Environmental Activities

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

INDEX

Scope of report: Brother Industries, Ltd. and its global group companies (including those in Japan)
Covered period: April 1, 2015 to March 31, 2016
Guideline used as a reference: GRI's "Sustainability Reporting Guidelines (G4)"

Message from the Management (Environment)

Achieving a Sustainable Society

Global trend toward sustainable development

In September 2015, the 2030 Agenda for Sustainable Development was adopted at the United Nations summit. The agenda sets out the Sustainable Development Goals from 2016 to 2030 (which define the ideal situation of the world) to put the world on the path toward sustainable development. The development goals require action to cope with worsening environmental issues such as global warming, pollution, and biodiversity loss.

Promising active and continuous efforts

The Brother Group Global Charter ("Global Charter") was established in 1999 to provide the foundation for all Brother Group activities in the global marketplace. In the Global Charter, 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. In 2010, the Brother Group created the "Brother Earth" slogan, and has been accelerating its efforts, including biodiversity conservation with stakeholders, based on a unified message of "Working with you for a better environment."

Results of the Brother Group Environmental Action Plan 2015 (2011-2015)

We identified important issues and set ambitious targets under the Brother Group Environmental Action Plan 2015 (2011-2015). We actively acquired environmental labels in respective countries, disclosed environmental information about new products, and continuously upgraded our framework to quickly meet new laws and regulations enacted in different regions. We protected the ecosystems of forests and oceans at more than 100 locations around the world, involving 43 facilities of the Brother Group. Notably, regarding reduction of CO_2 emissions, manufacturing facilities outside Japan attained the mid-term targets for FY2020 (April 1, 2020-March 31, 2021), and have started to actively work on Scopes 1, 2, and 3. Thus, steady progress has been made in collaboration with stakeholders.

Ensuring a long and successful future

In March 2016, the Brother Group formulated the Mid-Term Business Strategy "CS B2018" based on the Brother Group Global Charter as a roadmap for achieving the mid- to long-term corporate vision, Global Vision 21. We will step up our efforts to fulfill the Brother Group Environmental Action Plan 2018 (2016-2018)(environmental activity guidelines for CS B2018) in order to further enhance the value of the Brother brand as one that customers can trust; be a company that group employees are truly proud to be a part of; and one that has a long successful future.

Brother Industries, Ltd.
Representative Director & President
Toshikazu Koike
August 2016

Highlights

"Brother Earth" - Working with you for a better environment

Foundation for all Brother Group activities in the global marketplace

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 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.

Brother Group's mid- to long-term vision and environmental action plan

Mid- To Long-Term Vision	Environmental Action Plan
The Brother Group sets three goals in the Mid-to Long-Term Corporate Vision (Global Vision 21) to become a company that provides good value obviously to our existing customers, but also to potential future customers. ・To become a leading global company with high profitability ・To become a world-class manufacturer by developing outstanding proprietary technologies ・To embody Brother's motto, "At your side." throughout our corporate culture The Brother Group formulated a Mid-Term Business Strategy "CS B2018" as a road map to achieve the vision. In particular, we will commit to three reforms in "Business," "Operations," and "Talent" and aim to become a multi-business enterprise by changing the printing-centric structure and focusing on areas with growth potential, such as industrial areas* and new businesses.	Reduction in emissions of CO_2 and other greenhouse gases (which are considered to be major contributors to climate change), prevention of environmental pollution, improvement in resource productivity, and biodiversity conservation are important issues toward sustainable development. Regarding reduction in CO_2 emissions, we set the mid-term targets for FY2020 (April 1, 2020-March 31, 2021) in 2009. The Mid-Term Environmental Action Plan set specific targets as milestones to achieve the targets. The Brother Group Environmental Action Plan 2018 (2016-2018) is the eighth plan after Brother's first Environmental Action Plan (Voluntary Plan), which was formulated in 1993. The action plan is intended to continuously enhance the foundation established by the Brother Group Environmental Action Plan 2015 (2011-2015) as environmental targets for the Mid-Term Business Strategy "CS B2018."

*: Machinery business (Industrial sewing machines, Machine tools, and Industrial parts) and Domino business

Highlights

"Brother Earth" - Working with you for a better environment

Accelerating activities under the slogan of "Brother Earth"

Under the "Brother Earth" logo and slogan (formulated in 2010) which symbolize our environmental activities and promise to help society achieve sustainable development, by positively and continuously considering the environmental impact of all aspects of our business operations, each Brother Group employee is further committed to participating in various activities based on the unified message of "Working with you for a better environment" in cooperation with Brother's customers and other stakeholders.

Promoting various activities to reduce environmental impact since 1991

In 1991, the Brother Group established a company-wide environmental organization to promote various activities to reduce the environmental impact of its business operations. After Brother Industries (U.K.) Ltd. obtained ISO 14001 certification in 1996, facilities in and outside Japan acquired certification in stages. Steady efforts have been made to continuously reduce its environmental impact across the whole group.
The Brother Group has also endeavored to quickly comply with laws and regulations that are enacted in respective countries and regions.
Under the mission to "provide customers with superior value, by quickly creating and delivering high-quality products and services," a project was launched in 1992 to implement measures for the protection of the ozone layer in the product production process. In 1993, the use of substances that deplete the ozone layer was completely banned in the production process of Brother Industries, Ltd., and wholly owned subsidiaries' facilities. The Brother Group has been seriously committed to measures to reduce the environmental impact of all aspects of its business operations.
Regarding products, the Brother Group acquired ENERGY STAR certification, which was introduced in 1993 in the U.S. Since then, the Brother Group has been actively working to acquire environmental labels in respective countries.

▶Timeline for Environmental Milestone Achievement
http://www.brother.com/en/eco/management/history/index.htm

▶List of ISO 14001-certified Facilities and History of Auditing for ISO 14064
http://www.brother.com/en/eco/facility/iso_14001/index.htm

Highlights

Main results of the Brother Group Environmental Action Plan 2015 (2011-2015)

The Brother Group identified important issues and set ambitious environmental targets to be achieved by 2015 in the fields of "Creating Eco-conscious Products," "Reducing Environmental Impact," "Complying with Laws, Regulations and Social Trends," and "Communicating Environmental Commitment" to promote activities. As a result, the Brother Group has made steady progress in its environmental activities. Notably, the Brother Group has been committed to creating eco-conscious products, primarily focused on reducing energy consumption. The Brother Group has been working on top-class eco-conscious designs in respective product categories by actively acquiring environmental labels in respective countries and meeting new standards, etc.

Examples of technology improvement to improve the environmental performance

[Brother's activities]
Aiming at an infinite supply of zero standby power.
- Low Energy Standby -

[Brother's activities]
Our aim was a sleek machine tool energized by recycled electricity, much like an eco-friendly compact car.
- Power Regeneration System -

[Brother's activities]
The key to increasing rotation speed and decreasing power consumption was "sound."
- Low-noise Belt Drive -

Achieving CO_2 emissions reduction targets and promoting activities to obtain a third-party assurance for Scope 1, 2, and 3 calculation data

At eight business sites in Japan, CO_2 emissions have been reduced by 10.3% from FY2010 (April 1, 2010-March 31, 2011) (absolute value), achieving a reduction of 2.0% per annum vis-à-vis the reduction target of 1.0% per annum.
At manufacturing facilities outside Japan (excluding the U.S.), CO_2 emissions have been reduced by 26.3% from FY2010 (per unit of sales), achieving a reduction of 5.2% per annum vis-à-vis the reduction targets of 1.0% per annum.
In FY2013 (April 1, 2013-March 31, 2014), the Brother Group started calculations for Scopes 1, 2, and 3 using emissions coefficients by country and region applied to respective business sites based on the GHG Protocol (a globally used index) and is endeavoring to acquire third-party assurance for the calculation data.
Due to these ongoing efforts, Brother scored 98 points* in its evaluation for information disclosure* and a C in its performance evaluation for CDP (former name: Carbon Disclosure Project) that evaluates corporate efforts to cope with climate change.

*: The score represents the evaluation points based on our response to the CDP's request for information.

▶CO_2 Emissions Reduction Activities http://www.brother.com/en/eco/facility/index.htm

Highlights

Main results of the Brother Group Environmental Action Plan 2015 (2011-2015)

Establishing the Brother Group's policy to expand the scope of biodiversity conservation activities

To maintain the health of Mother Nature which sustains humankind, it is essential to ensure biodiversity conservation and sustainability. The Nagoya Protocol and Aichi Biodiversity Targets were adopted at the tenth meeting of the Conference of the Parties (COP10) to the Convention on Biological Diversity (CBD) held in Nagoya, Aichi in October 2010. In response, the Brother Group added a new commitment: "We will endeavor to reduce our impact on the ecosystem and to conserve biodiversity in all our operations." to the Action Guidelines in the Environmental Policy in FY2011 (April 1, 2011-March 31, 2012). In FY2012 (April 1, 2012-March 31, 2013), the Brother Group established a biodiversity conservation policy, and the scope has been expanded to cover activities in all business operations.

The results of the Brother Group's environmental activities including specific results of the Brother Group Environmental Action Plan 2015 (2011-2015) are reported in this "Environmental Activities" site.

▶Biodiversity
http://www.brother.com/en/eco/communication/biodiversity/index.htm

▶Brother Group Environmental Action Plan 2015 (2011-2015)
http://www.brother.com/en/eco/management/action_plan/index.htm

Brother Group Environmental Action Plan 2018 (2016-2018)

Creating eco-conscious products

To further enhance commitment to developing eco-conscious products, the Brother Group has been working on top-class eco-conscious designs in respective product categories by actively acquiring environmental labels in respective countries and meeting new standards, etc. Based on top-class eco-conscious designs, the Brother Group has been working to reduce the carbon footprints of products in order to reduce their environmental impact of products through their entire life cycle.

Cut CO_2 emissions from the group as a three-year target toward achieving the mid-term targets by FY2020 (April 1, 2020-March 31, 2021)

Since FY2013, the scope of activities to cut CO_2 emissions has been expanded on a group basis. Furthermore, the Brother Group has taken on a challenge to calculate and reduce CO_2 emissions from the entire product supply chain, in addition to CO_2 emissions from its operations. To verify the calculation results, the Brother Group is subject to verification of compliance with the international standards (ISO14064-1 requirements) established by a third party organization, in an effort to acquire certification for the accuracy of data.

Highlights

Brother Group Environmental Action Plan 2018 (2016-2018)

Maintaining regulatory compliance for all product categories

In addition to complying with laws and regulations in respective countries and regions, including the REACH Regulation and RoHS Directive, the Brother Group operates an environmental information system (an IT system for investigating and managing certain chemical substances contained in purchased parts) and audits suppliers from which parts and materials are purchased. Thus, Brother has a group-wide chemical substances assurance system.

Support activities for continuous improvement under our philosophy of "Brother Earth"

The Brother Group helps raise awareness to consider its environmental impact under the "Brother Earth" slogan. Brother's special website on the environment (brotherearth.com) presents "Special Stories" and "Eco-conscious Products" that explain employees' commitment to eco-conscious product development, as well as the Brother Group's environmental conservation activities, etc. The Brother Group actively works on environmental conservation and other activities to contribute to communities in collaboration and cooperation with many stakeholders through interactive communication including "Click for the Earth" in the special website and events with environmental themes.

Support biodiversity conservation in total Brother group under the COP10 Aichi Biodiversity Targets

As a global company headquartered in the venue of COP10, the Brother Group considers the Aichi Biodiversity Targets (by 2020) as high-priority targets. Respective facilities have been working on biodiversity conservation activities with regional characteristics taken into consideration. The Brother Group endeavors to provide employees with education about biodiversity conservation to help prevent destruction of habitats and recover ecosystem services that are essential for the survival of humankind. Activities will be further promoted to exterminate and prevent the invasion of invasive alien species and conserve the habitats of rare species, etc.

Corporate Environmental Strategy and Management

Brother Group's Environmental Strategy

Brother Group's environmental policy

Basic philosophy

The Brother Group shall positively and continuously act to decrease the environmental impact of all aspects of our business operations so that society can achieve sustainable development.

Basic environmental policy

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.

Action Guidelines and specific environmental activities

Action guidelines	Specific 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 acquired ISO 14001 certification, and strive to reduce environmental impact by conserving energy and reducing CO_2 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.

Corporate Environmental Strategy and Management

Brother Group's Environmental Strategy

Brother Group Mid-Term Environmental Action Plan

The Brother Group aims to fulfill its corporate social responsibilities at ever higher levels through continuous commitment to environmental challenges, to raise environmental activities to be amongst the best in the industry, and to instill a strong sense of pride so that employees feel truly proud to be part of the Brother Group.

To achieve these goals, the strategy focuses on three points:

1. Continuously reducing the environmental impact	2. Enhancing business competitiveness	3. Increasing the brand value
・Reducing the overall environmental impact of the Brother Group ・Reducing the environmental impact of business sites in Japan	・Further improving the environmental performance of products ・Seizing business opportunities by complying with laws and regulations ・Ensuring that eco-friendly products appeal to customers through website information	・Publically presenting the "Brother Earth" statement ・Actively conducting global social contribution activities ・Publicizing overall environmental activities on the web

Our goals for 2015

- Brother is recognized as an "environmentally conscious company" by customers.
- Brother is recognized as an "environmentally conscious company" by local communities.
- Employees of the Brother Group are all environmentally conscious and have achieved the Brother Mid-Term Environmental Action Plan.

To implement the strategy, the Brother Group Environmental Action Plan 2015 (2011-2015) was formulated (under the slogan of "Brother Earth") which identifies important issues and sets ambitious environmental targets to be achieved by 2015 in the fields of "Creating Eco-conscious Products," "Reducing Environmental Impact," "Complying with Laws, Regulations and Social Trends," and "Communicating Environmental Commitment." Steady progress has been made.
Notably, in terms of creating eco-conscious products (primarily focused on energy conservation), we have taken strong action and promoted top-level eco-conscious design in each product area (e.g. actively acquiring eco labels and meeting new standards in respective countries).

The Brother Group Environmental Action Plan 2018 (2016-2018) is intended to continuously strengthen the foundation established by the Brother Group Environmental Action Plan 2015 (2011-2015) and to further enhance the value of the Brother brand as one that customers can trust, and be a company that group employees are truly proud to be a part of.

Corporate Environmental Strategy and Management

Brother Group's Environmental Strategy

Brother Group Environmental Action Plan 2018 (2016-2018) Basic policy

- Create eco-conscious products
- Cut CO_2 emissions from the group as a three-year target toward achieving the mid-term targets by FY2020 (April 1, 2020-March 31, 2021)
- Maintaining regulatory compliance for all product categories
- Support activities for continuous improvement under our philosophy of "Brother Earth"
- Support biodiversity conservation in total Brother group under the COP10 Aichi Biodiversity Targets

Brother Earth logo and slogan symbolize environmental activities

The Brother Group focuses on delivering eco-conscious products that take the environment into consideration throughout a product's life cycle, and encourages every Brother employee to participate in conserving the global environment.

The Brother Group's environmental conservation activities date back to the Brother Group Environmental Policy ("Environmental Policy") that was formulated in 1993. Subsequently, the Brother Group Global Charter ("Global Charter") was established in 1999 to provide the foundation for all Brother Group activities in the global marketplace; the phrases in the basic philosophy of the Environmental Policy were used to formulate the Global Charter. In the Global Charter, 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.

To boost these efforts, the Brother Group created the "Brother Earth" logo and slogan in 2010. 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."

Brother Earth

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.

*: This video is from YouTube.

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.

Corporate Environmental Strategy and Management

Brother Group's Environmental Strategy

"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

Corporate Environmental Strategy and Management

Mid-Term Environmental Action Plan

Mid-Term targets for FY2020

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. For CO_2 emissions, the Brother Group set the mid-term targets for FY2020 (April 1, 2020-March 31, 2021).

Mid-term targets for FY2020

(1) Cut total CO_2 emissions by 30% from FY1990 levels at eight business sites in Japan by FY2020 (absolute value)

(2) Cut CO_2 emissions by 20% (per unit of sales) from FY2006 levels at manufacturing facilities outside Japan (except the USA)* by FY2020

*: USA (a manufacturing facility outside Japan) constitutes part of a sales facility.

Brother Group Environmental Action Plan 2015 (2011-2015)

In the Brother Group Environmental Action Plan 2015 (2011-2015), we identified important issues and set ambitious targets for each fiscal year under the slogan "Brother Earth" and made steady progress by fulfilling the targets in the fields of "Creating Eco-conscious Products," "Reducing Environmental Impact," "Complying with Laws, Regulations and Social Trends," and "Communicating Environmental Commitment." Regarding CO_2 emissions which contribute to global warming, the action plan provided the mid-term targets concerning reductions to be achieved by FY2020 (April 1, 2020-March 31, 2021) as a milestone. The Brother Group continuously implemented measures to attain one of the highest levels in the industry and fulfilled its targets.

Basic policy of the Brother Group Environmental Action Plan 2015 (2011-2015)

Basic policy

1. **Making a commitment to creating eco-conscious products, primarily focused on reducing energy consumption**
   ▶[Environmental target] Eco-conscious products
   http://www.brother.com/en/eco/management/action_plan/index.htm#target01
2. **Working on reducing group CO_2 emissions**
   ▶[Environmental target] Reducing environmental impact of business sites
   http://www.brother.com/en/eco/management/action_plan/index.htm#target02
3. **Quickly complying with laws and regulations across the world, eliminating risks, and expanding business opportunities**
   ▶[Environmental target] Complying with laws, regulations and social trends
   http://www.brother.com/en/eco/management/action_plan/index.htm#target03
4. **Disclosing environmental information, enhancing interactive communications with stakeholders.**
   ▶[Environmental target] Environmental communication
   http://www.brother.com/en/eco/management/action_plan/index.htm#target04

Corporate Environmental Strategy and Management

Mid-Term Environmental Action Plan

Environmental targets (2011-2015) and achievements in FY2015

1. Eco-conscious products

1-1. Actively acquiring environmental labels in respective countries and meeting new standards
(1) Ensuring that requests are met from sales facilities to acquire Blue Angel, Eco Mark, ENERGY STAR, Nordic Swan, EPEAT, and China's Ten Circle Mark, etc.
(2) Complying with new standards (from 2012) of Blue Angel and Eco Mark, and continuously acquiring the labels

1-2. Improving the energy-saving performance of products
(1) Complying with various energy-saving standards including ENERGY STAR, Blue Angel, Eco Mark, China's Energy Label, and Japan's Top Runner Target Program Standards, etc. for all applicable products
(2) Achieving top-level energy-saving performance in the industry for respective categories

1-3. Complying with emissions (e.g., TVOCs, UFPs, noise) standards
(1) Complying with standards with sufficient margins
(2) Also complying with new standards including those of Blue Angel and new German law (UFP)

1-4. Increasing the percentage and volume of recycled materials used
Complying with an ever-broader range of standards for all applicable products

1-5. Increasing reusability and recyclability (both for main units and consumables)
(1) Promoting design for reducing man-hours required in the reuse process, and cutting the number of replacement parts and costs, in the consumables reuse business
(2) Expanding the scope of parts for which materials derived from a closed recycling system can be used

1-6. Reducing logistics costs and CO_2 emissions by promoting optimization of packaging
(1) Both optimizing the packaging for reducing logistics costs and reducing CO_2 emissions attributed to logistics
(2) Promoting the selection of appropriate materials and reduction in size and weight

Corporate Environmental Strategy and Management

Mid-Term Environmental Action Plan

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

Environmental targets*		Targets for FY2015	Achievements in FY2015	Self-evaluation
1-1	(1)	Acquiring environmental labels for all applicable products	Acquired major environmental labels in respective countries for all applicable products	Achieved
	(2)	No revision made in the standard in this fiscal year	Targets and achievements that are not evaluated in a single year	Targets and achievements that are not evaluated in a single year
1-2	(1)	Complying with energy conservation standards in respective countries for all applicable products	All products complied with ENERGY STAR, Blue Angel, China's Energy Label, etc.	Achieved
	(2)	Achieving the top levels of energy-saving performance in the industry	Achieving the top levels of energy-saving performance in the industry	Achieved
1-3	(1)	Complying with emission standards for all applicable products	All products complied with Blue Angel UFP standards	Achieved
	(2)	Complying with Blue Angel's new standards (UFP)		
1-4		Complying with EPEAT standards for all applicable products	All products complied with EPEAT standards	Achieved
1-5	(1)	Recycling rate of collected ink cartridges: 50% or more	The recycling rate remained at 50% or more	Achieved
	(2)			
1-6	(1)	Reducing the size and weight of packaging materials compared with previously released products , thereby reducing CO_2 emissions in logistics	Reduced the size and weight of packaging materials compared with previously released products, and improved the loading efficiency	Achieved
	(2)			

▶Environmental Considerations within Product Life Cycles
http://www.brother.com/en/eco/product/index.htm

▶In-depth Data
http://www.brother.com/en/eco/performance/data/index.htm

Corporate Environmental Strategy and Management

Mid-Term Environmental Action Plan

2. Reducing environmental impact of business sites

For business sites in Japan and manufacturing facilities outside Japan, compliance with the Brother Group Environmental Action Plan 2015 (2011-2015) will serve as the basis of activities.

2-1. Reducing CO_2 emissions of the entire group
Reducing total CO_2 emissions of the entire group (business sites in Japan, and manufacturing and sales facilities outside Japan, except logistics) by 1% per annum (per unit of sales)

2-2. Reducing CO_2 emissions of eight business sites in Japan
Reducing CO_2 emissions by 1% per annum; reducing total CO_2 emissions by 25% from FY1990 levels by FY2015 (absolute value)

2-3. Reducing CO_2 emissions of manufacturing facilities outside Japan (excluding the USA)
Reducing CO_2 emissions by 1% per annum (per unit of sales)

2-4. Reducing CO_2 emissions in logistics
Setting emissions management standards, and reducing CO_2 emissions by 1% per annum (per basic unit)

2-5. Reducing water consumption at manufacturing facilities
Reducing water consumption by 5% from FY2010 (April 1, 2010-March 31, 2011) levels by FY2015 (per unit of sales)

2-6. Ensuring global management of environmental conservation activities at manufacturing facilities outside Japan
Building a framework for globally managing (i) compliance with environmental laws and regulations in countries where manufacturing facilities are based and (ii) proper waste treatment, etc.

2-7. Acquiring ISO 14001 certifications
Acquiring ISO 14001 certifications at new manufacturing and sales facilities

Corporate Environmental Strategy and Management

Mid-Term Environmental Action Plan

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

Environmental targets*	Targets for FY2015	Achievements in FY2015	Self-evaluation
2-1	Achieving 1% reduction from FY2014	Increased 2.4% from FY2014	Not achieved
	Achieved 18.9% reduction from FY2012, exceeding the targets set in FY2012 (1% reduction per annum from FY2013)		Significantly achieved
2-2	Achieving 1% reduction from FY2014	Achieved 3.5% reduction from FY2014	Significantly achieved
	Achieved 27.8% reduction from the mid-term targets for FY2020		Significantly achieved
2-3	Achieving 1% reduction from FY2014	Achieved 0.8% reduction from FY2014	Almost achieved
	Achieved 32.3% reduction from the mid-term targets for FY2020		Significantly achieved
2-4	Same as above	Achieved 6.4% reduction from FY2014	Significantly achieved
2-5	No targets set for a single year	(Achieved 23.4% reduction from FY2010)	Targets and achievements that are not evaluated in a single year
2-6	Same as above	(Monitoring the list of applicable laws and regulations related to production activities and confirmation of compliance for all manufacturing facilities)	Targets and achievements that are not evaluated in a single year
2-7	Acquiring certification for three sales facilities outside Japan	Five facilities acquired certification: Brother International Korea Co., Ltd., Brother International S.A. (Pty) Ltd., Brother International (Malaysia) Sdn. Bhd., Brother International (Gulf) FZE (Turkey Branch), and Brother Sewing Machines Europe GmbH	Significantly achieved

▶CO_2 Emission Reduction Activities
http://www.brother.com/en/eco/facility/index.htm

▶In-depth Data
http://www.brother.com/en/eco/performance/data/index.htm

▶List of ISO 14001-certified Facilities and History of Auditing for ISO 14064
http://www.brother.com/en/eco/facility/iso_14001/index.htm

Corporate Environmental Strategy and Management

Mid-Term Environmental Action Plan

3. Complying with laws, regulations and social trends

3-1. Globally complying with regulations on chemical substances
(1) Ensuring compliance with relevant laws (including REACH, RoHS, and TSCA) that regulate chemical substances contained in products
(2) Developing a strategy for managing chemical substances contained in products, and attaining industry-leading low levels by FY2015

3-2. Globally complying with energy-saving regulations on products
Complying with relevant energy-saving laws and regulations on products (including ErP, Russia's product regulations, South Korea's energy law, China's Energy Label, and Japan's energy saving law) with top-level energy-saving performance

3-3. Fulfilling manufacturers' broadening scope of responsibilities
(1) Increasing the accuracy of data submitted to the authorities to comply with WEEE/Packaging Directive, etc.
(2) Globally building a closed recycling system for products
(3) Globally expanding the consumables recycling system and aiming to develop the system to involve respective regional sales headquarters

3-4. Disclosing overall environmental information regarding products
(1) Globally disclosing information regarding products' environmental impact
(2) Disclosing product information in accordance with The Eco Declaration (ECMA370)

3-5. Using certified paper
Promoting the use of certified paper including FSC certified paper

3-6. Promoting green procurement
(1) Enhancing the auditing and education of suppliers, increasing eco awareness, and thereby ensuring legal compliance
(2) Building a framework for managing places of origin, illegal logging, recycling, etc. of paper used as packaging materials

Corporate Environmental Strategy and Management

Mid-Term Environmental Action Plan

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

Environmental targets*		Targets for FY2015	Achievements in FY2015	Self-evaluation
3-1	(1)	Ensuring compliance with regulations regarding chemical substances contained in products	Revised the green procurement standards in a timely basis, and maintained compliance	Significantly achieved
	(2)	Establishing in-house targets for determining management levels at respective factories, and promoting activities	Achieved the in-house targets for FY2015	Achieved
3-2		Complying with energy conservation regulations for products	Quickly identified the revision schedule of laws and regulations, and reflected the revisions in designs	Achieved
3-3	(1)	Continuing to weigh products when they are shipped from factories and to confirm changes in weight, in an effort to increase the accuracy of data submitted to the authorities	Continued to weigh products when they were shipped from factories and to confirm changes in weight, in an effort to increase the accuracy of data submitted to the authorities	Achieved
	(2)	Establishing a global system	No results in FY2015	Not achieved
	(3)	Launching recycling systems at respective sales facilities (RHQs)	Operated the recycling systems at RHQs in Europe, South and North America, and Asia/Oceania	Achieved
3-4	(1)	Disclosing 100% of new product information to sales companies	Created and disclosed a list of specifications related to the environmental impact	Achieved
	(2)	Disclosing 100% of information to sales companies in Europe	Disclosed environmental characteristics (including legal requirements) of printers, All-in-Ones, label printers, and scanners for Europe and the U.S.	Significantly achieved
3-5		No targets set for a single year	Continued to use FSC certified paper for catalogues prepared by sales companies in Japan	Targets and achievements that are not evaluated in a single year
3-6	(1)	Revising the green procurement standards, disseminating information (e.g. sending a notice about additional REACH-SVHCs in advance), and conducting audits at suppliers to raise awareness of suppliers and group companies about green procurement and ensure legal compliance	Revised the green procurement standards twice a year, and shared the information with suppliers via the designated web portal Audited suppliers on a regular basis based on the plan	Achieved
	(2)	Conducting investigations to confirm the recycling rates of packaging materials at target factories (five factories) Complying with EU Timber Regulation and Australia's Illegal Logging Prohibition Act	Continued with investigations to confirm the recycled content of packaging materials with assistance from five factories Conducted investigations to confirm legality of target packaging materials and products, and confirmed legality	Achieved

▶Compliance with Environmental Laws and Regulations on Products http://www.brother.com/en/eco/regulation/index.htm
▶In-depth Data http://www.brother.com/en/eco/performance/data/index.htm

Corporate Environmental Strategy and Management

Mid-Term Environmental Action Plan

4. Environmental communication

4-1. Promoting Brother Earth in combination with marketing activities
Ensuring eco-consciousness in developing new products and businesses, distributing environmental information via websites (including social media), and publicizing environmental commitments by promoting the Brother Earth planetarium dome, etc.

