

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.



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Scope of report: Brother Industries, Ltd. and its global group companies (including those in Japan)
Covered period: April 1, 2014 to March 31, 2015
Guideline used as a reference: GRI's "Sustainability Reporting Guidelines (G4)"

Message from the Management (Environment)

Achieving a Sustainable Society

Speeding up environmental conservation activities

"The Brother Group must work on activities that help reduce environmental impacts, even if only a little."

Various environmental problems (including global warming) have emerged due to the economic growth of human society. To cope with climate change on a global scale, we urgently need to learn from Mother Nature and create a material cycle process.

At the Brother Group, we have been working to become a "truly global company" in various aspects to achieve Global Vision 21 (Mid- to Long-Term Corporate Vision) formulated under the Brother Group Global Charter. As a global company operating in more than 40 countries and regions, the Brother Group created the "Brother Earth" environmental logo and slogan to globally facilitate efforts to help achieve a sustainable society. Based on a unified message of "Working with you for a better environment," we make coordinated efforts with our partners and our customers to expand the scope of activities.



Working with you for a better environment

Results in FY2014 (April 1, 2014-March 31, 2015)

We continuously upgraded our framework to quickly meet new laws and regulations enacted in different regions; further reduced the environmental impact of products (including energy conservation); actively acquired environmental labels in respective countries and met new standards; and started to release information about the environmental impact of new products in line with Eco Declaration (ECMA370). Regarding the reduction in emissions of CO₂ and other greenhouse gases, which are considered to be the major contributors to climate change, the scope of activities to reduce CO₂ emissions was expanded to the entire group in FY2013 (April 1, 2013-March 31, 2014). Meanwhile, the Brother Group is subject to audits based on ISO 14064 (Scopes 1 and 2), and has started to address audits for environmental impacts outside the group including the supply chain (Scope 3); and protected the ecosystems of forests and oceans at more than 100 locations around the world, involving 43 facilities of the Brother Group. Through these various environmental communication activities, the Brother Group has expanded the scope of its cooperation and collaboration with many stakeholders.

Thus, steady progress has been made toward fulfilling the Brother Group 2015 Mid-term Environmental Action Plan (2011-2015).

Notably, regarding CO₂ emissions from manufacturing facilities outside Japan, the mid-term targets for CO₂ emissions reduction of 20% by FY2020 (April 1, 2020-March 31, 2021) (per unit of sales) from FY2006 (April 1, 2006-March 31, 2007) levels were achieved seven years ahead of schedule. We further promoted activities to cut CO₂ emissions, achieving 31.7% reduction.

CO₂ emissions from eight business sites in Japan were cut by 25.2%, beyond the target of 24% for FY2014 (April 1, 2014-March 31, 2015) in line with the 30% reduction (absolute value) from the FY1990 (November 21, 1989-November 20, 1990) levels set out in the mid-term targets for FY2020.

Message from the Management (Environment)

Achieving a Sustainable Society

Evaluations by third-party organizations

Working on these environmental conservation activities, the Brother Group scored 85 points* (grade: B) in the Carbon Disclosure Project (CDP) (78 points, grade B, in the previous year) and was ranked 16th (36th in the previous year) in the Nikkei Environmental Management Survey (in the manufacturing industry). The Brother Group's efforts have been highly evaluated.

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

Ensuring a long and successful future

To become a company trusted by customers and to ensure a long and successful future, the Brother Group will positively and continuously consider the environmental impact of all aspects of its global business operations in accordance with the Brother Group Global Charter.

Brother Industries, Ltd.
Representative Director & President
Toshikazu Koike



July 2015

▶ Message From The Management

<http://www.brother.com/en/corporate/message/index.htm>

Face to Face Talk: Taking on New Challenges for the Next Phase of Growth



Today, the Brother Group has over 40,000 employees of various nationalities in more than 40 countries and regions. In the world of rapid change, what should Brother do to grow sustainably as a global company that is well accepted by society? Brother Industries' President Toshikazu Koike invited Keiko Takeshita, who is a popular actress appearing in films and TV shows and actively involved in social contribution and environmental activities while bringing up two children, to discuss Brother's CSR management.

Keep alert even when you are successful, and actively take on challenges

Koike: You were born in Nagoya City where Brother Industries' head office is located. What Brother products do you remember in your childhood?

Takeshita: My family used a Brother sewing machine. I used Brother typewriters in typewriting lessons when I was in 12th grade. The main products today are totally different from back then.

Koike: I remember you served as the Chief Pavilion Director of Japan Pavilions at the 2005 World Exposition in Aichi, Japan.



Takeshita: Yes. I took a photograph with my children and had it printed on a T-shirt. I've brought the T-shirt today.

Koike: The printer was exhibited at the Brother pavilion. The colors haven't faded over the nine years. In fact, the T-shirt printer is one of the products that I suggested we develop. At that time, I was the president of the sales company in the U.S., and I thought that inkjet printing would make T-shirts more comfortable to wear than those printed with the conventional method.

Face to Face Talk : Taking on New Challenges for the Next Phase of Growth

Takeshita: What a surprise! I didn't expect to meet the person who started the project to develop the printer.

Koike: In those days, Brother was expanding globally as a communications and printing equipment manufacturer. The lineup of printers and All-in-Ones was expanded for the SOHO (small office/home office) market. Brother's business grew rapidly in Europe and the U.S.

Takeshita: You wrote in your book* that one must not get carried away with success. This applies to actors and actresses, too. When they are just starting, they receive good support, but if their films become popular, then they'll be closely watched by the mass media. If they get carried away, they may lose control of themselves. It's important not to become complacent with success.

*: Solution Is Inside Us - 60 Management Philosophies of Toshikazu Koike, President of Brother (Naoyuki Takai, Kodansha Company Ltd.)



Koike: Exactly. Today, two thirds of our sales come from the printing-related business including printers, All-in-Ones, and electronic stationery. As smartphones and tablets spread, the need to print on paper will continue to decrease. Our results were good last fiscal year due partly to the weaker yen. In the long term, our top priority is to create a new business that will become our next core business, and that's why I encourage employees to have a sense of crisis and take on challenges. The Mid-Term Business Strategy "CS B2015" is under way based on the theme of "Back to Growth" toward 2015. We will drive the growth of the group by continuing to create products that surprise customers and contribute to society.

Takeshita: Brother has been around for a long time, but is changing dramatically. What is the basis of the corporate culture?

Koike: The Brother Group Global Charter is the basis of all our activities. All group companies and employees must base their daily decisions-making and actions on the Charter's Basic Policies and Codes of Practice. The Global Charter also states that we must put the customer first, everywhere, every time, and live the motto "At your side.," honor individuals and diversity regardless of gender and nationality, and take action with a challenging spirit. The Global Charter, which was translated into 27 languages, guides the daily work of more than 40,000 employees. We strive to ensure a long and successful future by having a challenging spirit.

A global company with collaboration among diverse people



Takeshita: It must be tough to share the policy with as many as 40,000 people. At the 2005 World Exposition in Aichi, Japan, I learned the importance of diversity in nature, and the same applies to personal relationships. By working with others, I understand the importance of respecting individualities and working together. I don't have specific suggestions, but I think we should try to recognize differences and explore what we have in common.

Face to Face Talk : Taking on New Challenges for the Next Phase of Growth

Koike: At Brother Industries, we have about 80 foreign employees. With more than 80 percent of our products manufactured outside Japan, we need to work with employees outside Japan in all of our operations including development, production, sales, and services. That's why we exchange staff with facilities outside Japan through the trainee program, for example. We have been creating opportunities for intercultural exchange by recruiting international students in Japan and directly hiring employees from outside Japan. When it comes to communication, experience matters. For example, a person who seems difficult to get along with at first may turn out to be a very interesting person.

I think Japanese employees in their 20s should work outside Japan for three to five years, but we have not fully attained this goal. We still have a long way to go to develop global human resources.

Takeshita: You often travel abroad. Is it because you value communication with fellow staff?

Koike: Yes. I value communication with staff. The weekly message from the president, which covers financial results, organizational structure, events, and the President's Awards, is translated into 10 languages and distributed via the intranet. In 2005, I started an in-house blog in which I write about personal topics, and I've posted nearly 750 times in the past decade. By writing the blog and showing that I am just an average Joe, I hope employees will feel closer to me, and will understand my commitment to life and philosophy. I visit overseas facilities once or twice a month and talk with local employees. One employee asked me directly, "How come you climbed all the way to the top while so young?" I answered, "It was just a fluke." Some questions are tough, such as, "What is your future product strategy?" I try to answer every question if time allows. About six times a year, we organize in-house presentations by a video conferencing system, which is our product, to connect the main venue with other facilities in Japan. I talk to about 1,000 managers about financial results, annual management plans, and events in the group, in particular.

Takeshita: I guess you write the blog during short breaks. How do you schedule your work each day?

Koike: I always think of the people who count on me. This is the source of motivation. I do not need a rest while I am on stage and watched by others.

Takeshita : You would not be able to survive on an uninhabited island.

Koike: No. I may suddenly lose motivation if other people no longer expected me to take the lead.

Takeshita : Changing the subject, Brother Industries is among the top companies in the Great Place to Work® survey*. How do you support working women?

Koike: We offer maternity leave, childcare leave, and shorter work hours, just as other companies do. But, most of our female employees who take childcare leave come back to work for us. We have about 25 female managers, one of whom was appointed as the first female general manager. But we still lag behind Europe and the U.S., where husbands and wives are expected to play equal roles in raising children. In Japan, women are unable to demonstrate their full potential due partly to traditional practices and their modesty.

*: Brother Industries, Ltd. (BIL) has been ranked among the best 20 companies in the surveys conducted by the Great Place to Work® Institute Japan for five consecutive years. In the survey in 2013, BIL was ranked 13th (among 220 Japanese companies).

Face to Face Talk: Taking on New Challenges for the Next Phase of Growth

Takeshita: At home, I am an ordinary mother. When my children were small, they asked me, "Why are you on TV while father is cooking in the kitchen?" It's hard work raising kids, but I learned how to allocate time and prioritize tasks while asking my husband for help and hiring babysitters and housekeepers. At work, I received time-saving tips as well as encouragement from other working mothers, "You may feel overwhelmed, but you'll survive." It seems that the time when you must work the hardest at your job also coincides with the time when you raise children. That means you must work at 120 percent of full capacity — 60 percent at home plus 60 percent at work.

Practicing "At your side." as a corporate citizen, based on the keyword of "continuity"

Takeshita: Brother has been supporting the reconstruction effort since the Great East Japan Earthquake.

Koike: We operate in many countries and regions around the world. If a major disaster strikes in one of the areas in which we operate, we immediately respond in some way. Because the Great East Japan Earthquake wreaked unprecedented havoc, it is crucial to continue to assist the reconstruction. To date, we have given away T-shirts featuring the Chinese character "kizuna," which literally means "ties," to employees who donated money. The Kizuna Fund was established so that employees can voluntarily make donations. Our employees helped people in the disaster areas find both a reason for living and also work by using sewing machines. They also helped organize a musical and sell specialty products. These activities are done as the Brother Group. The other day, we commended employees who volunteered in supporting the reconstruction after the earthquake under the Volunteer Award program. And last year, both the company and employees gave donations for reconstruction projects after the typhoon that hit the Philippines.



Takeshita: I serve as the goodwill ambassador of the Japan Association for the World Food Programme*. After the earthquake, we received massive support from the United Nations World Food Programme, mainly in the form of food and tents. Before the earthquake, Japan had always been the one to help other countries, so I felt both glad and shocked to find messages in overseas newspapers asking for support to save children in Japan. It showed the importance of mutual support, as well as immediate action and cooperation. After the Great Hanshin-Awaji Earthquake in 1995, I was involved in poetry reading events in Kobe in memory of the victims. In 2012, I started to read poems in Sendai. The affected areas and the damage are so extensive in the Tohoku region that local areas and cities must work closer together than ever.

Koike: Your work embodies our "At your side." spirit to support the affected areas. Your father worked for the government, and later became a lawyer and helped the socially vulnerable. You seem to have inherited his DNA, as I understand you have been actively involved in environmental protection projects.

*: The Japan Association for the World Food Programme is a specified nonprofit corporation that supports the WFP whose mission is to eradicate hunger and poverty. This organization serves as the contact in Japan to support the WFP.

Face to Face Talk: Taking on New Challenges for the Next Phase of Growth

Takeshita: I have accepted some opportunities to volunteer. One of them is at Furano Shizenjuku (NPO Furano Field) organized by So Kuramoto, the playwright of *Kita No Kuni Kara* (a TV drama series). The project focuses primarily on two goals: restoration of a former golf course into a natural forest, and environmental education. In a program called "three-generation family camp," families consisting of grandparents, parents, and children camp out overnight in the wild. One reluctant child who did not like insects at first caught a dragonfly and showed it to me the following morning.

Koike: Under the slogan of "Brother Earth," the Brother Group has been working to develop energy-saving products, reduce the environmental impact of its manufacturing factories through the Eco Factory project, conserve the biological diversity, and raise funds for environmental conservation activities through the Brother eco point program in which points are awarded for eco-conscious actions taken by employees in their daily life. Various activities are underway at facilities around the world, and environmental education programs are also organized. We are the ones who are responsible for protecting the environment for future generations.

Increasing supporters around the world



Takeshita: Talking about the next generation, young people should take on challenges without worrying about making mistakes. In today's information society, children are surprisingly knowledgeable. But as with experiencing nature, simply knowing of something is not the same as fully understanding it. I want children to take the initiative and experience things with their five senses so that they can develop new ideas. I think this is the starting point in any field.

Koike: Mistakes are an opportunity to enrich lives. As president, I expect young employees to take on challenges and make many mistakes. I enjoy seeing them use their experience to make progress. They should embrace challenges, even tough ones, and make mistakes rather than thinking too much and losing their spirit of adventure. I often tell them that many company leaders have gained their experience by working on various challenges and making mistakes. Even if employees make mistakes, the ultimate responsibility lies with the top management who allowed them to take on the challenge. Employees should not be prevented from working on their preferred projects or from being promoted because of such mistakes. I encourage them to take full advantage of their personal networks as well as the company's assets and technologies. A company that has diverse employees in terms of personalities, backgrounds, and ways of thinking is more likely to prosper than a company which employs clones, no matter how skilled they are.

Takeshita: Diversity is the source of dynamism.

Face to Face Talk: Taking on New Challenges for the Next Phase of Growth

Koike: Brother is a global company. True communication and globalization cannot be attained unless our Japanese employees understand and accept the values and customs of different countries. I lived in the U.S. and experienced business there for more than 20 years, so I'm often considered as an American who looks Japanese. Deep down, I believe in being kind-hearted just like Tora-san the vagabond, the main character in the film series *Otoko Wa Tsurai Yo* (It's Tough Being a Man). In my view, personal relationships transcend national borders.

Takeshita: I appeared in the series three times as leading ladies with whom Tora-san falls in love. I adore Tora-san!

Koike: I want to be a softhearted and gentle person, and to value personal connections. Meanwhile, I have been lucky in business. I have a duty to pass on my experience in business and management to younger staff and help prevent them from making the same mistakes. In Japan, the birthrate is falling and the population is aging rapidly, so to survive, we need to adapt our company to the global market. The solution is to increase customers and employees who are devoted to Brother around the world.



Face to Face Talk: Taking on New Challenges for the Next Phase of Growth



Representative Director & President Brother Industries, Ltd.
Toshikazu "Terry" Koike

Profile

Born in 1955 in Ichinomiya City, Aichi Prefecture, and graduated from Waseda University (Political Science and Economics). Toshikazu "Terry" Koike joined Brother Industries, Ltd. in 1979, and was transferred to Brother International Corporation (U.S.A.) in 1982. Koike went on a sales tour across the U.S. with a printer prototype when Brother's main products were typewriters and sewing machines, etc., thus building the foundation for Brother's info-com devices business. He was appointed as Director & President of Brother International Corporation (U.S.A.) in 2000, and returned to Japan in 2005. Koike has been Representative Director & President of Brother Industries, Ltd. since 2007. He is nicknamed Terry, and publishes a broad range of information, from President's messages to personal experiences via an in-house blog on a company intranet. He enjoys various hobbies including wine tasting, music, hiking, visiting historic sites, playing golf, watching sports, and playing Japanese chess (shogi). Koike has stored 9,000 tunes ranging from 70s' folk songs to the latest hits on his iPod. He goes to concerts when time permits. His motto is "positively, pleasantly and powerfully."

Face-to-Face Talk guest



Actress
Keiko Takeshita

Profile

Born in Nagoya, Aichi, Japan, and graduated from Tokyo Woman's Christian University, Keiko Takeshita made her first TV appearance when in the 10th grade. She made her formal debut in 1973 on a TV drama series. Subsequently, she appeared in many popular TV programs including a quiz show and TV dramas, radio programs, films and theater, and has been popular among a wide range of audiences.

