as much as the use of FY2017.	Achieved

## Environmental Strategy and Management

# Environmental Action Plan



## Environmental targets based on the basic policy (2016-2018) and achievements in FY2018

### Summary of the last 3 years

The Blue Angel served as an example of environmental labels of each country was revised and went into force in January 2017 because the standards were sought higher environmental performances. Brother had all the new sales models after the date of enforcement met the standards, and also had the models for sale before the date of enforcement and continue to be marketed after the date met the standards and had the Blue Angel reacquired.

\ We promoted eco-conscious products, while organizing a much closer cooperative system among each department of the Brother Group and suppliers to fulfill the three major requirements such as environment, quality and cost for continuous development.

Furthermore in response to world-wide trends, we focused on product development corresponding to a circular economy which means resource circulation with expanding the use of recycled materials and reduce waste generation by durability of products.

▶ Product Life Cycles  
<https://global.brother/en/eco/product/lifecycle>

▶ Environmental Labels  
<https://global.brother/en/eco/product/label>

## 2. Reduction of environmental impacts of business sites

- 2-1** Reduce CO<sub>2</sub> emissions of Scopes 1 and 2 of the entire Brother Group by 3% from FY2015 levels by FY2018 (per unit of sales)
- 2-2** Calculate CO<sub>2</sub> emissions of Scope 3 of the entire Brother Group (in addition to Scopes 1 and 2), identifying effective measures to reduce CO<sub>2</sub> emissions throughout the supply chain, and continuously working on reduction
- 2-3** Reduce CO<sub>2</sub> emissions of business sites in Japan by 28% from FY1990 levels by FY2018 (absolute value)
- 2-4** Reduce water consumption of manufacturing facilities by 30% from FY2010 levels by FY2018 (per unit of sales)
- 2-5** Manage continuous improvement through monitoring and administration of the environmental management system with focus on the utilization of clean energy to achieve CO<sub>2</sub> emissions reduction targets
- 2-6** Continue to maintain (and obtain for new locations) the ISO 14001 certification for each Brother Group location

## Environmental Strategy and Management

# Environmental Action Plan



## Environmental targets based on the basic policy (2016-2018) and achievements in FY2018

\*: The numbers in "Environmental targets" in the chart below correspond to the numbers in the text above.

Environmental targets*	Achievements in FY2018	Self-evaluation
2-1	Achieved a 22.3% reduction from FY2017 (28.0% reduction from FY2015)	Significantly achieved
2-2	Continued to calculate Scope 3 of the Brother Group in FY2018 The mid-term target of CO <sub>2</sub> emission reduction in the Brother Group Environmental Vision2050 was certified as an evidence-based reduction target to achieve "2 degree goal" in the Paris Agreement by Science-based Targets which is the international environmental initiative.	Achieved
2-3	Achieved a 33.8% reduction from FY1990 *Carbon credits were partly used.	Achieved
2-4	Achieved a 30.5% reduction from FY2010	Achieved
2-5	Introduced the 4th solar power generation systems(100kW)in Mizuho Facility as Brother Industries, Ltd.	Achieved
2-6	The percentage of ISO 14001-certified facilities accounted for 88% of the entire Brother Group (as of April 1, 2019)	Achieved

## Summary of the last 3 years

The Brother Group facilities are engaged in processing and assembly to manufacture products. On CO<sub>2</sub> emission amount of Scope 1 of the entire Brother Group, we achieved a substantial reduction through switching materials at manufacturing facilities outside Japan. On CO<sub>2</sub> emission amount of Scope, to keep on promoting energy saving activities resulted in reducing by 28.0% compared with reducing by 3% from FY2015 levels by FY2018 (per unit of sales) .

On the usage of water, we worked on promoting water-saving activities and reducing waste, and led to reducing by 30.5% compared with reducing by 30% from FY2010 levels by FY2018 (per unit of sales). In FY2017 all the ISO 14001certified facilities completed the transition to the ISO 14001-2015, and the entire Brother Group is subject to audit based on ISO 14064 that provides guidelines for measuring and verifying emissions of greenhouse gases (GHGs).

▶Data Collection (Environment)  
<https://global.brother/en/eco/data>

## Environmental Strategy and Management

# Environmental Action Plan



## Environmental targets based on the basic policy (2016-2018) and achievements in FY2018

### 3. Regulatory compliance for all product categories

- 3-1** Maintain regulatory compliance
- 3-2** Contribute to society/community through participation and contribution to environmental CSR activities
- 3-3** Develop and implement a green procurement program for the Brother Group manufacturing locations
- 3-4** Encourage the reduction of our environmental impact in the upstream processes by working with our suppliers

\*: The numbers in "Environmental targets" in the chart below correspond to the numbers in the text above.

Environmental targets*	Achievements in FY2018	Self-evaluation
3-1	Ensured compliance with regulations regarding chemical substances contained in products, laws and regulations on recycling of waste electrical and electronic equipment/packaging materials, and energy-saving regulations on products	Achieved
3-2	Actively participated in and contributed to public relations activities regarding environmental laws, regulations and standards	Achieved
3-3, 3-4	Created a control system for four kinds of phthalate esters which are newly restricted in July 2019 in EU RoHS directive, and inside and outside of Japan, we worked with suppliers and complied with them. Conducted an on-site audit at more than 400 suppliers in and outside Japan regarding the system for managing chemical substances contained in products	Achieved

### Summary of the last 3 years

The entire Brother Group ensures compliance with laws and regulations appropriately in response to the trends of compliance with laws and regulations in all the countries and regions.

Based on the Brother Group Green Procurement Standards, we properly manage the chemical substances contained in products and supply products complied with laws and regulations in all the countries and regions in the entire group.

- ▶ Actively participated in and contributed to public relations activities regarding environmental laws, regulations and standards  
<https://global.brother/en/eco/product/regulation>
- ▶ Green Procurement  
<https://global.brother/en/eco/product/green-procurement>



## Environmental Strategy and Management

# Environmental Action Plan



## Environmental targets based on the basic policy (2016-2018) and achievements in FY2018

### 4. Communication and marketing of the Brother Group environmental activities

- 4-1 Strengthen and expand the reach of our environmental website (brotherearth.com) to all stakeholders
- 4-2 Strengthen reporting of our Environmental Activities under our brother.com website
- 4-3 Promote effective environmental in-house branding activities
- 4-4 Promote awareness of the logo and slogan "Brother Earth"

\*: The numbers in "Environmental targets" in the chart below correspond to the numbers in the text above.

Environmental targets*	Achievements in FY2018	Self-evaluation
4-1	Not only an environment-related videos "the Blue Angel" was newly posted on the website, but "Japan - Brother's Forest Gujo" and "China - A project to improve local environmental awareness in Zhuhai city" were renewed as well. With "Space Brothers" which is one of manga (comics), depicting pursuit of dreams, friendship and love for the Earth, implemented a campaign "THE BEAUTIFUL DREAMER" which is the future of our beautiful planet and expansion of our circle of companions, and tried to spread and deepen "Special website on the environment (brotherearth.com)". "Endangered Species on Brother's Daily Calendar" was awarded a grand prize of BtoC site in the business section of the 6th Web GRAND PRiX.	Significantly achieved
4-2	"Eco-Digest" was newly publicized in Japanese, English, German, French, Italian and Spanish.	Achieved
4-3	Continued to promote the Brother eco point program within the Brother Group. Continuously implemented measures to improve the environmental awareness of employees through the internal commendation program and information dissemination via the intranet.	Achieved
4-4	Continuously publicized environmental messages through environmental events (e.g., exhibitions and environmental learning programs) and websites (e.g., social media)	Achieved

## Environmental Strategy and Management

# Environmental Action Plan



## Environmental targets based on the basic policy (2016-2018) and achievements in FY2018

### Summary of the last 3 years

In a bid to improve the Quality improvement of information disclosures and develop multilingual contents, Brother Industries, Ltd. as the Group's head office developing global operations, produced seven new video contents and renewed two video contents of "Special website on the environment (brotherearth.com)", and furthermore we have tried to create contents to introduce endangered animals, implement the campaign to expand our circle of companions, dispatch frequent information, and spread using social media in order to continue on a path of growth on Earth over the next 100 years.

During the last 3 years, "Endangered Species on Brother's Daily Calendar" of "Special website on the environment (brotherearth.com)" was awarded a grand prize of BtoC site in the business section of the 6th Web GRAND PRiX, and this environmental report has received the Good Performance Prize two times in the Environmental Report Section of the Environmental Communication Awards sponsored by the Ministry of the Environment and the general incorporated foundation, thus we are highly recognized from outside the company.

- ▶ Data Collection (Environment)  
<https://global.brother/en/eco/data>
- ▶ Special website on the environment (brotherearth.com)  
<https://www.brotherearth.com/en/>

## Environmental Strategy and Management

# Environmental Action Plan



## Environmental targets based on the basic policy (2016-2018) and achievements in FY2018

### 5. Support for biodiversity conservation

- 5-1** Select priority themes by taking into account the characteristics of respective facilities and their regions and work on activities to contribute to biodiversity conservation based on the Aichi Biodiversity Targets (by 2020) adopted at COP10 (high-priority targets) across the Brother Group

\*: The numbers in "Environmental targets" in the chart below correspond to the numbers in the text above.

Environmental targets*	Achievements in FY2018	Self-evaluation
5-1	<p>Biodiversity conservation activities were implemented in more than 40 countries and regions in FY2018 as well.</p> <p>Contribution to restoration and conservation of forests through seedling planting activities in Brother's Forest Gujo, Brother eco point program, and Click for the Earth, was recognized as one of the 12th cooperative projects endorsed by the Japan Committee for United Nations Decade on Biodiversity (UNDB-J).</p> <p>Global biodiversity conservation activities striving to develop human resources, establish systems and engage in attractive activities in Brother won the Gold Prize of the 2019 Aichi Environmental Award.</p>	Significantly achieved

### Summary of the last 3 years

The Brother Group undertaking biodiversity conservation activities in more than 40 countries and regions was recognized as one of the 12th cooperative projects endorsed by the Japan Committee for United Nations Decade on Biodiversity (UNDB-J), and won the Gold Prize of the 2019 Aichi Environmental Award, thus we highly recognized from outside the company. To make contributions to solving global environmental issues with accelerating these activities, in March 2018, not only we formulated the Brother Group Environmental Vision 2050 and also established a mid-term target for FY2030, and we continue efforts to achieve the targets.

▶ Data Collection (Environment)  
<https://global.brother/en/eco/data>

## Toward a Sustainable Society

# Global Environment Actions and SDGs

## Brother Global Environmental Conservation and the related SDGs



“Sustainable Development Goals (SDGs)” consisting of 17 goals and 169 targets was unanimously adopted by the 193 member states in U.N. General Assembly, and they are common goals for the international community.

The Brother Group has actively undertaken the issues to create shared values for the future prosperity to contribute to the SDGs goals through businesses under the Brother Group Environmental Policy.

Regarding social critical issues such as climate change, resource depletion, environmental pollution and destruction of the ecosystem, we formulated Brother Group Environmental Vision 2050 in 2018, set Mid-term Target for FY2030 as a milestone, and engage in various efforts.