4-2. Promoting environmental and social contribution activities focusing on conserving biodiversity
Globally conducting environmental protection activities for conserving biodiversity with the involvement of employees in respective regions, posting key activities on Brother's special website on the environment to be covered by Click for the Earth donations, and encouraging the participation of stakeholders.

4-3. Promoting prevention of global warming by raising the environmental awareness of employees
Globally promoting the Brother eco point program, measuring the level of environmental contribution by respective facilities, and raising the environmental awareness of employees, thereby consistently achieving CO_2 emissions reduction targets on a group basis.

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

Environmental targets*	Targets for FY2015	Achievements in FY2015	Self-evaluation
4-1	Actively disseminating information about environmental conservation activities involving employees	Promoted the "Ecosystem Restoration Project in the Brother Forests in Gujo" (involving employees) through Brother's special website on the environment, websites of respective facilities, etc., and continuously expanded the scope of information dissemination by utilizing Brother's official SNS accounts (Facebook, Twitter, YouTube)	Achieved
	Actively promoting environmental events and increasing environmental awareness	Organized "Brother Green X'mas 2015 - Projection Mapping on Brother Earth -" jointly with the Nagoya City Science Museum Organized "Mission to the Earth," a participatory event that enabled people to have their selfies projection mapped in the stratosphere with the Earth in the background	Achieved
4-2	Participation in Click for the Earth on brotherearth.com, Brother's special website on the environment	In FY2015, participants donated 822,902 points in total. An amount equivalent to the number of points (1 point = 1 yen) was donated to each activity.	Achieved
4-3	Number of employees participating in the Brother eco point program (27,893 individuals)	Achieved (31,899 individuals) Brother Industries (Philippines), Inc. launched the eco point program	Achieved

▶Environmental Communication Activities http://www.brother.com/en/eco/communication/index.htm
▶In-depth Data http://www.brother.com/en/eco/performance/data/index.htm

The Brother Group will achieve the Brother Group Environmental Action Plan 2018 (2016-2018) based on the accomplishments made through the Brother Group Environmental Action Plan 2015 (2011-2015) in order to further enhance the value of the Brother brand as one that customers can trust and be a company that employees are truly proud to be a part of.

Corporate Environmental Strategy and Management

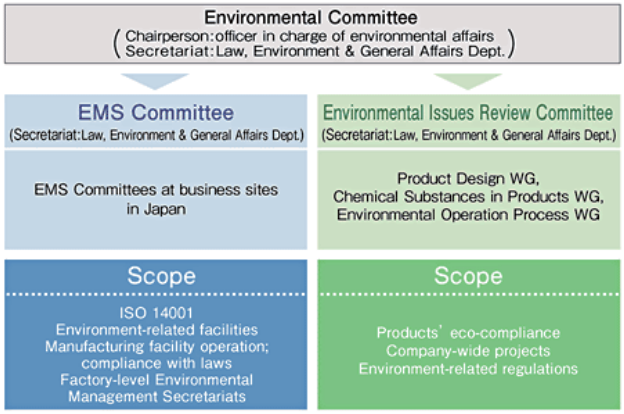
Internal Environmental Management Structure

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 Committee

The Environmental Committee is the decision-making body for environmental affairs. It is chaired by the officer in charge of environmental affairs and other executive officers responsible for function centers, new business, IT, and general affairs. Committee meetings are held four times a year.

▶BIL Governance structure
http://www.brother.com/en/csr/brothergroup/governance/index.htm#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.

Corporate Environmental Strategy and Management

Internal Environmental Management Structure

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 global 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 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 Mid-term 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.

▶List of ISO 14001-certified Facilities and History of Auditing for ISO 14064
http://www.brother.com/en/eco/facility/iso_14001/index.htm

Corporate Environmental Strategy and Management

Internal Environmental Management Structure

Environmental audit

The Brother Group annually conducts internal audits of environmental issues 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 environmental 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 environmental audit, it is confirmed that the PDCA cycle is properly practiced and there are no serious accidents or problems to report.

In the external review, BIL won the Gold Prize of the 2014 Aichi Environmental Award,* thereby achieving the "strong point" evaluation by the ISO certification body.

*: The social contribution and accomplishments in environmental management (e.g. manufacturing technologies to reduce environmental impact including the Low Energy Standby technology that significantly reduces standby power consumption of products; and establishment of a proprietary environmental information system to meet the management standards in line with regulations in respective countries) of BIL were highly evaluated.

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.

Corporate Environmental Strategy and Management

Environmental Commendation and Awards

External environmental commendation system

Brother Industries, Ltd.


賞状
環境報告書部門
優良賞
ブラザー工業株式会社殿
あなたは第十九回環境コミュニケーション大賞において頭書のとおり優秀な成績をおさめられましたのでこれを賞します
平成二十八年二月二十四日
第十九回環境コミュニケーション大賞
主催者名
山本良

On February 9, 2016, Brother Industries, Ltd. (BIL) won the Good Performance Prize in the Environmental Report Section of the 19th Environmental Communication Awards organized by the Japanese Ministry of the Environment and the Global Environmental Forum.

The aim of the Environmental Communication Awards is to encourage business operators, etc. to work on green management and environmental communication through commendations and improve the quality of environmental disclosure.

BIL won the award for its "Environmental Activities" webpage that delivers annual reports about the Brother Group's environmental activities; and for "brotherearth.com", Brother's special website on the environment, which uses responsive web design to disseminate information about both up-to-date and unique activities.

This is the second time for BIL to win the award and follows its win last year. The comment given during the evaluation was as follows:

'The environmental report is well documented. Notably, "Communicating Environmental Commitment" explains communication with stakeholders, and details the efforts related to eight items identified in the Action Guidelines for Biodiversity Conservation in the Electrical and Electronic Industries. Obviously, BIL has been committed to biodiversity conservation. "Reducing Environmental Impact" shows that BIL focuses on "CO_2 Emission Reduction Activities." This is highly commendable.' The comment also suggested improvements regarding editing, etc. because a large amount of information is disclosed. Therefore, the "Environmental Activities" webpage (2016 version) has been revised by reviewing the number of activities covered, method of coverage, etc.

Corporate Environmental Strategy and Management

Environmental Commendation and Awards

Brother Industries, Ltd

In January 2016, BIL won the Life Cycle Assessment Society of Japan (JLCA)* Incentive Award at the 12th JLCA Commendation Ceremony organized by JLCA (sponsored by the Ministry of Economy, Trade and Industry and Nikkan Kogyo Shimbun, Ltd.) for its activities to create eco-conscious products by acquiring the EcoLeaf environmental label (for printers and facsimiles).

BIL has acquired the EcoLeaf environmental label since it was launched in 2002. BIL was highly evaluated for its track record of acquiring the label (208 models in cumulative total as of the end of September 2015); many years of continuous efforts to popularize LCA techniques and acquire environmental labels; activities to build a system for collecting LCA data and applying it to products; facing challenges to calculate Scope 3 emissions based on the GHG protocol to reduce the CO_2 emissions from the entire supply chain; and the substantial results it derived from Low Energy Standby technology.

*: The Life Cycle Assessment Society of Japan (JLCA) is a platform involving LCA stakeholders from industrial and academic circles as well as national and public research institutions. JLCA was established to conduct surveys and research, promote information sharing, and implement awareness-raising and popularization activities about lifecycle assessment (LCA) and environmental efficiency based on developments in and outside Japan. JLCA facilitates the popularization and development of LCA activities in Japan and helps achieve a sustainable economy and society.

Taiwan Brother Industries, Ltd.

On January 26, 2016, Taiwan Brother Industries, Ltd. (Taiwan Brother) won the Excellence Prize in the Corporate Section of the Carbon Reduction Action Awards for FY2015 (April 1, 2015-March 31, 2016) from the Environmental Protection Administration, a Taiwanese governmental body responsible for environmental affairs (equivalent to the Japanese Ministry of the Environment).

Carbon Reduction Action Awards plaque

The aim of the Carbon Reduction Action Awards is to promote voluntary CO_2 emissions reduction activities by companies and social groups in Taiwan and raise awareness about CO_2 emissions reduction.

The award was presented to commend Taiwan Brother for the substantial results of its activities, including daily energy conservation promotion activities by all employees (including the environmental department), promotion of environmental education, active participation in environmental activities in the local community, and it was commended for its contribution to reducing CO_2 emissions.

Corporate Environmental Strategy and Management

Environmental Commendation and Awards

Brother Industries (U.K.) Ltd.

In June 2015, Brother Industries (U.K.) Ltd. (BIUK) won the Sustainable Products and Services Award, which is one of the Wales Responsible Businesses Awards 2015*1 organized by Business in the Community*1. Supported by the South Wales Chamber of Commerce, this award is presented to companies that continuously offer sustainable products and services.

By practicing the three Rs (reduce, reuse and recycle), BIUK achieved the following results:

- Reduced the environmental impact of the manufacturing process for recycled toner cartridges by 14% compared with new products
- Recovered 96% of toner parts
- Saved over £3.5 million as a direct result of reusing parts from FY2009 (April 1, 2009-March 31, 2010) to FY2013 (April 1, 2013-March 31, 2014)

BIUK won the award for driving circular economy principles for business growth.

*1: Wales Responsible Businesses Awards 2015 is the generic name of eight awards created to facilitate the growth of the local economy.
*2: Business in the Community is a charitable organization in the U.K. which works with companies to promote their CSR activities.

Internal environmental commendation system

"5R Award"

In FY2008 (April 1, 2008-March 31, 2009), the Brother Group implemented a commendation system for environmental activities for all group companies named the "5R Award". The aim was to motivate and improve the level of environmental activities of the entire group.

In FY2015, conventional categories were reorganized, and commitment to biodiversity conservation was added as an evaluation criterion for a 5R Award (under "Environmental Contributions"). Twenty-nine applications were received from May to June. The winners were four business sites and one department which achieved significant results tackling problems that all corporations have to face.

In November 2015, personnel from the award-winning entries gave presentations about their activities and received commendations from the BIL president at the Brother Group presentation meetings, which were attended by more than 3,000 people in total from group companies from Asia, Europe and the Americas.

Corporate Environmental Strategy and Management

Environmental Commendation and Awards

Business sites/departments that won a "5R Award" in FY2015

Award title		Business sites / departments
CO_2Emission Reduction 5R Award	Production Category	Brother Machinery Xian Co., Ltd.
	Office Category	Brother Iberia, S.L.U.
Product 5R Award		Machinery & Solution Company of Brother Industries, Ltd.
Environmental Contribution 5R Award	In the company	Brother Technology (Shenzhen) Ltd., Brother Industries (Shenzhen), Ltd.
	Outside the company	Taiwan Brother Industries, Ltd.

President's Award

In 1998, the Brother Group started the President's Award, a commendation system for all group companies. The award is intended to boost employees' motivation and challenging spirit by recognizing their efforts and accomplishments made throughout the year. The evaluation indices include reduction in CO_2 emissions and activities to improve the environment.

Commendation under the Brother eco point program

In April 2008, the Brother Group launched the "Brother eco point program" in Japan to help raise the environmental awareness of employees, and extended the program to facilities outside Japan from FY2009 (April 1, 2009-March 31, 2010).
Facilities in Japan and the U.S. as well as Brother Industries (U.K.) Ltd., etc. created their own commendation systems to encourage such activities. As of March 31, 2016, the Brother eco point program is in place in 44 countries and regions, involving 31,899 employees (25,908 employees in FY2014 [April 1, 2014-March 31, 2015]).

▶Timeline for Environmental Milestone Achievement
http://www.brother.com/en/eco/management/history/index.htm

Corporate Environmental Strategy and Management

Timeline for Environmental Milestone Achievement

Year	Month	Main Environmental activities
1991	September	・Company-wide environmental organization is established for each product division.
1993	May	・Brother's First Environmental Action Plan (Voluntary Plan) is formulated. ・Use of CFC 113 and trichloroethane in the production processes of Brother Industries, Ltd. (BIL) facilities and wholly-owned subsidiaries' facilities are completely banned (including total abolishment of all chlorinated solvents).
1994	February	・Brother's first white paper on the environment is issued (issued annually until 1999).
1995	February	・A new environmental management organization is started at BIL with the Facility Manager and Secretariat of the Environmental Management Committee of Facility spearheading the initiative.
1996	July	・Brother's Second Environmental Action Plan (Voluntary Plan) is formulated.
	December	・Brother Industries (U.K.) Ltd. becomes the first Brother Group company to obtain ISO 14001 certification.
1999	September	・Environmental Report is issued for the first time. (It has since been issued annually.) 
	December	・Brother's Third Environmental Action Plan (Voluntary Plan) is formulated.
2001	September	・Laser Printer HL-2460/2460N is awarded the Blue Angel Label of Germany.  HL-2460/2460N
	December	・Participates as an exhibitor in Eco-Products 2001. (Participated as an exhibitor each year until 2013.)
2002	April	・Zero emission is achieved at major facilities in Japan.
	September	・Laser Printer HL-7050 becomes the world's first printer awarded the TCO '99, an international environmental label.  HL-7050
	December	・Brother Group Fourth Environmental Action Plan is formulated and announced at the Brother Global Conference.
2003	April	・Personal Facsimile FAX-1100CL becomes first in the home-use facsimile industry to be awarded the EcoLeaf label managed by JEMAI.  FAX-1100CL

Corporate Environmental Strategy and Management

Timeline for Environmental Milestone Achievement

Year	Month	Main Environmental activities
2004	September	・Brother Green Procurement Management System starts operation. ・BIL starts company-wide environmental education by e-learning .
	May	・BIL becomes the first in the facsimile business to obtain the System Certification of the EcoLeaf.
	November	・Brother issues its first self-certification of the EcoLeaf label to the MFC-620CLN. MFC-620CLN 
2005	July	・Registers in Team -6% membership*1. ・Takes part in EPOC "ECO talk session" at citizen's pavilion of 2005 World Exposition Aichi, Japan*2.  *1  *2
2006	April	・Brother Group Fifth Environmental Action Plan is formulated.
2007	December	・Receives System Certification in the printer and facsimile business under the EcoLeaf eco-label
2008	April	・Brother Group Environmental Action Plan 2010 (2008-2010) is formulated.
	June	・Participates as exhibitor in Integrated Exhibition of the Environment in Celebration of the Hokkaido Toyako Summit in 2008.
2009	April	・A solar power generation system (100 kWh) is introduced at the Kariya Manufacturing Facility.
	June	・The CO_2 reduction target for FY2020 is added to the Brother Group Environmental Action Plan 2010 (2008-2010), and activities are launched.
	December	・Five models of printers (including HL-5350DN) and seven models of All-in-Ones (including MFC-8380DN) obtain Nordic Swan eco label certification.
2010	January	・Registers as a member of the Challenge 25 Campaign (switching from "Team Minus 6%").
	May	・"Brother Earth," a logo and slogan symbolizing the Brother Group's environmental activities, is created.
	July	・HL-5340D, HL-5350DN, HL-5380DN, MFC-8880DN, and MFC-8890DW become the first Brother products to obtain Environmental Choice New Zealand certification.
	October	・MFC-J6510DW, MFC-J6710DW, and MFC-J6910DW become the world's first inkjet printers to obtain Nordic Swan eco label certification. ・Brother exhibits its products at the tenth meeting of the Conference of the Parties (COP 10) as a company taking part in the Ink Cartridge Return Project.
	November	・GT-541 and GT-782 (garment printers) obtain Oeko-Tex Standard 100 certification.

Corporate Environmental Strategy and Management

Timeline for Environmental Milestone Achievement

Year	Month	Main Environmental activities
2011	April	・Brother Group Environmental Action Plan 2015 (2011-2015) is formulated. ・Brother U.K. Ltd. wins the Queen's Award.
	May	・Brother Industries, Ltd. wins the FY2010 Environmental goo Award in the category of Environmental and Social Reports.
2012	February	・Brother Sales, Ltd. wins the Certification Test for Environmental Specialists (Eco Test) Promotion Award 2011.
	May	・Brother (China) Ltd. wins the Eco Label Contribution Award from the China Environmental United Certification Center Co., Ltd. under the jurisdiction of the State Environmental Protection Administration. ・The Brother Group is recognized as the first Eco First company in the printer industry under the auspices of the Ministry of the Environment, Government of Japan.
2013	March	・Brother International (NZ) Ltd. becomes the first Brother Group company to be audited for ISO 14064 certification (Scopes 1, 2, and 3).
	June	・Brother International Corporation (U.S.A.) wins the Excellence Award in the Energy and Renewable Resources category of the Governor's Environmental Stewardship Awards program.
	April	・Brother International Corporation (U.S.A.) wins the RideWise Award (Silver Prize).
2014	January	・Brother Industries, Ltd. wins the 2014 Aichi Environmental Award (Gold Prize)
	May	・FAX-2840 becomes the first desktop black-and-white All-in-One to be certified under the Carbon Footprint of Products (CFP) program in Japan.
	June	・Brother Industries (U.K.) Ltd. wins BIG TICK under the BITC (Business in the Community) Sustainable Products and Services Award. ・Brother Industries (U.K.) Ltd. wins BIG TICK under the BITC (Business in the Community) Wales Responsible Business Services Award. ・Brother Technology (Shenzhen) Ltd. is commended by the City of Shenzhen as an advanced company under the Pengcheng* Waste Reduction Activities. ・Brother Industries (Shenzhen), Ltd. is commended by the City of Shenzhen as an advanced company under the Pengcheng Waste Reduction Activities.
	September	・Brother Industries (U.K.) Ltd. wins the Category Winner under the Manufacturing Excellence (MX) Award for Sustainable Manufacturing.
	October	・Brother International Corporation (U.S.A.) wins the Platinum Award under New Jersey Smart Workplaces.
	December	・Brother Machinery Xian Co., Ltd. is commended by the High Technology Industry Development Zone Branch Office, Xian Environmental Protection Bureau as an advanced organization in environmental statistics in FY2013.

*: Pengcheng is another name for Shenzhen.

Corporate Environmental Strategy and Management

Timeline for Environmental Milestone Achievement

Year	Month	Main Environmental activities
2015	February	・Brother Industries, Ltd. (BIL) wins the Good Performance Prize in the Environmental Report Section of the 18th Environmental Communication Awards. ・Brother International Corporation (U.S.A.) is commended in Business Recycler of the Year organized by the Tennessee Recycling Coalition.
	June	・Brother Industries (U.K.) Ltd. wins the Sustainable Products and Services Award under the Business in the Community Wales Responsible Businesses Awards 2015.
2016	January	・Environmental Management Dept., Brother Industries, Ltd. wins the Life Cycle Assessment Society of Japan (JLCA) Incentive Award at the 12th JLCA Commendation Ceremony. ・Taiwan Brother Industries, Ltd. wins the Excellence Prize in the Corporate Section of the Carbon Reduction Action Awards for FY2015.
	February	・Brother Industries, Ltd. (BIL) wins the Good Performance Prize in the Environmental Report Section of the 19th Environmental Communication Awards.

▶List of ISO 14001-certified Facilities and History of Auditing for ISO 14064
http://www.brother.com/en/eco/facility/iso_14001/index.htm

Creating Eco-conscious Products

Environmental Considerations within 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 2015 (2011-2015) 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_2 emissions and water consumption), reduction in CO_2 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.

Creating Eco-conscious Products

Environmental Considerations within 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.

It is essential to apply at the design stage, environmental considerations for the entire life cycle of a product. For certain key criteria in the product environmental assessments, target values are set at the initial stage of development and design. Improvements must be achieved when compared with previously released products.

[Brother's activities]
The environmental performance of our printers is improved by using air flow.
- Air Flow Simulation Technology -

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) .

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.

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

Product environmental impact assessment flow

Creating Eco-conscious Products

Environmental Considerations within Product Life Cycles

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 Japan Environmental Management Association for Industry under the name of the EcoLeaf environmental label. BIL also discloses its carbon footprint.
From January 25, 2007, the LCA information has been shared internally on the intranet of BIL. March 2016 saw detailed LCA information published in-house for 89 products (nine products were newly released in FY2015). These are used by the responsible departments and business partners to encourage the development of eco-conscious products. The Brother Group will continue to reduce the environmental impact of products by using LCA techniques.

▶Special Stories "Air Flow Simulation Technology"
http://www.brotherearth.com/en/story/air-flow.html

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 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 Directive.

▶Compliance with Environmental Laws and Regulations on Products
http://www.brother.com/en/eco/regulation/index.htm

Creating Eco-conscious Products

Environmental Considerations within Product Life Cycles

3. Production

Basic policy

All manufacturing facilities of the Brother Group have ISO 14001 environmental management systems. Products are manufactured within that global system 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.

Measures

Electrical power consumption and CO_2 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 Management System
http://www.brother.com/en/eco/management/organization/index.htm#01

▶CO_2 Emission Reduction Activities
http://www.brother.com/en/eco/facility/index.htm

▶Zero Waste Emission Activities
http://www.brother.com/en/eco/facility/waste/index.htm

▶Reducing Water Consumption
http://www.brother.com/en/eco/facility/water/index.htm

▶Preventing Pollution
http://www.brother.com/en/eco/facility/pollution/index.htm

▶Special Stories "Eco Factory"
http://www.brotherearth.com/en/story/ecofactory.html

▶Special Stories "Coatless Surface"
http://www.brotherearth.com/en/story/coatless.html

[Brother's activities]
Our commitment is to make our factories itself more eco-conscious.
- Eco Factory -

[Brother's activities]
Coatless Surface is our deep consideration for the environment.
- Coatless Surface -

Creating Eco-conscious Products

Environmental Considerations within Product Life Cycles

4. Packaging and logistics

Basic Policy

Brother is committed to:

・reducing product packaging and waste where possible; and

・reducing CO_2 emissions in distribution and transport.

Measures

・We are applying simpler and smaller packaging.

・We are combining product categories when arranging ship ments to maximize loads.

・We continue to review distribution routes.

▶CO_2 Emission Reduction Activities
http://www.brother.com/en/eco/facility/index.htm

▶Special Stories "Package Design Optimization"
http://www.brotherearth.com/en/story/package-desing-optimization.html

[Brother's activities]
From Flat to Upright Our breakthrough has led to a remarkably eco-friendly packaging.
- Package Design Optimization -

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.

Environmental labels and energy-saving standard compliance marks awarded to environmentally friendly products

Measures

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

[Brother's activities]
Aiming at an infinite supply of zero standby power.
- Low Energy Standby -

[Brother's activities]
Our aim was a sleek machine tool energized by recycled electricity, much like an eco-friendly compact car.
- Power Regeneration System -

[Brother's activities]
The key to increasing rotation speed and decreasing power consumption was "sound."
- Low-noise Belt Drive -

▶Environmental Labels Acquired http://www.brother.com/en/eco/product/label/index.htm

▶Special Stories "Low Energy Standby" http://www.brotherearth.com/en/story/standby.html

▶Special Stories "Power Regeneration System" http://www.brotherearth.com/en/story/power-supply-regenerative.html

▶Special Stories "Low-noise Belt Drive" http://www.brotherearth.com/en/story/hsm_belt-driving.html

Creating Eco-conscious Products

Environmental Considerations within 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.

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 P-touch 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 many 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.

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

Brother Sales, Ltd. joined the Bellmark campaign in April 2011 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

[Brother's activities] Promoting the reuse of monochrome toner cartridges

Mie Brother Precision Industries, Ltd. works on reusing toner cartridges for monochrome laser printers.

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 as needed, and is continually improving the methods of reusing toner cartridges.


Monochrome toner cartridges

▶Collection and Recycling http://www.brother.com/en/eco/product/recycling/index.htm

Creating Eco-conscious Products

Environmental Labels Acquired

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 were set in the Brother Group Environmental Action Plan 2015 (2011-2015) to acquire specific environmental labels including Blue Angel, Eco Mark, Nordic Swan, EPEAT, and China's Ten Circle Mark, and significant efforts were 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

The Blue Angel (Germany)

This eco-label is issued by the Federal Environmental Agency and the German Institute for Quality Assurance and Labeling. 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 2013, the standard was revised and upgraded (including addition of the UFP standards). Brother worked to comply with the new standard for both new and current products. Brother acquired the label for 25 product models in FY2015 (April 1, 2015-March 31, 2016).

▶List of products that acquired Blue Angel [PDF/0.2MB]
http://download.brother.com/pub/com/en/eco/pdf/blue_angel.pdf

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. Brother managed to acquire the label for 36 product models in FY2015.

▶List of products that acquired Nordic Swan [PDF/0.2MB]
http://download.brother.com/pub/com/en/eco/pdf/nordic_swan.pdf

Creating Eco-conscious Products

Environmental Labels Acquired

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. In FY2015, Brother acquired the label for one product model.

▶List of products that acquired Ten Circle Mark [PDF/0.2MB]
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). In FY2015, Brother acquired the label for 25 product models and 14 consumables.

List of products that acquired Eco Mark

▶Printers [PDF/0.2MB]
http://download.brother.com/pub/com/en/eco/pdf/eco_mark_printers.pdf
▶Stationery/office supplies (tape cassettes) [PDF/0.2MB]
http://download.brother.com/pub/com/en/eco/pdf/eco_mark_cassettes.pdf
▶Toner Cartridges [PDF/0.2MB]
http://download.brother.com/pub/com/en/eco/pdf/eco_mark_toner_cartridges.pdf
▶Ink Cartridges [PDF/0.2MB]
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. In FY2015, Brother acquired the label for four product models.

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

▶List of products that acquired Environmental Choice [PDF/0.2MB]
http://download.brother.com/pub/com/en/eco/pdf/environmental_choice.pdf

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.

▶List of products that acquired Green Mark [PDF/0.2MB]
http://download.brother.com/pub/com/en/eco/pdf/green_mark.pdf

Creating Eco-conscious Products

Environmental Labels Acquired

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 color laser printers/All-in-Ones and black-and-white laser printers/All-in-Ones, etc. In FY2015, Brother acquired the label for 14 product models.

▶List of products that acquired Korea Eco-label [PDF/0.2MB]
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. Twelve products were certified in FY2015.

Type III labels

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

システム認定
No.2004-12

EcoLeaf (Japan)

This eco-label is awarded to products that disclose quantifiable information about their environmental characteristics. It is managed and issued by the Japan Environmental Management Association for Industry. BIL has received "System Certification"* in the Printer and Facsimile Business (registered name) and is working on acquiring the EcoLeaf label for main products. Brother's 18 product models were certified in FY2015.

*: 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.

Carbon Footprint (Japan)

Carbon Footprint* is a mechanism to visualize the emissions of greenhouse gases (in CO_2 equivalent) from procurement of raw materials to disposal and recycling of products. It is issued by the Japan Environmental Management Association for Industry. 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. Five product models were certified in FY2015.