She won various awards for her TV and stage performances, including the Japan Academy Prize for Best Supporting Actress, Best Actress in a Leading Role in the Asian Television Awards, and the individual award in the 42nd Kinokuniya Theater Awards. She was appointed as the Chief Pavilion Director of Japan Pavilions at the 2005 World Exposition in Aichi, Japan, and to date, continues to be actively involved in charitable work, environmental conservation and cultural promotion activities. She currently serves as the vaccine ambassador of the Japan Committee Vaccines for the World's Children, goodwill ambassador of the Japan Association for the World Food Programme, cultural ambassador of the Kyoto National Museum, and instructor of the Furano Shizenjuku (NPO Furano Field), etc.

Highlights of FY2014

Strategy and Approach

Environmental strategy

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
 - Reducing the overall environmental impact of the Brother Group
 - Reducing the environmental impact of business sites in Japan
2. Enhancing business competitiveness
 - 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
3. Increasing the brand value
 - 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 2015 Mid-term Environmental Action Plan (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. With FY2015 (April 1, 2015-March 31, 2016) being the final year, various measures and activities are planned to achieve the targets.

Brother's environmental strategy aims to achieve high level standards and Brother actively participates in evaluations by third-party organizations, including the Carbon Disclosure Project (CDP) (Brother scored 85 points* this year, up from 78 points in the previous year, and again graded B as in the previous year.) and the Nikkei Environmental Management Survey (Brother's ranking in the manufacturing industry: 16th place, up from 36th place in the previous year) in Japan. Brother Industries, Ltd. (BIL) won the Gold Prize of the 2014 Aichi Environmental Award for its overall accomplishments in environmental activities.

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

In-depth report

- ▶ **Brother Group's Environmental Strategy** <http://www.brother.com/en/eco/management/index.htm>
- ▶ **Mid-term Environmental Action Plan** http://www.brother.com/en/eco/management/action_plan/index.htm
- ▶ **Internal Environmental Management Structure** <http://www.brother.com/en/eco/management/organization/index.htm>
- ▶ **Timeline for Environmental Milestone Achievement** <http://www.brother.com/en/eco/management/history/index.htm>

Highlights of FY2014

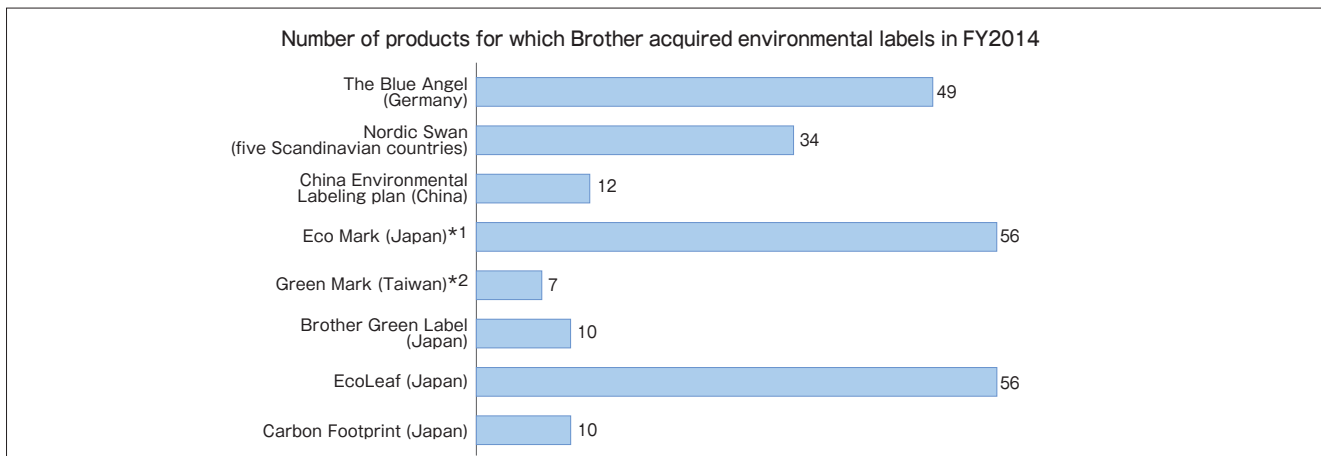
Creating Eco-conscious Products

Reducing impact throughout life cycles based on top-class eco-conscious designs

The Brother Group is committed to creating eco-conscious products, primarily focused on reducing energy consumption in line with the basic policy of the Brother Group 2015 Mid-term Environmental Action Plan (2011-2015). 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 based on the basic policy.

Activity highlights in FY2014

Actively acquiring environmental labels in respective countries and meeting new standards



*1: Including 17 consumables *2: Consumables

Improving the energy-saving performance of products

[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 -

In-depth report

- ▶ **Environmental Considerations within Product Life Cycles** <http://www.brother.com/en/eco/product/index.htm>
- ▶ **Environmental Labels Acquired** <http://www.brother.com/en/eco/product/label/index.htm>
- ▶ **In-depth Data** <http://www.brother.com/en/eco/performance/data/index.htm>

Highlights of FY2014

Cutting CO2 Emissions on a Group Basis

Advancing CO2 emissions reduction throughout business operations

Reducing emissions of CO2 and other greenhouse gases that are the main contributors to climate change is a critical challenge for modern society. The Brother Group set the target of reducing emissions from eight business sites in Japan by 30% from FY1990 (November 21, 1989-November 20, 1990) levels (absolute value), and reducing emissions from manufacturing facilities outside Japan (excluding the U.S.)* by 20% per unit of sales from FY2006 (April 1, 2006-March 31, 2007) levels, by FY2020 (April 1, 2020- March 31, 2021), and has been working based on the Brother Group 2015 Mid-term Environmental Action Plan (2011-2015) as a milestone. Since FY2013 (April 1, 2013-March 31, 2014), the scope of activities to cut CO2 emissions has been expanded on a group basis. In addition, the Brother Group is subject to audits to meet the Scope 1 and Scope 2 requirements based on ISO 14064, and started to meet the Scope 3 requirements covering environmental impacts outside the group.

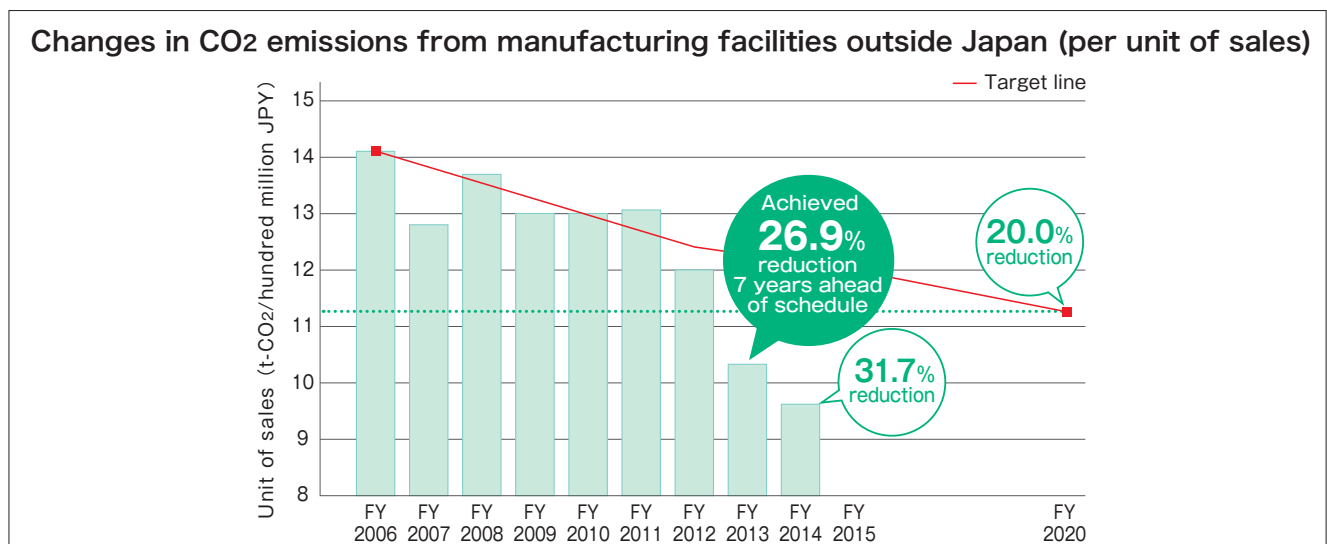
*: Manufacturing facilities in the U.S. constitute part of sales facilities.

Activity highlights in FY2014

For eight business sites in Japan, emissions were reduced in CO2 equivalent by 374 tons (by 2.3%) from FY2013, and by 25.2% in terms of the mid-term targets for FY2020 (achieving the target of 24% reduction for FY2014).

Manufacturing facilities outside Japan cut CO2 emissions by 6.6% from FY2013 (per unit of sales), achieving the FY2014 target in the Brother Group 2015 Mid-term Environmental Action Plan (2011-2015). In terms of the mid-term targets by FY2020, CO2 emissions were cut by 31.7% from the FY2006 levels, further promoting the CO2 emissions reduction activities after achieving the targets seven years ahead of schedule in FY2013.

CO2 emissions in logistics have been reduced by 1% per unit of sales, per annum since FY2014, as planned. In FY2014, emissions were reduced by 9.5% per unit of sales from FY2013.



Highlights of FY2014

Cutting CO2 Emissions on a Group Basis

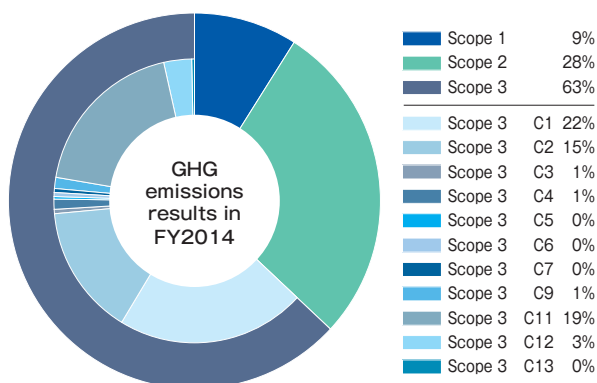
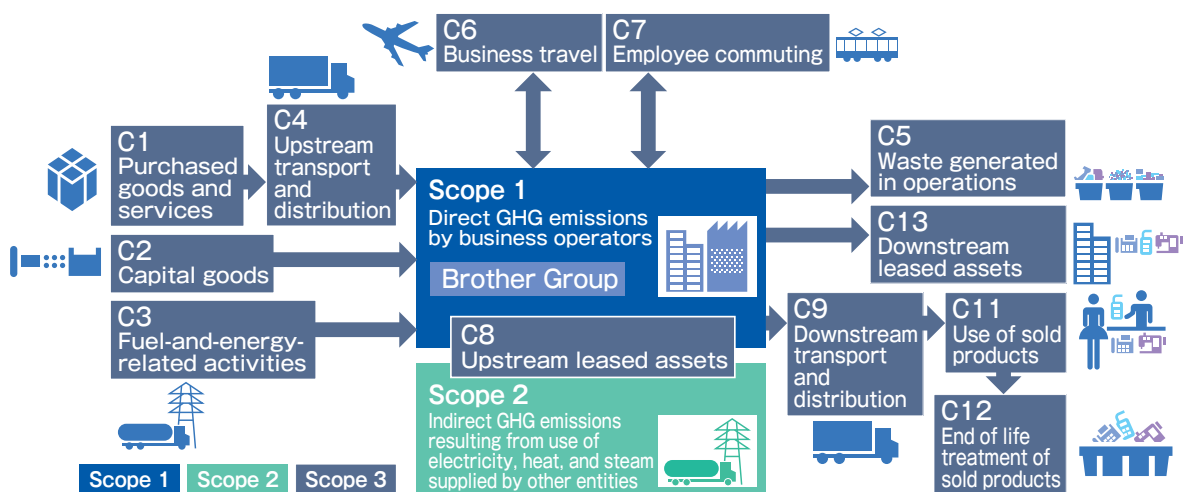
Calculating greenhouse gas emissions based on ISO14064-1 (Scopes 1, 2, and 3)

In FY2013, the Brother Group started calculations for Scope 1 and Scope 2 using emissions coefficients by country and region applied to respective business sites based on the GHG Protocol (a globally used index). In FY2014, the Brother Group started to calculate Scope 3. 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. The Brother Group acquired certification for the accuracy of data for the Scope 1 and Scope 2 calculation results (eight facilities in Japan and Mie Brother Precision Industries, Ltd.) in FY2013, Scope 3 calculation results for eight facilities in Japan and Mie Brother Precision Industries, Ltd. and Scope 1 and Scope 2 calculation results for all manufacturing facilities in FY2014.

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
Scope 1 (t-CO ₂)	2,016	1,842	29,389
Scope 2 (t-CO ₂)	15,358	15,667	88,939
Scope 3 (t-CO ₂)	—	—	204,719



Statement for verification by a third party organization



PDF is displayed [PDF/4.0MB]

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

Highlights of FY2014

Cutting CO2 Emissions on a Group Basis

In-depth report

▶ **CO2 Emissions Reduction Activities**

<http://www.brother.com/en/eco/facility/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

▶ **In-depth Data**

<http://www.brother.com/en/eco/performance/data/index.htm>

Complying with Laws and Regulations around the World

Complying with environmental laws and regulations around the world

The Brother Group is committed to complying with laws and regulations in all the countries and regions where Brother operates. The Brother Group is developing activities in accordance with its policy and environmental targets defined in the Brother Group 2015 Mid-term Environmental Action Plan (2011-2015) to promote contamination prevention and reduction of environmental impact quickly.

With its commitment to complying with laws and regulations, the Brother Group can quickly respond if any action is needed for a product, thereby enhancing sales and service activities.

Activity highlights in FY2014

Globally complying with regulations on chemical substances

- Ensuring compliance with relevant laws (including REACH, RoHS, and TSCA) that regulate chemical substances contained in products

Number of fluorescent X-ray measurements performed to comply with EU RoHS

More than 120,000

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

Disclosing overall environmental information regarding products

- Disclosing product information (100%) to the sales facilities of the Brother Group in accordance with The Eco Declaration (ECMA370)

Highlights of FY2014

Complying with Laws and Regulations around the World

Complying with environmental laws and regulations around the world

Promoting green procurement

- Revising the green procurement standards (on July 1, 2014 and January 6, 2015)
- Sending notices in advance regarding additional substances subject to REACH-SVHC
- Disseminating information and auditing suppliers to raise awareness of suppliers and group companies regarding green procurement and thereby promote legal compliance

Number of chemical substances (groups) subject to investigation in green procurement	196 substances (groups)
Number of requests made to conduct investigations regarding green procurement and the REACH Regulation	More than 85,000

In-depth report

▶ **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

▶ **In-depth Data**

<http://www.brother.com/en/eco/performance/data/index.htm>

▶ **The Eco Declaration**

<http://www.brother.com/en/eco/product/declaration/index.htm>

Highlights of FY2014

Communication with Stakeholders

Enhancing information disclosure on the web and through interactive communication

Based on the basic policy set out in the Brother Group 2015 Mid-term Environmental Action Plan (2011-2015), the Brother Group is committed to developing environment-related communication. It actively participates in social contribution activities in collaboration with many stakeholders, and is expanding its network of these activities.

Activity highlights in FY2014

1. Actively publicizing (i) environmental technologies employed in new products and (ii) environmental conservation activities involving employees as volunteers



Brother's special website on the environment featuring "Package Design Optimization".



Brother's special website on the environment featuring "Project for Combating Desertification in Inner Mongolia".

2. Improving the quality of the website on the environment

The Brother Group was ranked 3rd among 219 companies in the "Eco Site Survey 2015 Ranking" organized by Tribeck Brand Strategies, Inc. for its "Environmental Activities" and brotherearth.com, Brother's special website on the environment. Also, the Brother Group won the Good Performance Prize in the Environmental Report Section of the 18th Environmental Communication Awards, a commendation system organized by the Japanese Ministry of the Environment and the Global Environmental Forum.



BIL wins the Good Performance Prize in the Environmental Report Section of the 18th Environmental Communication Awards.

3. Actively promoting environmental events in Japan and helping increase environmental awareness



"Brother Earth Eco Festival" venue



Projecting images based on the themes of the global environment and Christmas

Highlights of FY2014

Communication with Stakeholders

Enhancing information disclosure on the web and through interactive communication

4. Increasing the number of participants in the Brother eco point program

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 contribution activities depending on the number of points earned. In FY2014, 25,908 Brother Group employees (21,440 in FY2013) participated in the program. This number accounts for more than 60% of the total number of employees. Environmental awareness has been growing steadily.



Brother eco point program in place in 44 countries and regions

5. Implementing environmental activities for biodiversity conservation involving employees from 43 facilities

More than 100 activities in total were implemented to protect the ecosystems of forests and oceans at 43 facilities of the Brother Group including those in Japan, the U.S., the U.K., China, Thailand, Australia, and New Zealand. The activities involved employees and their families, as well as customers, suppliers, and local residents.