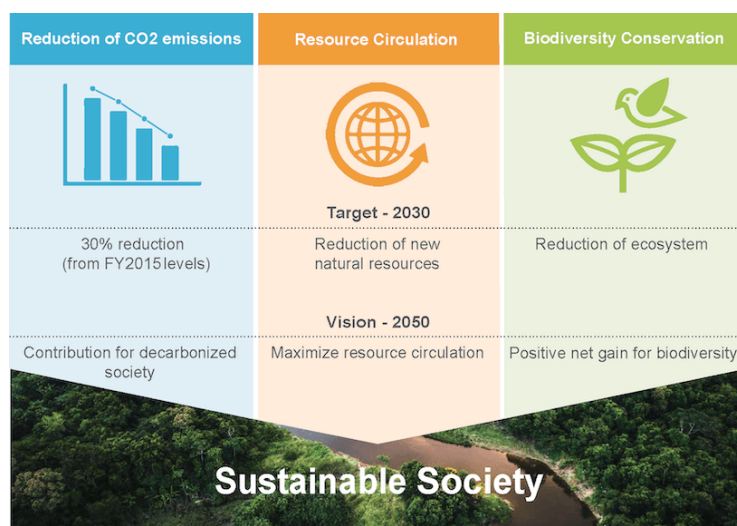
► Environmental Policy and Management Structure  
<https://global.brother/en/eco/management/brothergroup>

## Brother Group Environmental Vision 2050

Established on March 19, 2018

The Brother Group Environmental Vision 2050 recognizes environmental issues in society as business risks for the Brother Group and clearly states the Brother Group's continuous commitment to solving these issues over the long term as a company providing products using bio-based such as paper, sewing thread and cloth while utilizing energy and resources.

### Three key issues for the Brother Group

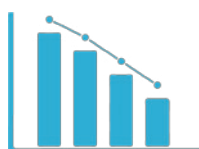


## Toward a Sustainable Society

# Global Environment Actions and SDGs

## Brother Group Environmental Vision 2050

### Three key issues for the Brother Group



#### Reduction of CO2 Emissions

The vision indicates that the Brother Group will contribute to creating a carbon-free society that the Paris Agreement aims to achieve (i.e., substantially eliminating greenhouse gas emissions.)

#### Mid-term target for FY2030 30% reduction (from FY2015 levels)

[Scopes 1 and 2] Achieve 30% reduction from the FY2015 level

[Scope 3] Categories 1, 11, and 12 Achieve 30% reduction from the FY2015 level

※The mid-term target for FY2030 on reduction of CO2 emissions has been recognized as a target based on scientific evidence by Science Based Targets (SBT), an international initiative established to help achieve greenhouse gas emission reduction targets.

▶Brother Became the First Company in the Chubu Region to Have CO2 Emissions Reduction Targets Approved by the "Science Based Targets Initiative"  
<https://global.brother/en/news/2018/sbt>

\*:Click the link above to read a press release.

#### Environmental Vision 2050 Contribution for decarbonized society

By 2050, the Brother Group will actively reduce CO2 emissions from the entire value chain in all business operations and contribute to creating a carbon-free society that the global community aims to achieve.

▶"Environmental Vision 2050" Reduction of CO2 Emissions  
<https://global.brother/en/eco/sustainable-society/co2>



#### Resource Circulation

The vision aims to ensure sustainable use of natural resources in business operations and minimize the environmental impact due to wastes.

#### Mid-term target for FY2030 Reduction of new natural resources

Mechanisms for circulate resources have been established throughout the value chain. Efforts have been made to reduce the amount of new natural resources that are used in main products.

The group's manufacturing facilities continuously endeavor to ensure efficient use of water resources and proper treatment of wastewater.

#### Environmental Vision 2050 Maximize resource circulation

Toward 2050, the Brother Group will maximize resource circulation to ensure the sustainable use of natural resources and minimize the environmental impact due to wastes.

▶"Environmental Vision 2050" Resource Circulation  
<https://global.brother/en/eco/sustainable-society/resource-circulation>

## Toward a Sustainable Society

# Global Environment Actions and SDGs

## Brother Group Environmental Vision 2050

### Three key issues for the Brother Group



#### Biodiversity Conservation

The vision aims to minimize the environmental impact of business operations and promote activities to restore and conserve the ecosystem beyond the impact.

#### Mid-term target for FY2030 Reduction of ecosystem

The Brother Group will assess the environmental impact of its business operations on the ecosystem and the effectiveness of restoration and conservation activities, and work to avoid and reduce the environmental impact on the ecosystem.

The manufacturing and sales facilities of the entire group will work on ecosystem restoration and conservation activities on a voluntary basis depending on the situation in each region.

#### Environmental Vision 2050 Positive net gain for biodiversity

By 2050, the Brother Group will minimize the environmental impact of business operations on the ecosystem and promote activities to restore and conserve the ecosystem beyond the impact.

▶ "Environmental Vision 2050" Biodiversity Conservation  
<https://global.brother/en/eco/sustainable-society/biodiversity>



Toward a Sustainable Society

## "Environmental Vision 2050" Reduction of CO<sub>2</sub> Emissions



### Brother Group Environmental Vision 2050

#### VISION

01  
Reduction of CO<sub>2</sub>  
Emissions

02  
Resource Circulation

03  
Biodiversity  
Conservation

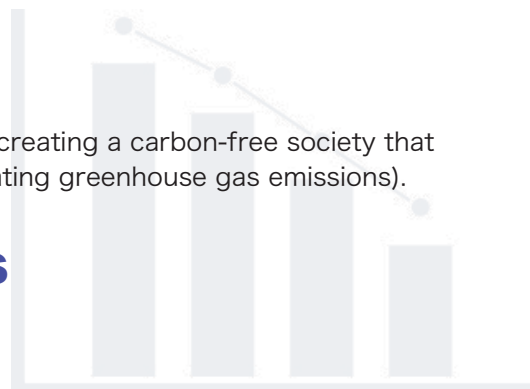
## 01

The vision indicates that the Brother Group will contribute to creating a carbon-free society that the Paris Agreement aims to achieve (i.e., substantially eliminating greenhouse gas emissions).

## Reduction of CO<sub>2</sub> Emissions

### GOAL

By 2050, the Brother Group will actively reduce CO<sub>2</sub> emissions from the entire value chain in all business operations and contribute to creating a carbon-free society that the global community aims to achieve.



## Toward a Sustainable Society

# "Environmental Vision 2050" Reduction of CO<sub>2</sub> Emissions



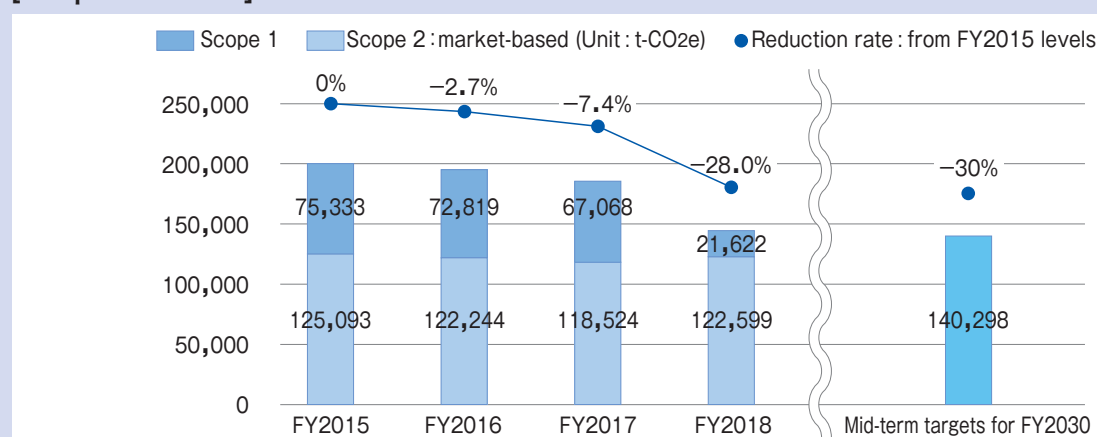
## Brother Group Environmental Vision 2050

### VISION

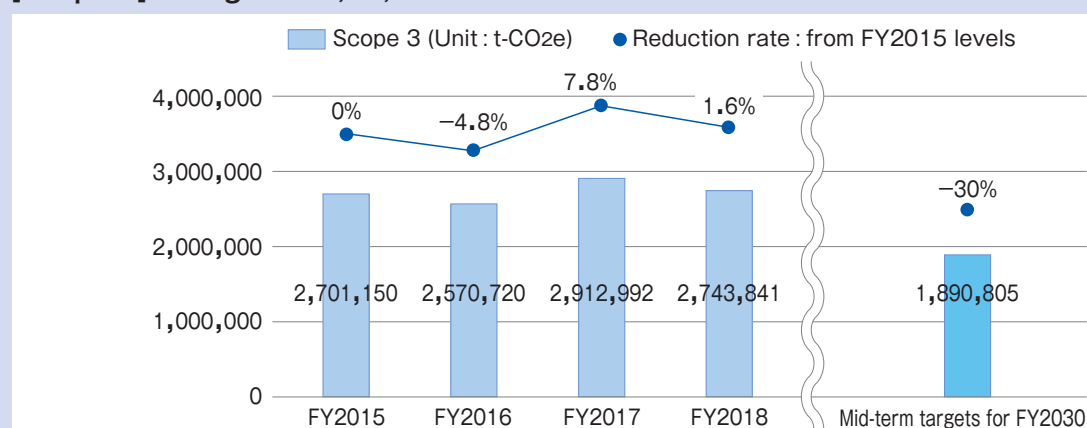
## Reduction of CO<sub>2</sub> Emissions

### Mid-term target for FY2030\*

#### [Scopes 1 and 2] Achieve 30% reduction from the FY2015 level



#### [Scope 3] Categories 1, 11, and 12 Achieve 30% reduction from the FY2015 level



To achieve the ambitious target of a 30% reduction from the FY2015 levels (the mid-term target for FY2030), the procurement, development, manufacture, logistics, sales, and service divisions will work closely with each other to address the challenge.

▶ Brother Became the First Company in the Chubu Region to Have CO<sub>2</sub> Emissions Reduction Targets Approved by the "Science Based Targets Initiative" <https://global.brother/en/news/2018/sbt>

\*: The mid-term target for FY2030 has been recognized as a target based on scientific evidence by Science Based Targets (SBT), an international initiative established to help achieve greenhouse gas emission reduction targets.

\*: Click the link above to read a press release.

## Toward a Sustainable Society

# "Environmental Vision 2050" Reduction of CO<sub>2</sub> Emissions



## Brother Group Environmental Vision 2050

### VISION

## Reduction of CO<sub>2</sub> Emissions

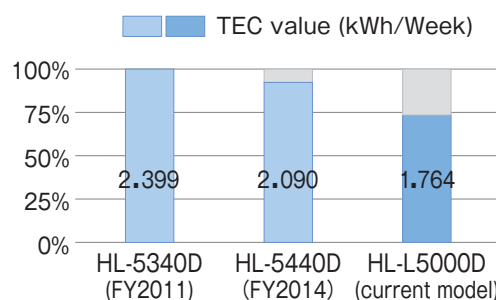
### CO<sub>2</sub> reduction stories

#### Brother energy-saving products in view of customers and global environment

The power consumption per week of HL-L5000D is expended 1.764(kWh/Week) for a single customer. It realized a 16% reduction of power consumption compared to the previous model, and a 26% reduction compared with the model before the last.