*: 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_2 emissions. Consumers are motivated to pursue a low-carbon lifestyle by utilizing the visualized information.

Creating Eco-conscious Products

Environmental Labels Acquired

Conformance label

International ENERGY STAR Program (the U.S., Japan, EU, Canada, Australia, New Zealand, and Taiwan)

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

List of products that qualify the standards of International ENERGY STAR program

▶U.S.A. [PDF/0.2MB]
http://download.brother.com/pub/com/en/eco/pdf/energy_star.pdf

▶EU [PDF/0.2MB]
http://download.brother.com/pub/com/en/eco/pdf/energy_star_eu.pdf

Energy Conservation Certification (Energy saving label) (China)

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

Oeko-Tex Standard 100 (including Europe, the U.S., and Japan)

This international standard is intended to protect consumers from harmful substances and chemical substances, etc. contained in textile products (including garments) that may affect health.

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.

RoHS Directive

Compliance with the RoHS Directive

The EU (European Union) enforced the RoHS (Restriction on the use of certain Hazardous Substances in electrical and electronic equipment) Directive in July 2006. All Brother products, excluding machine tools, for all markets in the world are compliant with the RoHS Directive. Products only for the Japanese market are labeled with our own eco-label to show they are compliant with the RoHS Directive.

Creating Eco-conscious Products

The Eco Declaration

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.

Please choose your country/region.

▶**Europe**
http://www.brother.com/en/eco/product/declaration/europe/index.htm

▶**U.S.A.**
http://www.brother.com/en/eco/product/declaration/usa/index.htm

Creating Eco-conscious Products

Collection and Recycling

Efforts to Improve Recycling

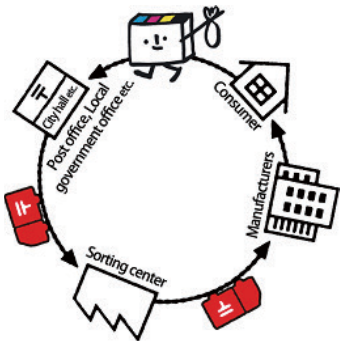
With the "end of life" of products in mind, the Brother Group has been working to (i) increase reusability and recyclability of products and consumables and (ii) build recycling systems in accordance with laws and regulations in respective countries.

Brother Group's collection and recycling efforts

Brother Sales, Ltd. [Japan]

Jointly collecting ink cartridges via post offices

n 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. Collection began at 3,638 posts offices across the country in April 2008.*1 The project has been a success as ink cartridges can be recycled by depositing them in the collection boxes at post offices*2 regardless of the manufacturer.
Recently, local government offices have started to install collection boxes. As of June 1, 2015, collection boxes are in place at 3,640 post offices and 2,768 local governments, etc.



Recycle process of "Ink Cartridge Return Project"

Used toner cartridges and drum units from printing products are collected free of charge. Requests are accepted via the company website, telephone, or fax. In the Brother eco point program, points are automatically awarded for every consumable returned, and seedlings are planted according to the number of points earned.

"Ink Cartridge Return Project" won the Excellence Award in the 13th Green Purchasing Awards by the Green Purchasing Network in September 2011.

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.

*1: Since November 2008, Brother Sales, Ltd. has been collecting ink cartridges as a certified, wide-area waste disposal agent, as defined in the revised Waste Management and Public Cleansing Act, under the guidance of the Ministry of the Environment, Government of Japan.
*2: Not all post offices participate in this project.

Creating Eco-conscious Products

Collection and Recycling

Mie Brother Precision Industries, Ltd. [Japan]

Promoting the reuse of monochrome toner cartridges

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

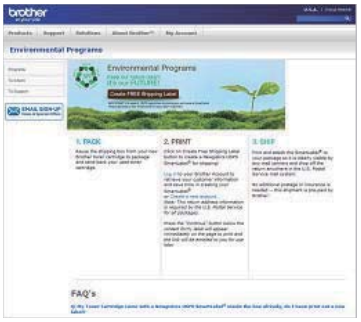
Brother International Corporation (U.S.A.) [North America]

Promoting the collection and recycling of consumables in North America

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.


Website for collecting toner and ink cartridges (U.S.)

Brother International Europe Ltd. [Europe]

Portal site for recycling consumables and products

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. The scheme is available in the EU and is translated into 28 languages.

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 .

Portal site for recycling (Europe)

▶**Portal site for recycling (Europe)** http://www.brother.eu/recycle

Creating Eco-conscious Products

Collection and Recycling

Brother Industries (U.K.) Ltd., Brother Industries (Slovakia) s.r.o. [Europe]

Recycling toner cartridges

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.

Clean room at the Recycling Technology Centre

▶Environmental Commendation and Awards
http://www.brother.com/en/eco/management/award/index.htm

Brother International Singapore Pte. Ltd. [Asia/Oceania]

Jointly collecting used ink and toner cartridges in Singapore

On December 1, 2011, Brother International Singapore Pte. Ltd. (BIC(S)) launched "Project Homecoming" to collect used ink and toner cartridges in Singapore in collaboration with four other printer manufacturers (Canon, Dell, Seiko Epson, and Lexmark International).

This project originated with the "Ink Cartridge Return Project " in Japan conducted by six companies (the above five companies plus Hewlett-Packard Japan, Ltd.) in collaboration with Japan Post Holdings Co., Ltd. This is the first joint project for printer manufacturers to collect used ink cartridges outside Japan.

In Singapore, collection boxes have been placed in 13 branches of the National Library, which are visited by many people daily, with cooperation from the National Environment Agency and the National Library Board. Collected cartridges are disassembled and then materials such as plastics and metals are recycled.

Go Green
Recycle Cartridges
Project Homecoming
A Joint-Brand Ink & Toner Cartridge Recycling Programme

"Project Homecoming" logo mark

Collection box

Creating Eco-conscious Products

Collection and Recycling

Brother International (Aust.) Pty. Ltd. [Asia/Oceania]

Participating in a toner cartridge recycling program

Brother International (Aust.) Pty. Ltd. is participating in the Cartridges 4 Planet Ark (C4PA) program to recycle toner cartridges.

Brother International (NZ) Ltd. [Asia/Oceania]

Used consumables and products collected and recycled

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.

Complying with Laws, Regulations and Social Trends

Compliance with Environmental Laws and Regulations on Products

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, 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 basic policy and environmental targets set out in the Brother Group Environmental Action Plan 2015 (2011-2015), 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. In addition, to fulfill the environmental targets of "Globally complying 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 developments of laws and regulations in respective 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.

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 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
http://www.brother.com/en/eco/regulation/green_procurement/index.htm

Compliance with the Law on Promoting Green Purchasing (Japan)

The Japanese Law on Promoting Green Purchasing (the Act on Promotion of Procurement of Eco-Friendly Goods and Services by the State and Other Entities), which came into force in April 2001, requires the state and other public entities to purchase products that comply with the law. Local governments, businesses, and citizens are also encouraged to purchase such products that comply with the law. In FY2008 (April 1, 2008-March 31, 2009), the Brother Group set a binding goal for all products subject to the law to meet its requirements. As a result, all main products (All-in-Ones, printers) released since FY2009 (April 1, 2009-March 31, 2010) comply with the law.

Complying with Laws, Regulations and Social Trends

Compliance with Environmental Laws and Regulations on Products

Compliance with the RoHS Directive in different countries (EU, Ukraine, Serbia, Canada, the U.S., Turkey, China, South Korea, India, Vietnam and other countries in Southeast Asia)

RoHS, which is an EU directive introduced in July 2006, bans 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. Later in 2007, China RoHS came into force, requiring the labeling with information on the contents of hazardous substances for electronic information products sold in China.
In 2008, the South Korea WEEE & RoHS came into force, requiring manufacturers to: restrict the use of hazardous substances contained in electrical and electronic products; set content standards for such substances; recycle products; and collect packaging materials. The Brother Group promptly complied with these new laws by utilizing the environmental information system.

FY2009 saw new regulations come into force or conventional regulations tightened in different countries and regions, for example, enforcement of the Turkey RoHS, and the addition of restricted substances under the Canadian Environmental Protection Act (CEPA), which is intended to control hazardous substances. The Brother Group succeeded in promptly meeting all of these regulations.

In FY2010 (April 1, 2010-March 31, 2011), the Brother Group complied with the Serbian WEEE & RoHS and RoHS in the Ukraine.
In FY2011 (April 1, 2011-March 31, 2012), in emerging countries including China, Southeast Asia, and India, local sales facilities joined local manufacturers' associations and actively conducted information gathering and lobbying activities, thus strengthening communications with the authorities in respective countries. A framework is now in place in this region for the compliance with environmental laws and regulations.

In FY2012 (April 1, 2012-March 31, 2013), the Brother Group complied with the WEEE & RoHS in India and RoHS in Vietnam.

In the US, the Brother Group ensured compliance with the Toxic Substances Control Act (TSCA, which regulates commercially used chemicals), the California Proposition 65 (a law requiring warning labels for hazardous substances), and the Perchlorate Contamination Prevention Act.

Complying with Laws, Regulations and Social Trends

Compliance with Environmental Laws and Regulations on Products

Compliance with the REACH Regulation (EU)

REACH is the EU Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals. It came into force in June 2007 for chemical substances that are manufactured or imported. Phased registration deadlines are set depending on the substance and its volume band. The Brother Group completed pre-registration of chemical substances covered by the regulation by FY2008.

In EU countries, manufacturers are required to (i) report SVHC (Substances of Very High Concern) content in products, (ii) disclose information regarding SVHCs when selling products and (iii) respond to inquiries from consumers within 45 days. The Brother Group improved the environmental information system to facilitate the investigation of SVHC content. In FY2009, the Brother Group set up a system for collecting data from suppliers to improve disclosure of information on SVHC content.

In FY2010, 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, the SDSs were revised to comply with the revised REACH Regulation.

▶Safety Data Sheets (SDS) http://sds.brother.co.jp/sdsapp/index.html

Compliance with the Ecodesign Directive (EU, Canada, the U.S., South Korea, and Australia)

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 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 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.

In the U.S., energy conservation standards were established for each product area in accordance with the Energy Policy Act of 2005. The Brother Group met the standards for external power supply products. Meanwhile, the Brother Group ensured compliance with similar energy conservation standards in other countries including Australia and Canada. In South Korea, the Brother Group complied with energy conservation standards for printers, All-in-Ones, and AC adapters based on the Energy Use Rationalization Act.

Complying with Laws, Regulations and Social Trends

Compliance with Environmental Laws and Regulations on Products

Compliance with the WEEE Directive, etc. (EU, the U.S., Japan, South Korea, Australia, and New Zealand)

The WEEE Directive 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 sales offices in Europe are members of a compliance organization or scheme in their country. Compliance organizations recover and recycle WEEE on behalf of companies to meet the requirements and targets set within the Directive. 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.

Disclosure of product information in accordance with The Eco Declaration (ECMA-370) (Europe and the U.S.)

The Brother Group discloses the environmental characteristics (including legal requirements) of printers, All-in-Ones, label printers, and scanners for Europe and the U.S. in accordance with The Eco Declaration (ECMA-370), which is a standardized format and system for disclosing environmental characteristics of electric home appliances including fax machines and All-in-Ones in Europe.

▶The Eco Declaration
http://www.brother.com/en/eco/product/declaration/index.htm

Efforts to prevent illegal logging (EU and Australia)

The EU Timber Regulation and Australia's Illegal Logging Prohibition Act have entered into force, which prohibit placing timber products (including paper products) derived from illegally harvested timber on the market. The regulations also define the methods to conduct 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 product package boxes, and confirmed the legality of timber used as a raw material.

Complying with Laws, Regulations and Social Trends

Green Procurement

Green procurement policy

Procuring environmentally friendly parts and materials from suppliers who promote environmental conservation activities

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 February 2001 in which we prioritize procuring environmentally friendly parts and materials for all products that we sell.

In April 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 to promote the manufacture of environmentally conscious products with suppliers. All suppliers are required to deliver parts and materials in accordance with the Brother Group Green Procurement Standards. Also, the Brother Group conducts audits on suppliers every three years to check their management systems and operations comply with laws and regulations. Suppliers are required to make any necessary improvements and guarantee that the goods that they supply meet the standards.

Policy of green procurement activities

1) Buy products from suppliers who promote environmental conservation activities
2) Buy goods (parts, materials, sub-materials, and products) that do not contain hazardous chemical substances specified by the Brother Group

Scope

The Green Procurement Standards apply to the Brother Group's procurement activities for all goods including:

- 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 trade mark;
- 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.

Complying with Laws, Regulations and Social Trends

Green Procurement

Brother Group Green Procurement Standards

Quick compliance with environmental laws and regulations in various countries

The Brother Group Green Procurement Standards have been updated 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 chemical substances in all goods which are supplied to the Brother Group. Specifically, substances/substance groups the use of which is restricted globally in accordance with laws and regulations, etc. are specified as "RoHS" and "Prohibited substances excluding RoHS," and are designated as "prohibited chemical substances (Level A)." Meanwhile, chemical substances/substance groups included in the Candidate List of "Substances of Very High Concern" (SVHC) according to EU REACH regulation (REGULATION (EC) No 1907/2006) are classified as "SVHC," while some chemical substances/substance groups published in the "Joint Industry Guide" (JIG-101) are categorized as "Controlled substances excluding SVHC." "SVHC" and "Controlled substances excluding SVHC" are designated as "controlled chemical substances (Level B)." When "controlled chemical substances (Level B)" are intentionally included, suppliers are required to identify and report the content (density) because these substances will be subject to restrictions in the future. To help build a sustainable society, suppliers are encouraged to actively work on the conservation of biological diversity and formulate plans to reduce greenhouse gas emissions.

Brother Group Green Procurement Standards

▶Green Procurement Standards Japanese (version 8.0) [PDF/579KB]
http://download.brother.com/pub/jp/eco/pdf/gpsj_ver8_0.pdf

▶Green Procurement Standards English (version 8.0) [PDF/625KB]
http://download.brother.com/pub/com/en/eco/pdf/gpse_ver8_0.pdf

▶Green Procurement Standards Chinese-simp (version 8.0) [PDF/624KB]
http://download.brother.com/pub/com/cn/eco/pdf/gpssc_ver8_0.pdf

▶Green Procurement Standards Chinese-trad (version 8.0) [PDF/790KB]
http://download.brother.com/pub/com/cn/eco/pdf/gpstc_ver8_0.pdf

▶Green Procurement Standards Vietnamese (version 8.0) [PDF/804KB]
http://download.brother.com/pub/com/vn/eco/pdf/gpsv_ver8_0.pdf

In FY2011 (April 1, 2011-March 31, 2012), the Brother Group expanded the scope of CSR procurement to cover human rights, labor, health and safety, fair trade and ethics, quality and safety, information security, contribution to society, etc.

▶Compliance with the RoHS Directive in different countries
http://www.brother.com/en/eco/regulation/index.htm#rohs

▶Compliance with the REACH Regulation
http://www.brother.com/en/eco/regulation/index.htm#reach

▶Promoting CSR Procurement
http://www.brother.com/en/csr/partner/purchase/index.htm

Complying with Laws, Regulations and Social Trends

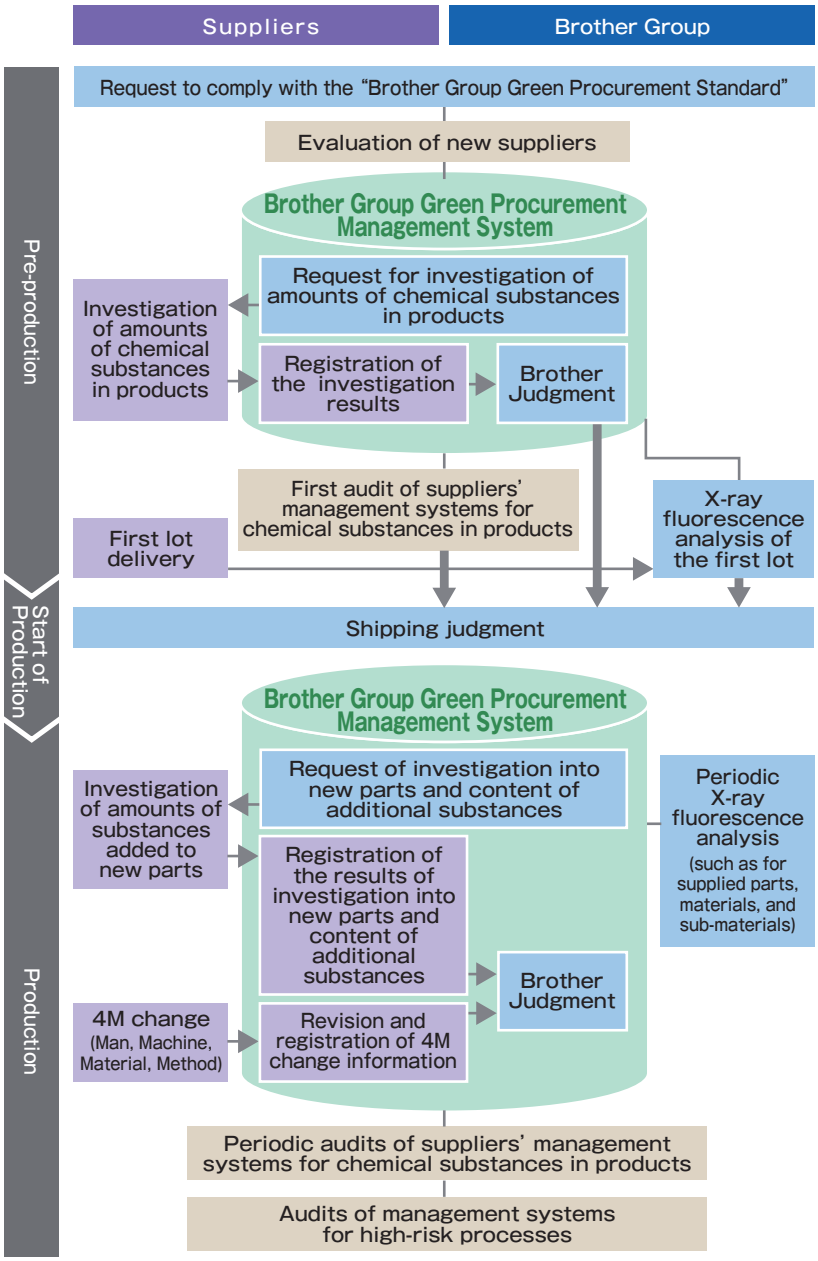
Green Procurement

Brother Group Green Procurement Management System

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

The Brother Group requests all suppliers to cooperate in investigations into the content of chemical substances in products and pass the audits of their management systems for chemical substances in products.

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



Reducing Environmental Impact

CO_2 Emission Reduction Activities

Continuously implementing energy conservation measures based on the mid-term targets for 2020

As a global company operating in various countries and regions, the Brother Group considers efforts to prevent global warming as one of the top priority issues.

The Brother Group's CO_2 emissions in Japan come mainly from electricity used by offices, while the group's CO_2 emissions overseas are attributed mainly to the use of electricity and fuel at factories and offices. The Brother Group established the mid-term targets for 2020 to reduce CO_2 emissions. Meanwhile, the Brother Group has been continuously implementing energy conservation measures to increase the efficiency of air conditioning and lighting, and ensure the efficient operation of production equipment at factories based on the Brother Group Mid-Term Environmental Action Plan as a milestone.

The emissions coefficient as defined in the Act on Promotion of Global Warming Countermeasures (competent government agency: the Japanese Ministry of the Environment) is used to calculate the emissions in and outside Japan. The CO_2 emissions reduction rate is evaluated on an annual basis.

Mid-term targets for FY2020 (April 1, 2020-March 31, 2021)

(1) Cut total CO_2 emissions by 30% from FY1990 levels at eight business sites in Japan by FY2020 (absolute value)

(2) Cut CO_2 emissions by 20% (per unit of sales) from FY2006 levels at manufacturing facilities outside Japan (except the USA)* by FY2020

*: USA (a manufacturing facility outside Japan) constitutes part of a sales facility. Thus, the CO_2 emissions are included in the results of the sales facility.

Reducing Environmental Impact

CO_2 Emission Reduction Activities

Results of the Brother Group Environmental Action Plan 2015 (2011-2015)

Based on the Brother Group Environmental Action Plan 2015 (2011-2015), the Brother Group worked to reduce CO_2 emissions by 1% per annum at eight business sites in Japan (absolute value) and at manufacturing facilities outside Japan (except the USA) (per unit of sales). In particular, the Brother Group implemented energy conservation measures to attain industry-leading energy efficiency of its products.

At the eight business sites in Japan, the product production volume at the Kariya Manufacturing Facility increased, which led to increased consumption of electricity; at other manufacturing facilities, various energy conservation measures were implemented, including extensive energy conservation (depending on the level of operation), replacement with state-of-the-art air conditioning systems, and use of LEDs for ceiling lights. As a result, emissions were reduced by 542 tons (by 3.5%) from FY2014 (April 1, 2014-March 31, 2015) in CO_2 equivalent, and Brother could meet the target for FY2015 (April 1, 2015-March 31, 2016) set in the Brother Group Environmental Action Plan 2015 (2011-2015). The Brother Group reduced emissions by 27.8% from FY1990 (November 21, 1989-November 20, 1990) levels (absolute value), achieving the target for FY2015 set in the mid-term targets for 2020.

After achieving the targets seven years ahead of schedule in FY2013 (April 1, 2013-March 31, 2014), manufacturing facilities outside Japan (except the USA) further promoted the CO_2 emissions reduction activities. As a result, although production volume increased in FY2015, emissions were reduced by 2,185 tons (by 0.8%) from FY2014 in CO_2 equivalent, and Brother could meet the target for FY2015 set in the Brother Group Environmental Action Plan 2015 (2011-2015). Emissions were reduced by 32.3% (per unit of sales) from FY2006 (April 1, 2006-March 31, 2007), achieving the mid-term targets for 2020.

Regarding the CO_2 emissions reduction target (reducing total CO_2 emissions of the entire group [business sites in Japan, and manufacturing and sales facilities outside Japan, except logistics] by 1% per annum [per unit of sales] from FY2013) for the Brother Group set in FY2012 (April 1, 2012-March 31, 2013), emissions increased by 2.4% from FY2014, but decreased by 18.9% from FY2012, achieving the overall target.

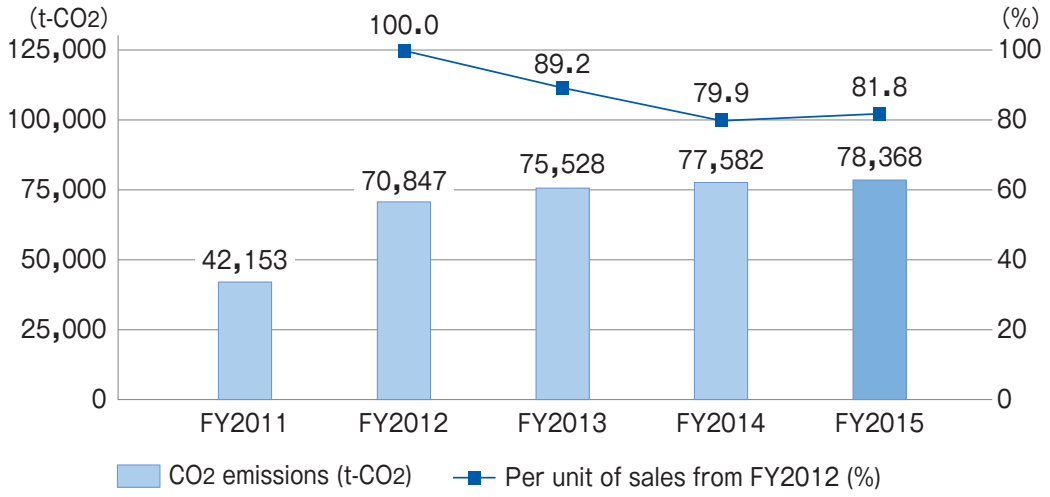
CO_2 emissions in logistics have been reduced by 1% per unit of sales, per annum since FY2014, as planned. In FY2015, emissions were reduced by 6.4% per unit of sales from FY2014.

In FY2013, the Brother Group started calculations for Scopes 1, 2, and 3 using emissions coefficients by country and region applied to respective business sites based on the GHG Protocol (a globally used standard) and has been making efforts to acquire certification for the accuracy of data.

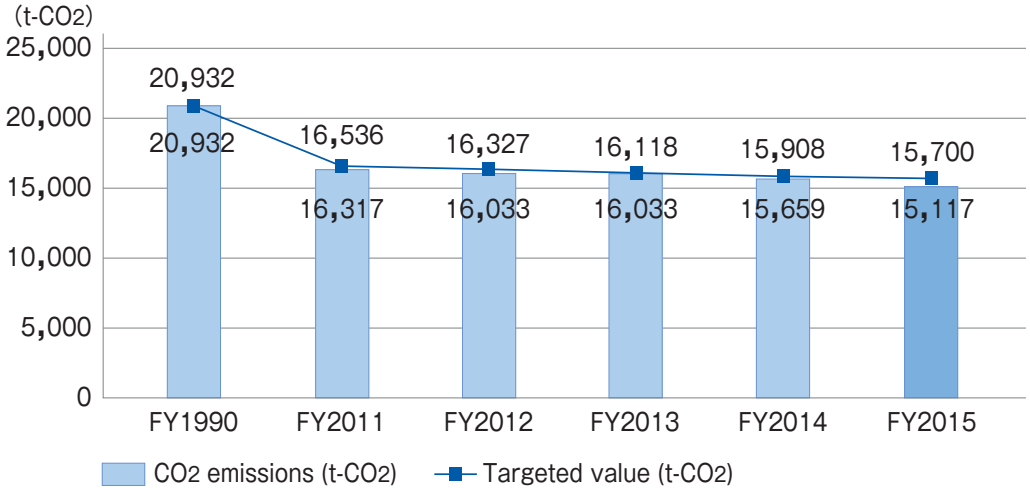
Reducing Environmental Impact

CO_2 Emission Reduction Activities

Changes in CO_2 emissions of the Brother Group*



Changes in CO_2 emissions from eight business sites in Japan (absolute value)



*: CO_2 emissions are calculated based on the "Review results regarding calculation of greenhouse gas emissions" by the Ministry of the Environment, Japan. The list of emissions coefficients defined in the Order for Enforcement that came into force in December 2002 was applied for the calculations. The scope of aggregation was expanded in FY2012 (April 1, 2012-March 31, 2013). The results are managed from FY2013.

Reducing Environmental Impact

CO_2 Emission Reduction Activities

Scope of aggregation

FY2011	FY2012	FY2013	FY2014	FY2015
Eight business sites of Brother Industries, Ltd. (head office, Mizuho Manufacturing Facility, Hoshizaki Manufacturing Facility, Minato Manufacturing Facility, Momozono Manufacturing Facility, Kariya Manufacturing Facility, Research & Development Center, and Logistics Center), Mie Brother Precision Industries, Ltd., Brother Industries (U.K.) Ltd., Taiwan Brother Industries, Ltd., Zhuhai Brother Industries, Co., Ltd., Brother Machinery Xian Co., Ltd.,*1 Brother Industries (Shenzhen), Ltd., Brother Technology (Shenzhen) Ltd., Brother Industries Technology (M) Sdn. Bhd., Brother Industries (Vietnam) Ltd., and Brother Industries (Slovakia) s.r.o.	Brother Industries Saigon, Ltd., Nissei Corporation, Brother Sales, Ltd., XING Inc., and 52 sales companies*2 outside Japan were added to the scope of aggregation on the left.	Brother Industries (Philippines), Inc. was added to the scope of aggregation on the left.	Brother Machinery Vietnam Co., Ltd. was added to the scope of aggregation on the left.	Same as on the left

*1: 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.