Brother's special website on the environment that features reports on activities in Thailand (videos)

In-depth report

▶ **Environmental Communication Activities**

<http://www.brother.com/en/eco/communication/index.htm>

▶ **Brother Eco Point Program**

http://www.brother.com/en/eco/communication/eco_point/index.htm

▶ **Biodiversity**

<http://www.brother.com/en/eco/communication/biodiversity/index.htm>

▶ **In-depth Data**

<http://www.brother.com/en/eco/performance/data/index.htm>

Corporate Environmental Strategy and Management

Brother Group's Environmental Strategy

Accelerating activities to play our part in achieving a sustainable society under the slogan of "Brother Earth"

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. 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.



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."

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.

Brother Group's environmental policy and environmental activities

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.

Corporate Environmental Strategy and Management

Brother Group's Environmental Strategy

Brother Group's environmental policy and environmental activities

Action Guidelines and specific environmental activities

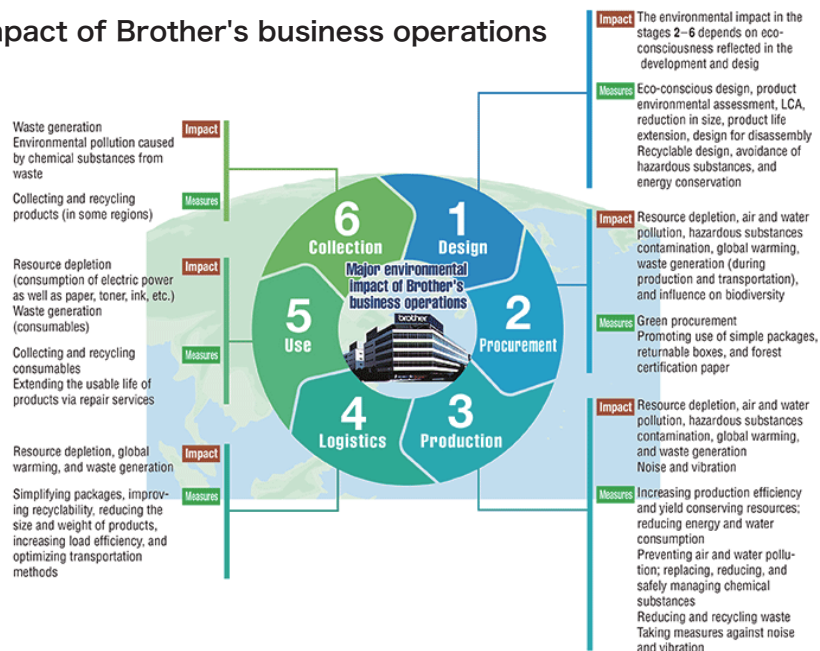
Action guidelines	Specific environmental activities
1. We will set environmental targets in all areas (manufacturing, production, and service) and continuously improve their environmental aspects.	Both manufacturing and sales facilities acquired ISO 14001 certification, and strive to reduce environmental 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's environmental policy and environmental activities

Major environmental impact of Brother's business operations



Environmental strategy

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
 - Reducing the overall environmental impact of the Brother Group
 - Reducing the environmental impact of business sites in Japan
2. Enhancing business competitiveness
 - 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
3. Increasing the brand value
 - 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.

Corporate Environmental Strategy and Management

Brother Group's Environmental Strategy

Environmental strategy

To implement the strategy, the Brother Group 2015 Mid-term Environmental Action Plan (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. With FY2015 (April 1, 2015-March 31, 2016) being the final year, various measures and activities are planned to achieve the targets.

Brother's environmental strategy aims to achieve high level standards and Brother actively participates in evaluations by third-party organizations, including the Carbon Disclosure Project (CDP) (Brother scored 85 points* this year, up from 78 points in the previous year, and again graded B as in the previous year.) and the Nikkei Environmental Management Survey (Brother's ranking in the manufacturing industry: 16th place, up from 36th place in the previous year) in Japan. Brother Industries, Ltd. (BIL) won the Gold Prize of the 2014 Aichi Environmental Award for its overall accomplishments in environmental activities.

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

Brother Earth

In 2010, the Brother Group created the "Brother Earth" logo and slogan which symbolizes the group's environmental activities, with a unified message of "Working with you for a better environment," to facilitate various activities.


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.



*: This video is from YouTube.

"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 recycling-oriented 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	
	<p>Refuse Avoid purchase of environmentally burdensome materials whenever possible</p> <p>Reduce Reduce waste material</p> <p>Reuse Reuse waste material without processing</p> <p>Reform Reuse materials in a different form</p> <p>Recycle Reuse materials as resources</p>

Corporate Environmental Strategy and Management

Mid-term Environmental Action Plan

Brother Group 2015 Mid-term Environmental Action Plan (2011-2015)

A milestone toward 2020

In the fifth year of the Brother Group 2015 Mid-term Environmental Action Plan (2011-2015), we have identified important issues and set ambitious targets under the slogan of Brother Earth and made steady progress in the fields of "Creating Eco-conscious Products," "Reducing Environmental Impact," "Complying with Laws, Regulations and Social Trends," and "Communicating Environmental Commitment." Regarding CO₂ emissions which contribute to global warming, the action plan provides the mid-term targets concerning reductions which are to be achieved by FY2020 (April 1, 2020-March 31, 2021): cut CO₂ emissions by 30% (absolute value) from FY1990 (November 21, 1989-November 20, 1990) levels at eight business sites in Japan; and cut CO₂ emissions by 20% (per unit of sales) from FY2006 (April 1, 2006-March 31, 2007) levels at manufacturing facilities outside Japan (except the USA)*1.

With FY2015 (April 1, 2015-March 31, 2016) being the final year of the action plan, various activities are planned to achieve the targets.

Mid-term targets by FY2020

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

To achieve the mid-term targets by FY2020, the Brother Group has been working on measures to attain one of the highest levels in the industry by actively applying energy conservation strategies, in order to reduce CO₂ 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).

Notably, manufacturing facilities outside Japan cut CO₂ emissions by 13.7% in FY2013 (April 1, 2013-March 31, 2014) (per unit of sales) from FY2012 (April 1, 2012-March 31, 2013), achieving the target of a 20% reduction seven years ahead of schedule. Based on these accomplishments, the scope of activities to cut CO₂ emissions was expanded to cover the entire group on an ongoing basis. In FY2014 (April 1, 2014-March 31, 2015), CO₂ emissions were cut by 10.9% from FY2013. Meanwhile, the Brother Group complied with Corporate Value Chain (Scope 3) Accounting and Reporting Standard*2 which defines the environmental impact outside the group. In FY2014, the process in Japan acquired an external certification.

By achieving the action plan, the Brother Group will (1) fulfill corporate social responsibilities at ever higher levels through continuous commitment to environmental challenges, (2) raise environmental activities to among the best in the industry, and thereby (3) instill a strong sense of pride so that employees feel truly proud to be part of the Brother Group.

This fiscal year marks a milestone in the mid-term environmental action plan. A process is underway to formulate the next mid-term environmental action plan, which will be completed by the end of this fiscal year.

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

*2: This international standard for calculating greenhouse gas emissions applies to indirect greenhouse gas emissions in the supply chain related to business operations.

Corporate Environmental Strategy and Management

Mid-term Environmental Action Plan

Brother Group 2015 Mid-term Environmental Action Plan (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 CO2 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

Environmental targets (2011-2015)

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 CO2 emissions by promoting optimization of packaging

(1) Both optimizing the packaging for reducing logistics costs and reducing CO2 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

Environmental targets (2011-2015)

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

Environmental targets*		Targets for FY2014	Achievements in FY2014	Self-evaluation
1-1	(1)	Acquired major environmental labels in respective countries for all applicable products	Acquired major environmental labels in respective countries for all applicable products	Achieved
	(2)	Complying with Eco Mark's new standards	Achieved	Achieved
1-2	(1)	Complying with energy conservation standards in respective countries for all applicable products	Achieved	Achieved
	(2)	Achieving the top levels of energy-saving performance in the industry	Achieved in all categories Improved the energy conservation performance, and reduced the noise of home sewing machines in particular	Significantly achieved
1-3	(1)	Complying with emission standards for all applicable products	Achieved	Achieved
	(2)	Complying with Blue Angel's new standards (UFP)	Ensured compliance for all major products	Significantly achieved
1-4		Complying with EPEAT standards for all applicable products	Achieved	Achieved
1-5	(1)	Ink cartridge recycling rate: 50% or more	Achieved	Achieved
	(2)			
1-6	(1)	Reducing the size and weight of packaging materials compared with previous products, thereby reducing CO ₂ emissions in logistics	Achieved Notably, the loading efficiency of new black-and-white laser printers has been improved by changing the packaging from a horizontal layout to a vertical layout.	Significantly achieved
	(2)			

▶ **Creating Eco-conscious Products** <http://www.brother.com/en/eco/highlight/index.htm#product>

▶ **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>

2. Reducing environmental impact of business sites

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

2-1. Reducing CO₂ emissions of the entire group

Reducing total CO₂ 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)

Corporate Environmental Strategy and Management

Mid-term Environmental Action Plan

Environmental targets (2011-2015)

- 2-2. Reducing CO₂ emissions of eight business sites in Japan
Reducing CO₂ emissions by 1% per annum; reducing total CO₂ emissions by 25% from FY1990 levels by FY2015 (absolute value)
- 2-3. Reducing CO₂ emissions of manufacturing facilities outside Japan (excluding the USA)
Reducing CO₂ emissions by 1% per annum (per unit of sales)
- 2-4. Reducing CO₂ emissions in logistics
Setting emissions management standards, and reducing CO₂ 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

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

Environmental targets*	Targets for FY2014	Achievements in FY2014	Self-evaluation
2-1	Achieving 1% reduction from FY2013	Achieved 11.0% reduction from FY2013	Significantly achieved
2-2	Same as above	Achieved 2.3% reduction from FY2013 Achieved 25.2% reduction from the mid-term targets for FY2020	Achieved
2-3	Same as above	Achieved 6.6% reduction from FY2013 Achieved 31.7% reduction from the mid-term targets for FY2020	Significantly achieved
2-4	Same as above	Achieved 9.5% reduction from FY2013	Achieved
2-5	No targets set for a single year	Achieved 26.4% reduction from FY2010	Achieved
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	Not evaluated in a single year
2-7	The new factory in Vietnam acquired ISO 14001 certification.	Manufacturing facilities: 1 (Brother Machinery Vietnam Co., Ltd.)	Achieved

▶ **Cutting CO₂ Emissions on a Group Basis** <http://www.brother.com/en/eco/highlight/index.htm#warming>

▶ **CO₂ 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

Environmental targets (2011-2015)

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

Environmental targets (2011-2015)

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

Environmental targets*		Targets for FY2014	Achievements in FY2014	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	Achieved
	(2)	Establishing the index (KPI) for determining management levels at respective factories, and promoting activities	Achieved KPI for FY2014	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	Continued in FY2015	Achieved
	(3)	Launching recycling systems at respective sales facilities (RHQs)	Same as above	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 USA	Significantly achieved
3-5		No targets set for a single year	Started to use FSC certified paper for catalogues prepared by sales companies in Japan	Achieved
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 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 regulations	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

▶ **Complying with Laws and Regulations around the World** <http://www.brother.com/en/eco/highlight/index.htm#regulation>

▶ **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

Environmental targets (2011-2015)

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 and social contribution 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 CO₂ emissions reduction targets on a group basis.

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

Environmental targets*	Targets for FY2014	Achievements in FY2014	Self-evaluation
4-1	Actively disseminating information about (i) environmental technologies built into new products and (ii) environmental conservation activities involving employees	Promoted the "Package Design Optimization" technology (for increasing transporting efficiency and reducing environmental impact), "Low-noise Belt Drive" technology (built into home sewing machines), "Project for Combating Desertification in Inner Mongolia" and "Mangrove Reforestation Project in Thailand" (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
	Improving the quality of the environmental website	Ranked 3rd in "Eco Site Survey 2015 Ranking" by Tribeck Brand Strategies, Inc., and won the Good Performance Prize in the Environmental Report Section of the 18th Environmental Communication Awards (organized by the Japanese Ministry of the Environment and the Global Environmental Forum)	Significantly achieved
	Actively promoting environmental events and increasing environmental awareness in Japan	Organized "Brother Earth Eco Festival" and "Brother Green X'mas 2014 - Projection Mapping on Brother Earth -" jointly with the Nagoya City Science Museum Donated "Koala Forest" (an experience-based facility for learning and exhibition) to the Higashiyama Zoo and Botanical Gardens operated by the City of Nagoya Exhibited at "Eco-Products 2014" (one of the largest environmental exhibitions in Japan)	Significantly achieved
4-2	Continuing environmental conservation activities to conserve biological diversity involving customers and employees at 33 facilities worldwide	Implemented in 43 facilities	Achieved
4-3	Percentage of employees participating in the Brother eco point program: more than 60% (more than 24,600 individuals)	Achieved (25,908 individuals)	Significantly achieved

▶ **Communication with Stakeholders** <http://www.brother.com/en/eco/highlight/index.htm#communication>

▶ **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>

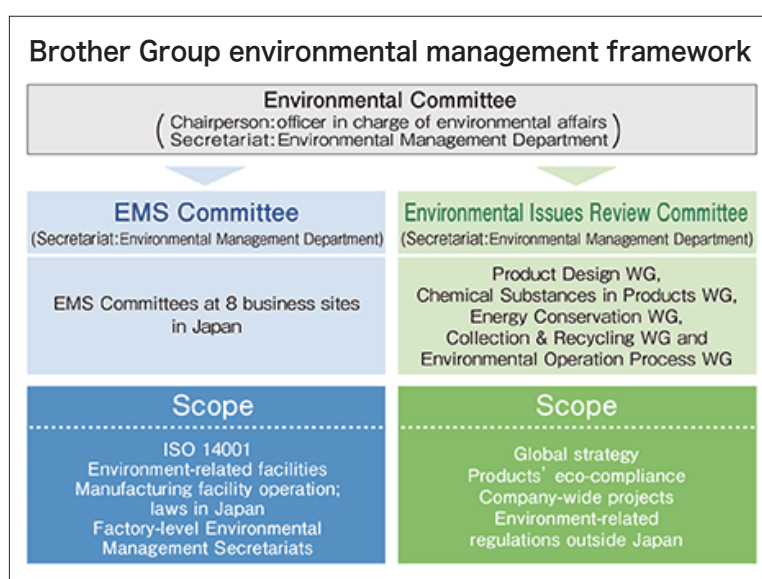
Corporate Environmental Strategy and Management

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 in-house companies to determine policies and implement measures.



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 from business segments responsible for development, technology, production, 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: Environmental Management 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 management framework

Environmental Issues Review Committee (secretariat: Environmental Management Dept.)

This committee draws up and reviews specific policies and measures relating to global strategy, 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.
- Energy Conservation WG: Focuses on improvements in the energy performance of products.
- Collection & Recycling WG: Focuses on the collection of products and recycling of consumables.
- Environmental Operation Process WG: Addresses the establishment of environmental eco-compliance operation and environmental information systems for the entire group.

Environmental communication promotion framework

Global CSR & Brand Strategy Conference

The Global CSR & Brand Strategy Conference is held where the top management discusses the Brother Group's CSR management. At the annual conference, the progress of global environmental activities under Brother Earth is confirmed, and the future vision is shared.

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. 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)

http://www.brother.com/en/eco/facility/iso_14001/index.htm

Corporate Environmental Strategy and Management

Internal Environmental Management Structure

Environmental management system

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. For facilities in Japan, internal audits are conducted by the Environmental Management Dept. of Brother Industries, Ltd. For overseas facilities, internal audits are conducted by departments in charge of environmental affairs at the respective facilities.

These internal audits 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 environmental audit in FY2014 (April 1, 2014-March 31, 2015), it was confirmed that the PDCA cycle is properly practiced and there were no serious accidents or problems to report. For advancing overall process, Brother Industries, Ltd. won the Gold Prize of the 2014 Aichi Environmental Award, thereby achieving the "strong point" evaluation by the ISO certification body for the first time.

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

Environmental commendation by external entities

Brother Industries, Ltd.

On February 13, 2015, Brother Industries, Ltd. (BIL) won the Good Performance Prize* in the Environmental Report Section of the 18th Environmental Communication Awards organized by the Japanese Ministry of the Environment and the Global Environmental Forum.

BIL's environmental report was recognized to reflect its commitment to environmental issues, present extensive information in a balanced manner, and cover many topics and specific activities in 2013.

*: The Good Performance Prize is awarded to reports that actively disclose information in an appropriate manner that sets an example (e.g. reports prepared by business operators that are committed to environmentally conscious management, reports that disclose information in an easy-to-understand manner).

Brother International Corporation (U.S.A.)