Brother strives to provide even better environmentally conscious products.

\* provided our calculations implemented in relation to TEC test methods



#### Consider the global environment through electrical energy and move toward the future with hydrogen utilization

Brother has long been in the study of fuel cell while figuring out the possibility of hydrogen to develop "fuel cell system". Many issues remain in order to expand hydrogen utilization. However, the technology development will ensure a secure future for Brother.



▶ Data Collection (Environment)  
<https://global.brother/en/eco/data>

#### Video contents of [brotherearth.com](https://www.brotherearth.com)

- ▶ Eco Factory  
<https://www.brotherearth.com/en/tech/ecofactory.html>
- ▶ Power Regeneration  
<https://www.brotherearth.com/en/tech/power-supply-regenerative.html>
- ▶ Low Energy Standby  
<https://www.brotherearth.com/en/tech/standby.html>
- ▶ Direct Drive  
<https://www.brotherearth.com/en/tech/direct-drive.html>
- ▶ Low-Noise Belt Drive  
[https://www.brotherearth.com/en/tech/hsm\\_belt-driving.html](https://www.brotherearth.com/en/tech/hsm_belt-driving.html)

Toward a Sustainable Society

## "Environmental Vision 2050" Resource Circulation



### Brother Group Environmental Vision 2050

#### VISION



## 02

The vision aims to ensure sustainable use of natural resources in business operations and minimize the environmental impact due to wastes.

## Resource Circulation

### GOAL

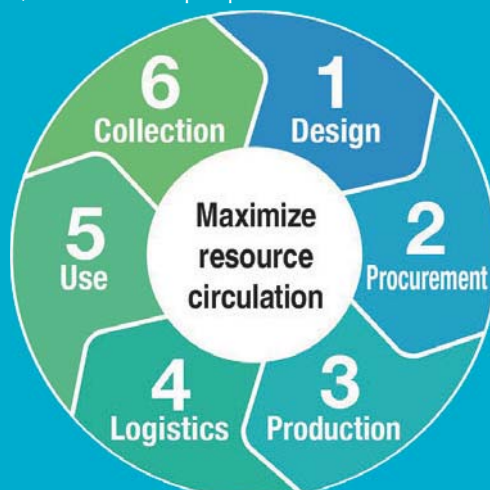
Toward 2050, the Brother Group will maximize resource circulation to ensure the sustainable use of natural resources and minimize the environmental impact due to wastes.

### Mid-term target for FY2030

Mechanisms for circulate resources have been established throughout the value chain. Efforts have been made to reduce the amount of new natural resources that are used in main products.

The group's manufacturing facilities continuously endeavor to ensure efficient use of water resources and proper treatment of wastewater.

The mid-term target aims to reduce\* the consumption of resources for main products, achieve efficient use of water resources, and ensure proper treatment of wastewater.



\*:Regarding the reduction of consumption of resources for products, the reduction target values will be set by FY2020 while monitoring the development of global environmental regulations.

## Toward a Sustainable Society

# "Environmental Vision 2050" Resource Circulation



## Brother Group Environmental Vision 2050

### VISION

## Resource Circulation

### Resource recycling stories

#### Open up further possibilities for the future global environment.

In Europe, we started recycling in 2004 when we adopted new toner cartridges suitable for recycling. We can deliver recycled cartridges with the same quality as new ones, by introducing an automatic recycling system. In 2014, Brother received two honorable awards in the "Responsible Business Award" by a British NPO "Business in the Community", for our excellent contribution to local communities and environment.



#### Video contents of [brotherearth.com](https://www.brotherearth.com)

- ▶ Package Design Optimization  
<https://www.brotherearth.com/en/tech/package-desing-optimization.html>

#### Water recycling: Brother Machinery Xian Co., Ltd.

Brother Machinery Xian Co., Ltd. is located in a relatively high water risk area due to lack of water recourses. In FY2018, BMX installed a rainwater tank on the premises for tree planting, which contributed to achieving the Brother Group's target of reducing water consumption.



## The Brother Group's activities to reduce water consumption

Securing safe water resources is an important environmental challenge for the global community. The Brother Group has been working to reduce water consumption to fulfill its responsibilities as an operator of manufacturing facilities in many countries and regions. In the Brother Group Environmental Action Plan 2018 (2016-2018), a target of reducing water consumption by 30% from FY2010 (April 1, 2010-March 31, 2011) levels by FY2018 (April 1, 2018-March 31, 2019) (per unit of sales) has been set, and various efforts were made to meet this target. As a result, the water consumption reduction rate became 30.5% in FY2018 and we achieved the target. We will continuously endeavor to ensure efficient use of water resources and proper treatment of wastewater.

## Toward a Sustainable Society

# "Environmental Vision 2050" Resource Circulation



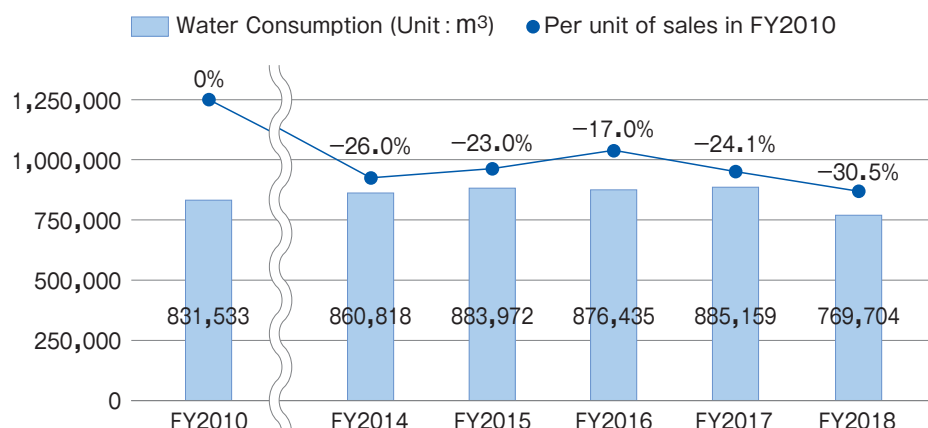
## Brother Group Environmental Vision 2050

### VISION

## Resource Circulation

### The Brother Group's activities to reduce water consumption

Changes in water consumption at the Brother Group



#### Scope of aggregation

FY2010	FY2014~FY2018
Eight business sites in Japan (head office of Brother Industries, Ltd., Mizuho Manufacturing Facility, Hoshizaki Manufacturing Facility, Minato Manufacturing Facility,*1 Momozono Manufacturing Facility, Kariya Manufacturing Facility, Research & Development Center, and Logistics Center), Brother Industries (U.K.) Ltd., Taiwan Brother Industries, Ltd., Zhuhai Brother Industries, Co., Ltd., Brother Machinery Xian Co., Ltd.,*2 Brother Industries (Shenzhen), Ltd.,*3 Brother Technology (Shenzhen) Ltd., Brother Industries Technology (M) Sdn. Bhd.,*4 Brother Industries (Vietnam) Ltd., Nissei Corporation, Mie Brother Precision Industries, Ltd., and Brother Industries (Slovakia) s.r.o.	Brother Industries Saigon, Ltd., Brother Industries (Philippines), Inc. and Brother Machinery Vietnam Co., Ltd. were added to the scope of aggregation on the left.

\*1: The Minato Manufacturing Facility stopped production on September 30, 2017.

\*2: Brother Machinery Xian Co., Ltd. is a business site established through the merger of Xian Brother Industries, Co., Ltd. (formerly Xian Typical Brother Industries, Co., Ltd.) with Brother Sewing Machine Xian Co., Ltd. in 2010. In the same year, Brother Sewing Machine (Shanghai) Co., Ltd. transferred its business to Brother Machinery Xian Co., Ltd.

\*3: Brother Industries (Shenzhen), Ltd. was subject to an absorption-type merger in October 2016, with Brother Technology (Shenzhen) Ltd. as the surviving company.

\*4: Brother Industries Technology (M) Sdn. Bhd. terminated its business operations on March 31, 2017.

► Data Collection (Environment)  
<https://global.brother/en/eco/data>



Toward a Sustainable Society

## "Environmental Vision 2050" Biodiversity Conservation



### Brother Group Environmental Vision 2050

*VISION*

01  
Reduction of CO<sub>2</sub>  
Emissions

02  
Resource Circulation

03  
Biodiversity  
Conservation

# 03

The vision aims to minimize the environmental impact of business operations and promote activities to restore and conserve the ecosystem beyond the impact.

## Biodiversity Conservation

### GOAL

By 2050, the Brother Group will minimize the environmental impact of business operations on the ecosystem and promote activities to restore and conserve the ecosystem beyond the impact.

### Mid-term target for FY2030

The Brother Group will assess the environmental impact of its business operations on the ecosystem and the effectiveness of restoration and conservation activities, and work to avoid and reduce the environmental impact on the ecosystem.

The manufacturing and sales facilities of the entire group will work on ecosystem restoration and conservation activities on a voluntary basis depending on the situation in each region.

Based on the mid-term target, the Brother Group will continue activities to reduce environmental impact on the ecosystem, quantitatively evaluate respective activities, and properly avoid and reduce environmental impact on the ecosystem.

## Toward a Sustainable Society

# "Environmental Vision 2050" Biodiversity Conservation



## Brother Group Environmental Vision 2050

### VISION

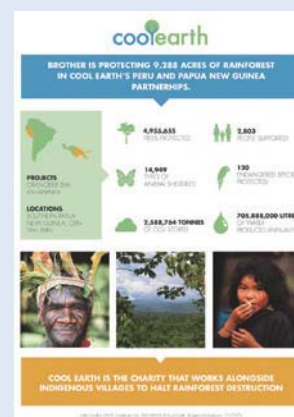
## Biodiversity Conservation

### Biodiversity conservation stories

#### Biodiversity conservation activity enabling resource recycling to reduce CO2 emissions

In 2009, BROTHER INTERNATIONAL EUROPE LTD. (BIE) teamed up with Cool Earth, a U.K.-based NPO working to protect the natural environment in the Amazon. In collaboration with 20 Brother sales companies in Europe, the partners are working to collect consumables such as toners and ink cartridges in an effort to promote the "Cool Earth Eco-Rewards initiative", which provides Cool Earth with funding for activities.

The funding is used for protecting the rainforest in Peru and the endangered species that inhabit the area. In FY2015, it expanded its scale by incorporating the "Click for the Earth" on the Brother Group's environmental website "brotherearth.com" into Cool Earth donation activities. BIE will continuously support this activity.



**PDF** Certificate of Donations issued for BIE by "Cool Earth" (October, 2018) [PDF/1.4MB]  
<https://global.brother/-/media/global/eco/pdf/data/en/181030-Certificate.ashx>

▶ <https://www.brother.co.uk/recycling/cool-earth>

#### Ongoing project to combat desertification and help improve the living conditions of the local people

Desertification is rapidly progressing in the Inner Mongolia Autonomous Region of China (Inner Mongolia).