*2: Three non-consolidated companies are included.

Reducing Environmental Impact

CO_2 Emission Reduction Activities

CO_2 reduction activities by the Brother Group's manufacturing facilities

Brother Industries, Ltd. (Japan)

At Brother Industries, Ltd. (BIL), divisions that own equipment, the general affairs division, and the environmental division reviewed management standards for power-intensive equipment including: lighting and air conditioning equipment, humidifiers, clean rooms, compressors, and constant temperature/humidity chambers. They identified locations that required improvements through energy conservation patrols and other means, to enhance electricity/energy-saving activities.

Since 2011 when the Great East Japan Earthquake struck, business sites of BIL have been working on the following electricity/energy conservation activities, by taking supply-demand measures in cooperation with the electric supply companies and cutting peak electricity demand in summer.

LED fluorescent lamps and canopy switches

- Cool Biz (no tie or jacket worn in summer)
- Switching off the lights of advertising towers at business sites (activity continuing at the head office building and the Mizuho Manufacturing Facility)
- Ensuring to observe air conditioning temperature settings (summer: 28°C, winter: 20°C)
- Introducing the most efficient LED fluorescent lamps
- Removing ceiling lights where possible and installing individual canopy (string) switches
- Switching off lights where unnecessary
- Setting the illuminance levels for lighting in common spaces to the necessary minimum (e.g., corridors, passages, elevator halls, stairwells) and adjusting the occupancy sensor timer settings to reduce the duration in which lights are on
- Eliminating the use of air conditioning in common spaces (e.g., corridors, passages, elevator halls, stairwells)

Double-pane glass window sashes
(interior side of windows)

- Unplugging or switching off the main power of power strips for office equipment (e.g., PCs, LED monitors) when employees go home
- Requiring employees to submit special air conditioning area applications to use rooms with temperature settings different from the standard setting, and reflecting such requirements in the ISO 14001 work instruction sheets as necessary
- Turning off beverage vending machines in turn every two weeks or every month (in summer)
- Switching off toilet seat heaters and adjusting warm water temperatures (in summer)
- Reducing the number of hours in which tea dispensers are available and reducing the number of hot water dispensers
- Adjusting the hot water temperatures of electric water heaters (in winter) (switching off in summer)

Reducing Environmental Impact

CO_2 Emission Reduction Activities

Brother Industries, Ltd. (Japan)

In FY2014 (April 1, 2014-March 31, 2015), at some offices, double-pane glass window sashes (retrofitted units) were installed on the interior side of existing windows, and proved to be highly effective for thermal insulation in summer and winter. These sashes were introduced extensively in FY2015 (April 1, 2015-March 31, 2016) to help create a comfortable office environment by reducing air-conditioning load, decreasing the workplace discomfort (e.g. too hot or too cold), and reducing noise from outside. The measure has been well-received by employees.

Photovoltaic power generation system expanded at the Mizuho Manufacturing Facility

In June 2014, the photovoltaic power generation system was expanded at the Mizuho Manufacturing Facility. At present, two photovoltaic power generation systems are in place at the Mizuho Manufacturing Facility and one at the Kariya Manufacturing Facility (a generation capacity of about 100 kW each). The total annual power generation of these three systems was 334 MWh in FY2015. The total power generation after installation of these systems added up to 2,528 MWh.

Nissei Corporation (Japan)

When adding air compressors, Nissei Corporation introduces inverter-driven air compressors (that automatically reduce the motor speed when the demand for compressed air is low) to save energy, because ordinary air compressors consume a large amount of electricity. To reduce unnecessary operation due to air leakage while compressed air is used, the air piping is inspected and repaired periodically. For equipment that is likely to cause an air leakage, operation rules have been changed to remove the air piping whenever it is not used. To reduce the electricity consumed by lighting, LED lamps were installed, and lighting fixtures were removed where unnecessary, among other initiatives.

Electrodeless lamps

Highly efficient air conditioning equipment (outdoor unit)

In FY2014, energy conservation was promoted by replacing mercury lamps with electrodeless lamps and improving the equipment used in the aluminum die cast manufacturing process.

In FY2015, highly efficient air conditioning equipment was introduced in the office building. Meanwhile, conventional transformers were replaced with top-runner transformers, and the number of transformers was reduced by reconfiguring the load connection in the manufacturing facility building. Measures were implemented to reduce 51 tons of CO_2 emissions in total.

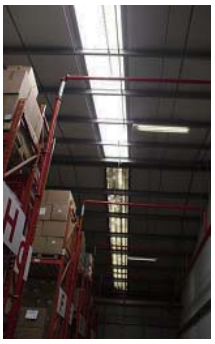
Top-runner transformer

Reducing Environmental Impact

CO_2 Emission Reduction Activities

Brother Industries (U.K.) Ltd. (Europe)

In FY2014, Brother Industries (U.K.) Ltd. replaced its heating systems with highly efficient systems to reduce heating energy consumed in winter. At the large opening to carry in goods, a high-speed shutter was installed to reduce the outflow of warm air in the manufacturing facility, thereby reducing the heating energy loss. To reduce the electricity consumption of lighting in the daytime, skylights were added continuously from FY2013. A unit control system was also introduced to automatically optimize the number of air compressors (which consume a large amount of electricity) in operation depending on the demand for compressed air, eliminating unnecessary electricity consumption.



Daylight from the skylights in the ceiling

Brother Machinery Xian Co., Ltd. (Asia)

Brother Machinery Xian Co., Ltd. built a new manufacturing facility, and transferred production from the old manufacturing facility in FY2013. The new facility was designed to give priority to energy conservation to minimize CO_2 emissions from the outset. Extensive energy conservation activities have been continuously implemented.

Energy conservation feature	Details
Natural lighting	Roof windows are provided, and lighting is controlled by sensors depending on the indoor illuminance.
Thermal insulation	The walls and roofs are thermally insulated to reduce (i) heat transmitted to the interior (solar radiation heat and outdoor heat) and (ii) heat radiated from the interior to the exterior, thus reducing unnecessary electricity consumed by air conditioning.
Total heat exchanger	In the production areas that require temperature control, the outdoor air is taken in via a total heat exchanger to reduce the air conditioning load and hence electricity consumption.
Dirivent fan	The fan produces a strong air stream to spread the hot air from the heater in the manufacturing facility, achieving a uniform temperature in the working area.
Highly efficient lighting equipment	The most efficient fluorescent lamps at the time of construction were installed.
Automatic lighting using occupancy sensors	In areas used by many people for short periods of time (e.g. bathrooms, stairways, break rooms, and changing rooms), occupancy sensors automatically switch the lights on and off, avoiding forgetting to turn off the lights.
Integrated management system	An integrated management system automatically turns off the air conditioning and lighting when and where unnecessary (e.g. during breaks and after work).

Reducing Environmental Impact

CO_2 Emission Reduction Activities

Brother Technology (Shenzhen) Ltd. (Asia)

In FY2015, Brother Technology (Shenzhen) Ltd. implemented the energy conservation measures given below to reduce the electricity consumption.

- Reviewed the layout of the manufacturing area and office, reduced space and the number of equipment, and cut power consumption
- Reduced the number of compressors in operation by one by connecting the compressed air piping for two separate buildings
- Reduced the number of air compressors in operation during the nighttime when the production load is small
- Installed power switches at readily accessible positions, so that electrical equipment in the production line is turned off at the end of production
- Halved the number of test runs for maintenance inspections of generators (from twice every two weeks to once every two weeks)

Taiwan Brother Industries, Ltd. (Asia)

In FY2015, Taiwan Brother Industries, Ltd. replaced old air conditioning, lighting systems, etc. that consume a large amount of electricity with highly efficient equipment. In terms of equipment operation, the number of pieces of heat source equipment in operation for air conditioning systems is optimized depending on the air conditioning load that changes according to seasonal changes, reducing unnecessary operation.

Newly introduced air conditioning equipment (outdoor unit)

Brother Industries (Vietnam) Ltd. (Asia)

In FY2015, Brother Industries (Vietnam) Ltd. implemented the energy conservation measures below to cut power consumption.

- Reviewed the layout of the manufacturing area, reduced space and the number of equipment, and cut power consumption
- Replaced the air curtain (which was installed to prevent outflow of chilled air from the opening of the manufacturing area) with a plastic curtain, and thereby reduced power consumption
- Reduced the heating time of heaters for injection molding machines from two hours to one hour before commencement of production
- Reduced the mold heating time by mold temperature controllers from two hours to 30 minutes before commencement of production
- Modified the equipment so that the power can be turned off with a single switch, thereby reducing standby electricity consumption due to failure to turn off the equipment at the end of work

Reducing Environmental Impact

CO_2 Emission Reduction Activities

CO_2 reduction activities by the Brother Group's sales facilities

Ongoing energy conservation activities at sales facilities

Energy conservation activities below are underway at offices and service centers of the Brother Group sales companies.

- Conventional lamps are being replaced with energy-efficient LED lamps
- Lights are being switched off and removed whenever and wherever unnecessary, and lighting fixtures fitted with sensors are being introduced
- Temperature settings and timers of air conditioning equipment are being reviewed
- Power is being switched off when it is unnecessary
- PCs are being set to standby mode and equipment is being switched off

As a result, electricity consumption in FY2015 was reduced by about 164 MWh from FY2014.

LED lamps used in the showroom and service center

Independent switches were added to reduce power consumption. The temperature settings of air-conditioning equipment were reviewed. Lights were switched off and removed whenever and wherever unnecessary.

Reducing Environmental Impact

CO_2 Emission Reduction Activities

Brother International Corporation (U.S.A.) (North America)

In 2012, the logistics center of Brother International Corporation (U.S.A.) (BIC (USA)) in Tennessee was certified under the International ENERGY STAR program* for the following energy/electricity conservation activities in particular.

- Introducing an automatic lighting control system
- Introducing an air conditioning control system (closed loop control type)
- Introducing thermal insulation measures for roofs and windows
- Introducing two photovoltaic power generation systems (power generation capacity of each: about 60 kW)

Photovoltaic power generation systems set up at two locations

In FY2011 (April 1, 2011-March 31, 2012), photovoltaic power generation systems were installed at two locations on the premises. The total power generation capacity is about 120 kW, and the electricity generated added up to 165 MWh in FY2015 (about 2.0% of the total electricity consumption at this site).

Ceiling equipment in the warehouse area
Ceiling fan (left) and extra-large fan (right)

In the warehouse area, extra-large fans were fixed to the ceiling to keep employees cooler in summer. In winter, warm air is circulated on the floor surface to increase the heating efficiency and reduce fuel consumed by the boiler. In FY2015, the energy consumption was reduced by about 580 MWh from FY2014.

*: In the U.S., a building program (covering all types of corporate buildings) is in place for certification under the International ENERGY STAR program.

▶Material Balance
http://www.brother.com/en/eco/performance/index.htm

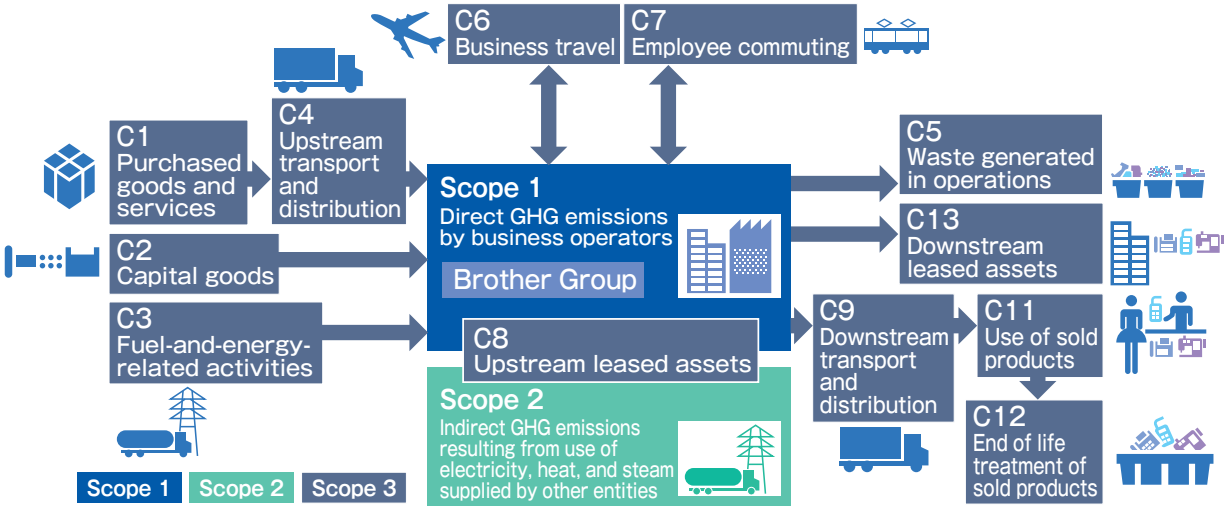
▶In-depth Data
http://www.brother.com/en/eco/performance/data/index.htm

Reducing Environmental Impact

CO_2 Emission Reduction Activities

Making further efforts to calculate greenhouse gas emissions based on ISO 14064 (Scopes 1, 2, and 3)

In FY2013, the Brother Group started calculations for Scope 1 and Scope 2 based on the GHG Protocol (a globally used standard). In FY2014, the Brother Group started to calculate Scope 3. In FY2015, the scope of the calculations was expanded to cover the entire Brother Group including the manufacturing and sales facilities in and outside Japan to calculate the emissions for Scopes 1, 2, and 3.
To verify the calculation results, the Brother Group is subject to verification of compliance with the international standards (ISO 14064 requirements) established by a third party organization, in an effort to acquire certification for the accuracy of data. The Brother Group acquired certification for the accuracy of data for the calculation results in FY2015. In FY2016 (April 1, 2016-March 31, 2017), the Brother Group will promote efforts to further increase the accuracy of the emissions calculations and reduce greenhouse gas emissions from the entire supply chain.



Scopes 1, 2, and 3 calculation results

* The scope of disclosure (aggregation) of the calculation results is limited to facilities that are subject to verification by a third party organization.

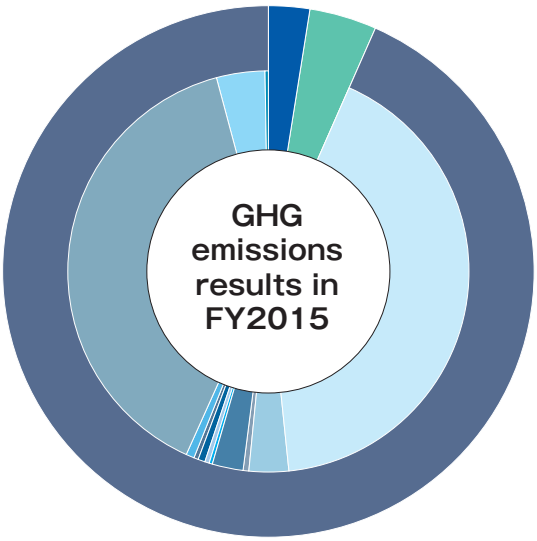
Scope		FY2012	FY2013	FY2014	FY2015
Scope 1 ($t\text{-}CO_2$)		2,016	1,842	29,389	75,333
Scope 2 ($t\text{-}CO_2$)	Location-based	15,358	15,667	88,939	122,766
	Market-based	—	—	—	125,093
Scope 3 ($t\text{-}CO_2$)		—	—	204,719	2,930,271

Reducing Environmental Impact

CO_2 Emission Reduction Activities

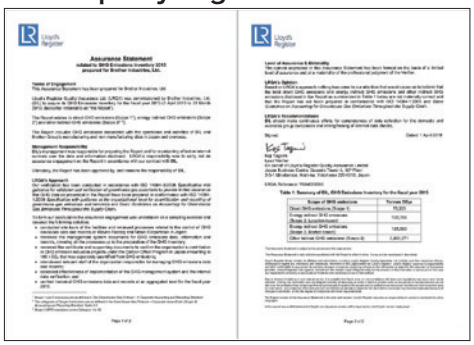
GHG emissions results in FY2015

Scope, category			CO_2 emissions		Remarks
			t-CO_2 equivalent	Ratio	
Scope 1(t-CO_2)			75,333	2.4%	
Scope 2(t-CO_2) : Market-based			125,093	4.0%	
Scope 3(t-CO_2)			2,930,271	93.6%	
	C1	Purchased goods and services	1,296,640	41.4%	
	C2	Capital goods	96,858	3.1%	
	C3	Fuel- and energy-related activities	9,523	0.3%	
	C4	Upstream transport and distribution	77,535	2.5%	
	C5	Waste generated in operations	3,012	0.1%	
	C6	Business travel	5,670	0.2%	
	C7	Employee commuting	13,299	0.4%	
	C8	Upstream leased assets	5,942	0.2%	
	C9	Downstream transport and distribution	15,552	0.5%	
	C10	Processing of sold products	—	—	No intermediate products sold
	C11	Use of sold products	1,245,508	39.8%	
	C12	End-of-life treatment of sold products	159,003	5.1%	
	C13	Downstream leased assets	1,729	0.1%	
	C14	Franchises	—	—	No franchises
	C15	Investments	—	—	No securities for portfolio investments
Total of Scopes 1, 2, and 3			3,130,697	100%	



Scope 1	2.5%
Scope 2	4.1%
Scope 3	93.4%
C1	42.0%
C2	3.2%
C3	0.3%
C4	2.5%
C5	0.1%
C6	0.2%
C7	0.4%
C8	0.2%
C9	0.5%
C11	40.0%
C12	3.9%
C13	0.1%

Statement for verification by a third party organization



▶View the PDF [PDF/586KB]

The Brother Group obtained an LRQA assurance statement for calculation and disclosure of GHG emissions.

Reducing Environmental Impact

CO_2 Emission Reduction Activities

Scope of aggregation

	FY2012	FY2013	FY2014
Scopes 1 and 2	Eight business sites of Brother Industries, Ltd. (head office, Mizuho Manufacturing Facility, Hoshizaki Manufacturing Facility, Minato Manufacturing Facility, Momozono Manufacturing Facility, Kariya Manufacturing Facility, Research & Development Center, and Logistics Center), and Mie Brother Precision Industries, Ltd.		Nissei Corporation, Brother Industries (U.K.) Ltd., Brother Industries (Slovakia) s.r.o., Taiwan Brother Industries, Ltd., Brother Industries Technology (M) Sdn. Bhd., Zhuhai Brother Industries, Co., Ltd., Brother Machinery Xian Co., Ltd., Brother Industries (Shenzhen), Ltd., Brother Industries (Vietnam) Ltd., Brother Technology (Shenzhen) Ltd., Brother Industries Saigon, Ltd., Brother Industries (Philippines), Inc., and Brother Machinery Vietnam Co., Ltd. were added to the scope of aggregation on the left.
Scope 3			Eight business sites of Brother Industries, Ltd. (head office, Mizuho Manufacturing Facility, Hoshizaki Manufacturing Facility, Minato Manufacturing Facility, Momozono Manufacturing Facility, Kariya Manufacturing Facility, Research & Development Center, and Logistics Center), and Mie Brother Precision Industries, Ltd.

	FY2015
Scopes 1 and 2	Standard Corp.*1; Brother International GmbH; Brother International GmbH (Austrian Branch); Brother France SAS; Brother U.K. Ltd.; Brother International (Nederland) B.V.; Brother Nordic A/S; Brother Norway, branch of Brother Nordic A/S; Brother Sweden, branch of Brother Nordic A/S, Denmark; Brother Finland, Brother Nordic A/S Denmark, branch in Finland; Brother Central And Eastern Europe GmbH; Brother International (Belgium) NV/SA; Brother (Schweiz) AG; Brother International Corporation (Ireland) Ltd.; Brother Italia S.p.A.; Brother International CZ s.r.o.*2; Brother International Hungary Kft.*2; Brother Iberia, S.L.U.; Brother Iberia, S.L.U. (Lisbon Branch); Brother LLC; Brother Polska Sp. z o.o.*2; and Brother Sewing Machines Europe GmbH (U.K. Branch)
Scopes 1, 2, and 3	Eight business sites of Brother Industries, Ltd. (head office, Mizuho Manufacturing Facility, Hoshizaki Manufacturing Facility, Minato Manufacturing Facility, Momozono Manufacturing Facility, Kariya Manufacturing Facility, Research & Development Center, and Logistics Center), Tokyo Branch, Nissei Corporation, Brother International Corporation, Mie Brother Precision Industries, Ltd., Brother Sales, Ltd., XING Inc., XING Music Entertainment, Inc., Brother Logitec Ltd., Brother Real Estate, Ltd., Brother Living Service Co., Ltd., Brother Enterprise, Ltd., Betop Staff, Ltd., Brother Industries (U.S.A.) Inc., Brother International Corporation (U.S.A.), Brother International Corporation (Canada) Ltd., Brother International de Mexico, S.A. de C.V., Brother International Corporation do Brasil, Ltda., Brother International de Chile, Ltda., Brother International Corporation de Argentina S.R.L., Brother Mobile Solutions, Inc., Brother International del Peru S.A.C., Brother Industries (U.K.) Ltd., Brother Industries (Slovakia) s.r.o., Brother International Europe Ltd., Brother Internationale Industriemaschinen GmbH, Brother Internationale Industriemaschinen GmbH (Italian Branch), Brother Sewing Machines Europe GmbH, Brother System Technology Development (Hangzhou) Ltd., Taiwan Brother Industries, Ltd., Brother Industries Technology (M) Sdn. Bhd., Zhuhai Brother Industries, Co., Ltd., Brother Machinery Xian Co., Ltd., Brother Industries (Shenzhen), Ltd., Brother Industries (Vietnam) Ltd., Brother Technology (Shenzhen) Ltd., Brother Industries Saigon, Ltd., Brother Industries (Philippines), Inc., Brother Machinery Vietnam Co., Ltd., Nissei Gear Motor Mfg. (Changzhou) Co., Ltd., Brother International S.A. (Pty) Ltd., Brother International (Aust.) Pty. Ltd., Brother International Singapore Pte. Ltd., Brother International (NZ) Ltd., Brother International (HK) Ltd., Brother International (Gulf) FZE, Brother International (Gulf) FZE (Turkey Branch), Brother Commercial (Thailand) Ltd., Brother Machinery (Asia) Ltd., Brother International (Malaysia) Sdn. Bhd., Brother International Philippines Corporation, Brother (China) Ltd., Brother International (India) Private Ltd., PT Brother International Sales Indonesia, Brother International Taiwan Ltd., Brother International (Vietnam) Co., Ltd., Brother International Korea Co., Ltd., Brother Machinery Shanghai Ltd., and Nissei Trading (Shanghai) Co., Ltd.

*1: Standard Corp. is a business site that was added for aggregation in April 2018.

*2: Non-consolidated subsidiaries

Reducing Environmental Impact

CO_2 Emission Reduction Activities

Efforts in logistics

The Brother Group set management standards for reducing logistics-related CO_2 emissions in FY2013 (April 1, 2013-March 31, 2014) and for reducing CO_2 emissions by 1% per unit of sales per annum after FY2013.
In FY2015 (April 1, 2015-March 31, 2016), emissions were reduced by 15.2% from FY2013 and by 6.4% from FY2014.

Efforts in Japan

In Japan, the New Comprehensive Program of Logistics Policies (2009-2013) was approved at a government cabinet meeting in July 2009. This program takes into consideration the trend of measures against global warming and includes targets to achieve logistics with less environmental impact. Systematic and comprehensive efforts have been made to develop logistics measures.
The Brother Group has been reviewing delivery routes and adjusting the delivery service frequency, etc. as necessary to increase the efficiency of logistics in Japan. The logistics network was rearranged to unload products shipped from manufacturing facilities outside Japan (including those in China and ASEAN countries) at the Port of Tokyo and the Port of Osaka, which are closely located to large market areas, instead of the Port of Nagoya, which had been used before. In addition, some products are unloaded at the Port of Yokohama, which is close to customers and the group also started delivering products from warehouses in Yokohama. Truck transportation was reduced and delivery distances were significantly reduced by increasing warehousing facilities. As a result, CO_2 emissions were cut by about 38% per shipped weight. The Brother Group has successfully kept CO_2 emissions low ever since.
Since 2013, a modal shift has been introduced for part of the product shipment to large customers by switching from trucks to railroad. CO_2 emissions in FY2015 were reduced by 40 tons.
Meanwhile, six external warehouses that had been used to store service parts were integrated into one factory, and the logistics and reverse logistics facilities for some products were consolidated to eliminate the need for transport between warehouses. In total, the volume of transport was reduced by about 10%.
3PL is also used in the sales logistics of Brother products. It is noteworthy that sales logistics are undertaken by companies that are committed to reducing CO_2 emissions (e.g., use of small hybrid delivery trucks).

Reducing Environmental Impact

CO_2 Emission Reduction Activities

Efforts at facilities outside Japan

Brother's manufacturing facilities in China and Southeast Asia produce nearly all Brother products. Many of these manufacturing facilities are located in industrial parks near ports that are served by container ships, thus the products can be shipped to overseas markets. The manufacturing facilities also employ containers with higher loading capacity to increase the loading efficiency and reduce the number of containers required.

Sales facilities in respective regions have been stepping up efforts to track logistics-related CO_2 emissions, from unloading at ports to delivery warehouse and retailers, and analyze the data, so that future CO_2 emissions reduction measures can appropriately reflect local conditions.

Regarding transportation of products to sales facilities in the U.S., the U.S. arrival port for unloading was changed for some products, thereby reducing distances traveled by sea, facilitating transshipping from sea to land, and enabling Brother to transport more by railway (with less environmental impact). The ratio carried by rail was increased, almost eliminating the use of trucks for urgent shipments. Since FY2011, efforts have been made to improve respective operations by optimizing order placement cycles and transporting orders by pallet.

At the same time, a transport management system was introduced to load different products (orders received from various customers) with optimal combinations and to increase the cargo loading efficiency per truck. As a result, the transport frequency was reduced by 25% from the results of FY2009 (April 1, 2009-March 31. 2010).

Products manufactured in Southeast Asia had been transported to sales facilities via Brother International Singapore Pte. Ltd. In 2011, this system was replaced by direct delivery from manufacturing facilities to reduce marine transportation distances, etc.

At various facilities (mainly manufacturing facilities) in China and other regions in Asia, delivery trucks of less than three tons were replaced with larger ones of three tons or more (whose CO_2 emissions coefficient is small) to reduce CO_2 emissions. As a result, CO_2 emissions were reduced by about 1,359 tons in FY2015 from FY2014.