In October 2014, Brother International Corporation (U.S.A.) (BIC (USA)) won the Platinum Award - the most prestigious award under New Jersey Smart Workplaces*¹ organized by RideWise (one of New Jersey's designated transportation management associations) for its track record at its distribution center. Specifically, BIC (USA) was commended for the excellent eco-commuting program implemented by the distribution center.



In February 2015, BIC (USA) was commended as "Business Recycler of the Year" organized by the Tennessee Recycling Coalition*² for its accomplishments in waste reduction.

*1: New Jersey Smart Workplaces, which is organized by RideWise, certifies excellent commuting/transportation programs offered by employers across New Jersey and helps reduce employees' commuting costs, etc. based on measurable data (CO₂ emissions, vehicle mileage).

*2: The Tennessee Recycling Coalition is a non-profit organization that promotes recycling and ensures sustainable management of resources.

Brother Machinery Xian Co., Ltd.

In December 2014, Brother Machinery Xian Co., Ltd. was commended by the High Technology Industry Development Zone Branch Office, Xian Environmental Protection Bureau as an advanced organization in environmental statistics in FY2013.

Corporate Environmental Strategy and Management

Environmental Commendation and Awards

Environmental commendation by external entities

Brother Industries (U.K.) Ltd.

In June 2014, Brother Industries (U.K.) Ltd. (BIUK) won BIG TICK 2014 under the Sustainable Products and Services Award from Business in the Community for its operational innovation in recycling toner cartridges. BIUK also won BIG TICK 2014 in the Finance Wales Responsible Small Business Award as a responsible business operator in Wales.

In September 2014, BIUK won the Category Winner under the Manufacturing Excellence (MX) Award for Sustainable Manufacturing from the Institution of Mechanical Engineers, for its track record as a leading company in enhancing sustainable manufacturing.



Brother Technology (Shenzhen) Ltd.

In June 2014, Brother Technology (Shenzhen) Ltd. was commended by the City of Shenzhen as an advanced company under the Pengcheng* Waste Reduction Activities for its track record of energy conservation, resource conservation, and waste reduction activities in FY2013.

*: Pengcheng is another name for Shenzhen.

Brother Industries (Shenzhen), Ltd.

In June 2014, Brother Industries (Shenzhen), Ltd. was commended by the City of Shenzhen as an advanced company under the Pengcheng Waste Reduction Activities for its track record of energy conservation, resource conservation, and waste reduction activities in FY2013.

Corporate Environmental Strategy and Management

Environmental Commendation and Awards

Environmental commendation by external entities

Year	Month	Country	Name of awarding entity/award	Award title	Name of company that won the award
2015	June	U.K.	Business in the Community Wales Responsible Businesses Awards 2015	Sustainable Products and Services Award	Brother Industries (U.K.) Ltd.
	February	Japan	18th Environmental Communication Awards (organized by the Japanese Ministry of the Environment and the Global Environmental Forum)	Good Performance Prize in the Environmental Report Section	Brother Industries, Ltd.
		U.S.A.	Tennessee Recycling Coalition	Business Recycler of the Year	Brother International Corporation (U.S.A.)
2014	December	China	High Technology Industry Development Zone Branch Office, Xian Environmental Protection Bureau	Advanced organization in environmental statistics in FY2013	Brother Machinery Xian Co., Ltd.
	October	U.S.A.	RideWise New Jersey Smart Workplaces	Platinum Award	Brother International Corporation (U.S.A.)
	September	U.K.	Brother International Corporation (U.S.A.)	Category Winner	Brother Industries (U.K.) Ltd.
	June	U.K.	Business in the Community Sustainable Products and Services Award	BIG TICK 2014	Brother Industries (U.K.) Ltd.
		U.K.	Business in the Community Finance Wales Responsible Small Business Award	BIG TICK 2014	Brother Industries (U.K.) Ltd.
		China	City of Shenzhen	Advanced company under the Pengcheng Waste Reduction Activities	Brother Technology (Shenzhen) Ltd.
		China	City of Shenzhen	Advanced company under the Pengcheng Waste Reduction Activities	Brother Industries (Shenzhen), Ltd.

► **Timeline for environmental milestone achievement**

<http://www.brother.com/en/eco/management/history/index.htm>

Corporate Environmental Strategy and Management

Environmental Commendation and Awards

Business sites and departments winning "5R Award" in FY2014 under Brother Group's internal environmental commendation system

In FY2008 (April 1, 2008-March 31, 2009), the Brother Group started the "5R Award," a commendation system for environmental activities for all group companies. The aim was to stimulate and improve the level of environmental activities of the entire group. Applications are solicited from May to July. Evaluations are made based on CO₂ emission reduction from the previous fiscal year, unique or characteristic aspects of activities, possibility of horizontal development, ease of implementation, etc.

In FY2014 (April 1, 2014-March 31, 2015), 24 applications were received. The winners were business sites and departments which tackled problems that all corporations have to face and achieved results. The CO₂ Reduction Contribution Award was presented to Brother Machinery Xian Co., Ltd. for the second consecutive year for significantly reducing CO₂ emissions.

In November 2014, 5R Award winners from Asia, Europe and the Americas made presentations about their activities and received commendations at the Brother Group presentation meeting, which was attended by more than 3,000 people from group companies.

FY2014 "5R Award"

Award title		Business sites / departments
5R Award (Reduction in CO ₂ Emissions)	Category: Manufacturing	Brother Technology (Shenzhen) Ltd.
	Category: Large Offices	Brother Sales, Ltd.
	Category: Small Offices	Brother International (NZ) Ltd.
5R Award (Products)		Mechanical System Development Dept. 2 of Brother Industries, Ltd.
5R Award (Environmental Contributions)		Brother Industries (Shenzhen), Ltd.
Judge Selection 5R Award (Reduction in CO ₂ Emissions)		Taiwan Brother Industries, Ltd.
Judge Selection 5R Award (Environmental Contributions)		Brother International Corporation (U.S.A.)

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 CO₂ 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, 2015, the Brother eco point program is in place in 44 countries and regions, involving 25,879 employees (21,440 employees in FY2013).

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. obtains ISO 14001 certification.
1997	February	•Kariya Manufacturing Facility of BIL obtains ISO 14001 certification.
	December	•Brother Industries (Johor) Sdn. Bhd.*1 obtains ISO 14001 certification. (Currently: Brother Industries Technology (M) Sdn. Bhd.)
1998	March	•Brother Industries Technology (M) Sdn. Bhd. obtains ISO 14001 certification.
	August	•Mizuho Manufacturing Facility of BIL obtains ISO 14001 certification.
1999	September	•Environmental Report is issued for the first time. (Environmental Report 1999) 
	October	•Buji Nanling Factory, Brother Corporation (Asia) Ltd. obtains ISO 14001 certification. (Currently: Brother Technology (Shenzhen) Ltd.)
	November	•Hoshizaki Manufacturing Facility of BIL obtains ISO 14001 certification. •Minato Manufacturing Facility of BIL obtains ISO 14001 certification. •Xian Typical Brother Industries, Co., Ltd.*2 obtains ISO 14001 certification. (Currently: Brother Machinery Xian Co., Ltd.)
	December	•Brother's Third Environmental Action Plan (Voluntary Plan) is formulated.
2000	September	•Environmental Report 2000 is issued.
	October	•Taiwan Brother Industries, Ltd. obtains ISO 14001 certification.
	December	•Momozono Manufacturing Facility of BIL obtains ISO 14001 certification.

*1: Brother Industries (Johor) Sdn. Bhd. was integrated into Brother Industries Technology (M) Sdn. Bhd. in 2004.

*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.

Corporate Environmental Strategy and Management

Timeline for Environmental Milestone Achievement

Year	Month	Main Environmental activities
2001	March	•Headquarters/Research & Development Center of BIL obtains ISO 14001 certification.
	July	•Zhuhai Brother Industries, Co., Ltd. obtains ISO 14001 certification.
	August	•Environmental Report 2001 is issued.
	September	•Laser Printer HL-2460/2460N is awarded the Blue Angel Label of Germany. 
	December	•Participates as exhibitor in Eco-Products 2001.
2002	April	•Zero emission is achieved at major facilities in Japan.
	August	•Environmental Report 2002 is issued.
	September	•Laser Printer HL-7050 becomes the world's first printer awarded the TCO '99, an international environmental label. 
	November	•Headquarters and sites of BIL in Japan obtain multiple site ISO 14001 certification.
	December	•Brother Group Fourth Environmental Action Plan is formulated and announced at the Brother Global Conference. •Brother Tennessee* (Brother Industries (U.S.A.) Inc.) obtains ISO 14001 certification. *: Registered facility name when ISO 14001 certification was acquired •Participates as exhibitor in Eco-Products 2002.
2003	April	•Personal Facsimile FAX-1100CL becomes first in the home-use facsimile industry to be awarded the EcoLeaf label managed by JEMAI. 
	July	•Environmental Report 2003 is issued.
	December	•Participates as exhibitor in Eco-Products 2003. •Mie Brother Precision Industries, Ltd. obtains ISO 14001 certification.
2004	April	•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.
	June	•Brother Industries(Shenzhen), Ltd. obtains ISO 14001 certification.
	July	•2004 Environmental & Social Report is issued.
	November	•Brother issues its first self-certification of the EcoLeaf label to the MFC-620CLN. 
	December	•Participates as exhibitor in Eco-Products 2004.

Corporate Environmental Strategy and Management

Timeline for Environmental Milestone Achievement

Year	Month	Main Environmental activities
2005	February	•Brother U.K. Ltd. obtains ISO 14001 certification.
	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. •2005 Brother Group Social & Environmental Report is issued. *1
	December	•Participates as exhibitor in Eco-Products 2005*3 •Brother Sewing Machine (Shanghai) Co., Ltd.*4 obtains ISO 14001 certification.
2006	March	•Brother International (Nederland) B.V. obtains ISO 14001 certification.
	April	•Brother Group Fifth Environmental Action Plan is formulated.
	May	•Brother Logitech Ltd. obtains ISO 14001 certification.
	June	•Brother Sewing Machine Xian Co., Ltd.*5 obtains ISO 14001 certification. (Currently: Brother Machinery Xian Co., Ltd.) •Brother International Corporation (Canada) Ltd. obtains ISO 14001 certification.
	July	•Corporate Social Responsibility Report 2006 is issued. •Eco Report 2006 is issued.
	December	•Participates as exhibitor in Eco-Products 2006.
2007	March	•Brother International Europe Ltd. obtains ISO 14001 certification.
	June	•Corporate Social Responsibility Report 2007 is issued.
	July	•Brother International (NZ) Ltd. obtains ISO 14001 certification.
	December	•Receives System Certification in the printer and facsimile business under the EcoLeaf eco-label •Participates as exhibitor in Eco-Products 2007.
2008	January	•Brother Italia S.p.A. obtains ISO 14001 certification.
	March	•Brother International GmbH obtains ISO 14001 certification. •Brother International Corporation (U.S.A.) obtains ISO 14001 certification. •Brother Iberia, S.L.U. obtains ISO 14001 certification.
	April	•Brother Group 2010 Mid-term Environmental Action Plan (2008-2010) is formulated. •Brother Finland Oy obtains ISO 14001 certification. (Currently Brother Finland, Brother Nordic A/S Denmark, branch in Finland)
	May	•Brother International (Aust.) Pty. Ltd. obtains ISO 14001 certification.

*4: Brother Sewing Machine (Shanghai) Co., Ltd. transferred its business to Brother Machinery Xian Co., Ltd. in 2010.

*5: 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.


Corporate Environmental Strategy and Management

Timeline for Environmental Milestone Achievement

Year	Month	Main Environmental activities
2008	June	<ul style="list-style-type: none"> • Brother France SAS obtains ISO 14001 certification. • Participates as exhibitor in Integrated Exhibition of the Environment in Celebration of the Hokkaido Toyako Summit in 2008. • Brother Group Corporate Social Responsibility Report 2008 is issued.
	July	<ul style="list-style-type: none"> • Brother Norge A.S. obtains ISO 14001 certification. (Currently: Brother Norway, branch of Brother Nordic A/S) • Brother International (Sweden) A.B. obtains ISO 14001 certification. (Currently: Brother Sweden, branch of Brother Nordic A/S, Denmark)
	August	<ul style="list-style-type: none"> • Brother International Singapore Pte. Ltd. obtains ISO 14001 certification. • Brother International Corporation (Ireland) Ltd. obtains ISO 14001 certification. • Brother International (Danmark) A/S obtains ISO 14001 certification. (Currently: Brother Nordic A/S)
	September	<ul style="list-style-type: none"> • Brother (Schweiz) AG obtains ISO 14001 certification.
	October	<ul style="list-style-type: none"> • Brother Industries (Slovakia) s.r.o. obtains ISO 14001 certification.
	November	<ul style="list-style-type: none"> • Brother Sales, Ltd. & Brother International Corporation obtain ISO 14001 certification. (Two companies acquired integrated authentication with Brother Industries, Ltd.)
	December	<ul style="list-style-type: none"> • Brother (China) Ltd. obtains ISO 14001 certification. • Participates as exhibitor in Eco-Products 2008.
2009	March	<ul style="list-style-type: none"> • Brother Industries (Vietnam) Ltd. obtains ISO 14001 certification. • Brother International (Belgium) NV/SA obtains ISO 14001 certification. • A solar power generation system (100 kWh) is introduced at the Kariya Manufacturing Facility.
	April	<ul style="list-style-type: none"> • Brother Internationale Industriemaschinen GmbH obtains ISO 14001 certification. • Brother International Austria GmbH obtains ISO 14001 certification. (Currently: Brother International GmbH (Austrian Branch)) • Brother International de Mexico, S.A. de C.V., Brother International Corporation do Brasil, Ltda., Brother International de Chile, Ltda., and Brother International Corporation de Argentina S.R.L. acquire integrated certification of ISO 14001 with Brother International Corporation (U.S.A.).
	June	<ul style="list-style-type: none"> • Brother Corporate Profile 2009 is issued. • The CO₂ reduction target for FY2020 is added to the Brother Group 2010 Mid-term Environmental Action Plan (2008-2010), and activities are launched.
	December	<ul style="list-style-type: none"> • Participates as exhibitor in Eco-Products 2009. • Five models of printers (including HL-5350DN) and seven models of multi-function centers (including MFC-8380DN) obtain Nordic Swan eco label certification.

Corporate Environmental Strategy and Management

Timeline for Environmental Milestone Achievement

Year	Month	Main Environmental activities	
2010	January	•Registers as a member of the Challenge 25 Campaign (switching from "Team Minus 6%").	
	February	•Brother International Philippines Corporation obtains ISO 14001 certification.	
	May	•"Brother Earth," a logo and slogan symbolizing the Brother Group's environmental activities, is created. •Brother International (Gulf) FZE obtains ISO 14001 certification.	
	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.	
	December	•Participates as exhibitor in Eco-Products 2010.	
2011	February	•Brother International (HK) Ltd. obtains ISO 14001 certification.	
	March	•Brother Industries (U.S.A.) Inc. and Brother International del Peru S.A.C. acquire integrated certification of ISO 14001 with Brother International Corporation (U.S.A.).	
	April	•Brother Group 2015 Mid-term Environmental Action Plan (2011-2015) is formulated. •Brother Nordic A/S acquires integrated certification of ISO 14001 with Finland, Norway, and Sweden branches. •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.	
	December	•Participates as exhibitor in Eco-Products 2011	
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. •Brother Polska Sp. z o.o. obtains ISO 14001 certification.	
	August	•Brother Industries Saigon, Ltd. obtains ISO 14001 certification.	
	December	•Participates as exhibitor in Eco-Products 2012.	

Corporate Environmental Strategy and Management

Timeline for Environmental Milestone Achievement

Year	Month	Main Environmental activities
2013	March	•Brother International (NZ) Ltd. is audited for ISO 14064 certification.
	April	•Brother LLC obtains ISO 14001 certification. •Brother International Hungary Kft. obtains ISO 14001 certification. •Brother International CZ s.r.o. obtains ISO 14001 certification.
	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.
	July	•Brother International Corporation (U.S.A.) wins the RideWise Award (Silver Prize). •XING Inc. obtains ISO 14001 certification. •Brother Industries, Ltd. (business sites in Japan) is audited for ISO 14064 certification.
	December	•Participates as exhibitor in Eco-Products 2013. •Brother Machinery Shanghai Ltd. obtains ISO 14001 certification. •Brother Mobile Solutions, Inc. and Nefsis Corporation obtain multiple site ISO 14001 certification with Brother International Corporation (U.S.A.).
2014	January	•Brother Industries, Ltd. wins the 2014 Aichi Environmental Award (Gold Prize)
	April	•Brother Industries (Philippines), Inc. obtains ISO 14001 certification.
	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	<ul style="list-style-type: none"> •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. •Brother Machinery Vietnam Co., Ltd. acquires ISO 14001 certification.
	June	<ul style="list-style-type: none"> •Brother Industries (U.K.) Ltd. wins the Sustainable Products and Services Award.