To reforest the once green plain, local Brother employees planted 10,000 seedlings together with the OISCA members and the local people. To water these seedlings, well drilling was also conducted and the groundwater was successfully pumped up. Gradually but steadily, new green started rooting in the desert. The project members also support the local residents, by proposing new alternative livestock and ways of selling herbal medicine.



▶ Data Collection (Environment)  
<https://global.brother/en/eco/data>

Toward a Sustainable Society

## "Environmental Vision 2050" Biodiversity Conservation



### Brother Group Environmental Vision 2050

*VISION*

## Biodiversity Conservation

### Biodiversity conservation stories

#### Video contents of [brotherearth.com](https://www.brotherearth.com)

- ▶ Japan - Brother's Forest Gujo, Project for restoring ecosystem and interacting with the locals  
<https://www.brotherearth.com/ja/activity/gujo.html>
- ▶ Thailand - Mangrove Reforestation Project  
<https://www.brotherearth.com/en/activity/thailand.html>
- ▶ Australia - Project Manta  
<https://www.brotherearth.com/en/activity/australia.html>
- ▶ China - Project for Combating Desertification in Inner Mongolia  
[https://www.brotherearth.com/en/activity/inner\\_mongolia.html](https://www.brotherearth.com/en/activity/inner_mongolia.html)
- ▶ China - A project to improve local environmental awareness in Zhuhai city  
<https://www.brotherearth.com/en/activity/zhuhai.html>
- ▶ The Americas - Environment and Education  
<https://www.brotherearth.com/en/activity/usa.html>
- ▶ Slovakia - Tatras mountains the reforestation project  
<https://www.brotherearth.com/en/activity/slovakia.html>

## Toward a Sustainable Society

# Preventing Pollution and Managing Chemical Substances



## Preventing pollution associated with different sources

To become an environmentally advanced company, the Brother Group is committed to continually reducing environmental impact under the Brother Group Environmental Policy, throughout the life cycle of products (from development and design of products, procurement of parts and materials to production, packaging and logistics, use by customers, collection, and recycling), placing priority on maintaining compliance with legal regulations and preventing environmental pollution in the respective countries and regions in which Brother operates. The risks and opportunities of environmental pollution are recognized as follows. Efforts have been made to prevent pollution through ISO 14001 activities, etc.

<b>Risks</b>	<ul style="list-style-type: none"> <li>• Increased environmental impact due to air, water, and soil pollution, etc. caused by leakage and outflow of hazardous chemical substances, and loss of biodiversity</li> <li>• Increase in management cost and capital investment due to reinforced environmental laws and regulations in and outside Japan</li> <li>• Compensation due to environmental pollution and health damage, and decontamination costs</li> <li>• Delay in business operations due to cancellation of sales or modification of land if soil pollution is found, and cost incurred to clean the land</li> <li>• Operation suspension/postponement caused by decontamination and unexpected additional measures</li> <li>• Social sanctions due to inappropriate responses to soil contamination or accidents</li> <li>• Asset value decline due to soil contamination</li> </ul>
<b>Opportunities</b>	<ul style="list-style-type: none"> <li>• Biodiversity conservation by preventing leakage and outflow of hazardous chemical substances</li> <li>• Permanent pollution prevention by maintaining a high compliance awareness &amp; reduction in management cost</li> <li>• Enhanced social trust by preventing soil contamination and accidents, and expended business chances</li> <li>• Asset value improvement by preventing soil contamination and accidents</li> </ul>

## Toward a Sustainable Society

# Preventing Pollution and Managing Chemical Substances



## Preventing pollution associated with different sources

### Managing and reducing chemical substances

#### Main activities at business sites in Japan

Brother Industries, Ltd. (BIL) participated in a priority review in line with the introduction of the PRTR system by KEIDANREN (Japan Business Federation) in 1998. BIL started to report the amount of chemical substances transferred and released, starting with those used at the business sites in FY1997 (April 1, 1997-March 31, 1998).

**PDF** Brother Industries, Ltd. FY2014-FY2018 balance of substances subject to PRTR [PDF/411KB]  
<https://global.brother/-/media/global/eco/pdf/data/en/prtr.ashx>

Since 2008, BIL has systematically commissioned disposal in accordance with the Act on Special Measures concerning Promotion of Proper Treatment of PCB Wastes. At the end of FY2017, BIL completed the commissioning of disposal of all electrical equipment containing waste PCB oil. Regarding high-concentration PCB waste, BIL has disposed of 2,468 units including capacitors and ballasts for fluorescent lamps. Regarding low-concentration PCB waste, BIL has disposed of 41 units of waste electrical equipment including transformers, capacitors, etc. Regarding waste PCB oil, BIL will complete the disposal of about 70 kg by the end of FY2019.

Regarding fluorocarbons, air conditioning equipment has been managed using the refrigerant management system of the Japan Refrigerants and Environment Conservation Organization (JRECO) since 2015 after the Act on Rational Use and Proper Management of Fluorocarbons came into force (April 2015). This system enables centralized and real-time monitoring of about 1,600 air conditioners at BIL in Japan.

#### Main activities at manufacturing facilities outside Japan

Manufacturing facilities outside Japan have identified applicable laws and regulations in respective regions within ISO 14001 systems. Management frameworks have also been established to ensure local environmental management.

The Brother Green Procurement Management System is in operation with collaboration from suppliers to carefully select parts, materials and sub-materials used in production processes to prevent contamination with harmful chemical substances.

## Toward a Sustainable Society

# Preventing Pollution and Managing Chemical Substances



## Preventing pollution associated with different sources

### Concept of preventing air, water, and soil pollution

The Brother Group gives high priority to preventing environmental accidents by reviewing target facilities and processes and switching to alternatives that are less likely to cause pollution. When managing existing facilities, activities to prevent pollution include setting and complying with voluntary management targets through ISO 14001.

### Preventing air pollution

Replacing fossil fuel-fired boilers and heaters with electric or city gas-fired boilers and heaters has reduced the impact of emissions to the environment. In fact, city gas has a low CO<sub>2</sub> emission coefficient. Thus, efforts are underway to prevent air pollution.

The risks of global warming due to CO<sub>2</sub> emissions, as well as soil and underground water contamination have been reduced due to the abolishment of heavy oil-fired boilers at all business sites of BIL including employees' dormitories.

Solar water heaters and heat pump equipment have replaced the oil boilers used for employees' dormitories at manufacturing facilities outside Japan. The electricity supply for Brother Technology (Shenzhen) Ltd. (BTSL) in Huanan, China, had been private power generation systems (fueled by heavy oil). They were replaced by the city's public utility service, thus reducing the risk of air pollution, CO<sub>2</sub> emissions and underground water pollution.

A catalytic combustor was introduced in 1994 to the coating process at the Kariya Manufacturing Facility to reduce VOC (volatile organic compounds) emissions. Exhaust gases are burned to control VOC emissions and prevent odors. Ongoing measures also include switching to materials with low organic solvent content and reducing consumption. BTSL set up VOC treatment facilities and implements measures for reducing emissions from the processes used to form resin products and manufacture printed wiring boards for mounting parts.



## Toward a Sustainable Society

# Preventing Pollution and Managing Chemical Substances



## Preventing pollution associated with different sources

### Concept of preventing air, water, and soil pollution

### Preventing water pollution

Measures to prevent water pollution include wastewater treatment facilities introduced at manufacturing facilities, such as at the Kariya Manufacturing Facility (in Japan) to treat its wastewater with the latest membrane bioreactor (in FY2011 [April 1, 2011-March 31, 2012]), Brother Industries Saigon, Ltd. (in Vietnam) to treat wastewater from the parts cleaning process, Brother Machinery Xian Co., Ltd. (in China) to treat its pre-coating surface treatment wastewater, Taiwan Brother Industries, Ltd. to treat pre-coating surface treatment wastewater, and Brother Industries (Vietnam) Ltd. (which expanded its factory in 2012) to replace the conventional wastewater treatment facility with a biofilm type facility. The increased treatment capacity has significantly lowered the environmental impact values of wastewater. At Brother Machinery Vietnam Co., Ltd. (BMV), which was established in 2013, a wastewater purification plant was introduced. Waste heat generated in the manufacturing facility is utilized to remove the water content of the wastewater from the coating pretreatment process, reducing the volume to sludge. By eliminating the waste fluid, the solid waste is appropriately treated. Other business sites do not have specified activities that cause significant environmental impact. At sites without sewage infrastructure, facilities have been installed to clean sewage and treat the resulting wastewater. These facilities comply with regional standards in accordance with the ISO 14001 facility management procedure.

As part of Brother's preventative measures, we periodically conduct exercises to assess for potential incidents such as hazardous wastewater flowing into sewage or permeating into soil. Other specific preventative measures include equipping wastewater treatment facilities with systems which constantly monitor COD (chemical oxygen demand) and installing oil traps for wastewater from cafeterias, to cope with an oil outflow accident. BOD (biochemical oxygen demand) and n-hexane extracts (an index of the oil content in water, etc.) are regularly measured and monitored.



## Toward a Sustainable Society

# Preventing Pollution and Managing Chemical Substances



## Preventing pollution associated with different sources

### Concept of preventing air, water, and soil pollution

#### Preventing soil contamination

Since 1997 Brother Industries, Ltd, has been conducting a survey on soil and underground water pollution caused by organochlorine compounds and hazardous heavy metal, which was used by the company in the past. Once contamination is confirmed, we conduct measures to prevent spread of pollutant as well as cleanup and also report to the local government that has jurisdiction. At the sales or change of the company-owned land, we conduct soil surveys in accordance with regulatory standards. When we purchase a land outside Japan to build a plant, we conduct a survey to check the usage history as well as soil analysis to fully grasp/confirm the status of pollution.

At Nissei Corporation (Nissei), a manufacturer of reducers and high precision gears, etc., a survey conducted in FY2015 found that the soil and underground water at the main factory had been contaminated with lead and its compounds due to damage to the hazardous substance storage facility. At the parking lot of the site of the former headquarters, the soil was found to be contaminated with organochlorine compounds. Nissei reported the contaminations to the local government that has jurisdiction, and coped with the problems properly based on guidance offered by the local government. The status of the underground water is confirmed to be normal based on monitoring.

## Toward a Sustainable Society

# Preventing Pollution and Managing Chemical Substances



## Preventing pollution associated with different sources

### Concept of preventing air, water, and soil pollution

### Preventing generation of noise, vibration, and offensive odors

BIL takes great care to prevent the generation of noise, vibration and offensive odors, so as not to cause inconvenience to local communities including homes, schools, and pedestrians. To prevent the generation of noise and vibration, facilities that cause noise or vibration such as chillers and exhaust outlets are installed or relocated as far away within the manufacturing facilities as possible. To prevent the generation of noise, BTSL (a manufacturing facility outside Japan) has set up a noise prevention system at the water treatment facility. Ongoing efforts have been made to prevent noise by using noise-absorbing flexible ducts and replacing exhaust fans with inverter-driven types, in particular.