Reducing Environmental Impact

CO_2 Emission Reduction Activities

Brother Group's CO_2 reduction activities in logistics

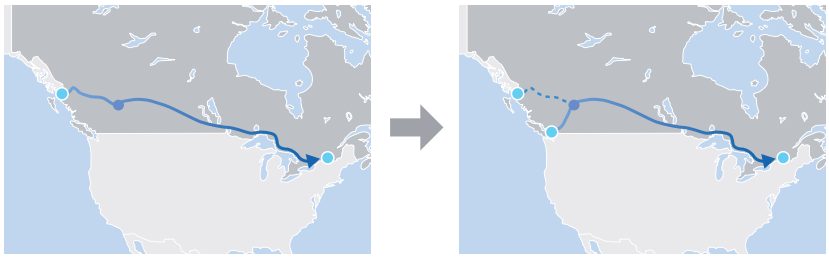
Brother Logitec Ltd. (Japan)

Brother Logitec Ltd., a group company in charge of logistics operations for Brother products in Japan, considers reduction in environmental impact attributed to logistics as an important management challenge. Thus, the company has been promoting various efforts to ensure green logistics. Measures include improving the cargo loading efficiency, optimizing transportation routes by using digital tachographs (device to continuously record the operations of trucks) to meet varying transportation quantities, and improving fuel efficiency by requiring drivers to drive economically and turn off their engines when stopped. As a result, fuel economy was improved by 5% in FY2010 (April 1, 2010-March 31, 2011) from FY2009, and has been maintained at this level.

Biofuel refined from 100% used edible oil from cafeterias has been in use since 2012, and one truck owned by Brother is exclusively run on such biofuel. To reduce CO_2 emissions into the atmosphere by using biofuel, the number of vehicles fueled solely by biofuel will be increased to cut CO_2 emissions further.

Brother International Corporation (Canada) Ltd. (North America)

Brother International Corporation (Canada) Ltd. (BIC Canada) switched the transport route for most cargo to Montreal from the route via Prince Rupert to a shorter Vancouver route, thereby reducing the transport distance.
As a result, the CO_2 emissions were reduced by about 6% in FY2015 from FY2014.



Reducing transport distances by switching the transport route

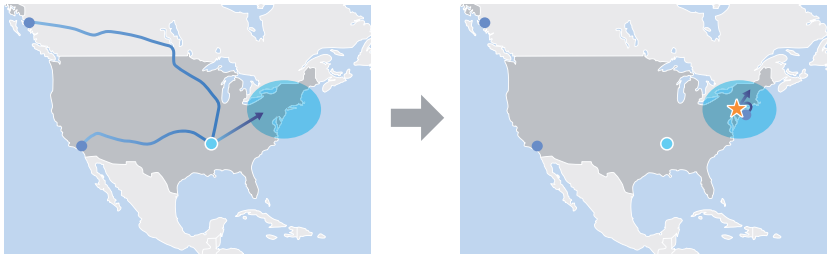
Reducing Environmental Impact

CO_2 Emission Reduction Activities

Brother International Corporation (U.S.A.) (North America)

In April 2014, Brother International Corporation (U.S.A.) (BIC (USA)) established the New Jersey Logistics Center (Cranbury), a new facility on the east coast of the U.S. This logistics center has reduced the distance that products are transported from the manufacturing facility primarily to the northeastern part of the U.S.
The establishment of the logistics center contributed to reducing CO_2 emissions by about 21% in FY2015.

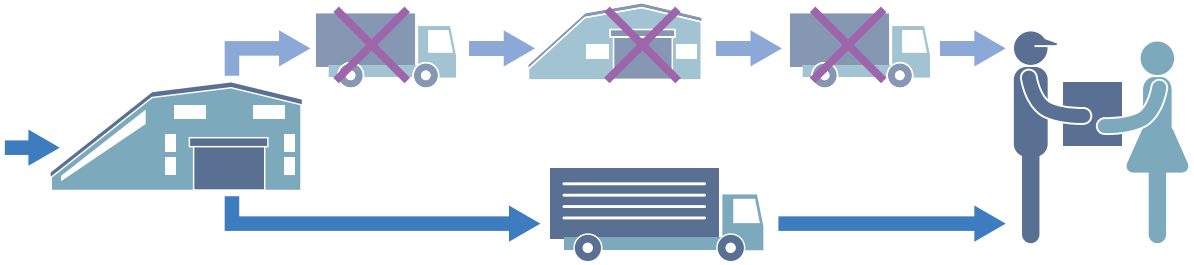
New Jersey Logistics Center (Cranbury)



Reducing transport distances by establishing a new facility

Brother Industries (U.K.) Ltd. (Europe)

Brother Industries (U.K.) Ltd. (BIUK) improved transport efficiency by increasing the container loading rate and replacing delivery trucks of less than three tons with larger ones of three tons or more. Regarding the transport for the OEM business, products had been delivered via the OEM warehouse. The transport distance was reduced by switching to direct delivery from manufacturing facilities to customers.



Reducing transport distances by switching the transport route

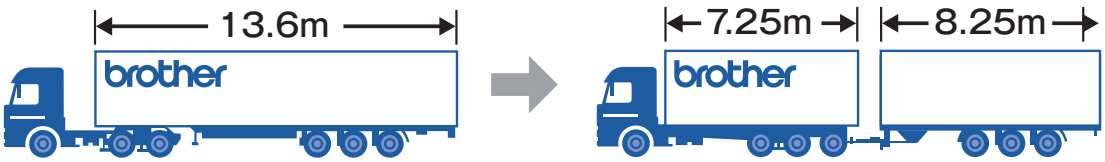
Reducing Environmental Impact

CO_2 Emission Reduction Activities

Brother Group's CO_2 reduction activities in logistics

Brother Industries (Slovakia) s.r.o. (Europe)

Brother Industries (Slovakia) s.r.o. (BISK) reduced CO_2 emissions by increasing the container loading rate and replacing delivery trucks of less than three tons with larger ones of three tons or more. BISK also replaced the 13.6-meter trailers (which account for 60% of the means of transport) with 15.5-meter trailers using tandems, to further increase the transport efficiency.



Increasing the transport efficiency by replacing the trailers

Reducing Environmental Impact

Zero Waste Emission Activities

Building a recycling framework

Ensuring activities to curb waste generation and emissions

To help use resources effectively and prevent resource depletion, the Brother Group ensures activities are carried out to curb waste generation, reduce emissions, and achieve "zero landfill waste" (meaning that less than 1% of waste generated at factories is sent to landfill). In our operations, respective business sites follow the ISO 14001 framework (under which they are certified), thereby systematically and continuously working to reduce waste.
In FY2003 (April 1, 2003-March 31, 2004 for business sites in Japan; and January 1, 2003-December 31, 2003 for facilities outside Japan), manufacturing facilities outside Japan and business sites in Japan started to share waste data using a common format and began to monitor the overall status. Efforts have been made to maintain and promote zero landfill waste at respective manufacturing facilities.

Results of the Brother Group's activities in FY2015

All the manufacturing facilities (except for Brother Machinery Vietnam Co., Ltd. (BMV) which started production in 2014) and business sites in Japan maintained zero landfill waste.

Details of the Brother Group's activities in FY2015

Main activities at business sites in Japan

In FY2001 (April 1, 2001-March 31, 2002), the Brother Group's business sites in Japan achieved zero landfill waste, and work is continuing to prevent the generation of landfill waste at business sites.

Main zero waste activities at business sites in Japan

- Promoting the recycling of polyethylene (PE) and polypropylene (PP) used as packaging materials and resin parts that are waste from the repair process. These materials are reused a again as raw materials
- Using garbage bags derived from recycled PE pellets (manufactured by recycling operators)
- Using paper derived from confidential documents (recycled by a specialized collection contractor through shredding and liquefying processes)
- Turning food waste from the cafeterias of the Mizuho Manufacturing Facility and Hoshizaki Manufacturing Facility, which have large kitchen equipment, into compost through a specialized collection contractor; recycling waste edible oil as biofuel and using it in the logistics division within the group
- Repairing damaged wooden pallets (which were to be disposed of) and recycling them in-house
- Ensuring separation of packaging materials for delivered parts (which were disposed of as waste) and recycling them as materials

Reducing Environmental Impact

Zero Waste Emission Activities

Details of the Brother Group's activities in FY2015

Main activities at business sites outside Japan

Focusing on waste generation, all the manufacturing facilities worked to reduce and recycle waste and achieve zero landfill waste. Major sales facilities also worked toward obtaining/maintaining ISO 14001 certification and promoting waste reduction activities.

Main zero waste activities at manufacturing facilities outside Japan

- Separating chips contaminated with emulsified liquid (which was disposed of as industrial waste) into emulsified liquid and chips, in order to reuse the emulsified liquid and sell the chips (compressed into solids) to recyclers as valuable commodities
- Significantly reducing waste paper by reducing paper consumption in printing tests for printers and replacing application documents with electronic files at manufacturing facilities, etc.
- Significantly reducing packaging-related waste by replacing packaging boxes for parts with returnable containers and increasing the density of parts packaged in innovative packaging styles, etc.
- Improving collection boxes for used printer cartridges and upgrading equipment to repair scratches on the resin case surfaces, to improve the refurbishment rate for toner cartridges and to address waste generation
- Promoting reuse of production equipment to reduce waste

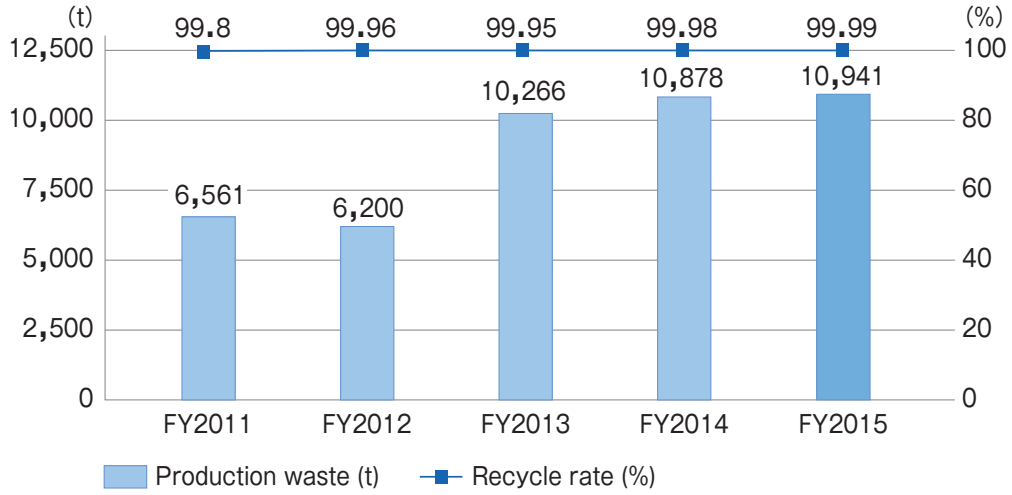
Main zero waste activities at sales facilities outside Japan

- Acquiring ISO 14001 certification at main sales facilities, and promoting waste reduction activities
- Ensuring separation of waste by type, and raising awareness about zero waste activities
- Having separated waste appropriately recycled by a specialized contractor to effectively utilize resources

Reducing Environmental Impact

Zero Waste Emission Activities

Changes in waste volume of the Brother Group



Scope of aggregation

FY2011	FY2012	FY2013	FY2014	FY2015
Eight business sites of Brother Industries, Ltd. (BIL) (head office, Mizuho Manufacturing Facility, Hoshizaki Manufacturing Facility, Minato Manufacturing Facility, 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.* Brother Industries (Shenzhen), Ltd., Brother Technology (Shenzhen) Ltd., Brother Industries Technology (M) Sdn. Bhd., Brother Industries (Vietnam) Ltd., Mie Brother Precision Industries, Ltd., and Brother Industries (Slovakia) s.r.o.		Brother Industries Saigon, Ltd., Brother Industries (Philippines), Inc., and Nissei Corporation were added to the scope of aggregation on the left.	Brother Machinery Vietnam Co., Ltd. was added to the scope of aggregation on the left.	Same as on the left

*: 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.

Reducing Environmental Impact

Reducing Water Consumption

Brother Activities to reduce water consumption in different regions around the world

Enhancing efforts by setting new reduction targets

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 2015 (2011-2015), a target of reducing water consumption by 5% from FY2010 (April 1, 2010-March 31, 2011) levels by FY2015 (April 1, 2015-March 31, 2016) (per unit of sales) has been set, and various efforts were made to meet this target.

Brother Group's results of activities in FY2015

In FY2015, total water consumption (business sites in Japan and manufacturing facilities outside Japan combined) increased by 23,038 m3 from FY2014 (April 1, 2014-March 31, 2015) due to an increase in production volume and number of employees at Brother Industries (Philippines), Inc. and Brother Industries (Vietnam) Ltd. In per unit sales, water consumption increased by 4.1% from FY2014, but decreased by 23.4% from FY2010, thereby the target was achieved.

The Brother Group remains committed to further implementing measures to save water in FY2016 (April 1, 2016-March 31, 2017) to attain new reduction targets set out in the Brother Group Environmental Action Plan 2018 (2016-2018).

Details of the Brother Group's activities in FY2015

Main activities at business sites in Japan

At business sites in Japan, efforts have been made to reduce consumption of clean water by replacing equipment and apparatuses with new ones. During the past few years, Japanese-style toilets have been replaced with Western-style toilets. It should be noted that water-saving toilets have been actively introduced. At the Kariya Manufacturing Facility, the fuel for the odor prevention system (catalyst combustion type) was changed from LPG to city gas in order to reduce the CO_2 emissions in FY2013 (April 1, 2013-March 31, 2014). This eliminated the need to sprinkle water to cool the five large LPG tanks (500 kg each) on the ground, resulting in a reduction of clean water consumption.

Reducing Environmental Impact

Reducing Water Consumption

Details of the Brother Group's activities in FY2015

Main activities at facilities outside Japan

Activities to reduce water consumption at manufacturing facilities outside Japan started in FY2009 (April 1, 2009-March 31, 2010). Replacement of water-cooled air conditioners with air-cooled air conditioners, advancement of activities through QC circle activities and an extensive review combined with the optimization of water for sinks and toilets, in particular, produced substantial results.
The main measures to reduce water consumption taken by respective manufacturing facilities are described below.


Faucet before taking water-saving measures


Faucet after taking water-saving measures

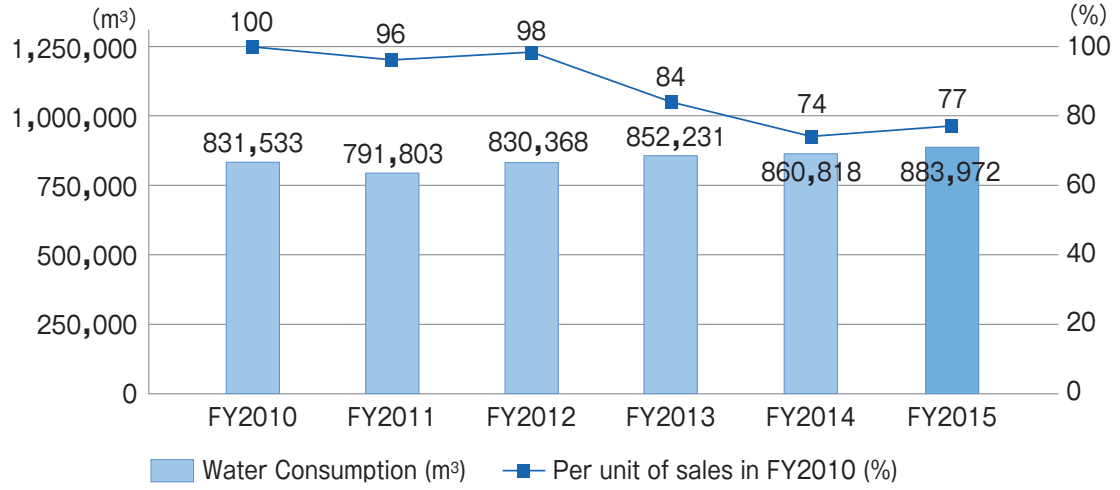

Rainwater storage tank (Brother Industries Technology (M) Sdn. Bhd.)

- Replacing the faucet valves with lever-type faucet valves that allow the water flow to be easily adjusted. Combined with the introduction of shower-type water-saving devices in faucets to reduce the water flow, this leads to reduced consumption
- Replacing water-cooled air-conditioning equipment with air-cooled inverter air conditioning equipment in line with energy conservation activities, and preventing the dispersion and evaporation of water in cooling towers to eliminate waste
- Collecting wastewater drained from central air conditioning and using this wastewater for flushing the factory toilets; Daily water consumption was reduced by 6 m3 (1,440 m3 annually)
- Improving water injection control and reducing water consumption in the coating process for sewing machine parts
- Posting the monthly water consumption results on the factory bulletin board to encourage employees to reduce water consumption (This was combined with posters for raising awareness)
- Reducing the time of the roof leak inspection on container cars (water spraying using a shower) to one minute (with a timer set up); conducting only visual inspections in the case of short-distance transport
- Collecting rainwater in a storage tank for use in cleaning up drains etc. and thereby reducing water consumption by about 20 L/month

Reducing Environmental Impact

Reducing Water Consumption

Changes in water consumption at the Brother Group



Scope of aggregation

FY2010	FY2011	FY2012	FY2013	FY2014	FY2015
Eight business sites of Brother Industries, Ltd. (BIL) (head office, Mizuho Manufacturing Facility, Hoshizaki Manufacturing Facility, Minato Manufacturing Facility, 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.* Brother Industries (Shenzhen), Ltd., Brother Technology (Shenzhen) Ltd., Brother Industries Technology (M) Sdn. Bhd., Brother Industries (Vietnam) Ltd., Nissei Corporation, Mie Brother Precision Industries, Ltd., and Brother Industries (Slovakia) s.r.o.			Brother Industries Saigon, Ltd. and Brother Industries (Philippines), Inc. were added to the scope of aggregation on the left.	Brother Machinery Vietnam Co., Ltd. was added to the scope of aggregation on the left.	Same as on the left

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Reducing Environmental Impact

Preventing Pollution

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 procurement of parts and materials to development, design, use, collection, reuse, and recycling), placing priority on maintaining compliance with legal regulations and preventing environmental pollution in the respective countries/regions in which Brother operates.

Managing and reducing chemical substances

In Japan, Brother Industries, Ltd. (BIL) manages and reduces the amounts of chemical substances handled, transferred, released, and consumed at business sites. Treatment of PCBs (polychlorinated biphenyls) is underway in accordance with the Act on Special Measures concerning Promotion of Proper Treatment of PCB Wastes.

Transformers and capacitors that contain PCBs are collected at one place, strictly controlled, and delivered to certified contractors for treatment. In line with the policy of the national government, BIL finished contracting the treatment of high-concentration PCB waste (that requires high priority treatment) from 2006 to 2009. Regarding PCB waste (e.g. ballasts for fluorescent lamps and low-concentration PCB waste) that is instructed to be stored properly until treatment method and equipment are in place, the City of Nagoya organized a seminar in October 2014, and BIL formulated a treatment plan in FY2015 (April 1, 2015-March 31, 2016) in response to the seminar. BIL earmarked a budget and started to contract the treatment in stages. Most of the high-concentration PCB waste and low-concentration PCB-containing waste that could be newly treated at the contractor were disposed of in FY2015. The treatment of the remaining waste is expected to be completed by the end of FY2016 (April 1, 2016-March 31, 2017). Ballasts, etc. and contaminated waste were registered for the carry-in style of packing in FY2015 (i.e. registration for carrying in waste by concluding a treatment contract). Carry-in and treatment will be completed in FY2017 (April 1, 2017-March 31, 2018). Regarding PCB-containing apparatuses, investigation and treatment are also underway at group companies.

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.

▶Flow of Substances Subject to PRTR at BIL (FY2011-FY2015) [PDF/93KB]
http://download.brother.com/pub/com/en/eco/pdf/2016/chemistry.pdf

Reducing Environmental Impact

Preventing Pollution

Concept of pollution prevention

BIL 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_2 emission coefficient. Thus, efforts are underway to prevent air pollution.

VOC treatment facility (BTSL)

The risks of global warming due to CO_2 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) and Brother Industries (Shenzhen), Ltd. (BISZ) 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_2 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. In FY2015, BTSL and BISZ set up VOC treatment facilities to implement measures for reducing emissions.

Reducing Environmental Impact

Preventing Pollution

Preventing water pollution


Wastewater treatment facility (BMV)

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.

Reducing Environmental Impact

Preventing Pollution

Preventing soil contamination

In 1997, BIL launched surveys for contamination of soil and underground water by organochlorine compounds and hazardous heavy metals that the company used historically. Pollutant leakage prevention and remediation measures have been undertaken in zones that were found to have been contaminated. All contaminated zones, when found, have been reported to the local government (the City of Nagoya) that has jurisdiction over this issue.

When selling or modifying land owned by BIL, soil analyses have been conducted in accordance with legally prescribed standards.

When purchasing land outside Japan and planning the construction of manufacturing facilities from FY2010 (April 1, 2010-March 31, 2011), historic land use surveys and soil analyses have been conducted in order to identify and verify the pollution status.

At Nissei Corporation, 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 equipment. At the parking lot of the site of the former headquarters, the soil was found to be contaminated with fluorine and its compounds, etc. Nissei Corporation reported the contaminations to the local government that has jurisdiction, and coped with the problems properly based on the guidance offered by the local government.

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. In FY2015, BTSL (a manufacturing facility outside Japan) implemented a new measure to prevent the generation of noise. Specifically, BTSL set up a noise prevention system at the water treatment facility.

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.

Reducing Environmental Impact

Environmental Accounting

For greater efficiency in our environmental activities

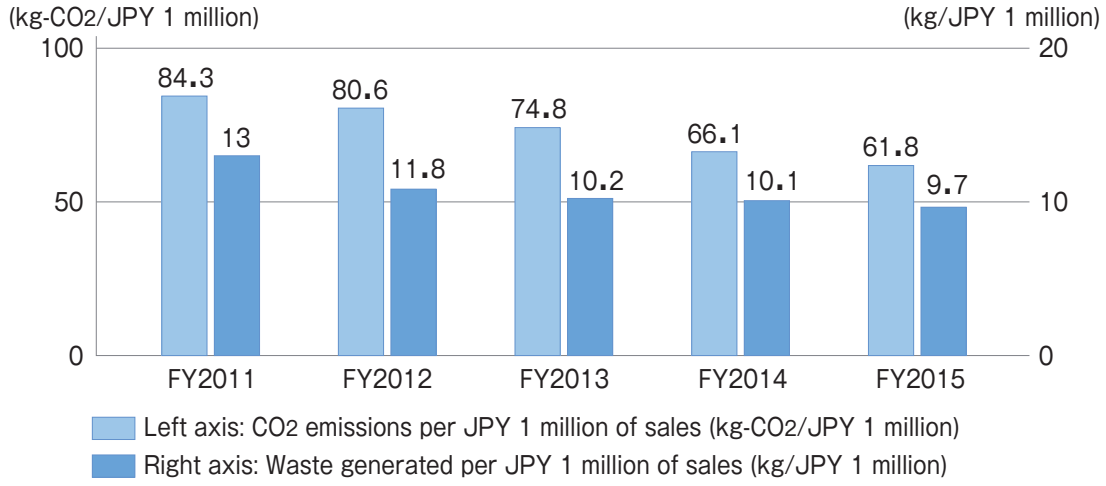
Concept of environmental accounting

The Brother Group performs environmental accounting as an effective means to improve the efficiency of environmental management on an ongoing basis. The Brother Group monitors annual investments and expenses related to environmental activities, quantitatively assess their effects, and then uses the results to plan environmental activities to be carried out the next fiscal year.

Environmental conservation and economic effects by achieving the Brother Group 2015 Mid-Term Environmental Action Plan (2011-2015)

By achieving the Brother Group 2015 Mid-Term Environmental Action Plan (2011-2015), CO_2 and waste emissions per JPY 1 million of sales of the Brother Group have been decreasing year after year, steadily producing environmental conservation effects. The economic effects derived from the environmental conservation measures during the five years were JPY 790 million in total. The energy expenses reduction effects achieved by energy conservation were JPY 140 million.

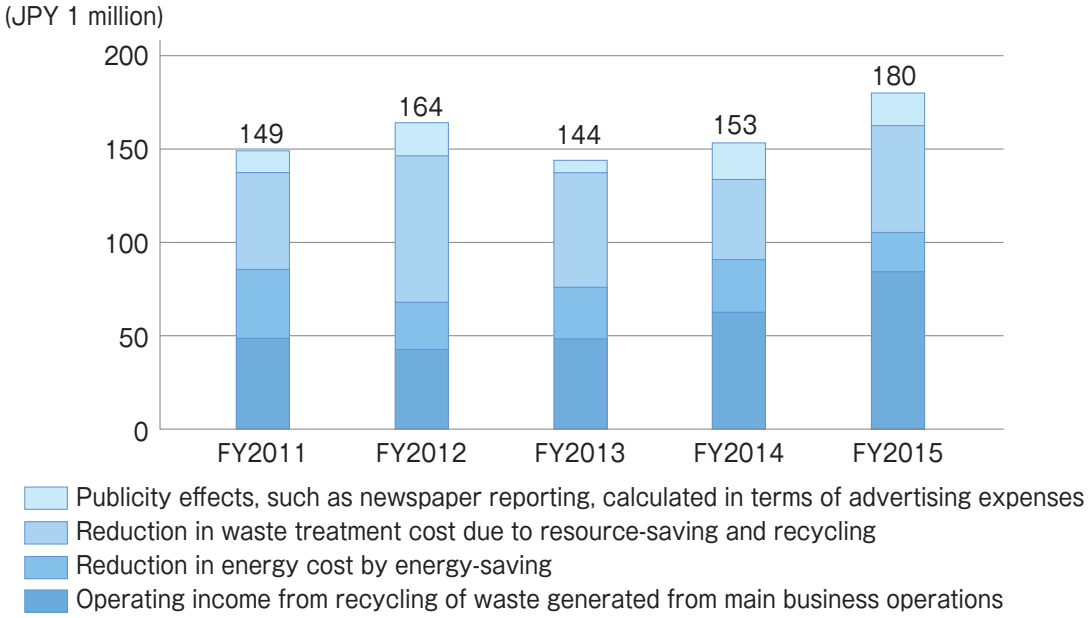
Environmental conservation effects



Reducing Environmental Impact

Environmental Accounting

Economic effects derived from environmental conservation measures



▶Environment Accounting (Detailed Data: FY2010-FY2015) [PDF/202KB]
http://download.brother.com/pub/com/en/eco/pdf/2016/accounting.pdf

*: Economic effects derived from environmental conservation activities are those that can be calculated in monetary terms from among the effects derived from the environmental conservation activities. Effects that cannot be calculated based on solid grounds (i.e., assumed effects and accidental effects) are not calculated. The scope of aggregation is indicated in the PDF file.

Calculation results for FY2015 (April 1, 2015-March 31, 2016)

Environmental conservation costs and expenses

The Brother Group (business sites in Japan) spent JPY 184 million on environmental conservation activities, down 50% from the previous year. The amount decreased because the cost to extensively modify IT-related equipment for environmental management was high in FY2014 (April 1, 2014-March 31, 2015). Manufacturing facilities outside Japan spent JPY 115 million, down approximately 16% from the previous year.

Expenditures and labor costs for various environmental conservation activities were JPY 794 million, up approximately 1.5%, for the facilities in Japan, and JPY 295 million, up approximately 27%, for those outside Japan.

Environmental investments in Japan focused primarily on energy conservation measures such as improvement of the thermal insulation performance of buildings.

Environmental investments by manufacturing facilities outside Japan are attributed to efforts to modify equipment for maintaining and improving the quality of wastewater from manufacturing facilities, and efforts to replace old air conditioning equipment and increase efficiency.