► **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 2015 Mid-term Environmental Action Plan (2011-2015) sets ever-higher targets for each of these stages to accelerate efforts. Specific activities include enhancing eco-conscious design processes and green procurement, continuous reduction in environmental impact at manufacturing facilities (such as CO₂ emissions and water consumption), reduction in CO₂ 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.

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 those products of the previous generation.

Creating Eco-conscious Products

Environmental Considerations within Product Life Cycles

1. Development and design

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.



Product environmental impact assessment flow

Key Criteria for environmental impact assessment

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

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 2015 saw detailed LCA information published in-house for 80 products (13 products were newly released in FY2014). 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.

*: Carbon footprint (short for "Carbon Footprint of Products") is a mechanism to convert greenhouse gas emissions from the entire life cycle (from procurement of raw materials for products and services to disposal and recycling) into CO₂ and indicate it on products and services clearly. The LCA techniques are utilized to quantitatively calculate environmental impacts.

Creating Eco-conscious Products

Environmental Considerations within Product Life Cycles

2. Procurement

Basic policy

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

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

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

Measures

Brother works with suppliers and uses the IT-based Brother Green Procurement Management System to manage data on chemicals 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>

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 CO₂ 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>

► CO₂ 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 CO₂ emissions in distribution and transport.

Measures

- We are applying simpler and smaller packaging.
- We are combining product categories when arranging shipments to maximize loads.
- We continue to review distribution routes.

CO₂ 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" technology** <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



Creating Eco-conscious Products

Environmental Considerations within Product Life Cycles

6. Collection and recycling

[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 have been set in the Brother Group 2015 Mid-term Environmental Action Plan (2011-2015) to acquire specific environmental labels including Blue Angel, Eco Mark, Nordic Swan, EPEAT, and China's Ten Circle Mark, and quick efforts have been 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. 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. As a result, Brother acquired the label for 49 product models in FY2014 (April 1, 2014-March 31, 2015).

► [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). 12 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 34 product models in FY2014 despite the new standards.

► [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

Actively acquiring environmental labels from around the world



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 12 product models including color laser All-in-Ones and black-and-white laser printers in FY2014.

▶[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). Under new standards established in FY2014, Brother acquired the label for 39 product models and 17 consumables.

▶[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 All-in-Ones and black-and-white laser printers, etc.

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 seven consumables in FY2014.

▶[List of products that acquired Green Mark \[PDF/0.2MB\]](#)

http://download.brother.com/pub/com/en/eco/pdf/green_mark.pdf



Korea Eco-label (South Korea)

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

▶[List of products that acquired Korea Eco-label \[PDF/0.2MB\]](#)

http://download.brother.com/pub/com/en/eco/pdf/korea_eco_label.pdf

Creating Eco-conscious Products

Environmental Labels Acquired

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. Seven products (10 product models) were certified in FY2014.

Type III labels

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



EcoLeaf (Japan)

This eco-label is awarded to products that disclose quantifiable information about their environmental characteristics. It is managed and issued by the 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 acquired the label for 56 product models in FY2014.

*: 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 CO₂ 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. Ten product models were certified in FY2014.

*: 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 CO₂ 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 \[PDF/0.2MB\]](http://download.brother.com/pub/com/en/eco/pdf/energy_star.pdf)
http://download.brother.com/pub/com/en/eco/pdf/energy_star.pdf



Energy Conservation Certification (Energy saving label) (China)

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



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

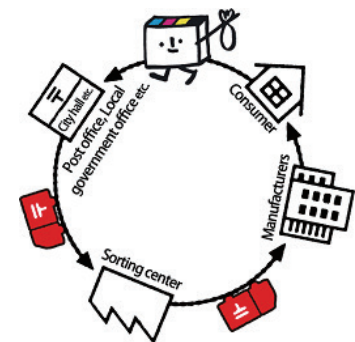
In Japan, printing product manufacturers and sellers have collection boxes at retail outlets to collect used ink cartridges. In order to further improve the collection rate in January 2007, the Brother Group along with other printing product manufacturers and sellers launched an "Ink Cartridge Return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

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.



Recycle process of "Ink Cartridge Return Project"

*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

Brother Group's collection and recycling efforts

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.) 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 \(Europe\)](http://www.brother.eu/recycle) <http://www.brother.eu/recycle>



Portal site for recycling (Europe)

Creating Eco-conscious Products

Collection and Recycling

Brother Group's collection and recycling efforts

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

Recycling toner cartridges

Brother Industries (U.K.) Ltd. (BIUK) and Brother Industries (Slovakia) s.r.o. (BISK) recycle toner cartridges.

In June 2014, BIUK won BIG TICK 2014 under the Sustainable Products and Services Award from Business in the Community for its operational innovation in recycling toner cartridges.

► Environmental Commendation and Awards

<http://www.brother.com/en/eco/management/award/index.htm>



Toner cartridge inspection by Brother Industries (Slovakia) s.r.o.

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.



Project Homecoming

A Joint-Brand Ink & Toner Cartridge Recycling Programme

"Project Homecoming" logo mark



Collection box

Creating Eco-conscious Products

Collection and Recycling

Brother Group's collection and recycling efforts

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 develops activities in line with the basic policy and environmental targets set out in the Brother Group 2015 Mid-term Environmental Action Plan (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 is 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 makes 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

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

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, the EU regulation regarding restriction of the use of PFOS (perfluorooctane sulfonates, organic fluorine compounds), as well as 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) and the California Proposition 65 (a law requiring the listing and labeling of hazardous substances).

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

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 to retailers 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 Sheet \(SDS\)](http://sds.brother.co.jp/sdsapp/index.html) <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 for 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.

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

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

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 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 was created by Ecma International (an international standardization organization established in 1961 in the field of information communication systems).

▶ [The Eco Declaration](http://www.brother.com/en/eco/product/declaration/index.htm) <http://www.brother.com/en/eco/product/declaration/index.htm>

Efforts to prevent illegal logging (EU)

The EU Timber Regulation came into force in 2013. The regulation prohibits placing timber products (including paper products) derived from illegally harvested timber on the EU market. The regulation also defines 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. 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 formulated the Brother Group Environmental Policy, made specific requests to suppliers, and issued the Brother Group Green Procurement Standards (Ver. 1.0) (which 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 articles (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 articles (parts, materials, sub-materials, and products) 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 products.

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 articles (parts, materials, sub-materials and products) 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 \(version 7.7\) \[PDF/468KB\]](http://download.brother.com/pub/jp/eco/pdf/gpsj_ver7_7.pdf)
http://download.brother.com/pub/jp/eco/pdf/gpsj_ver7_7.pdf
- ▶ [Green Procurement Standards English \(version 7.7\) \[PDF/452KB\]](http://download.brother.com/pub/com/en/eco/pdf/gpse_ver7_7.pdf)
http://download.brother.com/pub/com/en/eco/pdf/gpse_ver7_7.pdf
- ▶ [Green Procurement Standards Chinese-simp \(version 7.7\) \[PDF/546KB\]](http://download.brother.com/pub/com/cn/eco/pdf/gpssc_ver7_7.pdf)
http://download.brother.com/pub/com/cn/eco/pdf/gpssc_ver7_7.pdf
- ▶ [Green Procurement Standards Chinese-trad \(version 7.7\) \[PDF/747KB\]](http://download.brother.com/pub/com/cn/eco/pdf/gpstc_ver7_7.pdf)
http://download.brother.com/pub/com/cn/eco/pdf/gpstc_ver7_7.pdf
- ▶ [Green Procurement Standards Vietnamese \(version 7.7\) \[PDF/652KB\]](http://download.brother.com/pub/com/vn/eco/pdf/gpsv_ver7_7.pdf)
http://download.brother.com/pub/com/vn/eco/pdf/gpsv_ver7_7.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.

*: JIG: Joint Industry Guide for Material Composition Declaration for Electronic Products jointly issued by Japan, the US and EU, with the objective of making it more efficient for businesses in the electric and electronic equipment industries to check for chemical substances in products and parts, establishing standards for parts suppliers to identify specified chemical substances and responding to related inquiries; enforced in May 2005

- ▶ [Compliance with the RoHS Directive in different countries](http://www.brother.com/en/eco/regulation/index.htm#rohs) 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) http://www.brother.com/en/eco/regulation/index.htm#reach
- ▶ [Promoting CSR Procurement](http://www.brother.com/en/csr/partner/purchase/index.htm) http://www.brother.com/en/csr/partner/purchase/index.htm

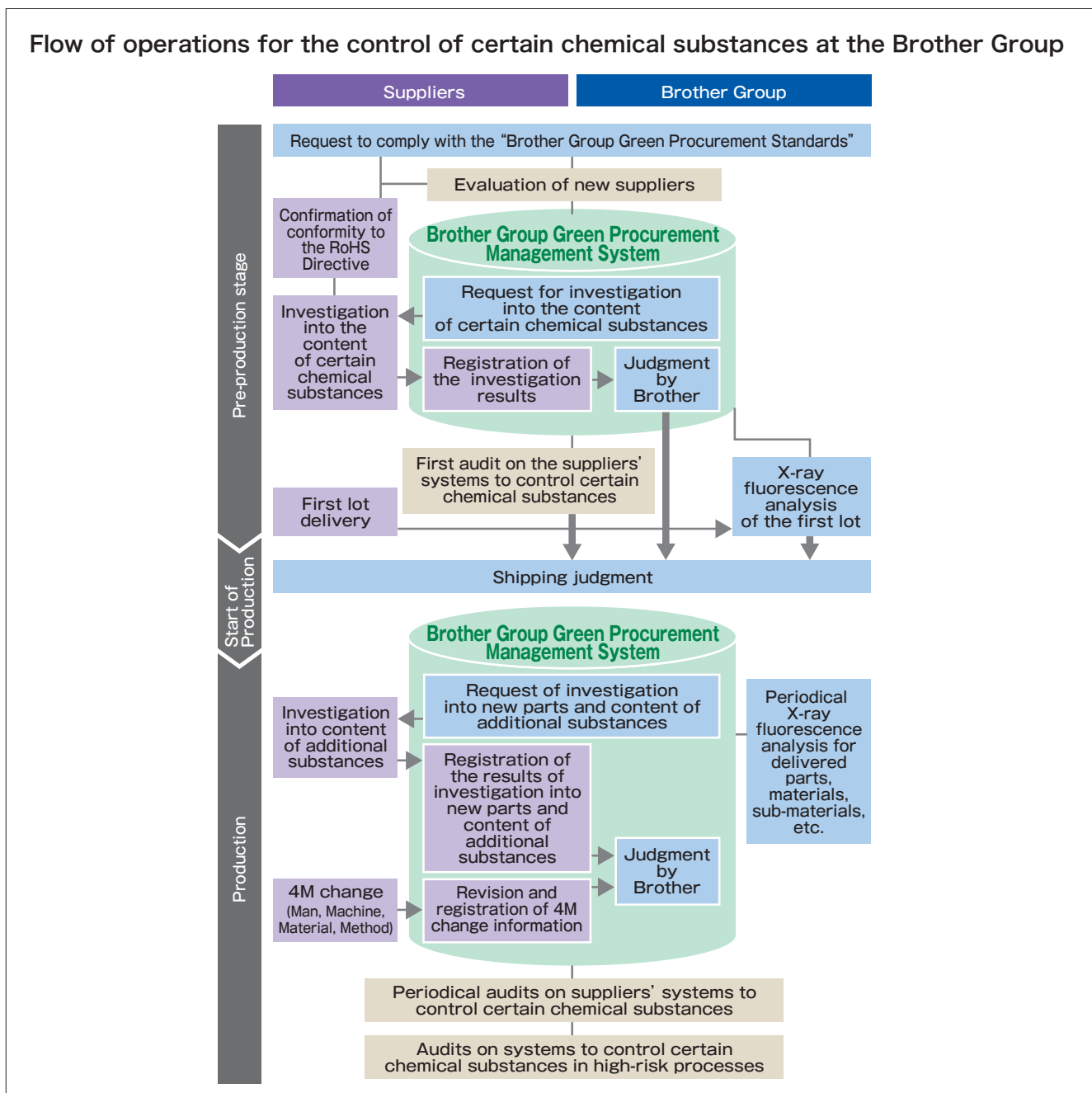
Complying with Laws, Regulations and Social Trends

Green Procurement

Brother Group Green Procurement Management System

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

The Brother Group requests all suppliers to cooperate in investigations into the content of certain chemical substances and pass audits on certain chemical substances.



Reducing Environmental Impact

CO2 Emission Reduction Activities

Activities to reduce CO2 by conserving energy

Milestone for mid-term targets by 2020

Reducing emissions of CO₂ and other greenhouse gases that are the main contributors to climate change is a critical challenge for modern society. The Brother Group set the target of reducing emissions from eight business sites in Japan by 30% from FY1990 (November 21, 1989-November 20, 1990) levels (absolute value), and reducing emissions from manufacturing facilities outside Japan (excluding the U.S.)* by 20% per unit of sales from FY2006 (April 1, 2006-March 31, 2007) levels, by FY2020 (April 1, 2020- March 31, 2021), and has been working based on the Brother Group 2015 Mid-term Environmental Action Plan (2011-2015) as a milestone. Since FY2013 (April 1, 2013-March 31, 2014), the scope of activities to cut CO₂ emissions has been expanded on a group basis. In addition, the Brother Group is subject to audits to meet the Scope 1 and Scope 2 requirements based on ISO 14064, and started to meet the Scope 3 requirements covering environmental impacts outside the group.

*: Manufacturing facilities in the U.S. constitute part of sales facilities.

CO₂ emissions reduction targets in the Brother Group 2015 Mid-term Environmental Action Plan (2011-2015)

To achieve the mid-term targets by FY2020, the Brother Group has been working to reduce CO₂ emissions by 1% per annum at eight business sites in Japan (absolute value) and at manufacturing facilities outside Japan (except the U.S.) (per unit of sales). In particular, the Brother Group is committed to attaining industry-leading energy efficiency of its products.

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 CO₂ emissions reduction rate is evaluated on an annual basis.

Reducing Environmental Impact

CO2 Emission Reduction Activities

Activities to reduce CO2 by conserving energy

Brother Group's results of activities in FY2014

The Brother Group's CO2 emissions in Japan come mainly from the electricity used by offices, while the group's CO2 emissions overseas are attributed mainly to the use of electricity and fuel at factories and offices. The Brother Group has been increasing the efficiency of air conditioning and lighting, and ensuring the efficient operation of production equipment at factories, in order to reduce electricity usage and CO2 emissions.

At the eight business sites in Japan, the product production volume at the Kariya Manufacturing Facility increased, which led to increased consumption of electricity and city gas; at other manufacturing facilities, various energy conservation measures were implemented to eliminate unnecessary electricity consumption, 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, the emissions were reduced by 374 tons (by 2.3%) from FY2013 in CO2 equivalent, and Brother could meet the target for FY2014 set in the Brother Group 2015 Mid-term Environmental Action Plan (2011-2015).

Manufacturing facilities outside Japan cut CO2 emissions by 6.6% from FY2013 (per unit of sales), achieving the FY2014 target in the Brother Group 2015 Mid-term Environmental Action Plan (2011-2015). In terms of the mid-term targets by FY2020, CO2 emissions were cut by 31.7% from the FY2006 levels, further promoting the CO2 emissions reduction activities after achieving the targets seven years ahead of schedule in FY2013.

CO2 emissions in logistics have been reduced by 1% per unit of sales, per annum since FY2014, as planned. In FY2014, emissions were reduced by 9.5% per unit of sales from FY2013.