To prevent the generation of offensive odors, filters and/or deodorizing equipment are provided at exhaust outlets at various facilities, including coating facilities. Measures in the coating process also include switching to paints with lower organic solvent content (which gives rise to offensive odor) and reducing the consumption of paints. For measures to prevent noise and offensive odors, facilities that cause noise and offensive odors are buried underground. For example, an underground type water tank has been employed at the new wastewater treatment facility that was built at the Kariya Manufacturing Facility in FY2011. In particular, noise and offensive odors are measured when facilities are built, and then constantly monitored after construction is complete.

Nissei implemented further measures to reduce the noise affecting its neighborhood by relocating the die-cast machine within the factory (away from the direction of the housing lots) and stopping and scrapping a large melting furnace (to reduce the noise generated when raw materials were charged) in FY2016.

## Creating Eco-conscious Products

### Product Life Cycles



### Setting ever higher targets for reducing environmental impact at each stage

The Brother Group is committed to reducing environmental impact at all stages of the life cycle of its products. This is the guiding principle of the group's manufacturing activities.



Since each of the stages are closely interlinked in terms of environmental impact, continuous efforts are required to make incremental improvements and to achieve technological innovation. The Brother Group aims to make such efforts throughout its operations in order to continuously deliver eco-conscious products to customers.

The Brother Group Environmental Action Plan 2018 (2016-2018) set ever-higher targets for each of these stages to accelerate efforts. Specific activities included enhancing eco-conscious design processes and green procurement, continuous reduction in environmental impact at manufacturing facilities (such as CO<sub>2</sub> emissions and water consumption), reduction in CO<sub>2</sub> emissions in logistics (for example, by optimizing packaging), further improvements in energy-saving performance during product use, and enhancement in the reusability, recyclability, and collection system for either products or consumables.

Moreover, under the Brother Group Environmental Action Plan 2021 (2019-2021), we strive to aggressively tackle the major challenges set in the “Brother Group Environmental Vision 2050” together with stakeholders, such as manufacturing eco-conscious products, reducing CO<sub>2</sub> emission in the entire value chain, reinforcing resource circulation in business operations, lowering operational impact on ecosystem, expanding conservation activities, observing environmental laws and regulations, and appropriately responding to social demands.

## Creating Eco-conscious Products

# Product Life Cycles



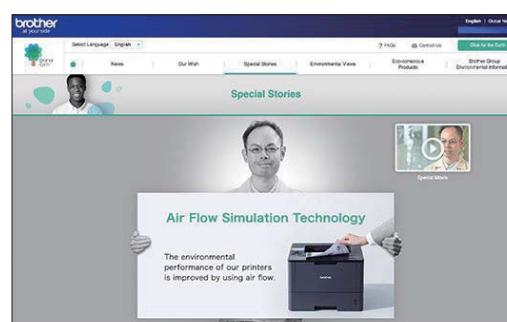
## 1. Development and design

### Basic policy

Brother products are developed and designed to:

- comply with laws and regulations of the various countries and regions where sold;
- be compact and lightweight to conserve resources;
- achieve the top levels of energy conservation performance in the industry;
- manage hazardous chemical substances, as defined in the Brother Green Procurement Standards;
- be easily recycled at the end of life; and
- meet emission standards (including chemical substances, noises, and etc.).

It is extremely significant to take measures at this stage for environmental considerations within product life cycles. For certain key criteria in the “product environmental assessments”, target values are set at the initial stage of development and design.



▶ [Brother's activities] Air Flow Simulation Technology  
<https://www.brotherearth.com/en/tech/air-flow.html>

### Measures

Brother Industries, Ltd. (BIL) conducts “product environmental assessments” at key stages of development and ensures eco-conscious design by addressing the product life cycle from material procurement, production, products use and through to the collection and recycling at the end of life. Also, BIL actively acquires environmental labels in respective countries. For customers in Europe and the U.S. in particular, BIL discloses product information in accordance with The Eco Declaration (ECMA-370).

## Creating Eco-conscious Products

# Product Life Cycles



## 1. Development and design

### Measures

### Product environmental impact assessments and Life Cycle Assessment (LCA)

BIL conducts product environmental impact assessments in order to evaluate the impact that products have on the environment. There are 51 assessment items. For key criteria, improvement must be achieved at the product development stage.

► The Eco Declarations  
<https://global.brother/en/eco/product/declaration>



Product environmental impact assessment flow

### Key Criteria for environmental impact assessment

- Size and weight
- Parts reuse/recyclability, disassembly/dismantling, avoidance of difficult-to-disassemble structures, integration of resin materials
- Hazards during production or use
- Size, weight and recyclability of packaging materials
- Material labeling, compliance with related laws and environmental labels

## Creating Eco-conscious Products

# Product Life Cycles



## 1. Development and design

### Measures

We conduct an LCA that quantitatively provides numerical data for the "degree of impact on the environment" at each stage of its life cycle. Environmental load characteristics and improvement points are identified and the improvement effect is confirmed for each product. Evaluation results are released on the BIL website showing the products which have acquired various environmental labels and on the website managed and operated by the Sustainable Management Promotion Organization under the name of the EcoLeaf environmental label. BIL also discloses its carbon footprint.

From 2007, the LCA information has been shared internally on the intranet of BIL. As of March 2019, there are a total of 238 EcoLeaf products (25 products were newly released in FY2018 [April 1, 2018-March 31, 2019]), mainly image devices. As for other categories, there are 120 products (9 products were newly released in FY2018). The Brother Group will continue to reduce the environmental impact of products by using LCA techniques.



- ▶ Sustainable Management Promotion Organization "EcoLeaf Environmental Labeling Program"  
<https://ecoleaf-label.jp/english/>
- ▶ Sustainable Management Promotion Organization "CFP Program"  
<https://www.cfp-japan.jp/english/>
- ▶ [Brother's activities] Air Flow Simulation Technology  
<https://www.brotherearth.com/en/tech/air-flow.html>

## Creating Eco-conscious Products

# Product Life Cycles



## 2. Procurement

### Basic policy

We check parts and materials that are used to make products, to ensure:

- they do not contain hazardous materials, and
- they are made via an eco-friendly process.

In this way, we give priority to purchasing parts and materials.

### Measures

Brother works with suppliers and uses the IT-based Brother Green Procurement Management System, to manage data on chemicals in products and promote the use of alternative parts/substances. This is regularly updated in response to the candidate list substances of very high concern defined within the REACH Regulation.

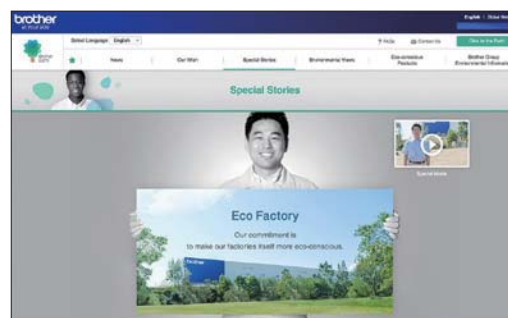
► Environmental Compliance  
<https://global.brother/en/eco/product/regulation>

## 3. Production

### Basic policy

All production facilities of the Brother Group manufacture products with due consideration being given to:

- ensuring efficient use of materials, energy, and water resources, etc.;
- reducing pollutants released into the atmosphere and wastewater;
- preventing the generation of waste; and
- recycling waste generated.



► [Brother's activities] Eco Factory  
<https://www.brotherearth.com/en/tech/ecofactory.html>



## Creating Eco-conscious Products

# Product Life Cycles

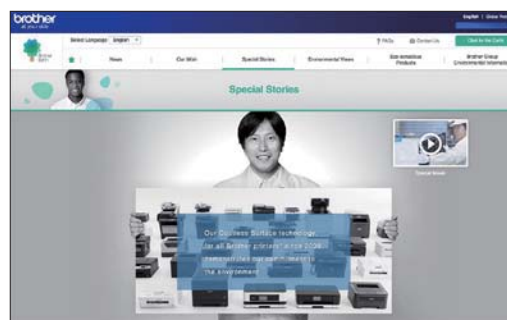


### 3. Production

#### Measures

- Electrical power consumption and CO<sub>2</sub> emissions are reduced by ensuring all manufacturing facilities efficiently run equipment.
- The factories are also focusing on reducing the volumes of process waste and any waste generated is treated within the scope of zero landfill.

- ▶ Environmental Action Plan  
<https://global.brother/en/eco/management/action-plan>
- ▶ "Environmental Vision 2050" Reduction of CO<sub>2</sub> Emissions  
<https://global.brother/en/eco/sustainable-society/co2>
- ▶ "Environmental Vision 2050" Resource Circulation  
<https://global.brother/en/eco/sustainable-society/resource-circulation>
- ▶ Preventing Pollution and Managing Chemical Substances  
<https://global.brother/en/eco/sustainable-society/pollution>
- ▶ [Brother's activities] Eco Factory  
<https://www.brotherearth.com/en/tech/ecofactory.html>
- ▶ [Brother's activities] Coatless Surface  
<https://www.brotherearth.com/en/tech/coatless.html>



- ▶ [Brother's activities] Coatless Surface  
<https://www.brotherearth.com/en/tech/coatless.html>

### 4. Packaging and logistics

#### Basic Policy

Brother is committed to:

- reducing product packaging and waste where possible; and
- reducing CO<sub>2</sub> emissions in distribution and transport.

## Creating Eco-conscious Products

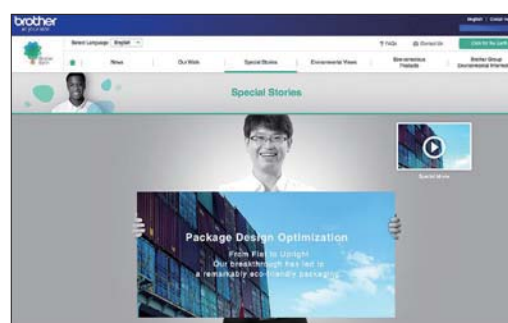
### Product Life Cycles



## 4. Packaging and logistics

### Measures

- We are applying simpler and smaller packaging.
  - We are combining product categories when arranging shipments to maximize loads.
  - We continue to review distribution routes.
- ▶ "Environmental Vision 2050" Reduction of CO<sub>2</sub> Emissions  
<https://global.brother/en/eco/sustainable-society/co2>
- ▶ [Brother's activities] Package Design Optimization  
<https://www.brotherearth.com/en/tech/package-design-optimization.html>



- ▶ [Brother's activities] Package Design Optimization  
<https://www.brotherearth.com/en/tech/package-design-optimization.html>

## 5. Use

### Basic policy

Consideration for our customers' use of our products:

- they do not consume excessive energy; and
- our products can be used safely, conveniently and comfortably.

We also endeavor to disclose overall environmental information about products.



Examples of environmental labels and energy-saving standard compliance marks awarded to environmentally friendly products

## Creating Eco-conscious Products

# Product Life Cycles



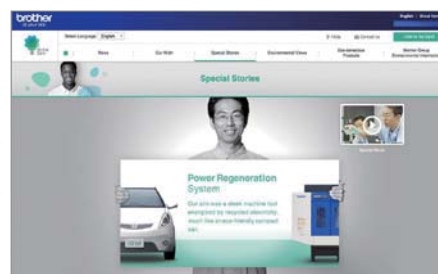
## 5. Use

### Measures

We are strengthening development of eco-friendly products focusing on energy conservation.