Reducing Environmental Impact

Environmental Accounting

Classification		Details of main activities and their effects	Investment (unit: JPY million)		Expenses (unit: JPY million)	
			In Japan	Outside Japan	In Japan	Outside Japan
1.Business area cost	1)Pollution prevention cost	Pollution prevention measures (including air, water, vibration and noise)	24 (20)	49 (49)	21 (1)	86 (2)
	2)Global environmental conservation cost	Global warming prevention (energy-saving) measures	117 (-3)	66 (-71)	83 (20)	92 (67)
	3)Resource circulation cost	Recycling and reduction in waste generation	0 (0)	0 (0)	104 (19)	59 (3)
2.Upstream/ downstream cost	Costs incurred to reduce environmental impact when procuring parts and materials and after selling products	Green procurement activities; collection and recycling of used products/consumables	0 (0)	0 (0)	89 (-6)	15 (13)
3.Administration cost	Costs incurred by activities that contribute indirectly to reducing the environmental impact of business operations	Establishment, administration, and maintenance of the ISO 14001 system; environmental training for employees; disclosure of environmental information; greening and cleanup of manufacturing facilities and their surrounding areas	33 (-122)	0 (0)	329 (-29)	35 (-20)
4.R&D cost	R&D costs for reducing environmental impact	Development of eco-conscious products and technologies; implementation of product environmental assessments; design improvement	10 (-48)	0 (0)	152 (7)	4 (4)
5.Social activity cost	Costs of environmental conservation that is not directly linked with corporate activities	Support for environmental conservation groups and organizations; support for environmental activities by local citizens; information services	0 (0)	0 (0)	12 (-1)	4 (-7)
6.Cost to deal with environmental damage	Costs incurred to restore the natural environment (including soil remediation)	Soil contamination surveys; soil remediation	0 (0)	0 (0)	4 (1)	0 (0)
Total			184 (-153)	115 (-22)	794 (12)	295 (62)

Figures in parentheses show increases/decreases in the amount from the previous fiscal year.

Reducing Environmental Impact

Environmental Accounting

Environmental conservation and economic effects in FY2015

Regarding environmental conservation effects, both resource input and environmental impact have been decreasing in Japan, while energy input remained almost unchanged at manufacturing facilities outside Japan. Releases into the atmosphere decreased significantly, while water consumption and waste emissions increased. The increase is attributed to increased production at Brother Industries (Philippines), Inc. and Brother Industries Saigon, Ltd. The main economic effects were reduction in waste treatment costs due to resource saving and recycling in Japan and operating income from the recycling of waste outside Japan.

Content of environmental conservation effects		Classification of index to measure environmental conservation effects		In Japan	Outside Japan
Effects resulting from business area cost	Effects related to resource input into business operations	Total energy input	(kL: converted into crude oil quantity)	10,116 (-367)	18,820 (-18)
		Water input	m^3	93,989 (-7,071)	698,704 (34,743)
	Effects related to environmental impact and waste released from business operations	Release into atmosphere	CO_2(t-CO_2/year)	15,117 (-542)	30,993 (-92)
			NOx(Kg/year)	2,020 (-26)	2,894 (-709)
			SOx(Kg/year)	8 (0)	72 (-16)
		Generation of wast	Amount of waste generation (t)	1,998 (-304)	5,259 (408)
			Landfill waste (t)	0 (0)	1 (-1)

Figures in parentheses show increases/decreases in the amount from the previous fiscal year.

Content of economic effects derived from environmental conservation measures*		In Japan (unit: JPY million)	Outside Japan (unit: JPY million)
Income	Operating income from recycling of waste generated from main business operations	2.9 (-4.0)	81.3 (25.7)
Cost reduction	Reduction in energy cost by energy-saving	8.2 (5.2)	12.8 (-12.5)
	Reduction in waste treatment cost due to resource-saving and recycling	27.6 (-4.1)	29.7 (-18.4)
Other	Publicity effects, such as newspaper reporting, calculated in terms of advertising expenses	3.1 (0.8)	13.9 (-3.3)
Total		41.8 (-2.1)	137.7 (28.3)

Figures in parentheses show increases/decreases in the amount from the previous fiscal year.

*: Economic effects derived from environmental conservation measures are those that can be calculated in monetary terms from among the effects derived from the environmental conservation activities. Effects that cannot be calculated based on solid grounds (i.e., assumed effects and accidental effects) are not calculated.

Scope of aggregation

Eight business sites in Japan (including head office)*1 and 12 manufacturing facilities outside Japan*2: Target period is from April 1, 2015 to March 31, 2016.

*1: Head office, Mizuho Manufacturing Facility, Hoshizaki Manufacturing Facility, Minato Manufacturing Facility, Momozono Manufacturing Facility, Kariya Manufacturing Facility, Research & Development Center, Logistics Center (Aggregate only environmental conservation effects for Logistics Center)

*2: Brother Industries (U.K.) Ltd., Brother Industries (Slovakia) s.r.o., Taiwan Brother Industries, Ltd., Zhuhai Brother Industries, Co., Ltd., Brother Machinery Xian Co., Ltd., Brother Industries (Shenzhen), Ltd., Brother Technology (Shenzhen) Ltd., Brother Industries Technology (M) Sdn. Bhd., Brother Industries (Vietnam) Ltd., Brother Industries Saigon, Ltd., Brother Machinery Vietnam Co., Ltd., and Brother Industries (Philippines), Inc.

Reducing Environmental Impact

List of ISO 14001-certified Facilities and History of Auditing for ISO 14064

Making continuous improvements by administering the environment management system

All of the Brother Group's manufacturing facilities as well as the sales facilities listed in the table below have acquired ISO 14001 certification (an international standard for environmental management systems) in accordance with the Brother Group Environmental Policy. Environmental improvement activities have been designed in line with the requirements of respective facilities. When a new business site is established, activities are implemented in compliance with ISO 14001 concurrently with the commencement of operations, in principle. ISO 14001 certification is immediately obtained in order to maximize the effectiveness of environmental conservation activities.

Meanwhile, the Brother Group is subject to audit based on ISO 14064 that provides guidelines for measuring and verifying emissions of greenhouse gases (GHGs).

List of ISO 14001-certified facilities

Name of site/facility		Month and year of certification
Brother International S.A. (Pty) Ltd.		December 2015
Brother Sewing Machines Europe GmbH		
Brother International (Gulf) FZE (Turkey Branch)		September 2015
Brother International Korea Co., Ltd.		June 2015
Brother International (Malaysia) Sdn. Bhd.		
Brother Machinery Vietnam Co., Ltd.		February 2015
Brother Industries (Philippines), Inc.		April 2014
Brother International Corporation (U.S.A.)(Two facilities listed on the right additionally acquired integrated certification with Brother International Corporation (U.S.A.))	Brother Mobile Solutions, Inc.	December 2013
	Nefsis Corporation	
Brother Machinery Shanghai Ltd.		
XING Inc.		July 2013
Brother International CZ s.r.o.*		May 2013
Brother International Hungary Kft.*		
Brother LLC		April 2013
Brother Industries Saigon, Ltd.		August 2012
Brother Polska Sp. z o.o.*		May 2012

*: These are non-consolidated subsidiaries (as of March 31, 2015).

Reducing Environmental Impact

List of ISO 14001-certified Facilities and History of Auditing for ISO 14064

List of ISO 14001-certified facilities

Name of site/facility		Month and year of certification
Brother Nordic A/S (Four facilities listed on the right acquired integrated certification with Brother Nordic A/S.)	Brother Nordic A/S	April 2011
	Brother Finland, Brother Nordic A/S Denmark, branch in Finland	
	Brother Norway, branch of Brother Nordic A/S	
	Brother Sweden, branch of Brother Nordic A/S, Denmark	
Brother International Corporation (U.S.A.) (Two facilities listed on the right additionally acquired integrated certification with Brother International Corporation (U.S.A.))	Brother Industries (U.S.A.) Inc.	March 2011
	Brother International del Peru S.A.C.	
Brother International (HK) Ltd.		February 2011
Brother International (Gulf) FZE		May 2010
Brother International Philippines Corporation		February 2010
Brother Internationale Industriemaschinen GmbH		April 2009
Brother International Austria GmbH (Currently: Brother International GmbH (Austrian Branch))		
Brother International Corporation (U.S.A.)(Four companies listed on the right acquired integrated certification with Brother International Corporation (U.S.A.))	Brother International de Mexico, S.A. de C.V.	
	Brother International Corporation do Brasil, Ltda.	
	Brother International de Chile, Ltda.	
	Brother International Corporation de Argentina S.R.L.	
Brother Industries (Vietnam) Ltd.		March 2009
Brother International (Belgium) NV/SA		
Brother (China) Ltd.		December 2008
Brother Industries, Ltd.(Two companies listed on the right acquired integrated certification with Brother Industries, Ltd.)	Brother Sales, Ltd.	November 2008
	Brother International Corporation	
Brother Industries (Slovakia) s.r.o.		October 2008
Brother (Schweiz) AG		September 2008
Brother International Singapore Pte. Ltd.		August 2008
Brother International Corporation (Ireland) Ltd.		
Brother International (Danmark) A/S (Currently: Brother Nordic A/S)		

Reducing Environmental Impact

List of ISO 14001-certified Facilities and History of Auditing for ISO 14064

List of ISO 14001-certified facilities

Name of site/facility		Month and year of certification
Brother Norge A.S. (Currently: Brother Norway, branch of Brother Nordic A/S)		July 2008
Brother International (Sweden) A.B. (Currently: Brother Sweden, branch of Brother Nordic A/S, Denmark)		
Brother France SAS		June 2008
Brother International (Aust.) Pty. Ltd.		May 2008
Brother Finland Oy (Currently: Brother Finland, Brother Nordic A/S Denmark, branch in Finland)		April 2008
Brother International GmbH		March 2008
Brother International Corporation (U.S.A.)	NJ office	
	MA office	
	CA office	
	MIM Industries, Inc.	
	IL office	
Brother Iberia, S.L.U.		
Brother Italia S.p.A.		January 2008
Brother International (NZ) Ltd.		July 2007
Brother International Europe Ltd.		March 2007
Brother Sewing Machine Xian Co., Ltd.*1 (Currently: Brother Machinery Xian Co., Ltd.)		June 2006
Brother Logitec Ltd.		May 2006
Brother International (Nederland) B.V.		March 2006
Brother Sewing Machine (Shanghai) Co., Ltd.*2		December 2005
Brother U.K. Ltd.		February 2005
Brother Industries(Shenzhen), Ltd.		June 2004
Mie Brother Precision Industries, Ltd.		December 2003

*1: Xian Typical Brother Industries, Co., Ltd. merged with Brother Sewing Machine Xian Co., Ltd. in 2010. The new company is named Brother Machinery Xian Co., Ltd.
*2: Brother Sewing Machine (Shanghai) Co., Ltd. transferred its business to Brother Machinery Xian Co., Ltd. in 2010.

Reducing Environmental Impact

List of ISO 14001-certified Facilities and History of Auditing for ISO 14064

List of ISO 14001-certified facilities

Name of site/facility		Month and year of certification
Brother Tennessee* (Brother Industries (U.S.A.) Inc.) * Registered facility name when ISO 14001 certification was acquired		December 2002
Brother Industries, Ltd.	Acquired integrated certification for the headquarters and manufacturing facilities in Japan	November 2002
Zhuhai Brother Industries, Co., Ltd.		July 2001
Brother Industries, Ltd.	Headquarters / Research & Development Center	March 2001
Brother Industries, Ltd.	Momozono Manufacturing Facility	December 2000
Nissei Corporation*1		
Taiwan Brother Industries, Ltd.		October 2000
Brother Industries, Ltd.	Hoshizaki Manufacturing Facility	November 1999
Brother Industries, Ltd.	Minato Manufacturing Facility	
Xian Typical Brother Industries, Co., Ltd.*2 (Currently: Brother Machinery Xian Co., Ltd.)		
Buji Nanling Factory, Brother Corporation (Asia) Ltd. (Currently: Brother Technology (Shenzhen) Ltd.)		October 1999
Brother Industries, Ltd.	Mizuho Manufacturing Facility	August 1998
Brother Industries Technology (M) Sdn. Bhd.		March 1998
Brother Industries (Johor) Sdn. Bhd.*3 (Currently: Brother Industries Technology (M) Sdn. Bhd.)		December 1997
Brother Industries, Ltd.	Kariya Manufacturing Facility	February 1997
Brother Industries (U.K.) Ltd.		December 1996

*1: Nissei Corporation became a consolidated subsidiary of Brother Industries, Ltd. on January 30, 2013.
*2: Xian Typical Brother Industries, Co., Ltd. merged with Brother Sewing Machine Xian Co., Ltd. in 2010. The new company is named Brother Machinery Xian Co., Ltd.
*3: Brother Industries (Johor) Sdn. Bhd. was integrated into Brother Industries Technology (M) Sdn. Bhd. in 2004.

Reducing Environmental Impact

List of ISO 14001-certified Facilities and History of Auditing for ISO 14064

History of audit in compliance with or based on ISO 14064-1

Name of site/facility	Month and year of audit
Scopes 1, 2, and 3	2016, 2018 (expended the scope of aggregation for reaudit), 2018 (reaudit due to the partial review of the calculation method), 2019 (expended the scope of aggregation for reaudit)
Brother Industries, Ltd., (Headquarters, Mizuho, Hoshizaki, Minato, Momozono, and Kariya Manufacturing Facilities, Research & Development Center, Logistics Center, Tokyo Branch)	
Nissei Corporation* (Headquarters, two sales offices)	
Brother International Corporation	
Mie Brother Precision Industries, Ltd.	
Brother Sales, Ltd. (Headquarters, seven sales offices)	
XING Inc. (Headquarters, Tokyo head office, seven sales offices)	
XING Music Entertainment, Inc.	
Brother Logitec Ltd.	
Brother Real Estate, Ltd.	
Brother Living Service Co., Ltd.	
Brother Enterprise, Ltd.	
Betop Staff, Ltd.	
Brother Industries (U.S.A.) Inc.	
Brother International Corporation (U.S.A.) (Headquarters, four offices)	
Brother International Corporation (Canada) Ltd.	
Brother International de Mexico, S.A. de C.V.	
Brother International Corporation do Brasil, Ltda.	
Brother International de Chile, Ltda.	
Brother International Corporation de Argentina S.R.L.	
Brother Mobile Solutions, Inc.	
Brother International del Peru S.A.C.	
Brother Industries (U.K.) Ltd.	
Brother Industries (Slovakia) s.r.o.	
Brother International Europe Ltd.	
Brother Internationale Industriemaschinen GmbH	
Brother Internationale Industriemaschinen GmbH (Italian Branch)	

*: Nissei Corporation became a consolidated subsidiary of Brother Industries, Ltd. on January 30, 2013.

Reducing Environmental Impact

List of ISO 14001-certified Facilities and History of Auditing for ISO 14064

History of audit in compliance with or based on ISO 14064-1

Name of site/facility	Month and year of audit
Scopes 1, 2, and 3	2016, 2018 (expended the scope of aggregation for reaudit), 2018 (reaudit due to the partial review of the calculation method), 2019 (expended the scope of aggregation for reaudit)
Brother Sewing Machines Europe GmbH	
Brother System Technology Development (Hangzhou) Ltd.	
Taiwan Brother Industries, Ltd.	
Brother Industries Technology (M) Sdn. Bhd.	
Zhuhai Brother Industries, Co., Ltd.	
Brother Machinery Xian Co., Ltd.	
Brother Industries (Shenzhen), Ltd.	
Brother Industries (Vietnam) Ltd.	
Brother Technology (Shenzhen) Ltd.	
Brother Industries Saigon, Ltd.	
Brother Industries (Philippines), Inc.	
Brother Machinery Vietnam Co., Ltd.	
Nissei Trading (Shanghai) Co., Ltd. (Headquarters, one branch)	
Brother International S.A. (Pty) Ltd.	
Brother International (Aust.) Pty. Ltd.	
Brother International Singapore Pte. Ltd.	
Brother International (NZ) Ltd.	
Brother International (HK) Ltd.	
Brother International (Gulf) FZE	
Brother International (Gulf) FZE (Turkey Branch)	
Brother Commercial (Thailand) Ltd.	
Brother Machinery (Asia) Ltd.	
Brother International (Malaysia) Sdn. Bhd.	
Brother International Philippines Corporation	
Brother (China) Ltd. (Headquarters, two branches)	
Brother International (India) Private Ltd.	

Reducing Environmental Impact

List of ISO 14001-certified Facilities and History of Auditing for ISO 14064

History of audit in compliance with or based on ISO 14064-1

Name of site/facility	Month and year of audit
Scopes 1, 2, and 3	2016, 2018 (expended the scope of aggregation for reaudit), 2018 (reaudit due to the partial review of the calculation method), 2019 (expended the scope of aggregation for reaudit)
PT Brother International Sales Indonesia	
Brother International Taiwan Ltd.	
Brother International (Vietnam) Co., Ltd.	
Brother International Korea Co., Ltd.	
Brother Machinery Shanghai Ltd.	
Nissei Gear Motor Mfg. (Changzhou) Co., Ltd	
Scopes 1 and 2	
Standard Corp.*	
Brother International GmbH	
Brother International GmbH (Austrian Branch)	
Brother France SAS	
Brother U.K. Ltd.	
Brother International (Nederland) B.V.	
Brother Nordic A/S	
Brother Norway, branch of Brother Nordic A/S	
Brother Sweden, branch of Brother Nordic A/S, Denmark	
Brother Finland, Brother Nordic A/S Denmark, branch in Finland	
Brother Central And Eastern Europe GmbH	
Brother Sewing Machines Europe GmbH (U.K. Branch)	
Brother International (Belgium) NV/SA	
Brother (Schweiz) AG	
Brother International Corporation (Ireland) Ltd.	
Brother Italia S.p.A.	
Brother International CZ s.r.o.	
Brother International Hungary Kft.	
Brother Iberia, S.L.U.	
Brother Iberia, S.L.U. (Lisbon Branch)	

*: Standard Corp. is a business site that was added for aggregation in April 2018.

Reducing Environmental Impact

List of ISO 14001-certified Facilities and History of Auditing for ISO 14064

History of audit in compliance with or based on ISO 14064-1

Name of site/facility	Month and year of audit
Scopes 1 and 2	2016, 2018 (expended the scope of aggregation for reaudit) , 2018 (reaudit due to the partial review of the calculation method) , 2019 (expended the scope of aggregation for reaudit)
Brother LLC	
Brother Polska Sp. z o.o.	
Scopes 1, 2, and 3	June 2015
Brother Industries, Ltd., (Headquarters, Mizuho, Hoshizaki, Minato, Momozono, and Kariya Manufacturing Facilities, Research & Development Center, Logistics Center)	
Mie Brother Precision Industries, Ltd.	
Scopes 1 and 2	
Nissei Corporation* (Manufacturing facilities in Japan)	
Brother Industries (U.K.) Ltd.	
Brother Industries (Slovakia) s.r.o.	
Taiwan Brother Industries, Ltd.	
Brother Industries Technology (M) Sdn. Bhd.	
Zhuhai Brother Industries, Co., Ltd.	
Brother Machinery Xian Co., Ltd.	
Brother Industries (Shenzhen), Ltd.	
Brother Industries (Vietnam) Ltd.	
Brother Technology (Shenzhen) Ltd.	
Brother Industries Saigon, Ltd.	
Brother Industries (Philippines), Inc.	
Brother Machinery Vietnam Co., Ltd.	
Scopes 1 and 2	July 2013
Brother Industries, Ltd., (Headquarters, Mizuho, Hoshizaki, Minato, Momozono, and Kariya Manufacturing Facilities, Research & Development Center, Logistics Center	
Mie Brother Precision Industries, Ltd.	
Scopes 1, 2, and 3	March 2013
Brother International (NZ) Ltd.	

*: Nissei Corporation became a consolidated subsidiary of Brother Industries, Ltd. on January 30, 2013.

Addresses of facilities are available here.

▶Facilities All Over the World http://www.brother.com/en/corporate/network/index.htm

Communicating Environmental Commitment

Environmental Communication Activities

Enhancing communication with our stakeholders

Under the environmental slogan of "Brother Earth," the Brother Group promises to continuously take positive steps to protect the global environment in all aspects of our business operations, and send a globally unified environmental message.

To implement specific measures, the Brother Group Environmental Action Plan 2015 (2011-2015) was formulated to promote efforts through business operations. Notably, one of the important challenges was to "disclose environmental information, and enhance communication with our stakeholders as well as their understanding." Various environmental communication activities expanded the scope of collaboration with as many stakeholders as possible.

Brother Earth
Working with you for a better environment

Brother Earth logo and slogan

Targets of main activities in FY2015 and results of the Brother Group Environmental Action Plan 2015 (2011-2015)

1. Promoting Brother Earth in combination with marketing activities

To ensure eco-consciousness in developing new products and businesses, distribute environmental information via websites (including social media), and publicize environmental commitments by promoting the Brother Earth planetarium dome, etc., Brother Industries, Ltd. (BIL) promoted the "Ecosystem Restoration Project in the Brother Forests in Gujo" involving employees through Brother's special website on the environment, websites of respective facilities, etc., and continuously expanded the scope of information dissemination by utilizing Brother's official SNS accounts (Facebook, Twitter, YouTube).

In FY2015 (April 1, 2015-March 31, 2016), BIL organized "Mission to the Earth," a participatory event that enabled people to have their selfies projection mapped in the stratosphere with the Earth in the background in October, and "Brother Green Christmas-Projection Mapping on Brother Earth-" in collaboration with the Nagoya City Science Museum in December.

During the past five years, the "Brother Earth" logo and slogan have been used on websites of all the sales facilities of the Brother Group, and employees' environmental awareness has been increasing steadily.

"Mission to the Earth"

"Brother Green Christmas
-Projection Mapping on Brother Earth-"

Communicating Environmental Commitment

Environmental Communication Activities

2. Promoting environmental and social contribution activities focusing on conserving biodiversity

The Brother Group globally conducted environmental and social contribution activities for conserving biodiversity with the involvement of employees in respective regions, posted key activities on brotherearth.com, Brother's special website on the environment to be covered by Click for the Earth donations, and encouraged the participation of stakeholders. During the past five years, entry in the Click for the Earth, etc. has helped increase the number of social contribution activities (mainly biodiversity conservation activities) at Brother Group facilities.

FY	2011	2012	2013	2014	2015
Number of facilities that participated	15	22	33	43	39

Click for the Earth on brotherearth.com, Brother's special website on the environment

3. Promoting prevention of global warming by raising the environmental awareness of employees

The Brother Group globally promoted the Brother eco point program, measured the level of environmental contribution at respective facilities, and raised the environmental awareness of employees, thereby helping consistently achieve CO_2 emissions reduction targets on a group basis. In FY2015, Brother Industries (Philippines), Inc. launched the eco point program.

FY	2011	2012	2013	2014	2015
Number of facilities that participated	8,803	14,776	21,440	25,908	31,899

Brother eco point program in place in 44 countries and regions as of March 31, 2016

4. Disclosing eco-conscious information about products and global environmental information

The Brother Group offered global and local environmental information and eco-conscious information about products, etc. through websites of respective facilities efficiently and on a timely basis. In FY2015, the number of visitors to the English version of brotherearth.com, Brother's special website on the environment (except for Click for the Earth) increased by 40% from FY2014 (April 1, 2014-March 31, 2015).

Communicating Environmental Commitment

Brother Eco Point Program

Brother eco point program introduced in 44 countries and regions

Under the Brother eco point program, eco points are awarded for eco-conscious actions by employees and their families. Eco points are also awarded for used consumables collected from customers. Brother carries out various environmental conservation activities depending on the number of points earned. To raise the environmental awareness of employees and thus help prevent global warming, the Brother eco point program was launched in April 2008 for group facilities in Japan, and has been shared by the group's facilities outside Japan since FY2009 (April 1, 2009-March 31, 2010).

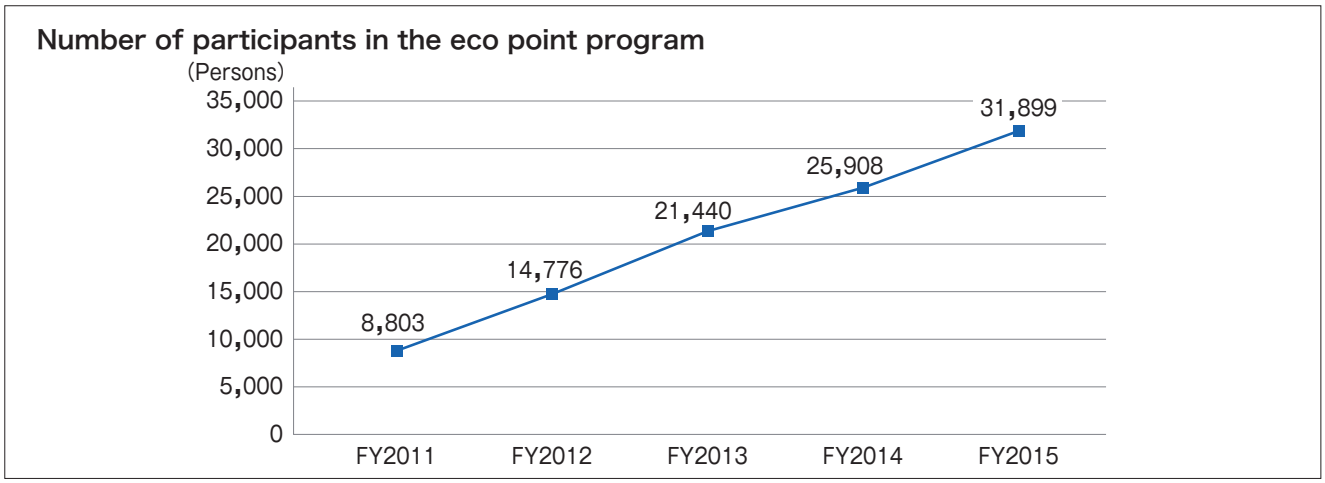
At the Brother Group, employees and their families have been working to reduce CO_2 emissions as much as possible in their daily lives. In addition to making financial contributions, employees actively participate in environmental conservation activities. Personal experience helps increase eco consciousness and expands the scope of activities.

As of March 31, 2016, the Brother eco point program is in place in 44 countries and regions. In FY2015 (April 1, 2015-March 31, 2016), Brother Industries (Philippines), Inc. launched its program. The number of participants in the eco point program totaled 31,899. Environmental awareness has been growing steadily.

Brother facilities that have introduced the eco point program

Communicating Environmental Commitment

Brother Eco Point Program



	FY2011	FY2012	FY2013	FY2014	FY2015
Number of participants	8,803	14,776	21,440	25,908	31,899

Activities under the Brother eco point program

Group companies in Japan (Japan)

Brother Industries, Ltd. (BIL) is working with Brother Sales, Ltd. (Brother Sales) and other group companies in Japan to promote the Brother eco point program. Specifically, eco points are awarded for eco-conscious actions taken by employees and their families, such as turning off unnecessary lights, saving water, separating waste, using washable cups instead of disposable ones, using stairs (2UP3DOWN), traveling on foot, by bicycle or public transportation, and participating in local clean-up activities. The points earned are used as contributions to fund the environmental conservation activities in which employees and their families participate as volunteers.


Brother eco point program commendation for FY2015 (May 2016)

A commendation program is in place to boost this program, and each year, participants (individuals, families, and organizations) who earned many points during the past year are commended.

Brother Sales also awards points when used toner and ink cartridges of All-in-Ones and printers are collected.