▶CO2 reduction activities by the Brother Group

<http://www.brother.com/en/eco/facility/index.htm#examples>

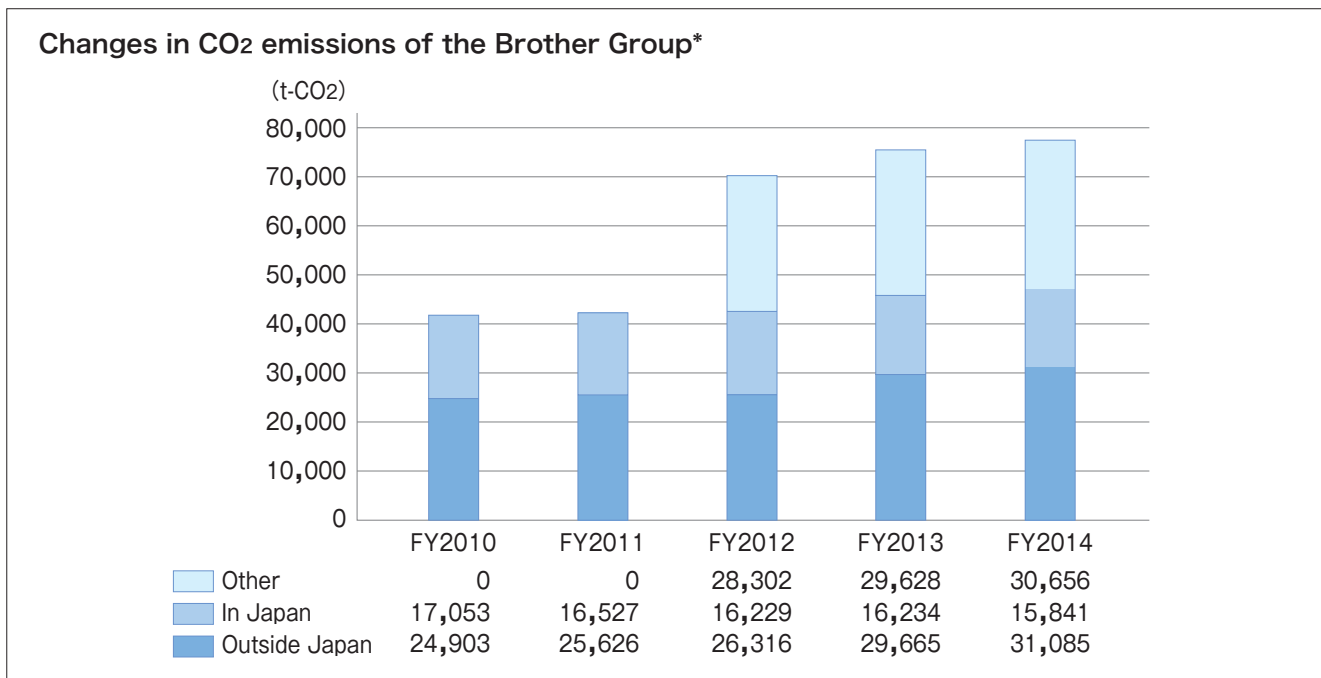
▶Brother Group's CO2 reduction activities in logistics

http://www.brother.com/en/eco/facility/index.htm#examples_logi

Reducing Environmental Impact

CO2 Emission Reduction Activities

Activities to reduce CO2 by conserving energy



*: CO2 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.

Scope of aggregation					
	FY2010	FY2011	FY2012	FY2013	FY2014
Others	Nissei Corporation, Brother Sales, Ltd., XING Inc., and 52 sales companies outside Japan*1				
In Japan	Eight facilities 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.				
Outside Japan	Brother Industries (U.K.) Ltd., Taiwan Brother Industries, Ltd., Zhuhai Brother Industries, Co., Ltd., Brother Machinery Xian Co., Ltd.,*2 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. was 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.

*1: Three non-consolidated companies are included.

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

- ▶ **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

CO2 Emission Reduction Activities

Calculating greenhouse gas emissions based on ISO14064 (Scopes 1, 2, and 3)

In FY2013, the Brother Group started calculations for Scope 1 and Scope 2 using emissions coefficients by country and region applied to respective business sites based on the GHG Protocol (a globally used index). In FY2014, the Brother Group started to calculate Scope 3. To verify the calculation results, the Brother Group is subject to verification of compliance with the international standards (ISO14064 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 Scope 1 and Scope 2 calculation results (eight facilities in Japan and Mie Brother Precision Industries, Ltd.) in FY2013, and Scope 3 calculation results for eight facilities in Japan and Mie Brother Precision Industries, Ltd. and Scope 1 and Scope 2 calculation results for all manufacturing facilities in FY2014. In FY2015, the scope of calculations for Scopes 1, 2, and 3 has been expanded to cover the entire Brother Group, in an effort to identify greenhouse gas emissions from the entire supply chain of the Brother Group.

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
Scope 1 (t-CO ₂)	2,016	1,842	29,389
Scope 2 (t-CO ₂)	15,358	15,667	88,939
Scope 3 (t-CO ₂)	—	—	204,719

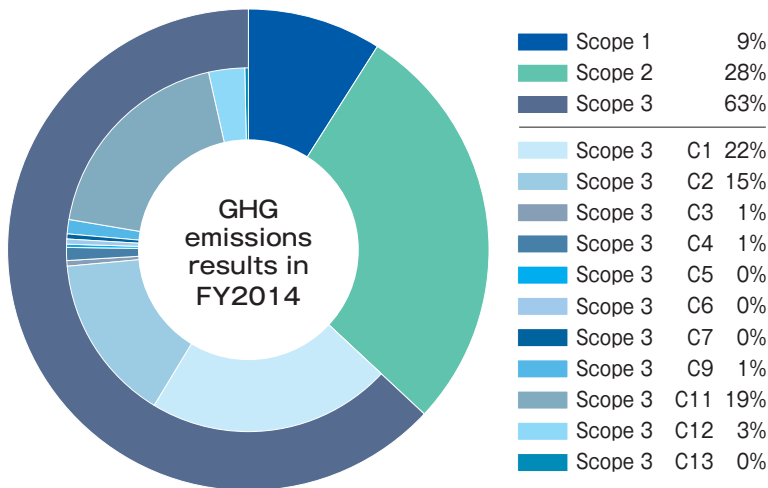
GHG emissions results in FY2014

Scope, category		CO ₂ emissions		Remarks
		t-CO ₂ equivalent	Ratio	
Scope 1 (t-CO ₂)		29,389	9%	
Scope 2 (t-CO ₂)		88,939	28%	
Scope 3 (t-CO ₂)		204,719	63%	
C1	Purchased goods and services	70,537	22%	
C2	Capital goods	48,285	15%	
C3	Fuel- and energy-related activities	1,770	1%	
C4	Upstream transport and distribution	4,143	1%	
C5	Waste generated in operations	469	0%	
C6	Business travel	1,469	0%	
C7	Employee commuting	1,532	0%	
C8	Upstream leased assets	0	0%	Included in Scope 1 and Scope 2
C9	Downstream transport and distribution	4,127	1%	
C10	Processing of sold products	0	0%	No intermediate products sold
C11	Use of sold products	60,911	19%	
C12	End-of-life treatment of sold products	11,169	3%	
C13	Downstream leased assets	307	0%	
C14	Franchises	0	0%	No franchises
C15	Investments	0	0%	No securities for portfolio investments
Total of Scopes 1, 2, and 3		323,048	100%	

Reducing Environmental Impact

CO2 Emission Reduction Activities

Calculating greenhouse gas emissions based on ISO14064 (Scopes 1, 2, and 3)



Statement for verification by a third party organization



► PDF is displayed [PDF/4.0MB]

http://download.brother.com/pub/com/en/eco/pdf/2015/lrqa_assurance.pdf

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

Scope of aggregation

	FY2012	FY2013	FY2014
Scopes 1 and 2	Eight facilities 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.		Brother Industries (U.K.) Ltd., Taiwan Brother Industries, Ltd., Zhuhai Brother Industries, Co., Ltd., Brother Industries (Shenzhen), Ltd., Brother Technology (Shenzhen) Ltd., Brother Machinery Xian Co., Ltd., Brother Industries Technology (M) Sdn. Bhd., Brother Industries (Vietnam) Ltd., Brother Industries Saigon, Ltd., Brother Industries (Slovakia) s.r.o., Brother Industries (Philippines), Inc., Brother Machinery Vietnam Co., Ltd., and Nissei Corporation were added
Scope 3			Eight facilities 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.

Reducing Environmental Impact

CO2 Emission Reduction Activities

CO2 reduction activities by the Brother Group

Brother Industries, Ltd. (Japan)

At Brother Industries, Ltd. (BIL), the Energy Conservation Working Group 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, 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.

- Cool Biz (no tie or jacket worn in summer)
- Switching off the lights of advertising towers at business sites (continuing with part of this activity this year)
- 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)
- 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
- 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)

In FY2014 (April 1, 2014-March 31, 2015), air conditioning systems were replaced with new ones, and the roofs and exterior walls of the manufacturing facilities were coated with thermal insulation, among other initiatives, to reduce electricity consumption. 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 will be fully introduced in FY2015 (April 1, 2015-March 31, 2016) and later.

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 313 MWh in FY2014. The total power generation after installation of these systems added up to 2,277 MWh.



LED fluorescent lamps and canopy switches



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



Photovoltaic power generation system expanded at the Mizuho Manufacturing Facility

Reducing Environmental Impact

CO2 Emission Reduction Activities

CO2 reduction activities by the Brother Group

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, fluorescent lamps were replaced with LED lamps which consume little electricity, and lighting fixtures were removed where unnecessary, among other initiatives. In FY2014, about 100 mercury lamps in total at two manufacturing facility buildings were replaced with electrodeless lamps (which do not have electrodes in the discharge tubes), to reduce electricity consumption by 220 MWh/year from FY2013 (April 1, 2013-March 31, 2014).

Characterized by long life, excellent energy conservation performance, and low heat output from lamps, electrodeless lamps help reduce running costs (including air conditioning load and lamp replacement). Meanwhile, the equipment used in the aluminum die cast manufacturing process was improved to increase thermal efficiency. The CO2 emissions were reduced by seven tons.



Inverter-driven air compressor



Electrodeless lamps

Reducing Environmental Impact

CO2 Emission Reduction Activities

CO2 reduction activities by the Brother Group

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)

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 162 MWh in FY2014 (about 1.8% of the total electricity consumption at this site).

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 FY2014, the energy consumption was reduced by about 344 MWh from FY2013.



Photovoltaic power generation systems set up at two locations



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



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

► **Brother Group's environmental commendation system**
<http://www.brother.com/en/eco/management/award/index.htm>

Reducing Environmental Impact

CO2 Emission Reduction Activities

CO2 reduction activities by the Brother Group

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 CO2 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

CO2 Emission Reduction Activities

CO2 reduction activities by the Brother Group

Brother (China) Ltd. (Asia)

Brother (China) Ltd. has been continuously working on energy conservation activities, including efforts to turn off lights and remove lamps where unnecessary as well as the eco point program.

As a result, electricity consumption in FY2014 was reduced by about 7 MWh from FY2013, which is equivalent to about 6% of the electricity consumption at this business site.

Brother Technology (Shenzhen) Ltd. (Asia)

In FY2014, Brother Technology (Shenzhen) Ltd. implemented the energy conservation measures given below to reduce the electricity consumption.

- Partially reduced the number of air compressors in operation from two to one by establishing air piping loops
- Reduced the number of air compressors in operation during the nighttime when the production load is small
- Replaced old water-cooled air conditioning systems with air-cooled inverter-driven air conditioning systems
- Divided the electrical circuit for the lighting switches in the training area into smaller blocks, so that part of the training area can be lit up
- Removed fluorescent lamps if they were unnecessary according to the illuminance standard
- Installed power switches at readily accessible positions, so that electrical equipment in the production line is turned off at the end of production
- Implemented measures to reduce the set-up time for the metal processing equipment (e.g. improvement of jigs), improved the equipment operation ratio, and reduced the equipment standby time
- Halved the number of test runs for maintenance inspections of generators (from twice every two weeks to once every two weeks)

Brother Industries(Shenzhen), Ltd. (Asia)

Brother Industries(Shenzhen), Ltd. replaced old air conditioning systems which consumed a large amount of electricity with highly efficient systems in stages. Thermal insulation films were applied on more windows to reduce the air conditioning load attributed to the heat from outside. An energy conservation project is also underway for existing equipment by replacing motors for ventilation fans with highly efficient motors, etc. Water servers at various locations in the manufacturing facilities were replaced with the latest models which can cut the electricity consumption by about 50%. In the office, independent light switches were introduced so that the lights can be turned off whenever unnecessary. Occupancy sensors were introduced to control the lighting in common spaces. Thus, efforts are being made to reduce electricity consumption.

Reducing Environmental Impact

CO2 Emission Reduction Activities

CO2 reduction activities by the Brother Group

Zhuhai Brother Industries, Co., Ltd. (Asia)

Zhuhai Brother Industries, Co., Ltd. reduced electricity consumption of air compressors which consume a large amount of electricity. Specifically, two small air compressors that were old and inefficient were replaced with one large inverter-driven air compressor that is automatically controlled depending on the demand for compressed air. The electricity consumption during the unloaded condition (unnecessary operation in which the motor runs idle) was reduced.

Taiwan Brother Industries, Ltd. (Asia)

In FY2014, Taiwan Brother Industries, Ltd. replaced old air conditioning systems, air compressors, metalworking machinery, 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. The CO2 emissions were reduced by about 19% from FY2013, achieving a significant reduction.



Newly introduced air compressor (inverter-driven)

Brother Industries (Vietnam) Ltd. (Asia)

In FY2014, Brother Industries (Vietnam) Ltd. implemented the energy conservation measures below for plastic molding equipment whose electricity consumption accounts for a large proportion at the manufacturing facilities.

- 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
- Reviewed the equipment layout, and reduced the number of pieces of peripheral equipment in operation for injection molding machines
- Modified crushers (which were continuously operated) to enable intermittent operation (every five minutes)
- Made improvements so that motors are automatically turned off when the equipment is stopped for a certain period of time, thereby reducing electricity consumption during production standby
- 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

CO2 Emission Reduction Activities

CO2 reduction activities by the Brother Group

Brother International Philippines Corporation (Asia)

Brother International Philippines Corporation replaced lamps with energy-efficient LED lamps. As a result, the electricity consumption in FY2014 was reduced by about 3 MWh from FY2013 (about 2% of the total at this site).



LED lights used in the showroom, service center and office

Brother Commercial (Thailand) Ltd. (Asia)

Brother Commercial (Thailand) Ltd. replaced 352 lamps in the office and service center with energy-efficient LED lamps. Ongoing energy conservation activities include turning off and removing lights whenever and wherever unnecessary, introducing lighting fixtures fitted with sensors, and promoting the eco point program.

As a result, electricity consumption in FY2014 was reduced by about 11 MWh (about 5% of the total at this site) from FY2013.



LED lights used in the office and service center

Brother Industries Technology (M) Sdn. Bhd.

Brother Industries Technology (M) Sdn. Bhd. replaced lamps and fluorescent lamps with LEDs to reduce electricity consumption. Activities are underway to prevent the lighting fixtures from being turned on at unnecessary times by introducing automatic control using timers and occupancy sensors.

Energy conservation controllers were introduced to reduce electricity consumption of air conditioning. These controllers are designed to control the operation of compressors in the outdoor units while maintaining the indoor air conditioning capacity.

Various activities are continuously implemented to reduce the electricity consumption of air compressors that consume a large amount of electricity. For example, the pressure loss in the air piping was reduced by increasing the piping size.



Energy conservation controller

Reducing Environmental Impact

CO2 Emission Reduction Activities

CO2 reduction activities by the Brother Group

Brother International (Malaysia) Sdn. Bhd. (Asia)

Brother International (Malaysia) Sdn. Bhd. replaced lamps in the showroom and service center with energy-efficient LED lamps. Ongoing energy conservation activities include turning off and removing lights whenever and wherever unnecessary.

As a result, the electricity consumption in FY2014 was reduced by about 8 MWh (about 13% of the total at this site) from FY2013.



LED lamps used in the showroom and service center

Brother International Singapore Pte. Ltd. (Asia)

Brother International Singapore Pte. Ltd.'s energy conservation activities focused on settings to automatically turn off PCs and fully observing the rule to turn off the equipment.

As a result, the electricity consumption in FY2014 was reduced by about 6 MWh (about 5% of the total at this site) from FY 2013.



Fully observing the rule to switch off the equipment

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

Brother International (Aust.) Pty. Ltd. has been working steadily on energy conservation activities, including turning off lights and removing lights where possible, introducing lights equipped with sensors, reviewing temperature settings and setting timers of air conditioning equipment, and switching off power when it is unnecessary.

As a result, electricity consumption in FY2014 was reduced by about 57 MWh from FY2013, which is equivalent to about 22% of the total electricity consumption of the site.

Reducing Environmental Impact

CO2 Emission Reduction Activities

Efforts in logistics

The Brother Group set management standards for reducing logistics-related CO₂ emissions in FY2013 (April 1, 2013-March 31, 2014) and for reducing CO₂ emissions by 1% per unit of sales per annum after FY2013.

In FY2014 (April 1, 2014-March 31, 2015), emissions were reduced by 9.5% from FY2013.

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, CO₂ emissions were cut by about 38% per shipped weight. The Brother Group has successfully kept CO₂ emissions low ever since.

In 2013, a modal shift was introduced for part of the product shipment. The mode of product transport for large customers was switched from trucks to railroad. CO₂ emissions in FY2014 were reduced by 54 tons from FY 2013.

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 CO₂ emissions (e.g., use of small hybrid delivery trucks).

*: 3PL (third party logistics) refers to an outsourcing service in which contractors propose, comprehensively undertake, and implement the most efficient planning of logistics strategies and installation of logistics systems on behalf of shippers.

Reducing Environmental Impact

CO2 Emission Reduction Activities

Efforts in logistics

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 CO₂ emissions, from unloading at ports to delivery warehouse and retailers, and analyze the data, so that future CO₂ 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 CO₂ emissions coefficient is small) to reduce CO₂ emissions. As a result, CO₂ emissions were reduced by about 100 tons in FY2014 from FY2013.