- ▶ [Brother's activities] Low energy standby  
<https://www.brotherearth.com/en/tech/standby.html>



- ▶ [Brother's activities] Power Regeneration System  
<https://www.brotherearth.com/en/tech/power-supply-regenerative.html>



- ▶ [Brother's activities] Low-noise belt drive  
[https://www.brotherearth.com/en/tech/hsm\\_belt-driving.html](https://www.brotherearth.com/en/tech/hsm_belt-driving.html)



- ▶ [Brother's activities] Direct drive  
<https://www.brotherearth.com/en/tech/package-desing-optimization.html>

- ▶ Environmental Labels  
<https://global.brother/en/eco/product/label>
- ▶ [Brother's activities] Low energy standby  
<https://www.brotherearth.com/en/tech/standby.html>
- ▶ [Brother's activities] Power Reeneration System  
<https://www.brotherearth.com/en/tech/power-supply-regenerative.html>
- ▶ [Brother's activities] Low-noise belt drive  
[https://www.brotherearth.com/en/tech/hsm\\_belt-driving.html](https://www.brotherearth.com/en/tech/hsm_belt-driving.html)
- ▶ [Brother's activities] Direct Drive  
<https://www.brotherearth.com/en/tech/direct-drive.html>

## Creating Eco-conscious Products

# Product Life Cycles

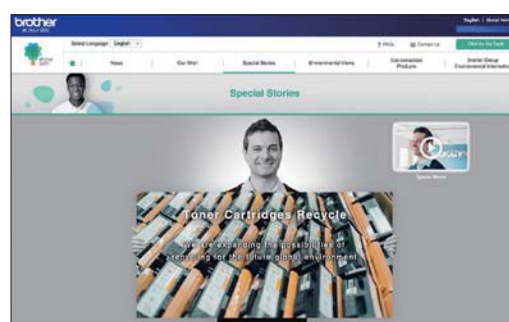


## 6. Collection and recycling

### Basic policy

As considerations for the end of life of a product, we make efforts to:

- collect and recycle products and consumables at end of life; and
- design products so that they can be easily recycled.



▶【Brother's activities】Toner Cartridges Recycle  
<https://www.brotherearth.com/en/tech/toner-recycle.html>

### Measures

- Ink cartridges consumed in Japan: The "Ink Cartridge Return Project" is under way in collaboration with printing product manufacturers.
- Toner cartridges, drum units, and label writer tape cassettes consumed in Japan: Brother's own collection and recycling system is in place.
- Toner and ink cartridges consumed outside Japan: Collection and recycling systems have been introduced in more than 40 countries and regions.
- In Europe, products are collected and recycled in accordance with the WEEE Directive. In Australia and New Zealand, products are collected and recycled on a voluntary basis. Regarding corporate customers in Japan, used Brother products (fax machines, printers, and All-in-Ones) are collected and recycled in collaboration with business partners.
- Participating in the Bellmark campaign by collecting used cartridges, for environmental conservation and educational support.

## Creating Eco-conscious Products

# Product Life Cycles



## 6. Collection and recycling

### Measures

#### [Brother's activities] Conducting eco activities through the Bellmark campaign (Japan)

Brother Sales, Ltd. joined the Bellmark campaign in order to (i) actively participate in social contribution activities via support for education and (ii) improve the collection rate of used cartridges and promote recycling.



#### Examples of products in the Bellmark campaign



▶ Collection and Recycling  
<https://global.brother/en/eco/product/recycling>

▶ [Brother's activities] Toner Cartridges Recycle  
<https://www.brotherearth.com/en/tech/toner-recycle.html>

## Creating Eco-conscious Products

# Environmental Compliance



## Complying with environmental laws and regulations in various countries with full collaboration of the supply chain

In recent years, various laws and regulations have been introduced at both the national and regional levels. Legal and regulatory restrictions have been rising year after year regarding chemical substances and product areas covered. Legislation covers such areas as reducing power consumption during product use, as well as environmental and health impacts.

As a global company with operations in more than 40 countries and regions, the Brother Group believes that compliance with laws and regulations is the foundation of environmental risk management and product competitiveness. The Brother Group has developed activities in line with the Brother Group Environmental Action Plan, in order to ensure compliance with laws and regulations in all the countries and regions in which the Brother Group operates and to quickly prevent pollution and reduce environmental impacts with high ethical standards. To globally comply with regulations on chemical substances and energy-saving regulations on products, the Brother Group has been committed to continuously strengthening its framework for responding to the development of laws and regulations in respective countries and regions and offering eco-conscious products before new regulations come into force. Ensuring compliance with laws and regulations across the group has made it possible to quickly cope with needs for products and enhance sales and services. Also, the Brother Group started addressing social demands related to the environment, in addition to environmental laws and regulations.

To deliver environmentally conscious products, environmentally conscious parts and materials must be used. When procuring parts and materials, suppliers are asked to deliver parts and materials in accordance with the Brother Group Green Procurement Standards. Also, the Brother Group conducts audits on suppliers at least every three years to check their management systems and operations. Suppliers are required to make necessary improvements and guarantee that the goods that they supply meet the standards.

► Green Procurement  
<https://global.brother/en/eco/product/green-procurement>



## Creating Eco-conscious Products

# Environmental Compliance



## Complying with environmental laws and regulations in various countries with full collaboration of the supply chain

### Compliance with the RoHS Directive in different countries and regions

The RoHS Directive is an EU law that took effect in July 2006, banning the use of hazardous substances in electrical and electronic equipment. In response to this directive, the Brother Group worked with suppliers to build Brother's unique environmental information system, which is used to investigate, avoid, and manage chemical substances contained in products. In line with the subsequent revision, the Brother Group established a system to create technical documents and Declarations of Conformity (DoC) in 2012. Measures have been taken to cope with more restricted substances added in 2019. Meanwhile, since 2007, many countries and regions including China and South Korea have introduced laws and regulations that reflect the regulations of the RoHS Directive on hazardous substances contained in electrical and electronic equipment. Many more countries and regions are likely to follow suit. The Brother Group will properly ensure compliance with the laws and regulations in these countries and regions.

### Compliance with the REACH Regulation (EU)

REACH is the EU Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals. It came into force in June 2007 for chemical substances that are manufactured or imported. The Brother Group completed the registration of these applicable chemical substances by the deadline in June 2018, and has been continuously checking additional substances requiring registration. In EU countries, there are various obligations related to the SVHC (Substances of Very High Concern) content in products. The Brother Group improved the environmental information system to facilitate the investigation of SVHC content. In FY2009 (April 1, 2009-March 31, 2010), the Brother Group set up a system for collecting data from suppliers to improve disclosure of information on SVHC content. In FY2010 (April 1, 2010-March 31, 2011), the Brother Group developed a system for calculating the SVHC content in products and reporting it to the appropriate agency as necessary. Meanwhile, safety data sheets (SDSs) have been translated into EU languages and have been published on the website. In FY2012 (April 1, 2012-March 31, 2013), the SDSs were revised to comply with the revised REACH Regulation.



## Creating Eco-conscious Products

# Environmental Compliance



## Complying with environmental laws and regulations in various countries with full collaboration of the supply chain

### Compliance with energy-saving regulations in respective countries and regions

The Ecodesign (ErP) Directive (formerly, the EuP Directive, which came into effect in 2005, and was revised in 2009) was set up as a framework that requires the eco-conscious design of energy-related products sold in the EU, to help prevent global warming. The Brother Group uses the data in the environmental information system to calculate life-cycle assessment (LCA) results for the entire product life cycle and facilitate eco-conscious design, thereby ensuring quick compliance with the directive. Energy-saving technologies for applicable products were developed, and relevant procedures for product environmental impact assessments were updated for "imaging equipment (Lot 4)," "standby and off-mode losses (Lot 6)," "external power supply (Lot 7)," and "networked standby losses of energy using products" (Lot 26) (these are categories into which Brother's products fall) to put in place a framework for compliance. A system is in place to ensure compliance.

Countries and regions outside the EU have increasingly introduced laws and regulations requiring eco-conscious design and set energy conservation standards in respective product areas. The Brother Group has taken quick action to meet these laws and regulations.

### Compliance with the WEEE Directive, etc.

The WEEE Directive is an EU law that requires the collection and 3Rs (Reduce, Reuse and Recycle) of used electrical and electronic equipment. Member countries, distributors, producers, and other entities are required to fulfill the requirements in the design, sorting, collection, and recycling phases. The Brother Group complies with the WEEE Directive using collection and recycling routes in place in respective member countries. The Brother Group also works on collection and recycling on a voluntary basis in Australia and New Zealand.

In FY2009, the Brother Group ensured compliance with the Enforcement Ordinance of the Act on the Promotion of Saving and Recycling of Resources in South Korea. A collection and recycling system for Brother's products was developed in Japan in collaboration with partners, and commenced in FY2012. In the US, a collection and recycling system is operated by contractors in accordance with state and federal laws.

In recent years, WEEE-based bills have been drafted and legislated in other countries and regions, primarily in Southeast Asia. The Brother Group obtains the latest information through sales companies in respective countries and regions, manufacturers' associations, information services, etc., and establishes a collection and recycling system in line with the requirements to ensure legal compliance.

## Creating Eco-conscious Products

# Environmental Compliance



## Complying with environmental laws and regulations in various countries with full collaboration of the supply chain

### Efforts to prevent illegal logging (EU and Australia)

The EU Timber Regulation and Australia's Illegal Logging Prohibition Act prohibit placing timber products (including paper products) derived from illegally harvested timber on the market. The regulations also require investigations and assessments of suppliers to prevent mixing of illegally harvested timber. The Brother Group collected information from suppliers about inkjet and thermal paper as well as paper packaging materials including product package boxes, and confirmed the legality of timber used as a raw material.

## Creating Eco-conscious Products

# The Eco Declarations



## The Eco Declarations

Ecma International is an industry association founded in 1961, dedicated to the standardization of information and communication systems.

THE ECO DECLARATION (TED) has been created by Ecma International to provide environmental information on known regulations, standards, guidelines and currently accepted practices in an industry standard format.

Brother Group provides TED for Printers, All-in-Ones, Label Printers and Scanners.