▶Environmental Commendation and Awards
http://www.brother.com/en/eco/management/award/index.htm
▶Biodiversity
http://www.brother.com/en/eco/communication/biodiversity/index.htm

Communicating Environmental Commitment

Biodiversity

Brother Group's biodiversity conservation policy

To maintain the health of Mother Nature which sustains humankind, it is essential to implement measures against global warming and ensure biodiversity conservation and sustainability. The Brother Group launched greening activities in 1966, and started to work on biodiversity conservation through activities to plant seedlings, etc. in 2005.

The Nagoya Protocol and Aichi Biodiversity Targets were adopted at the tenth meeting of the Conference of the Parties to the Convention on Biodiversity ("CBD-COP10") held in Nagoya, Aichi in October 2010. In response, the Brother Group added a new commitment: "We will endeavor to reduce our impact on the ecosystem and to conserve biodiversity in all our operations." to the Action Guidelines in the Environmental Policy in FY2011 (April 1, 2011-March 31, 2012). In FY2012 (April 1, 2012-March 31, 2013), the Brother Group established a biodiversity conservation policy, and the scope has been expanded to cover activities in all business operations.

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.

Communicating Environmental Commitment

Biodiversity

Brother Group's commitment to Aichi Biodiversity Targets

The Aichi Biodiversity Targets represent the global targets that serve as the core of the Strategic Plan for Biodiversity 2011-2020 adopted at CBD-COP10. It was agreed at CBD-COP10 to "take effective and urgent action to halt the loss of biodiversity" by 2020, and actions required of respective countries were compiled as 20 items in the Aichi Biodiversity Targets. Based on these items, the Four Electrical and Electronic Associations* Biodiversity Working Group, of which Brother Industries, Ltd. is a member, identified eight items that are closely linked with the environmental and biodiversity conservation activities which companies in the electrical and electronic industries can work on and make more significant contributions through active promotion. The vision for contributing to respective targets by member companies was compiled and released as the Action Guidelines for Biodiversity Conservation in the Electrical and Electronic Industries in March 2015.

The table below summarizes the main activities undertaken by the Brother Group in line with the guidelines (as of March 31, 2016).

Action Guidelines for Biodiversity Conservation in the Electrical and Electronic Industries and the status of the Brother Group's activities

<table>
<tr><th colspan="2">Aichi Biodiversity Targets</th><th>Action Guidelines for Biodiversity Conservation in the Electrical and Electronic Industries</th><th>Status of the Brother Group's activities</th></tr>
<tr><td>Target 1: Awareness increased</td><td>People recognize the value of biodiver-sity and related activities.</td><td>Member companies will conduct employee education on biodiversity wherever possible so that the importance of biodiversity conservation will be widely recognized. Member companies will also contribute to raising public awareness of information about their conservation activities through by cooperating with other stakeholders.</td><td>・The biodiversity basic policy was established based on the Brother Group Environmental Policy, and all employees were informed of the policy.
・Employees participated in the GREEN ECHO project under the auspices of the Environmental Partnership Organizing Club. They cultivated traditionally grown vegetables, etc. to become more familiar with plants. The activities helped raise the environmental awareness of employees.
 
Showing support for the GREEN ECHO project - raising environmental awareness by growing plants
・The eco point program and Click for the Earth donation program have been promoted. Employees and their families, as well as customers, have been encouraged to work on eco-conscious actions, and have been solicited to participate in biodiversity-related activities, etc., thereby raising environmental awareness and expanding the scope of the programs.
▶Brother Eco Point Program
http://www.brother.com/en/eco/communication/eco_point/index.htm
▶Click to save our planet with Brother Earth
http://www.brotherearth.com/en/top.html</td></tr>
</table>

*: The Four Electrical and Electronic Associations consist of the Japan Electrical Manufacturers' Association, the Japan Electronics and Information Technology Industries Association, the Communications and Information network Association of Japan, and the Japan Business Machine and Information System Industries Association.

Communicating Environmental Commitment

Biodiversity

Action Guidelines for Biodiversity Conservation in the Electrical and Electronic Industries and the status of the Brother Group's activities

Aichi Biodiversity Targets		Action Guidelines for Biodiversity Conservation in the Electrical and Electronic Industries	Status of the Brother Group's activities
Target 4: Sustainable consumption and production	All parties concerned implement their plans for sustainable production and consumption.	Member companies will conduct the following activities in their production activities and supply chains at each life-cycle stage wherever possible, in order to achieve sustainable consumption and production. ・Continuous efforts to reduce CO_2 emissions in the production process ・The provision of products and services that contribute to achieving a low-carbon society ・Reducing the volume of waste to be landfilled ・The 3R activities (Reduce, Reuse and Recycle) ・The procurement of biodiversity-friendly materials, etc.	・Resource conservation has been promoted, with reductions in size and weight, collection, and recycling of products in mind, from the development phase. ・CO_2 emissions have been reduced by increasing the energy-saving performance of electronic circuits, implementing energy-saving functions, etc., thereby promoting the prevention of global warming. ・ISO 14001 was introduced at respective business sites. Environmental conservation activities involving all employees (e.g. energy and resource conservation, chemical substances control, waste management, water saving, prevention of pollution) have been promoted to reduce impacts on ecosystems. ・Efforts have been made to reduce CO_2 emissions and prevent global warming by increasing efficiency in energy use (e.g. electricity and fuel) at business sites and shifting to substances whose global warming coefficient is small, etc., thereby mitigating climate change and impacts on ecosystems. ▶Environmental Considerations within Product Life Cycles http://www.brother.com/en/eco/product/index.htm ▶CO_2 Emission Reduction Activities http://www.brother.com/en/eco/facility/index.htm ▶Zero Waste Emission Activities http://www.brother.com/en/eco/facility/waste/index.htm ▶Reducing Water Consumption http://www.brother.com/en/eco/facility/water/index.htm ▶Collection and Recycling http://www.brother.com/en/eco/product/recycling/index.htm

Communicating Environmental Commitment

Biodiversity

Action Guidelines for Biodiversity Conservation in the Electrical and Electronic Industries and the status of the Brother Group's activities

Aichi Biodiversity Targets		Action Guidelines for Biodiversity Conservation in the Electrical and Electronic Industries	Status of the Brother Group's activities
Target 5: Habitat loss halved or reduced	The loss of natural habitats including forests is at least halved, and degradation and fragmentation are significantly reduced.	Member companies will, wherever possible, take social actions and conduct biodiversity-conscious management of green spaces within their business premises, as well as promote the creation of ecosystem networks around the business premises, in order to protect habitats and reduce the degradation and fragmentation of habitats.	・In the U.K., Brother has supported reforestation activities at a former quarry site, and provided opportunities to learn that reforested areas are inhabited by various animals and plants. ▶Contributing to Reforestation at a Former Quarry Site (UK) http://www.brotherearth.com/en/news_detail/126.html ・In Inner Mongolia, Brother has worked on a project to prevent desertification and promote greening, and planted seedlings of Russian olive (Elaeagnus angustifolia), a plant well adapted to the desert environment and saxaul (Haloxylon ammodendron) which is resistant to dry conditions.  ▶Project for Combating Desertification in Inner Mongolia http://www.brotherearth.com/en/environmental-views/inner_mongolia.html ▶Click to save our planet with Brother Earth http://www.brotherearth.com/en/top.html
Target 8: Pollution reduced	Pollution caused by chemical substances, fertilizers, and pesticides is reduced to the extent that is no longer harmful.	Member companies will strive for the appropriate management of chemical substances from a global perspective and reduce adverse effects on ecosystems wherever possible, in order to prevent pollution that is detrimental to ecosystems and biodiversity.	・Brother has actively promoted green procurement by avoiding chemical substances that affect the environment when procuring raw materials for products, using FSC certified paper, etc., thereby ensuring biodiversity-conscious procurement of raw materials. ・Efforts have been made to reduce environmental impacts due to operations at manufacturing facilities (e.g. eliminating boilers fueled by heavy oil, decomposing pollutants using catalytic combustion systems, introducing advanced wastewater treatment systems), thereby reducing the impacts on ecosystems due to the pollution of air, water, soil, etc. ▶Compliance with Environmental Laws and Regulations on Products http://www.brother.com/en/eco/regulation/index.htm ▶Green Procurement http://www.brother.com/en/eco/regulation/green_procurement/index.htm ▶Preventing Pollution http://www.brother.com/en/eco/facility/pollution/index.htm

Communicating Environmental Commitment

Biodiversity

Action Guidelines for Biodiversity Conservation in the Electrical and Electronic Industries and the status of the Brother Group's activities

Aichi Biodiversity Targets		Action Guidelines for Biodiversity Conservation in the Electrical and Electronic Industries	Status of the Brother Group's activities
Target 9: Invasive alien species prevented and controlled	Invasive alien species are controlled or eradicated.	Member companies will actively work on the eradication of invasive alien species, the prevention of the introduction of invasive alien species and awareness-raising activities about the problem, particularly in the transportation of their products, in the management of green spaces within their business premises and in their social actions, in order to prevent the impacts caused by invasive alien species.	・In Okazaki, Japan, Brother has removed moso bamboo shoots (a fast-growing alien species) in Chiharazawa designated as a nature conservation area by the Aichi Prefectural Government, to allow sunlight to reach broad-leaved indigenous trees, such as Stewartia monadelpha and Malus tschonoskii, which are rarely found on plains, and protect these species.  ▶**Five-year-long activities to cut moso bamboo trees in precious forests of broad-leaved trees have been successfully completed.** http://www.brotherearth.com/en/news_detail/505.html ▶**Click to save our planet with Brother Earth** http://www.brotherearth.com/en/top.html

Communicating Environmental Commitment

Biodiversity

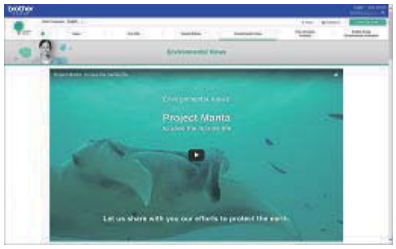
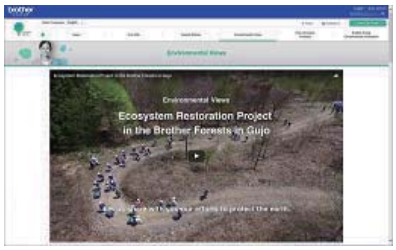
Action Guidelines for Biodiversity Conservation in the Electrical and Electronic Industries and the status of the Brother Group's activities

Aichi Biodiversity Targets		Action Guidelines for Biodiversity Conservation in the Electrical and Electronic Industries	Status of the Brother Group's activities
Target 11: Protected areas increased and improved	At least 17% and 10% of the land and marine areas are designated as protected areas, etc. for conservation.	Member companies will, wherever possible, conduct biodiversity-conscious green space management which contributes to protected areas within their business premises and on land owned by their companies, as well as conduct conservation activities in protected areas outside their company premises, in order to expand protected areas that are important for biodiversity.	・In Central and South America (e.g. the Republic of Peru), Brother has supported activities to conserve tropical rainforests and protect habitats of endangered wild animals in the Amazon Basin. ▶Protecting the Amazon Rainforest in Peru http://www.brotherearth.com/en/news_detail/141.html ・In Canada, Brother has supported activities to restore forests and protect habitats for wildlife, and helped prevent soil erosion and improve the water quality of the Red River Basin. ▶Developing reforestation activities in Canada http://www.brotherearth.com/en/news_detail/440.html ・In Thailand, Brother has supported protection and recovery of local mangrove forests, and planted seedlings. As the mangrove forests have grown, the number of species of birds and aquatic animals has increased.  ▶Mangrove Reforestation Project in Thailand http://www.brotherearth.com/en/environmental-views/thailand.html ▶Click to save our planet with Brother Earth http://www.brotherearth.com/en/top.html
Target 14: Ecosystems and essential services safeguarded	Ecosystems that offer the blessings of nature are restored and conserved.	Member companies will conduct activities for conserving and restoring ecosystems wherever possible, so that ecosystem services can be used sustainably.	・In the U.S., Brother has supported the Replanting Our National Forests campaign to protect national forests that provide habitats for wildlife, as well as precious natural resources for construction materials, clean air, and drinking water, thereby protecting forests threatened by fire, diseases, and insects. ▶Restoring precious forests by tree-planting activities in the USA http://www.brotherearth.com/en/news_detail/436.html ▶Click to save our planet with Brother Earth http://www.brotherearth.com/en/top.html

Communicating Environmental Commitment

Biodiversity

Action Guidelines for Biodiversity Conservation in the Electrical and Electronic Industries and the status of the Brother Group's activities

Aichi Biodiversity Targets		Action Guidelines for Biodiversity Conservation in the Electrical and Electronic Industries	Status of the Brother Group's activities
Target 19: Knowledge improved, shared and applied	Relevant knowledge, science and technology are improved.	Member companies will work on the development and dissemination of monitoring technologies which use ICT as well as promote the accumulation of data through biodiversity monitoring wherever possible, in order to improve knowledge, the scientific base and technologies relating to biodiversity.	・In Australia, Brother has supported a survey on the biology and ecology of manta rays (Manta birostris) which are an icon of Australia's oceans and seas and assessed the impact of marine debris on sea turtles (endangered species), in order to understand and conserve the country's unique ocean environment.  ▶Project Manta - to save the marine life http://www.brotherearth.com/en/environmental-views/australia.html ・In Gujo, Gifu, Japan, Brother has planted seedlings of indigenous deciduous trees such as Quercus serrata Murray and Quercus crispula Blume as well as Magnolia salicifolia (willow-leafed magnolia), which is designated as the city flower of Gujo, etc. on a former ski ground by utilizing the eco point program. Brother has conducted a survey about the impact of this activity on the ecosystem and started to review the model of afforestation activities to restore the ecosystem.  ▶Ecosystem Restoration Project in the Brother Forests in Gujo http://www.brotherearth.com/en/environmental-views/gujo.html ▶Click to save our planet with Brother Earth http://www.brotherearth.com/en/top.html

*: The Four Electrical and Electronic Associations consist of the Japan Electrical Manufacturers' Association, the Japan Electronics and Information Technology Industries Association, the Communications and Information network Association of Japan, and the Japan Business Machine and Information System Industries Association.

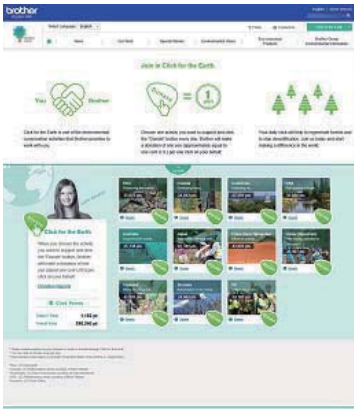
Communicating Environmental Commitment

Biodiversity

Brother Group's biodiversity conservation activities

The Brother Group started to support biodiversity conservation as part of its environmental conservation activities. As of March 31, 2016, more than 100 activities in total had been implemented to protect ecosystems in forests and oceans at 43 facilities of the Brother Group.

Click for the Earth donation program



Visitors to the Click for the Earth website are requested to support environmental conservation activities that are implemented by the Brother Group in different regions of the world. One click is allowed per day for each visitor, and is counted as one point. Each year, BIL funds environmental conservation activities in the following fiscal year or later depending on the total points (1 yen per point).

- ▶Fiscal year 2015 points and donation amounts for each activity have been determined
  http://www.brotherearth.com/en/news_detail/596.html
- ▶Fiscal year 2014 points and donation amounts for each activity have been determined
  http://www.brotherearth.com/en/news_detail/469.html
- ▶Fiscal year 2013 points and donation amounts for each activity have been determined
  http://www.brotherearth.com/en/news_detail/325.html
- ▶Fiscal year 2012 points and donation amounts for each activity have been determined
  http://www.brotherearth.com/en/news_detail/125.html
- ▶Fiscal year 2011 points and donation amounts for each activity have been determined
  http://www.brotherearth.com/en/news_detail/155.html
- ▶You are invited to join in Click for the Earth donations (free of charge) for supporting Brother's activities.
  http://www.brotherearth.com/en/top.html

Communicating Environmental Commitment

Biodiversity

Brother Industries, Ltd., Brother Sales, Ltd., Brother Real Estate, Ltd. [Japan]

On the occasion of the 100th anniversary of its founding in 2008, the Brother Group concluded an agreement with Gujo City in Gifu Prefecture to build healthy forests. The Brother Group supports activities to plant seedlings and thin forests at Brother Forests in Gujo*1.


Carefully planting seedlings of native species

Employees and their families of Brother Industries, Ltd. (BIL), Brother Sales, Ltd. (Brother Sales), and customers of Brother Real Estate, Ltd. (Brother Real Estate) among others work on the activities to plant seedlings, with the help of local people. Since FY2008 (April 1, 2008-March 31, 2009), seedlings have been planted in spring and autumn each year. As of October 2015, the total number of participants has totaled about 1,500.


Surveying the height, thickness, health condition, etc. of the seedlings

Thus far, 4,802 seedlings have been planted. Participants plant seedlings of native species including Quercus serrata Murray, Quercus crispula Blume, Alnus hirsuta (which easily grows on uncultivated land), and Magnolia salicifolia (the symbol flower of Gujo City). In spring, they put back the seedlings that have been affected by the weight of snow in winter. In autumn, they plant new seedlings in areas where the old ones did not grow. Some seedlings had grown to over several meters in height, highlighting considerable results.


Participants of the seedling planting activity

Through many years of activities, some areas have been found to be inappropriate for seedlings to take root. From FY2015 (April 1, 2015-March 31, 2016), a team from the Consulting Firm for Clinical Environmental Studies, Nagoya University was asked to cooperate in reviewing measures to restore forests that are rich in biodiversity. A survey has started to confirm the survival rate of planted seedlings, growth status by species, moisture and gravel content in soil, and species of butterflies and wild birds observed in the forests, among others. BIL, Nagoya University, and Gujo City officials will hold discussions based on the survey results to determine future measures.

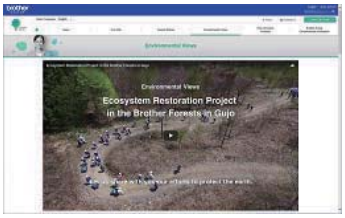


Image from Brother's special website on the environment on which the Ecosystem Restoration Project in the Brother Forests in Gujo is posted.

These activities are covered by the Brother eco point program, which has been promoted by BIL with group companies, and by the Click for the Earth donation program*2, which customers can join on brotherearth.com, Brother's special website on the environment. To watch a video about the activities in FY2015, visit Environmental Views on brotherearth.com.

*1: "Brother Forests in Gujo" refers to three sites in Gujo City, Gifu Prefecture. In February 2008, a three-party agreement was signed among Gifu Prefecture, Gujo City, and BIL to restore the three forests, as part of "the program to build forests in collaboration with companies" promoted by Gifu Prefecture. In ten years since signing the agreement, we will plant seedlings of indigenous species on a former ski ground (8 hectares) and thin two forests (20 hectares in total) to encourage the growth of healthy forests. About 6,000 seedlings (reviewed in FY2013 [April 1, 2013-March 31, 2014]) will be planted during this ten-year period. By the end of October 2015, 4,802 seedlings (including 1,778 and 365 seedlings planted by Brother Sales and Brother Real Estate, respectively) have been planted in total.

*2: Visitors to the Click for the Earth website are requested to support environmental conservation activities that are implemented by the Brother Group in different regions of the world. One click is allowed per day for each visitor, and is counted as one point. Each year, BIL funds environmental conservation activities in the following fiscal year or later depending on the total points earned (1 yen per point).

Communicating Environmental Commitment

Biodiversity

Brother Industries, Ltd., Brother Sales, Ltd., Brother Real Estate, Ltd. [Japan]

Number of seedlings that have been planted (2011-October 2015)*3

Year	2011		2012		2013		2014		2015	
Month	April	October	April	October	April	October	April	October	April	October
Number of seedlings planted	350	350	350	350	250	250	250	250	250	250
Brother Sales	146	151	176	172	201	106	100	100	100	100
Brother Real Estate	—	35	38	37	38	37	38	37	38	37

Brother Sales earns Brother eco points depending on the number of used consumables for printing equipment collected, while Brother Real Estate earns the points depending on the number of houses built. They plant the number of seedlings equivalent to the total points earned, respectively.

*3: The number of seedlings planted from FY2008 to FY2010 (April 1, 2010-March 31, 2011) is indicated on p. 81 of the 2014 Brother Group Corporate Social Responsibility Report (Environmental Activities).

▶**You are invited to join in Click for the Earth donations (free of charge) for supporting Brother's activities.**
http://www.brotherearth.com/en/top.html

▶**Environmental Views on brotherearth.com, Brother's special website on the environment**
http://www.brotherearth.com/en/environmental-views/gujo.html

Communicating Environmental Commitment

Biodiversity

Brother Industries, Ltd. [Japan]

In 2010, Brother Industries, Ltd. (BIL) signed an agreement with the Aichi Prefectural Government and other local bodies, and carried out environmental conservation activities in Chiharazawa* (about 14 hectares) in Okazaki City for five years. Chiharazawa has been designated as a nature conservation area by the prefectural government.

These activities intended to stop the spread of moso bamboo trees, a fast-growing exotic species, and allow sunlight to reach broad-leaved indigenous trees, such as Stewartia monadelpha and Malus tschonoskii, which are rarely found on plains. From September 2010 to May 2015, employees of BIL and their families, Aichi Prefectural Government employees, and local citizens joined activities to cut moso bamboo trees in autumn, and remove moso bamboo shoots in spring each year, under the guidance of Professor Emeritus Shunsuke Serizawa of Aichi University of Education who has long worked on biodiversity conservation in this region. Now that sunlight properly reaches precious trees, an official decision has been made to complete these activities.

Before cutting moso bamboo trees (2010)

Activities to cut moso bamboo trees completed (2015)

Highly evaluating the activities, Professor Emeritus Serizawa commented: "These conservation activities have produced significant results as emergency measures to stop the spread of fast-growing moso bamboo trees. Without these activities, the entire area would have quickly turned into a bamboo forest. I believe that this is one of the most successful social contribution activities by a company."

*: Among the more than 500 nature conservation areas nationwide designated by the national and prefectural governments, this is the first case where a private enterprise has become involved in protecting a nature conservation area as part of its social contribution activities.

Performance Data

Material Balance

Identifying the environmental impact of business operations

Overview of main environmental impact associated with the Brother Group operations

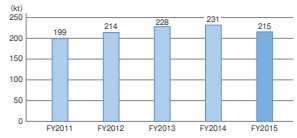
The Brother Group facilities are engaged in processing and assembly to manufacture products. The environmental impacts (including resource consumption, CO_2 emissions, and waste generated) associated with all business operations are quantitatively monitored and summarized to reduce environmental impacts.

Input of Resources, Production & Emission of Substances in FY2015 (April 1, 2015-March 31, 2016)*

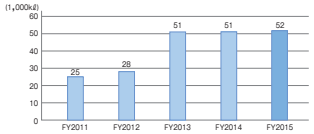
*: The scope of aggregation was directly related to the product range (not including the water dose or waste generated in sales sites).

Resource and energy inputs in FY2015 Each graph, please refer to page 112.

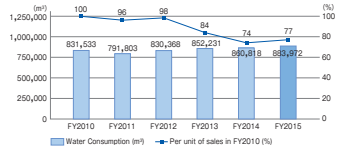
Resource consumption		Total energy consumption		Water consumption	
Product material	214,678t	Crude petroleum equivalent	51,591kL	Total amount of water consumption	883,972㎥



page 112 graph 1



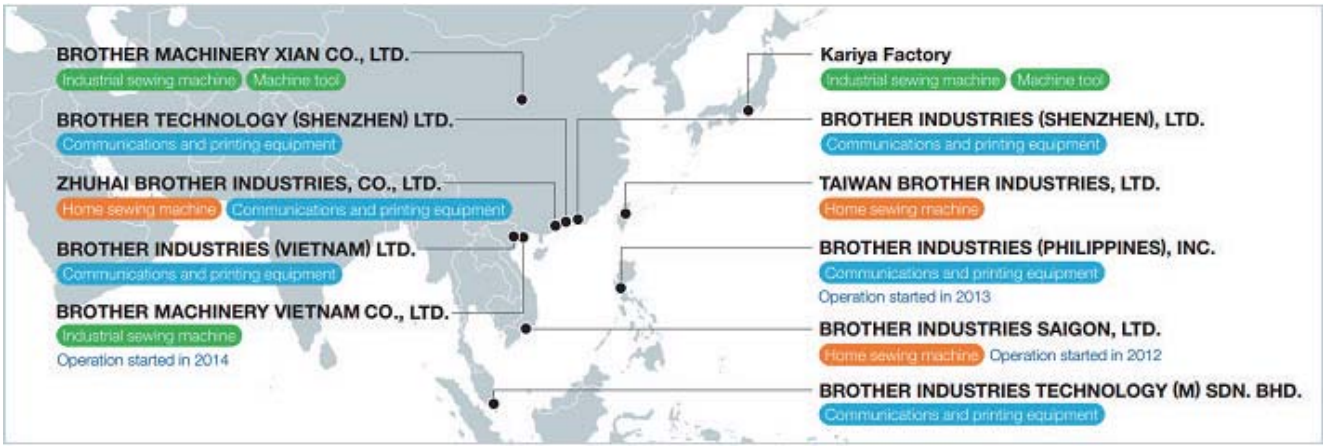
page 112 graph 2



page 112 graph 3

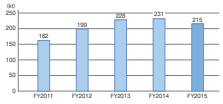
▶Reducing Water Consumption
http://www.brother.com/en/eco/facility/water/index.htm

Brother Group in FY2015 (main manufacturing facilities)

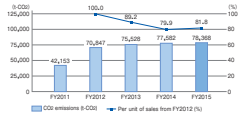


Production & Emission of Substances in FY2015 Each graph, please refer to page 113.

Brother products		CO_2 emissions		Amount of wastewater		Amount of waste	
Brother products	214,678t	CO_2 emissions	78,368t-CO_2	Amount of wastewater	773,674㎥	Production-related waste	10,941t
				Amount of wastewater recycled*	0㎥ (0%)	Amount of waste recycled	10,939t

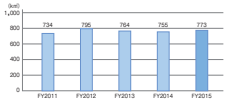


page 113 graph 4

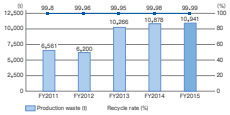


page 113 graph 5

▶CO_2 Emission Reduction Activities
http://www.brother.com/en/eco/facility/index.htm



page 113 graph 6



page 113 graph 7

▶Zero Waste Emission Activities
http://www.brother.com/en/eco/facility/waste/index.htm

*: The Brother Group facilities don't reuse any water resources in FY2015.