Reducing Environmental Impact

CO2 Emission Reduction Activities

Brother Group's CO2 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 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 CO₂ emissions into the atmosphere by using biofuel, the number of vehicles fueled solely by biofuel will be increased to cut CO₂ 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 CO₂ emissions were reduced by about 11% in FY2014 from FY2013.



Reducing transport distances by switching the transport route

Reducing Environmental Impact

CO2 Emission Reduction Activities

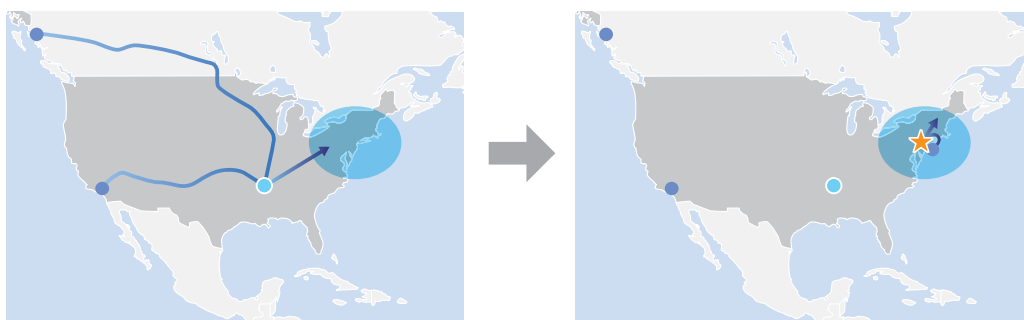
Brother Group's CO2 reduction activities in logistics

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 CO2 emissions by about 20% in FY2014.



New Jersey Logistics Center (Cranbury)

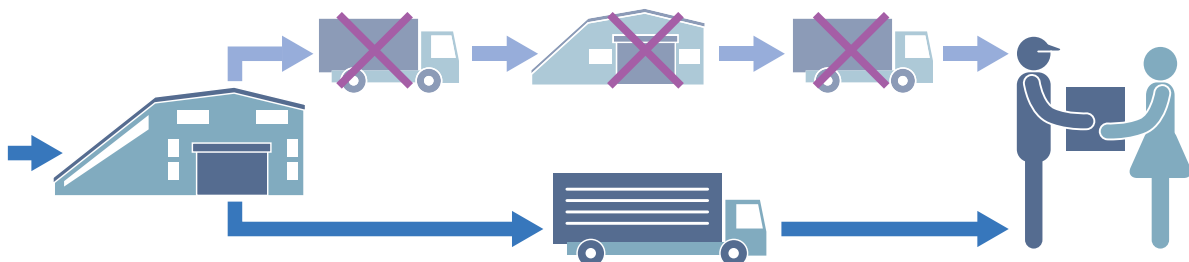


Reducing transport distances by establishing a new facility

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.

As a result, CO2 emissions were reduced by about 24% in FY2014 from FY2013.



Reducing transport distances by switching the transport route

Reducing Environmental Impact

CO2 Emission Reduction Activities

Brother Group's CO2 reduction activities in logistics

Brother International GmbH (Europe)

Brother International GmbH regularly used inland waterways to transport non-time sensitive shipments from Rotterdam in the Netherlands to Munchengladbach in Germany.

As a result, CO2 emissions in FY2014 were reduced by about 13% from FY2013.



Transport vessel

Brother France SAS (Europe)

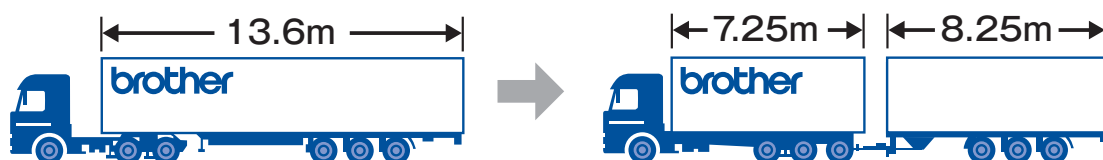
Brother France SAS met the pallet height restrictions as requested by business partners. (Pallets are the platforms used for loading cargo.) Double-deck trailers (with two-stage loading space) were introduced to increase cargo loading and transport efficiency, in collaboration with a logistics company. As a result, CO2 emissions were cut by 46% in FY2013 and further by 2% in FY2014 compared with conventional trailers.



Double-deck trailer

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

Brother Industries (Slovakia) s.r.o. (BISK) reduced CO2 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. As a result, CO2 emissions in FY2014 were reduced by about 7% from FY2013.



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 FY2014

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. The increased emissions in FY2014 (April 1, 2014-March 31, 2015) are attributed to the increased production volume at Brother Industries (Philippines), Inc., Brother Machinery Xian Co., Ltd., Zhuhai Brother Industries, Co., Ltd., Brother Industries Saigon, Ltd., and BMV that were included in the scope of aggregation in FY2014.

Reducing Environmental Impact

Zero Waste Emission Activities

Building a recycling framework

Details of the Brother Group's activities in FY2014

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)
- Sharing information within the company about office furniture such as desks, chairs, and shelves that is no longer needed in respective divisions to promote reuse from other offices who can use them
- Turning food waste from the cafeteria of the Mizuho Manufacturing Facility, which has 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
- Turning food waste from the cafeteria of the Hoshizaki Manufacturing Facility into compost (recycling 3 tons of waste from the cafeteria per annum) (starting in FY2014)
- 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

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

- Sending used work clothing to be recycled into sleeve covers, aprons and shoe covers for visitors. Reusing bags previously used for parts delivery as garbage bags to raise awareness about waste reduction
- 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

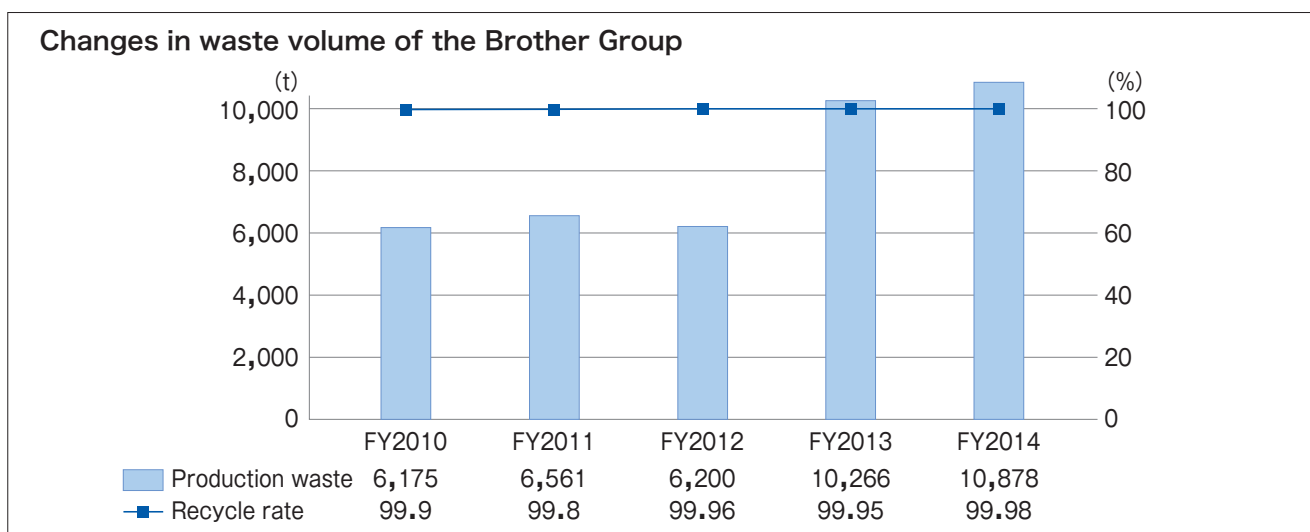
Reducing Environmental Impact

Zero Waste Emission Activities

Building a recycling framework

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



Scope of aggregation

FY2010	FY2011	FY2012	FY2013	FY2014
Eight facilities 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.

*: 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 save water consumption to fulfill its responsibilities as an operator of many manufacturing facilities in Asia. In the Brother Group 2015 Mid-term Environmental Action Plan (2011-2015) (now in its fifth year), 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 efforts have been stepped up to meet this target.

Brother Group's results of activities in FY2014 (April 1, 2014-March 31, 2015)

In FY2014, Brother Machinery Vietnam Co., Ltd. was added to the scope of aggregation. Thus, water consumption increased by 8,710 m³ in total (business sites in Japan and manufacturing facilities outside Japan combined). However, in per unit sales, an 11.9% reduction was achieved from FY2013 (a 26.4% reduction from FY2010), successfully attaining results far beyond the target of FY2015. The Brother Group will further implement measures to save water in FY2015.

Reducing Environmental Impact

Reducing Water Consumption

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

Details of the Brother Group's activities in FY2014

Main activities at business sites in Japan

At business sites in Japan, water-saving toilets were introduced to reduce the consumption of clean water. Three and 28 conventional toilets were replaced with water-saving toilets in FY2013 and FY2014, respectively.

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.

- 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)
- Reducing toilet reservoir tanks to optimize water consumption by inserting plastic bottles filled with water
- 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)
- Implementing water meters on each floor to accurately monitor monthly consumption. Investigating and analyzing the reasons for changes to take effective action
- Inspecting faucets and pipes every day and immediately repairing any damage to eliminate water leakage, etc.
- Reducing the time of the roof leak inspection on container cars (continuous 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



Faucet before taking water-saving measures



Faucet after taking water-saving measures

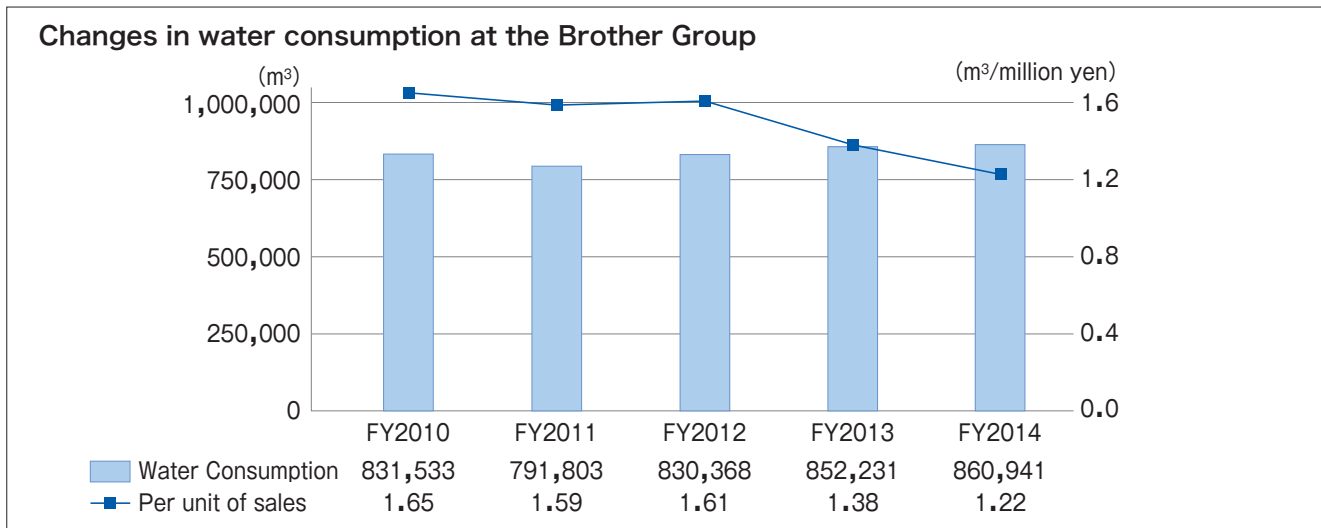


Rainwater storage tank (Brother Industries Technology (M) Sdn. Bhd.)

Reducing Environmental Impact

Reducing Water Consumption

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



Scope of aggregation

FY2010	FY2011	FY2012	FY2013	FY2014
Eight facilities 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.

*: 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

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. The treatment of equipment contaminated with high-concentration PCBs was completed, with the exception of (i) partly damaged equipment and (ii) small equipment that was not suited for treatment units. Regarding ballasts for fluorescent lamps and equipment contaminated with low-concentration PCBs, treatment is underway with contractors certified by the Minister of the Environment.

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 production process materials to prevent contamination with harmful chemical substances.

► [Flow of Substances Subject to PRTR at BIL \(FY2010-FY2014\) \[PDF/124KB\]](http://download.brother.com/pub/com/en/eco/pdf/2015/chemistry.pdf)

<http://download.brother.com/pub/com/en/eco/pdf/2015/chemistry.pdf>

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.

Reducing Environmental Impact

Preventing Pollution

Preventing pollution associated with different sources

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 CO₂ emission coefficient. Thus, efforts are underway to prevent air pollution.

The risks of 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. and Brother Industries (Shenzhen), Ltd. in Huanan, China, had been private power generation systems (fuelled by heavy oil). They were replaced by the city's public utility service, thus reducing the risk of air pollution, CO₂ 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.

Reducing Environmental Impact

Preventing Pollution

Preventing pollution associated with different sources

Preventing water pollution

Measures to prevent water pollution include wastewater treatment facilities introduced at manufacturing facilities, such as at the Kariya Manufacturing Facility (in Japan) to treat its wastewater with the latest membrane separation activated sludge process (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., which was established in 2013, a new 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.



Wastewater treatment facility
(Brother Machinery Vietnam)

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. Values of 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 pollution associated with different sources

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.

Preventing generation of noise, vibration, and offensive odors

BIL takes great care to prevent the generation of noise, vibration and offensive odors, so as not to cause inconvenience to local communities including homes, schools, and pedestrians. To prevent the generation of noise and vibration, facilities that cause noise or vibration such as chillers and exhaust outlets are installed or relocated as far away within the manufacturing facilities as possible. To prevent the generation of 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 effectiveness, and then uses the results to plan environmental activities to be carried out the next fiscal year.

Calculation results for FY2014

Environmental improvement costs and expenses

The Brother Group (business sites in Japan) spent JPY 337 million on environmental improvement activities, up approximately 47% from the previous year. Manufacturing facilities outside Japan spent JPY 137 million, down approximately 19% from the previous year.

Expenditures and labor costs for various environmental improvement activities were JPY 782 million, up approximately 6%, for the facilities in Japan, and JPY 233 million, up approximately 101%, for those outside Japan.

Environmental investments in Japan focused primarily on (i) equipment related to energy conservation and (ii) improvement of the system for collecting environmental information related to respective parts and materials used in products.

Environmental investments by manufacturing facilities outside Japan are attributed to efforts to replace old air conditioning equipment and increase efficiency.

Reducing Environmental Impact

Environmental Accounting

Calculation results for FY2014

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)	4 (1)	0 (0)	20 (-9)	84 (50)
	2)Global environmental conservation cost	Global warming prevention (energy-saving) measures	120 (11)	137 (-32)	63 (2)	25 (20)
	3)Resource circulation cost	Recycling and reduction in waste generation	0 (-1)	0 (0)	85 (8)	56 (26)
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 (-5)	0 (0)	95 (-4)	2 (1)
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	155 (57)	0 (0)	358 (35)	55 (13)
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	58 (56)	0 (0)	145 (13)	0 (0)
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 (-11)	0 (0)	13 (1)	11 (8)
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)	3 (0)	0 (0)
Total			337 (108)	137 (-32)	782 (45)	233 (117)

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

Reducing Environmental Impact

Environmental Accounting

Calculation results for FY2014

Environmental improvement effects and economic effects in FY2014

Environmental improvement effects remained almost unchanged from the previous year in Japan, while energy input, water consumption, release into the atmosphere, and waste emissions increased at manufacturing facilities outside Japan. The increase is attributed to (i) addition of Brother Industries (Philippines), Inc. (BIPH) to the scope of aggregation and (ii) increased production at Brother Industries Saigon, Ltd. (BISG). 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 effects		Classification of index to measure environmental 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)	10,483 (-232)	18,838 (1,787)	
		Water input	m ³	101,060 (-3,830)	664,084 (51,327)	
	Effects related to environmental impact and waste released from business operations	Release into atmosphere	CO ₂ (t-CO ₂ /year)		15,659 (-374)	31,085 (3,051)
			NO _x (Kg/year)		2,046 (15)	3,603 (274)
			SO _x (Kg/year)		8 (0)	88 (7)
		Generation of waste	Amount of waste generation (t)		2,302 (365)	4,851 (489)
	Landfill waste (t)			0 (0)	2 (-3)	

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

Reducing Environmental Impact

Environmental Accounting

Calculation results for FY2014

Content of economic effects involving environmental effects*		In Japan (unit: JPY million)	Outside Japan (unit: JPY million)
Income	Operating income from recycling of waste generated from main business operations	6.9 (0.1)	55.6 (14.1)
Cost reduction	Reduction in energy cost by energy-saving	3.0 (1.6)	25.3 (-1)
	Reduction in waste treatment cost due to resource-saving and recycling	31.7 (2.4)	11.3 (-20.6)
Other	Publicity effects, such as newspaper reporting, calculated in terms of advertising expenses	2.3 (-1.4)	17.2 (14.1)
Total		43.9 (2.7)	109.4 (6.5)

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

*: Economic effects derived from environmental effects are those that can be calculated in monetary terms from among the effects derived from the environmental 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 11 manufacturing facilities outside Japan*²: Target period is from April 1, 2014 to March 31, 2015.