## The Eco Declaration for Europe

Color Laser Printers/All-in-Ones

[WEB](https://global.brother/en/eco/product/declaration#cl_laser) [https://global.brother/en/eco/product/declaration#cl\\_laser](https://global.brother/en/eco/product/declaration#cl_laser)

Mono Laser Printers/All-in-Ones

[WEB](https://global.brother/en/eco/product/declaration#mn_laser) [https://global.brother/en/eco/product/declaration#mn\\_laser](https://global.brother/en/eco/product/declaration#mn_laser)

Inkjet Printers/All-in-Ones

[WEB](https://global.brother/en/eco/product/declaration#inkjet) <https://global.brother/en/eco/product/declaration#inkjet>

Mobile Printers

[WEB](https://global.brother/en/eco/product/declaration#mobile) <https://global.brother/en/eco/product/declaration#mobile>

Scanners

[WEB](https://global.brother/en/eco/product/declaration#scanner) <https://global.brother/en/eco/product/declaration#scanner>

Label Printers

[WEB](https://global.brother/en/eco/product/declaration#label) <https://global.brother/en/eco/product/declaration#label>

Tape Creator

[WEB](https://global.brother/en/eco/product/declaration#tc) <https://global.brother/en/eco/product/declaration#tc>

Stamp Creator

[WEB](https://global.brother/en/eco/product/declaration#stamp) <https://global.brother/en/eco/product/declaration#stamp>

## Creating Eco-conscious Products

# Green Procurement



### Green procurement policy

At the Brother Group which operates its business globally, safety and environmental impacts are prime considerations at every stage of a product's life cycle, from design, development, manufacturing, customer usage, and disposal, to reuse and recycling, as set out in its basic environmental policy of the Brother Group Environmental Policy. Under the "Brother Group Global Charter", the Brother Group began implementing green procurement activities from 2001 in which we prioritize procuring environmentally friendly parts and materials for all products that we sell. In 2002, the Brother Group issued the Brother Group Green Procurement Standards (Ver. 1.0) which includes the Brother Group Environmental Policy and specific requests to suppliers, and describes the flow of operations for the control of certain chemical substances contained in products to promote the manufacture of environmentally conscious products with suppliers. The Brother Group conducts audits on suppliers at least every three years to check their management systems and operations comply with laws and regulations, and to verify that the goods that they supply meet the standards.

#### Policy of green procurement activities

The Green Procurement Standards apply to the following goods that the Brother Group handles:

- Parts, materials and sub-materials used for products designed, manufactured, and sold by the Brother Group;
- Parts, materials and sub-materials used for products designed and manufactured by the Brother Group for a third party;
- Products designed and manufactured by a third party for the Brother Group and sold under the Brother Group's trademark;
- Products for sale that incorporate product(s) purchased from another company (or companies);
- Products purchased from another company to be sold "in their original state";
- Promotional goods.

## Creating Eco-conscious Products

# Green Procurement



## Brother Group Green Procurement Standards

### Quick compliance with environmental laws and regulations in various countries

The Brother Group has updated the Brother Group Green Procurement Standards as necessary to comply with various countries' environmental laws and regulations, which are constantly being extended in scope. The standards are released in Japanese, English, Chinese (simplified and traditional), and Vietnamese. Based on the Brother Group Green Procurement Standards, the Brother Group restricts the inclusion of certain substances in all goods which are supplied to the Brother Group, the use of substances is restricted globally in accordance with laws and regulations, etc. and they are designated as "prohibited chemical substances (Level A)," and their content in goods is managed. Meanwhile, controlled substances specified in chemSHERPA, the system endorsed by the Ministry of Economy, Trade and Industry of Japan, are designated as "controlled substances (Level B)," and their content in goods which are supplied to the Brother Group is managed.

To help build society for sustainable development, the Brother Group encourages the suppliers to actively work on the conservation of biological diversity and formulate plans to reduce greenhouse gas emissions.

### Brother Group Green Procurement Standards

**PDF** Green Procurement Standards Japanese (version 9.1) [PDF/435KB]  
[http://download.brother.com/pub/jp/eco/pdf/gpsj\\_ver9\\_1.pdf](http://download.brother.com/pub/jp/eco/pdf/gpsj_ver9_1.pdf)

**PDF** Green Procurement Standards English (version 9.1) [PDF/609KB]  
[http://download.brother.com/pub/com/en/eco/pdf/gpse\\_ver9\\_1.pdf](http://download.brother.com/pub/com/en/eco/pdf/gpse_ver9_1.pdf)

**PDF** Green Procurement Standards Chinese-simp (version 9.1) [PDF/724KB]  
[http://download.brother.com/pub/com/cn/eco/pdf/gpssc\\_ver9\\_1.pdf](http://download.brother.com/pub/com/cn/eco/pdf/gpssc_ver9_1.pdf)

**PDF** Green Procurement Standards Chinese-trad (version 9.1) [PDF/1MB]  
[http://download.brother.com/pub/com/cn/eco/pdf/gpstc\\_ver9\\_1.pdf](http://download.brother.com/pub/com/cn/eco/pdf/gpstc_ver9_1.pdf)

**PDF** Green Procurement Standards Vietnamese (version 9.12) [PDF/797KB]  
<http://download.brother.com/pub/com/vn/eco/pdf/gpsv-ver9-12.pdf>

- ▶ Compliance with the RoHS Directive in different countries and regions  
<https://global.brother/en/eco/product/regulation#rohs>
- ▶ Compliance with the REACH Regulation (EU)  
<https://global.brother/en/eco/product/regulation#reach>
- ▶ Promoting CSR Procurement  
<https://global.brother/en/csr/stakeholder/partner/csr>

## Creating Eco-conscious Products Green Procurement



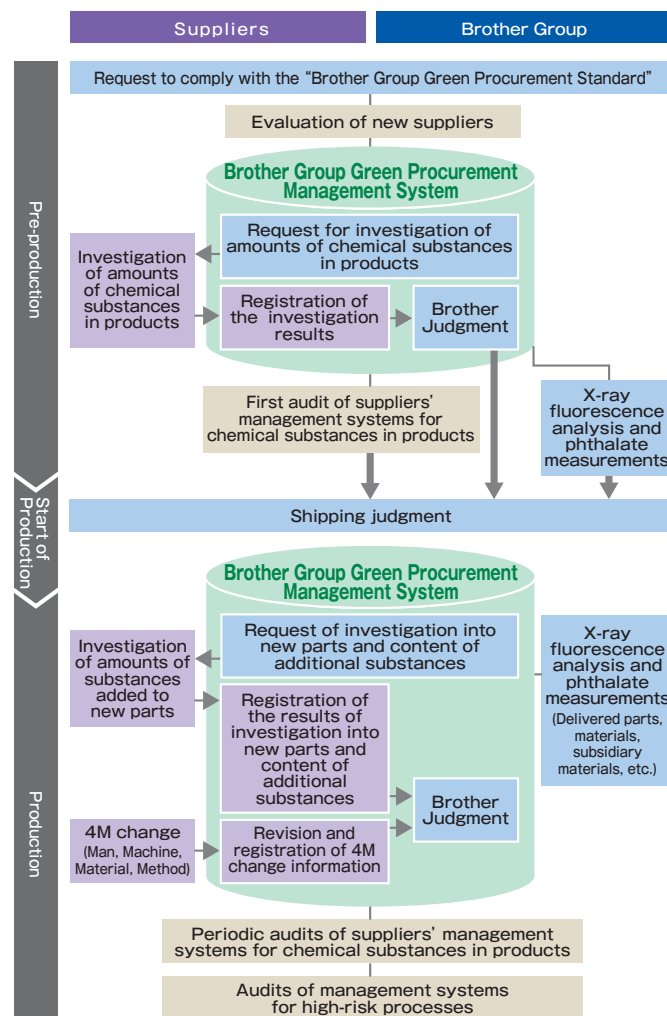
### Brother Group Green Procurement Management System

The Brother Group strictly controls chemical substances in products through a green procurement management system

The Brother Group introduced the Green Procurement System in 2004 and requests all suppliers to cooperate in investigations into the content of chemical substances in products.

The Brother Group also supported the concept of chemSHERPA, a scheme for sharing information about chemical substances contained in products recommended by the Japanese Ministry of Economy, Trade and Industry. In March 2018, the system was updated to handle data in chemSHERPA format.

### Flow of operations for the control of chemical substances in products at the Brother Group



## Creating Eco-conscious Products

# Environmental Labels



## Actively acquiring environmental labels from around the world

**A yardstick for use when selecting products, and helping reduce their overall environmental impact of society**

Environmental labels indicate that the selected product shows consideration for the environment, and provide customers helpful information when selecting eco-conscious products. Environmental labels come in three types (Type I, II and III) standardized by the International Organization for Standardization (ISO) or a compliance label that indicates that the product complies with specific performance criteria.

There are various environmental labels in the countries and regions around the world in which the Brother Group operates. The respective labels (which are based on different eco-conscious requirements and standards) are considered to meet stakeholders' environmental requirements and the Brother Group actively acquires the labels in the countries and regions where its products are sold.

Under this policy, targets are set in the Brother Group Environmental Action Plan 2021 (2019-2021) as well as in the Brother Group Environmental Action Plan 2018 (2016-2018) to acquire specific environmental labels including the Angel, Eco Mark, Nordic Swan, EPEAT, and China's Ten Circle Mark, and significant efforts are made to fulfill the targets.

Below are the main environmental labels acquired by Brother products.

### Type I labels

Awarded based on specific criteria judged by third party organizations



[www.blauer-engel.de/uz205](http://www.blauer-engel.de/uz205)

#### The Blue Angel (Germany)

This eco-label is issued by the Federal Environmental Agency, the German Institute for Quality Assurance and Labeling, etc. In July 2008, the MFC-6490CW and DCP-6690CW were the first inkjet All-in-Ones in the world to be certified in the ink-jet category at that time.

In January 2017, the standard was revised and upgraded. Brother has worked to comply with the new standard for both new and current products.

**PDF** List of products that acquired Blue Angel [PDF/0.3MB]  
[http://download.brother.com/pub/com/en/eco/pdf/blue\\_angel.pdf](http://download.brother.com/pub/com/en/eco/pdf/blue_angel.pdf)



## Creating Eco-conscious Products

# Environmental Labels



## Actively acquiring environmental labels from around the world

### Type I labels



#### Nordic Swan (five Scandinavian countries)

This eco-label is administered primarily by the Nordic Ecolabelling Board, and is used in five Scandinavian countries (Norway, Sweden, Denmark, Finland, and Iceland). Twelve Brother models, mainly black-and-white laser printers and All-in-Ones, were first awarded the label in 2009.

**PDF** List of products that acquired Nordic Swan [PDF/0.4KB]  
[http://download.brother.com/pub/com/en/eco/pdf/nordic\\_swan.pdf](http://download.brother.com/pub/com/en/eco/pdf/nordic_swan.pdf)



#### China Environmental Labeling plan (China)

This government-run eco-label (the Ten Circle Mark) is issued by the China Environmental United Certification Center under the jurisdiction of the State Environmental Protection Administration. Brother acquired the label for color laser printers/All-in-Ones and black-and-white laser printers/All-in-Ones.

**PDF** List of products that acquired Ten Circle Mark [PDF/0.3MB]  
[http://download.brother.com/pub/com/en/eco/pdf/china\\_environmental.pdf](http://download.brother.com/pub/com/en/eco/pdf/china_environmental.pdf)



#### Eco Mark (Japan)

This eco-label is issued by the Japan Environment Association. It is awarded to products that minimize environmental load and aid environmental protection across their entire life cycle (from production to disposal).