Performance Data

Material Balance

Calculation method

Resource and energy inputs in FY2015		
Resource consumption	The resource consumption is calculated by multiplying the shipments to major products shipped in FY2015 per weight. *: The calculation methods of resource consumption have been changed from FY2015.	
Total energy consumption	Total amount of electricity, steam, LPG/LNG, city gas, oil, etc. consumed at target business sites in FY2015	
	Crude petroleum equivalent	Calculated by converting electricity, oil, city gas, etc., LPG/LNG, and steam into crude petroleum, respectively *: The conversion rate for crude oil equivalent is based on the Table of Standard Calorific Values by Energy Source (February 2002) released by the Agency for Natural Resources and Energy, Government of Japan.
Water consumption	Total amount of water consumed at target business sites in FY2015	
	Clean water	Measurement using a water meter
	Industrial water	Same as above
	Underground water	Same as above

Production and emission of substances in FY2015		
Brother products	Consumption of raw materials per product x number of products shipped in FY2015	
CO_2	CO_2 emissions attributed to energy consumption at target business sites in FY2015 (energy consumption x CO_2 conversion factor) *: The CO_2 equivalent values are based on the list of emissions coefficients in the December 2002 Order for Enforcement in the Review Results of Calculating the Emission Amounts of Greenhouse Gases released by the Ministry of the Environment, Government of Japan.	
Amount of wastewater	The amount is equivalent to the amount of water intake, or is calculated in accordance with the formula set in respective regions (based on the amount of water intake).	
Amount of waste	Production-related waste	Total amount of waste (including metals, waste plastics, circuit boards, sludge, waste oil/solvents, waste acids/alkalis, glass/ceramics, and batteries) generated in the production process at target business sites in FY2015
	Amount of waste recycled	Amount of production-related waste (above) recycled

Performance Data

Material Balance

Environmental impact data of main facilities

Name of site
▶Business sites in Japan [PDF/168KB] Headquarters, Mizuho Manufacturing Facility, Hoshizaki Manufacturing Facility, Minato Manufacturing Facility, Momozono Manufacturing Facility, Kariya Manufacturing Facility, Research & Development Center, Logistics Center http://download.brother.com/pub/com/en/eco/pdf/2016/data_bil.pdf
▶Nissei Corporation [PDF/139KB] http://download.brother.com/pub/com/en/eco/pdf/2016/data_nissei.pdf
▶Mie Brother Precision Industries, Ltd. [PDF/121KB] http://download.brother.com/pub/com/en/eco/pdf/2016/data_mieb.pdf
▶Brother Industries (U.K.) Ltd. [PDF/121KB] http://download.brother.com/pub/com/en/eco/pdf/2016/data_biuk.pdf
▶Brother Industries (Slovakia) s.r.o. [PDF/122KB] http://download.brother.com/pub/com/en/eco/pdf/2016/data_bisk.pdf
▶Taiwan Brother Industries, Ltd. [PDF/122KB] http://download.brother.com/pub/com/en/eco/pdf/2016/data_taiwanb.pdf
▶Brother Industries Technology (M) Sdn. Bhd. [PDF/141KB] http://download.brother.com/pub/com/en/eco/pdf/2016/data_bitm.pdf
▶Zhuhai Brother Industries, Co., Ltd. [PDF/143KB] http://download.brother.com/pub/com/en/eco/pdf/2016/data_zuhaib.pdf
▶Brother Machinery Xian Co., Ltd.*1 [PDF/119KB] http://download.brother.com/pub/com/en/eco/pdf/2016/data_bmx.pdf
▶Brother Industries (Shenzhen), Ltd. [PDF/144KB] http://download.brother.com/pub/com/en/eco/pdf/2016/data_bisz.pdf
▶Brother Industries (Vietnam) Ltd. [PDF/122KB] http://download.brother.com/pub/com/en/eco/pdf/2016/data_bivn.pdf
▶Brother Technology (Shenzhen) Ltd. [PDF/121KB] http://download.brother.com/pub/com/en/eco/pdf/2016/data_btsl.pdf
▶Brother Industries Saigon, Ltd.*2 [PDF/119KB] http://download.brother.com/pub/com/en/eco/pdf/2016/data_bisg.pdf
▶Brother Industries (Philippines), Inc.*2 [PDF/119KB] http://download.brother.com/pub/com/en/eco/pdf/2016/data_biph.pdf
▶Brother Machinery Vietnam Co., Ltd.*3 [PDF/117KB] http://download.brother.com/pub/com/en/eco/pdf/2016/data_bmv.pdf

*1: 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.
*2: Brother Industries Saigon, Ltd. and Brother Industries (Philippines), Inc. have been included in the scope of aggregation from FY2013 (April 1, 2013-March 31, 2014).
*3: Brother Machinery Vietnam Co., Ltd. has been included in the scope of aggregation from FY2014 (April 1, 2014-March 31, 2015).

http://www.brother.com/en/csr/download/index.htm

▶Environmental impact data for before FY2012 (April 1, 2012-March 31, 2013) is available on the CSR Report PDF Download page.

Performance Data

In-depth Data

Successfully attaining targets in many areas

In accordance with the Brother Group Global Charter , the Brother Group promises to actively and continuously consider the environmental impact of all aspects of its operations. The Brother Group Environmental Action Plan 2015 (2011-2015) , which is a specific roadmap to fulfill its mission, set ambitious environmental targets to be achieved by 2015 in respective areas. In FY2015 (April 1, 2015-March 31, 2016), which is the final year of the plan, employees worked together to achieve the targets, and successfully achieved the targets in many areas.

▶Brother Group's Environmental Strategy http://www.brother.com/en/eco/management/index.htm

Targets and accomplishments in FY2015

▶Targets and accomplishments in FY2015 http://www.brother.com/en/eco/management/action_plan/index.htm
▶FY2015 targets and achievements (table) [PDF/70KB] http://download.brother.com/pub/com/en/eco/pdf/2016/plan_2015.pdf
▶FY2014 targets and achievements (table) [PDF/93KB] http://download.brother.com/pub/com/en/eco/pdf/2015/plan_2014.pdf
▶FY2013 targets and achievements (table) [PDF/49KB] http://download.brother.com/pub/com/en/eco/pdf/2014/plan_2013.pdf
▶FY2012 targets and achievements (table) [PDF/86KB] http://download.brother.com/pub/com/en/eco/pdf/2013/plan_2012.pdf
▶FY2011 targets and achievements (table) [PDF/97KB] http://download.brother.com/pub/com/en/eco/pdf/2012/plan_2011.pdf

Priority items	Graph	FY2013	FY2014	FY2015
Eco-conscious products				
Number of product models for which Brother acquired Type I environmental labels*1		135 models Including 28 consumables	158 models Including 24 consumables	119 models Including 14 consumables
Blue Angel		43 models	49 models	25 models
Eco Mark		56 models Including 28 consumables*2	56 models Including 17 consumables*2	39 models Including 14 consumables*2
Ten Circle Mark		9 models	12 models	1 model
Number of Type II environmental label certifications*1		7	7	12
Number of product models for which Brother acquired Type III environmental labels*1		5 models	66 models	23 models
Reducing environmental impact of business sites				
Changes in CO_2 emissions: On a group basis*3	page 113 graph 5	75,528t-CO_2	77,582t-CO_2	78,368t-CO_2
Water consumption	page 112 graph 3	852,231m^3	860,818m^3	883,972m^3
Waste generated	page 113 graph 7	10,226t	10,878t	10,941t
Recycle rate		99.95%	99.98%	99.99%

*1: The report format has been changed from the total of Type I, Type II, and Type III labels acquired to the number of labels acquired by type.
*2: Excluding tape cassettes for Brother P-touch
*3: In FY2014 (April 1, 2014-March 31, 2015) and FY2015 (April 1, 2015-March 31, 2016), a group company (Brother Machinery Vietnam Co., Ltd.) was added to the scope of aggregation in FY2013 (April 1, 2013-March 31, 2014).

Performance Data

In-depth Data

Priority items	Graph	FY2013	FY2014	FY2015
Complying with laws, regulations and social trends				
Number of chemical substances (groups) subject to investigation in green procurement		185 substances (groups)	196 substances (groups)	204 substances (groups)
Number of requests made to conduct investigations to comply with the REACH Regulation in green procurement		More than 82,000	More than 85,000	More than 83,000
Number of fluorescent x-ray measurements performed to comply with EU RoHS		More than 100,000	More than 120,000	More than 50,000
Environmental communication				
Number of facilities that have introduced the Brother eco point program		43 countries and regions*	44 countries and regions	44 countries and regions
Number of environmental conservation activities in which employees were involved		More than 90	More than 100	More than 100
Cumulative total number of employees who participated in the Brother eco point program		21,440 persons	25,908 persons	31,899 persons

*: Due to the expansion of activities, the number of facilities was changed to the number of regions for reporting results.

▶List of ISO 14001-certified Facilities and History of Auditing for ISO 14064
http://www.brother.com/en/eco/facility/iso_14001/index.htm

▶In-depth data for before FY2012 (April 1, 2012-March 31, 2013) is available on the CSR Report PDF Download page.
http://www.brother.com/en/csr/download/index.htm

Results of the green procurement activities of Brother Industries, Ltd.

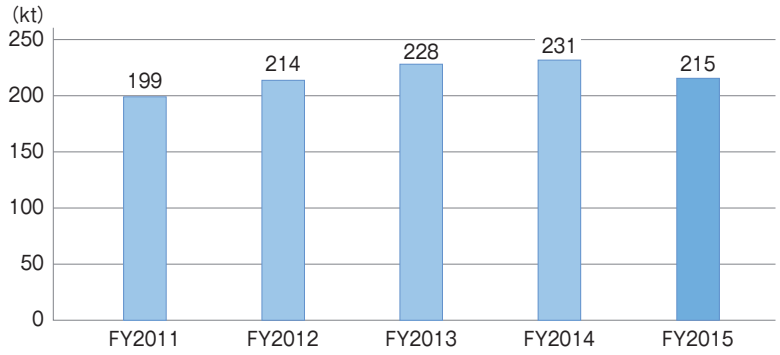
Brother Industries, Ltd. (BIL) joined the Green Purchasing Network in January 1997 and established purchasing guidelines in August 1997. BIL set standards for selecting products (e.g., energy conservation performance, avoidance of hazardous substances, reusability, and recyclability) and designated recommended products in 1998. Efforts have been made to enhance the penetration of the standards within the organization while reviewing the standards as needed. The green purchasing rate, which increased year after year, reached 99.00% in FY2009 (April 1, 2009-March 31, 2010) and 99.97% in FY2010 (April 1, 2010-March 31, 2011). The rate reached almost 100%, based on which we confirmed that the process was fully established. Thus, BIL excluded the rate from the scope of the disclosure of accomplishments from FY2011 (April 1, 2011-March 31, 2012).

Performance Data

In-depth Data

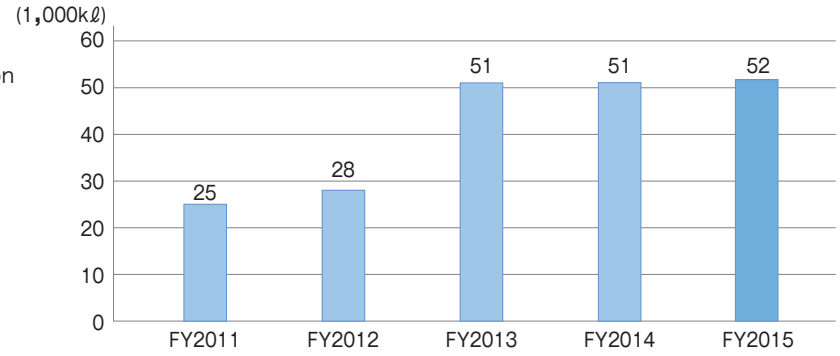
■Graph1

Resource consumption



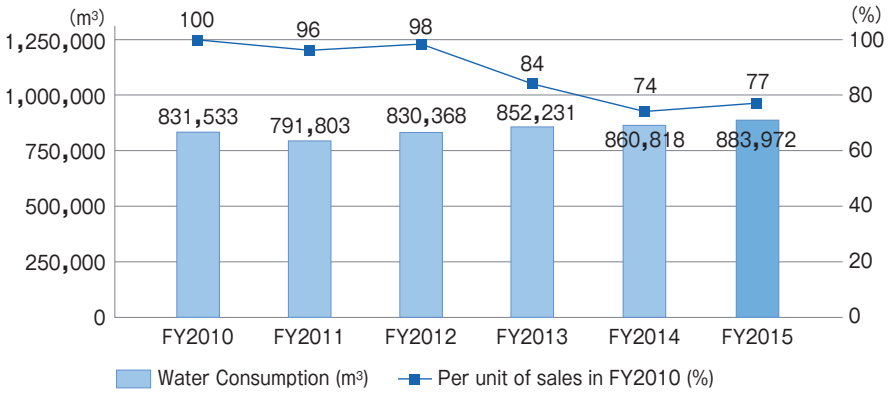
■Graph2

Total energy consumption



■Graph3

Water consumption

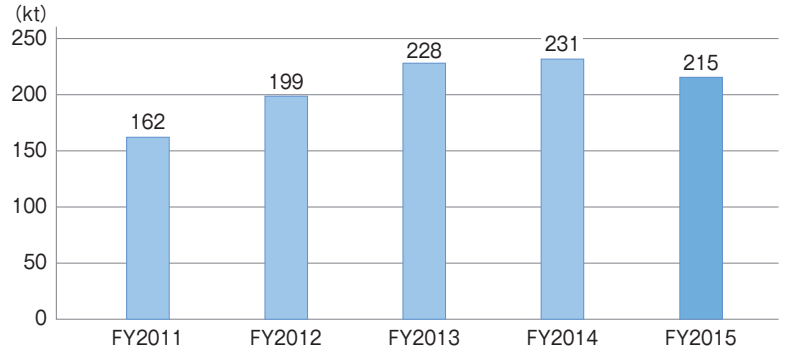


Performance Data

In-depth Data

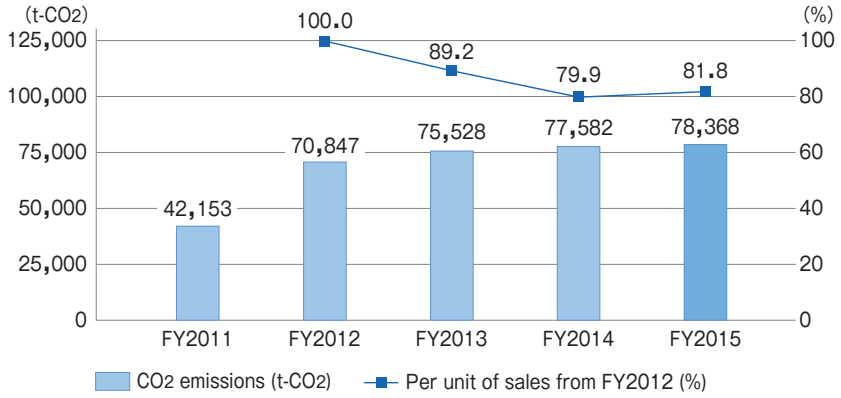
■Graph4

Brother products



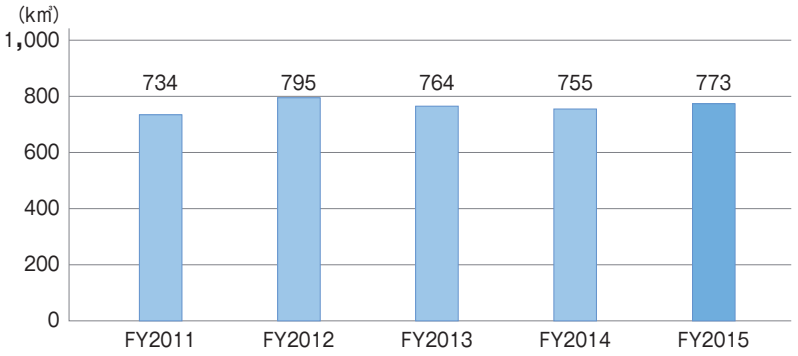
■Graph5

Changes in CO_2 emissions: On a group basis



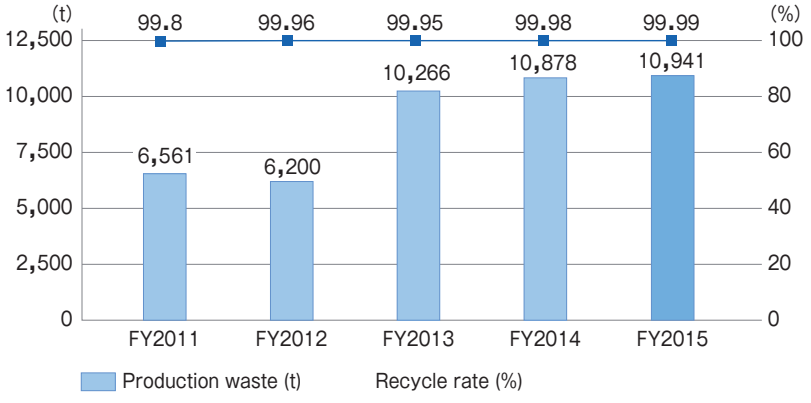
■Graph6

Amount of wastewater



■Graph7

Amount of waste



Glossary (Environment)

In alphabetical order

Act on the Rational Use of Energy

This act, commonly known as the "energy conservation law" (enforced in Japan in 1979), aims to implement the measures required for the rational use of energy with regard to factories; buildings; machinery and equipment; transportation, etc. and thereby contribute to the sound development of the national economy.

Biodiversity

Variation and interrelation of living things
The Convention on Biological Diversity concluded in Rio de Janeiro in 1992 defines diversity on three levels: ecosystem, species, and genetic.

BOD

Short for "biochemical oxygen demand"
BOD is used as an index that shows the level of water pollution caused by organic compounds. Specifically, BOD is the amount of oxygen (mg/L) needed by aerobic biological organisms in a body of water to break down organic compounds through oxidative decomposition.

Brother Earth (a Brother term)

Logo and slogan (established in 2010) that symbolize the Brother Group's environmental activities.
The Brother Group's environmental activities are publicized worldwide under the unifying message of "Working with you for a better environment."

Brother eco point program (a Brother term)

To raise the environmental awareness of employees and thus help prevent global warming, eco points are awarded for eco-conscious actions by employees and their families. Eco points are also awarded for used consumables collected from customers. Brother carries out various environmental contribution activities depending on the number of points earned.

Brother Green Labe (a Brother term)

Brother's unique environmental label (created in October 2001, revised in February 2007). Brother Industries, Ltd. awards the label to products that meet voluntary environmental standards (Brother Green Label standards) for products.

Glossary (Environment)

CDP (former name: Carbon Disclosure Project)

An international NPO headquartered in London, U.K.
Since 2003, CDP has been working with institutional investors to request major companies worldwide to disclose information about business risks associated with climate change, business opportunities, greenhouse gas emissions, etc. CDP evaluates the collected information and publicizes the results.

CEPA

Short for "Canadian Environmental Protection Act"
CEPA is an act that regulates evaluation and management of chemical substances in Canada. Enforced in 1994, CEPA aims to ensure safety of environment and safety of the effect of environment to human bodies by management of chemical substances and organisms.

Click for the Earth (a Brother term)

One of Brother's environmental conservation activities that Brother provides for with stakeholders Each visitor is encouraged to choose one activity to support and click the "Donate" button. Brother will make a donation of one yen per click on each visitor's behalf.
Your click will help to regenerate forests and to stop desertification.

COD

Short for "chemical oxygen demand"
COD is used as an index that shows the level of water pollution caused by organic compounds. COD refers to the amount of oxygen (mg/L) consumed when organic compounds in a body of water are chemically decomposed by oxidizing agents (potassium permanganate or potassium dichromate).

COP10

Short for the tenth meeting of the Conference of the Parties (COP10) that was held in Nagoya, Aichi. At COP10, the Strategic Plan for Biodiversity 2011-2020 (commonly known as the Aichi Biodiversity Targets) was adopted to take effective and urgent action to halt the loss of biodiversity.

Eco Declaration (ECMA370)

The Eco Declaration is a standardized format and system for disclosing the environmental characteristics of electric home appliances (including fax machines and All-in-Ones) in Europe. The Eco Declaration is useful for comparing two or more products.

Glossary (Environment)

E-learning
Learning/education and training using the Internet (or an intranet)

Electrodeless lamp
Electrodeless lamps are characterized by long service life, excellent energy-saving performance, and low heat output. Thus, electrodeless lamps help reduce air-conditioning loads and running costs (including lamp replacement).

Emissions
Substances emitted or released primarily into the atmosphere

Environmental accounting
A mechanism that enables companies etc., to realize the cost of environmental conservation in business operations and the effect derived from the activities, and to conduct measurements and make reports as quantitatively as possible (in monetary or physical units), in pursuit of sustainable development.

Environmental Information System (a Brother term)
The Brother Group established its proprietary environmental information system in cooperation with suppliers to investigate, avoid the use of, and manage chemical substances contained in products. The Environmental Information System has been improved to quickly comply with laws and regulations in respective countries.

Environmental management system
A mechanism (e.g. a framework, or a procedure) that enables organizations to set and achieve their environmental policies and targets in promoting voluntary environmental conservation activities.

ErP Directive
(a framework to set ecological design requirements for energy-related products)
ErP is short for "Energy-related Products."
The ErP Directive (enforced in 2005, revised in 2009) establishes a framework for the eco-conscious design of energy-related products, such as air conditioners and refrigerators sold in the EU, to help prevent global warming.

Glossary (Environment)

FSC
Short for "Forest Stewardship Council"
FSC is an international organization that promotes responsible management of forests and certifies distribution and processing of timber from forests as well as timber-producing forests themselves.

Green procurement
Before products and services are purchased, the need for the purchase should be fully considered. If the purchase is necessary, products and services with minimal environmental impact should preferentially be purchased, without focusing solely on price and quality. This concept is called "green purchase." Green procurement refers to procurement of products and services based on the concept of green purchase.

ISO 14001
An international standard for environmental management system established by the ISO (International Organization for Standardization) (published in 1996).

ISO 14064
An international standard established by the ISO (International Organization for Standardization) regarding calculation, reporting, and verification of GHG (greenhouse gas) emission reductions in organizations and projects (published in 2006).

JIG
Short for "Joint Industry Guide for Material Composition Declaration for Electronic Products"
JIG (published in 2005) are the common guidelines applicable in Japan, the U.S., and Europe regarding disclosure of information about chemical substances contained in electrical and electronic equipment. The guidelines aim to increase the efficiency of the process for investigating chemical substances.

LCA
Short for "life cycle assessment"
A technique for quantitatively evaluating resource input and environmental impact in the product lifecycle (from procurement of raw materials, to production, logistics, use, and disposal) and their potential impact on the global environment and ecosystem.

Glossary (Environment)

Low Energy Standby
Technology to reduce standby power (power that is consumed even when the operation of a product with a plug connected is stopped) to very close to zero.

LRQA
Short for "Lloyd's Register Quality Assurance Limited"
A certification organization which conducts examinations in the fields of quality, environment, safety and health, etc. LRQA confirms and provides validation and verification regarding greenhouse gas emissions.

Membrane bioreactor
This is a type of activated sludge process to purify sewage and industrial wastewater. A filtration membrane is used to separate treated water from activated sludge.

Milestone
A milestone is a date or an event that must be observed as a target of progress in project management. Milestones are set to ensure the management of important and significant targets.

Nagoya Protocol
The protocol to the Convention on Biological Diversity (CBD) was adopted at the tenth meeting of the Conference of the Parties (COP10) in Nagoya, Aichi in October 2010. The official name is the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity. The protocol provides measures to ensure proper implementation of the rules set out in the CBD.

Nature conservation areas (in Japan)
Areas that remain almost unaffected by human activities, retain primitive nature, and maintain excellent natural environments. These areas were designated in accordance with the Nature Conservation Act and prefectural ordinances to ensure conservation of the natural environment and biodiversity.

N-hexane extracts
This is a generic term for non-volatile substances extracted by n-hexane (volatile liquids that are widely used in solvents.) N-hexane extracts are used as an index to represent the oil content (mg/L), etc. in water such as mineral oils and animal/vegetable oils and fats.

Glossary (Environment)

Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)

This was enacted in 1986 in California to protect humans and drinking water sources from toxic chemical substances. The state government is required to publish a list of toxic substances at least once a year. Manufactures are required to label toxic substances on the list if they are contained in products.

PRTR Law (Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof)

PRTR is short for "Pollutant Release and Transfer Register."
The PRTR Law (enforced in 1999 in Japan) aims to promote voluntary improvement of the management of chemical substances by business operators and to prevent any impediments to the preservation of the environment by taking measures for the confirmation of release amounts, etc. of specific chemical substances in the environment (PRTR) and measures for the provision of information concerning the properties and handling of specific chemical substances (SDS), etc.

REACH Regulation

REACH is short for "Registration, Evaluation, Authorization and Restriction of Chemicals."
This regulation on the registration, evaluation, authorization and restriction of chemicals in Europe (enforced in 2007) aims to protect human health and the environment.

Recycled pellet

Particles (measuring about 3-5 mm) of molten waste plastics to be used as raw materials

RoHS Directive (directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment)

RoHS is short for "Restriction of Hazardous Substances."
This EU directive (enforced in 2006) prohibits the use of harmful substances contained in electrical and electronic equipment (lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyl (PBB), polybrominated diphenyl ether (PBDE)) in principle.

Glossary (Environment)

Scopes 1, 2, and 3

Scopes are standards for calculating and reporting greenhouse gas (GHG) emissions. The three different scopes help minimize overlapping calculations and identify target gases.
Scope 1: Direct GHG emissions by business operators
Scope 2: Indirect GHG emissions resulting from use of electricity, heat, and steam supplied by other entities
Scope 3: Indirect GHG emissions other than Scopes 1 and 2 (emissions by other entities in connection with business operators' activities)

SDS

Short for "safety data sheet"
SDSs are documents which provide information about properties and the handling of chemical substances when transferring or supplying designated chemical substances and products containing these chemical substances to other business operators, in order to promote improvements in appropriate management of chemical substances by business operators.
As of June 2014, the Brother Group offers the information in 25 languages.

Social media

A category of web services that enable interactive communication among users

Sound material-cycle society

A society where consumption of natural resources is reduced and environmental impact is minimized.
A sound material-cycle society can be achieved by taking the following steps:
Phase 1: Reducing products etc. that turn into waste
Phase 2: Reusing waste as resources as much as possible
Phase 3: Properly disposing of waste that cannot be used in any way

SS

Short for "suspended solids"
SSs are insoluble suspended solids in water. These solids are called suspended matter in JIS (Japanese Industrial Standards), and suspended solids in environmental and wastewater standards.
SSs pass through 2 mm sieves but remain on 1 μm filtration media.

Glossary (Environment)

SVHC
Short for "substances of very high concern"
SVHCs may seriously affect human health and the environment.

3PL
Short for "third party logistics"
Outsourcing services to plan most efficient logistics strategies, propose establishment of logistics systems, and undertake and implement comprehensive projects on behalf of consigners.

TSCA
Short for "Toxic Substances Control Act"
This US act (enforced in 1976) aims to regulate chemical substances and mixtures that present a substantial risk of injury to human health or the environment.

Type I labels
Awarded by third party organizations to products that contribute to environmental conservation based on certain standards
Eco Mark and the Blue Angel are popularly known in Japan and Germany, respectively.

Type II labels
Self-declared by business operators regarding the environmental information of their products
Brother Industries, Ltd. created the Brother Green Label.

Type III labels
Awarded to products whose environmental information is disclosed quantitatively based on LCA (Life Cycle Assessment)
In Japan, EcoLeaf is managed and issued by the Japan Environmental Management Association for Industry.

UFP
Short for "ultrafine particle"
UFPs are particles measuring 0.1 μm (1/1,000 of 0.1 mm) or less in diameter.

Glossary (Environment)

WEEE Directive

WEEE is short for "Waste Electrical and Electronic Equipment."
This EU directive (enforced in 2003) imposes obligations on member countries, sales business operators, manufacturers, etc. for waste electrical and electronic equipment in design, sorted collection, and recycling.

Zero Waste Emission Activities　(a Brother term)

These are the Brother Group's waste reduction activities to help use resources effectively and prevent resource depletion. "5R activities" are ensured to curb waste generation, reduce emissions, and achieve "zero landfill waste" (meaning that less than1% of waste generated at factories is sent to landfill).