**PDF** Toner Cartridges [PDF/0.3MB]  
[http://download.brother.com/pub/com/en/eco/pdf/eco\\_mark\\_toner\\_cartridges.pdf](http://download.brother.com/pub/com/en/eco/pdf/eco_mark_toner_cartridges.pdf)

**PDF** Ink Cartridges [PDF/0.3MB]  
[http://download.brother.com/pub/com/en/eco/pdf/eco\\_mark\\_ink\\_cartridges.pdf](http://download.brother.com/pub/com/en/eco/pdf/eco_mark_ink_cartridges.pdf)



#### Environmental Choice (New Zealand)

This eco-label was introduced by the national government of New Zealand, and is issued by New Zealand Ecolabelling Trust. Brother acquired the label for color laser printers/All-in-Ones, etc.

Copying machines, printers, fax machines and multifunctional devices. Licence No. 2410083

**PDF** List of products that acquired Environmental Choice [PDF/0.2MB]  
[http://download.brother.com/pub/com/en/eco/pdf/environmental\\_choice.pdf](http://download.brother.com/pub/com/en/eco/pdf/environmental_choice.pdf)

## Creating Eco-conscious Products

# Environmental Labels



## Actively acquiring environmental labels from around the world

### Type I labels



#### Green Mark (Taiwan)

This eco-label was introduced in Taiwan by the Environmental Protection Administration, and is issued by the Environment and Development Foundation. Brother acquired the label for color laser printers/All-in-Ones, black-and-white laser printers/All-in-Ones, and consumables.

**PDF** List of products that acquired Green Mark [PDF/0.2MB]  
[http://download.brother.com/pub/com/en/eco/pdf/green\\_mark.pdf](http://download.brother.com/pub/com/en/eco/pdf/green_mark.pdf)



#### Korea Eco-label (South Korea)

This eco-label is issued by the Korea Environment Industry & Technology Institute that was established in accordance with the Development of and Support for Environmental Technology Act. Brother acquired the label for black-and-white laser printers/All-in-Ones, etc.

**PDF** List of products that acquired Korea Eco-label [PDF/0.2MB]  
[http://download.brother.com/pub/com/en/eco/pdf/korea\\_eco\\_label.pdf](http://download.brother.com/pub/com/en/eco/pdf/korea_eco_label.pdf)

### Type II labels

Self-declared labels by businesses



#### Brother Green Label (Japan)

In October 2001, Brother Industries, Ltd. (BIL) established voluntary environmental standards for products and created the Brother Green Label to recognize products that satisfied related certification standards.

## Creating Eco-conscious Products

# Environmental Labels



## Actively acquiring environmental labels from around the world

### Type III labels

Awarded to products whose environmental load is shown quantitatively by LCA (Life Cycle Assessment)



### EcoLeaf (Japan)

This eco-label is awarded to products that disclose quantifiable information about their environmental characteristics. It is managed and issued by the Sustainable Management Promotion Organization. BIL, as a printer and facsimile business, has received “System Certification”\*, from the Japan Environmental Management Association for Industry, the administrative organization for the former EcoLeaf Environmental Labeling Program, and is working on acquiring the EcoLeaf label for its main products. (In FY2020, BIL will join the EcoLeaf Environmental Labeling Program managed and operated by the Sustainable Management Promotion Organization.)

EcoLeaf Environmental Labeling Program integrated with Carbon Footprint is currently in operation.

\*: Approval system for product environmental data collection systems. The Japan Environmental Management Association for Industry verifies and certifies that businesses that make EcoLeaf labels have the system needed to make them, and that the system is functioning properly and effectively.

▶ Sustainable Management Promotion Organization “EcoLeaf Environmental Labeling Program”  
<https://ecoleaf-label.jp/english/>



### Carbon Footprint (Japan)

Carbon Footprint\* is a mechanism to visualize the emissions of greenhouse gases (in CO<sub>2</sub> equivalent) from procurement of raw materials to disposal and recycling of products. It is issued by the Sustainable Management Promotion Organization. In May 2014, FAX-2840, MFC-8520DN, and MFC-8950DW became the first desktop black-and-white laser All-in-Ones, and HL-5440D, HL-5450DN, and HL-6180DW became the first desktop black-and-white laser printers, to acquire the label.

\*: Short for “Carbon Footprint of Products.” The environmental impact is calculated quantitatively by using the LCA technique. Businesses and consumers share awareness about actions to reduce CO<sub>2</sub> emissions. Consumers are motivated to pursue a low-carbon lifestyle by utilizing the visualized information.

▶ Sustainable Management Promotion Organization “CFP Program”  
<https://www.cfp-japan.jp/english/>

## Creating Eco-conscious Products

# Environmental Labels



## Actively acquiring environmental labels from around the world

### Conformance label



#### International ENERGY STAR Program (the U.S.A., Japan, Canada, and Taiwan)

This is an international energy saving program for office equipment. Its logo is awarded to products that meet the energy-saving standards.

**PDF** List of products that qualify the standards of International ENERGY STAR program [PDF/0.3MB]  
[http://download.brother.com/pub/com/en/eco/pdf/energy\\_star.pdf](http://download.brother.com/pub/com/en/eco/pdf/energy_star.pdf)



#### Energy Conservation Certification (Energy saving label) (China)

This eco-label is from China. It recognizes products for their energy-saving performance.

### Environmental assessment system



#### EPEAT (in the U.S.A.)

EPEAT is an environmental rating for electronic products that is managed and administered by the Green Electronics Council (a non-profit organization). The environmental criteria underlying the EPEAT system are based on the full product lifecycle, from design and production to energy use and recycling. EPEAT criteria consist of required and optional ones; products are ranked Gold, Silver, or Bronze depending on the level of conformity with the optional criteria. In December 2017, nine models including MFC-L2750DWXL became the first laser products to be registered as Silver products.

\*: Judgments are based on laws and regulations, etc. in respective countries and regions. Thus, the same product may have different ranks

**PDF** List of EPEAT-compliant products [PDF/0.3MB]  
<http://download.brother.com/pub/com/en/eco/pdf/epeat.pdf>

### Green purchasing laws



#### Products complying with the Law on Promoting Green Purchasing (Japan)

In April 2001, the Law on Promoting Green Purchasing came into effect. This law requires that national governmental organizations purchase green products and that regional governmental organizations and private business and individuals try to do the same. By affixing our own eco-label to Brother products that meet the standard, BIL is promoting environmental activities to customers.

## Creating Eco-conscious Products

# Collection and Recycling



### Efforts to Improve Recycling

With the "end of life" of products in mind, the Brother Group has been working to (i) increase reusability and recyclability of products and consumables and (ii) build recycling systems in accordance with laws and regulations in respective countries.

#### Brother Group's collection and recycling efforts

##### Brother International Europe Ltd.

In Europe, the portal site for recycling consumables and products provides information about how to return used toner cartridges, drum units, ink cartridges and products, and ask for collection boxes, etc. which are available in total 28 countries.

Regarding collection and recycling of products, Brother utilizes collection and recycling channels in place in respective countries in compliance with the Waste Electrical and Electronic Equipment (WEEE) Directive. More than 15 million toner cartridges were recycled from 2004 to the end of March, 2019.

▶ Portal site for recycling (Europe)  
<https://www.brother.eu/recycle>

##### Brother Industries (U.K.) Ltd., Brother Industries (Slovakia) s.r.o.

Brother Industries (U.K.) Ltd.'s Recycling Technology Centre is the Brother Group's core facility that recycles toner cartridges and designs and develops recyclable toner cartridges in collaboration with facilities in the U.S. and Japan. A project is underway to build a system for automating the recycling process. With support from the Recycling Technology Centre, Brother Industries (Slovakia) s.r.o. (BISK) recycles Brother's toner cartridges that are sold primarily in Europe. BISK's accomplishments and development expertise are shared in Japan, the U.S., and other countries to help raise the technological standards of the Brother Group.

▶ [Brother's activities] Toner Cartridges Recycle  
<https://www.brotherearth.com/en/tech/toner-recycle.html>



▶ [Brother's activities] Toner Cartridges Recycle  
<https://www.brotherearth.com/en/tech/toner-recycle.html>

## Creating Eco-conscious Products

# Collection and Recycling



## Efforts to Improve Recycling

### Brother Group's collection and recycling efforts

#### Brother International Corporation (U.S.A.)

In the U.S., the project is undertaken by collection and recycling contractors. The system is administered in accordance with state and federal laws.

The website of Brother International Corporation (U.S.A.) (BIC (USA)) explains how to return used toner cartridges, drum units, ink cartridges, and tape cassettes.

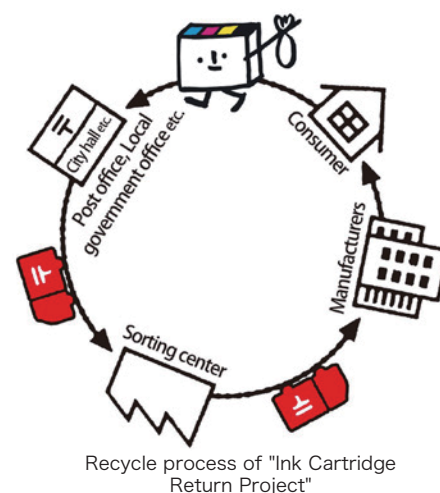
Used toner cartridges are collected in Canada via local sales facilities.

#### Brother Sales, Ltd.

In Japan, printing product manufacturers and sellers have collection boxes at retail outlets to collect used ink cartridges. In order to further improve the collection rate in January 2007, the Brother Group along with other printing product manufacturers and sellers launched an "Ink Cartridge Return Project" with post offices.

Since 2008 the collection has been implemented nationwide. See "Ink Cartridge Return Project" for detailed information.

In collaboration with business partners, Brother Sales, Ltd. collects Brother products (fax machines, printers, and All-in-Ones for businesses), and Brother Industries, Ltd. recycles them. See "Recycling Used Consumables" or "Corporate Used Products" in detail each.





## Creating Eco-conscious Products

# Collection and Recycling



## Efforts to Improve Recycling

### Brother Group's collection and recycling efforts

#### Mie Brother Precision Industries, Ltd.

Mie Brother Precision Industries, Ltd. started to work on refurbishing toner cartridges for monochrome laser printers in FY2009 (April 1, 2009-March 31, 2010) based on recycling expertise gained in Europe.

Collected used toner cartridges undergo sorting, disassembly, cleaning, and parts replacement for reuse. To further reduce environmental impact, the company shares information with recycling facilities in Europe and the Americas and is continually improving the methods of refurbishing toner cartridges. Collected used color toner cartridges are delivered to Brother Industries (U.K.) Ltd. for recycling.



Monochrome toner cartridges

#### Brother International (Aust.) Pty. Ltd.

Brother International (Aust.) Pty. Ltd. is a founding member of the Cartridges 4 Planet Ark (C4PA) program to recycle printer cartridges. Since inception 42.83 million cartridges (as of the end of July, 2019) collected and recycled by the program.

The company also participates in a National E-waste Recycling Scheme for recycling printers as a member of Electronic Product Stewardship Australasia (EPSA).

#### Brother International (NZ) Ltd.

Brother International (NZ) Ltd. is working with an experienced recycling contractor to collect and recycle used consumables (e.g. ink and toner cartridges, drum units) and printers. In FY2018, 130,000 consumables and printers and All-in-Ones weighing 34t in total were collected.