*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 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., and Brother Machinery Vietnam Co., Ltd.

►Environment Accounting (Detailed Data: FY2010-FY2014) [PDF/156KB]

<http://download.brother.com/pub/com/en/eco/pdf/2015/accounting.pdf>

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. 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).

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

Name of site subject to audit	Month of audit
Brother Industries, Ltd. (business sites in Japan)	July 2013
Brother International (NZ) Ltd.	March 2013

List of ISO 14001-certified facilities

Name of site	Month of certification	
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.))	December 2013	
Brother Mobile Solutions, Inc.		
Nefsis Corporation		
Brother Machinery Shanghai Ltd.		
XING Inc.	July 2013	
Brother International CZ s.r.o.*	April 2013	
Brother International Hungary Kft.*		
Brother LLC		
Brother Industries Saigon, Ltd.	August 2012	
Brother Polska Sp. z o.o.*	May 2012	
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	

*: 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

Making continuous improvements by administering the environment management system

Name of site		Month of certification
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)		
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

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

Name of site		Month of certification
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 International Corporation (Canada) Ltd.		
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
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* ³		

*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.

*3: 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

Making continuous improvements by administering the environment management system

Name of site		Month of certification
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.*1 (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.*2 (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: 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 Industries (Johor) Sdn. Bhd. was integrated into Brother Industries Technology (M) Sdn. Bhd. in 2004.

Addresses of facilities are available here.

► **Brother Group's major facilities**

<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 2015 Mid-term Environmental Action Plan (2011-2015) was formulated to promote efforts through business operations. Notably, one of the important challenges is to "disclose environmental information, and enhance communication with our stakeholders as well as their understanding." As part of such efforts, various environmental communication activities are under way to expand the scope of collaboration with as many stakeholders as possible.



Working with you for a better environment

Brother Earth logo and slogan

Main activity targets and results for FY2014 (April 1, 2014-March 31, 2015)

1. Actively publicizing (i) environmental technologies employed in new products and (ii) environmental conservation activities involving employees as volunteers

Brother developed "Package Design Optimization" technology for reducing packaging size, increasing transporting efficiency, and reducing environmental impacts while maintaining packaging strength. Brother also developed "Low-noise Belt Drive" technology that reduces power consumption while increasing the motor speeds of home sewing machines. Meanwhile, Brother employees worked on a "Project for Combating Desertification in Inner Mongolia" and a "Mangrove Reforestation Project in Thailand".

These features were promoted on Brother's special website on the environment and websites of respective facilities, etc. Brother's official SNS accounts with Facebook, Twitter, and YouTube were also used to continuously expand the distribution of information.



Brother's special website on the environment featuring "Package Design Optimization"

Communicating Environmental Commitment

Environmental Communication Activities

Main activity targets and results for FY2014 (April 1, 2014-March 31, 2015)

2. Improving the quality of the website on the environment

"Environmental Activities" (a website which reports on the Brother Group's annual environmental activities) and Brother's special website on the environment (which provides timely information about activities and unique efforts based on the responsive web design) were ranked 3rd among 219 companies in the "Eco Site Survey 2015 Ranking" organized by Tribeck Brand Strategies, Inc. (which ranks companies based on their status in improving their environmental websites). Also, Brother won the Good Performance Prize in the Environmental Report Section of the 18th Environmental Communication Awards, a system for commending excellent environmental reports which is organized by the Japanese Ministry of the Environment and the Global Environmental Forum.



Brother won the Good Performance Prize in the Environmental Report Section of the 18th Environmental Communication Awards

3. Actively promoting environmental events in Japan and helping increase environmental awareness

Brother Industries, Ltd. (BIL) has been working to provide various opportunities that encourage citizens to recognize the importance of the global environment by organizing environmental events and donating an exhibition facility, among other initiatives.

On October 11, 2014, BIL organized the "Brother Earth Eco Festival" in collaboration with the Nagoya City Science Museum in Aichi Prefecture. This new style of event provided opportunities to learn about the environment while having lunch, and was attended by 277 people. On December 20 and 21, 2014, "Brother Green X'mas 2014 - Projection Mapping on Brother Earth -" was organized. This was one of the largest projection mapping events in the Tokai area, attracting 18,200 visitors during the two-day period. On March 19, 2015, BIL donated "Koala Forest," an experience-based exhibition facility where children can learn about the biology and ecology of koalas and learn about the importance of environmental conservation, to the Higashiyama Zoo and Botanical Gardens operated by the City of Nagoya.

Meanwhile, BIL and Brother Sales, Ltd. exhibited at "Eco-Products 2014," one of the largest environmental exhibitions in Japan, from December 11 to 13, 2014 at Tokyo Big Sight. (they have exhibited at this event for 14 consecutive years.) The Brother booth was visited by about 6,100 individuals during the three-day period, the largest number ever recorded.



"Brother Earth Eco Festival" venue



Projecting images based on the themes of the global environment and Christmas



Brother's booth at "Eco-Products 2014"

Communicating Environmental Commitment

Environmental Communication Activities

Main activity targets and results for FY2014 (April 1, 2014-March 31, 2015)

4. Increasing the number of participants in the Brother eco point program

Under the Brother eco point program that was launched in Japan in FY2008 (April 1, 2008-March 31, 2009), eco points are awarded for eco-conscious actions taken by employees and their families. Eco points are also awarded for used consumables collected from customers. Brother works on various environmental conservation activities depending on the number of points earned.

This program has included facilities outside Japan since FY2009 (April 1, 2009-March 31, 2010); as of March 31, 2015, the program is in place in 44 countries and regions. In FY2014, 25,908 individuals, up from 21,440 individuals in FY2013 (more than 60% of Brother's employees) participated in the program and environmental awareness has been growing steadily.



Brother eco point program in place in 44 countries and regions

5. Implementing environmental activities for biodiversity conservation involving employees from 43 facilities

More than 100 activities in total were implemented to protect the ecosystems of forests and oceans at 43 facilities of the Brother Group including those in Japan, the U.S., the U.K., China, Thailand, Australia, and New Zealand. The activities involved employees and their families, as well as customers, suppliers, and local residents. For activities covered by click donations as described on Brother's special website on the environment, Brother Industries, Ltd. partly financed the activities depending on the number of clicks received.



Brother's special website on the environment that features reports on activities in Thailand and China (Inner Mongolia) (videos)

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).

As of March 31, 2015, the Brother eco point program is in place in 44 countries and regions. In FY2014 (April 1, 2014-March 31, 2015), the number of participants in the eco point program totaled 25,908 (21,440 in FY2013 [April 1, 2013-March 31, 2014]). Environmental awareness has been growing steadily.

At the Brother Group, employees and their families have been working to reduce CO₂ 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.

Brother facilities that have introduced the eco point program



Communicating Environmental Commitment

Brother Eco Point Program

Activities under the Brother eco point program

Group companies in Japan (Japan)

Encouraging participation in the Brother eco point program through commendations

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 FY2014 (May 2015)

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>

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

Conducting various conservation activities that cater to regional characteristics

In 2010, Brother International Corporation (U.S.A.) (BIC (USA)) introduced the intranet-based Brother eco point program to all nine facilities in North and South America (Canada, the U.S., Mexico, Brazil, Peru, Chile, and Argentina).

Under this program, points are awarded to eco-conscious actions by employees and their families that are linked to the Brother Group's five keywords to reduce the environmental impact (refuse, reduce, reuse, reform, and recycle.) Various environmental contribution activities are implemented (e.g. cleaning parks, beaches, and rivers; planting seedlings) depending on the points earned.

In addition to the above activities, BIC (USA) organizes events (e.g. eco-point quizzes, volunteer activities to plant seedlings) so that employees can have fun competing to earn points, and the number of participants has been increasing steadily.



Encouraging participation in the Brother eco point program with a desktop icon

Communicating Environmental Commitment

Brother Eco Point Program

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

Implementing measures using various items to increase environmental awareness

Brother Industries (U.K.) Ltd. (BIUK) launched the Brother eco point program via the intranet in August 2009 to increase employees' environmental awareness. In FY2012 (April 1, 2012-March 31, 2013), an in-house eco point exhibition booth was set up so that employees who do not use PCs in their jobs can equally take part in this program. BIUK also offers opportunities such as weekly eco checks and monthly eco quizzes so that all employees can participate in the program. Bicycles, energy monitors, pedometers, and other items are used in implementing measures, in order to motivate employees to participate. These efforts increased the participation rate in FY2014 by about 16% from FY2013.



BIUK employees working on the program

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

Focusing on various activities to increase employees' environmental awareness

Brother International (NZ) Ltd. (BINZ) launched the Brother eco point program in 2010. BINZ has been working to increase employees' environmental awareness by focusing on various environmental activities, such as reduction in waste and use of cars, compliance with the rules to turn off unnecessary lights, and reduction in business trips through effective utilization of videoconferencing systems. The points earned in this program have been used to fund the activities by Friends of Mana Island Incorporated since April 2011.

Through promotion of this program, employees have been encouraged to work on voluntary activities to cut greenhouse gas emissions. As a result, BINZ acquired carboNZeroCert™ certification (zero carbon) based on ISO 14064-1 standards in March 2013.



Planting seedlings for birds' nest building in support of the activities by Friends of Mana Island Incorporated

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

http://www.brother.com/en/eco/facility/iso_14001/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 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.

▶ Brother Group's commitment to Aichi Biodiversity Targets

<http://www.brother.com/en/eco/communication/biodiversity/index.htm#aichi>

Communicating Environmental Commitment

Biodiversity

Brother Group's biodiversity conservation activities

Brother Industries, Ltd. [Japan]

Suppressing the growth of moso bamboo, which hinders the growth of precious forests of broad-leaved trees

In 2010, Brother Industries, Ltd. (BIL) signed an agreement with the Aichi Prefectural Government and other local bodies, and has been carrying out environmental conservation activities in Chiharazawa*1 (about 14 hectares) in Okazaki City. Chiharazawa has been designated as a nature conservation area by the prefectural government.

In April 2014, a total of 29 individuals including the employees of BIL and their families, Aichi Prefectural Government employees, and local people joined activities to remove 125 moso bamboo shoots (*Phyllostachys heterocycla* f. *pubescens*).

These activities are 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 monadelphica* and *Malus tschonoskii*, which are rarely found on plains.

These activities started in September 2010. In autumn, moso bamboo trees are cut to allow sunlight to reach broad-leaved trees; in spring, bamboo shoots are removed to suppress their growth. During the past four years, the growth of bamboo trees has been suppressed to the extent that cutting is no longer necessary in autumn, therefore, sunlight properly reaches broad-leaved trees.

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.



Counting the number of moso bamboo trees to identify the status of growth



Carefully cutting moso bamboo shoots one by one

*1: 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.

*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 (1 yen per point).

Communicating Environmental Commitment

Biodiversity

Brother Group's biodiversity conservation activities

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

Helping restore and conserve forests through seedling planting activities, Brother eco point program, and Click for the Earth donation program

On the occasion of the 100th anniversary of its founding in 2008, the Brother Group concluded an agreement with the City of Gujo in Gifu Prefecture to build healthy forests. The Brother Group supports activities to plant seedlings and thin forests at Brother Forests in Gujo*1. Each year, seedlings are planted in spring and autumn. Employees and their families of Brother Industries, Ltd. (BIL) and Brother Sales, Ltd. (Brother Sales) as well as customers of Brother Real Estate, Ltd. (Brother Real Estate) take part in the activities, with the help of local people. As of April 2015, the total number of participants has been about 1,400, and 4,552 seedlings have been planted. Participants plant seedlings including *Quercus serrata* Murray and *Quercus crispula* Blume (indigenous species) and *Alnus hirsute* which easily grows on uncultivated land, as well as *Magnolia salicifolia* (willow-leaved magnolia), which is the city flower of Gujo. The participants also put back seedlings that were affected by the weight of snow in winter. New seedlings were also planted in areas where old ones did not grow.



Carefully planting seedlings of native species



Participants of the seedling planting activity

Some seedlings had grown to over several meters in height, producing results to a certain extent. Gradually, some areas have been found to be inappropriate for seedlings to take root. In April 2015, a team from the Consulting Firm for Clinical Environmental Studies of Nagoya University was asked to cooperate in investigating the status of growth of seedlings that had been planted.

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.

Number of seedlings that have been planted (2010-April 2015)*2

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

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*3, which customers can join on brotherearth.com, Brother's special website on the environment.

*1: The Brother Forests in Gujo refer 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. The goal is to plant 7,400 seedlings over a 10-year period; of which 4,552 had already been planted by the end of April 2015 (including 1,678 planted by Brother Sales and 328 by Brother Real Estate).

*2: The number of seedlings planted from FY2008 to FY2010 is indicated in p. 103 of the 2014 Brother Group Corporate Social Responsibility Report (Environmental Activities).

*3: 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).

▶ 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 Group's biodiversity conservation activities

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

Promoting forest conservation activities through the Click for the Earth donation program

Brother International Corporation (U.S.A.) (BIC (USA)) has been supporting forest conservation activities in North, Central, and South America. In July 2010, BIC (USA) entered into in partnership with the Arbor Day Foundation, a nonprofit forest protection organization in the U.S., as part of the Brother Group's global biodiversity conservation efforts. Through this agreement, Brother Group companies in the Americas work with the Arbor Day Foundation to tackle challenges specific to different regions, including restoration and development of healthy tropical rainforests, which are cradles of biodiversity. These activities are covered by the Click for the Earth donation program*, which visitors to brotherearth.com, Brother's special website on the environment, can join.

Restoring forests by planting seedlings in the U.S.

BIC (USA) is supporting the Replanting Our National Forests campaign (one of the partnership programs with the Arbor Day Foundation) through Click for the Earth, to help protect forests threatened by fire, diseases, and insects. National forests in the U.S. provide a valuable habitat for wildlife as well as precious natural resources such as construction materials, clean air, and drinking water.



Planting seedlings at a different site to restore forests in the U.S.

©Arbor Day Foundation

Details of support to environmental conservation activities that have received funding from Brother Click for the Earth donations

Fiscal year	2011	2012	2013	2014
Details of support	10,705 seedlings were planted in the forests of Bayfield, Wisconsin.	10,705 seedlings of longleaf pine and loblolly pine were planted in Manchester State Forest.	7,502 oaks were planted in a national forest in the western part of Tennessee.	4,535 seedlings were planted in the Fall Line Sandhills Natural Area in Georgia.

*: 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).

Communicating Environmental Commitment

Biodiversity

Brother Group's biodiversity conservation activities

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

Contributing to protection and restoration of tropical rainforests in Central and South America

Brother International Corporation de Argentina S.R.L., Brother International Corporation do Brasil, Ltda., Brother International de Chile, Ltda., Brother International de Mexico, S.A. de C.V., and Brother International del Peru S.A.C. are helping to protect and restore tropical rainforests in Central and South America through the Rain Forest Rescue program, one of the partnership programs with the Arbor Day Foundation.



Protecting precious tropical rainforests
©Nicole Balloffet

Tropical rainforests are home to almost half of all known species, and so this activity also helps to conserve species.

The expansive forests along the impressive, undulating landscape of the Sierra Madre Mountains serve as sanctuaries for birds of rare species such as the horned guan*1 and the resplendent quetzal*2. The forests play a key role in offering clean water and providing local communities with economic opportunities. It is imperative to protect the forests by building retaining walls on mountains and mountainsides and thereby preventing erosion, while protecting communities from fatal natural disasters such as hurricanes, floods, and landslides.

Details of support to environmental conservation activities that have received funding from Brother Click for the Earth donations

Fiscal year	2011	2012	2013	2014
Details of support	More than 305,714 square meters of tropical rainforests in the Maya Forest, Guatemala were protected.	More than 305,714 square meters of tropical rainforests in the Maya Forest, Guatemala were protected.	More than 147,335 square meters of tropical rainforests in the Maya Forest, Guatemala were protected.	More than 95,673 square meters of tropical rainforests in the Sierra Madre Mountains, Guatemala were protected.

*1:The horned guan (Kingdom: Animalia, Phylum: Chordata, Class: Aves, Order: Galliformes, Family: Cracidae, Subfamily: Oreophasinae, Genus: Oreophasis), when grown, has a red horn on top of its head. Their population has rapidly decreased due to destruction of habitats caused by development, pasturing, and insurrection, as well as overhunting for meat, etc. The conservation status of the horned guan is categorized as "Vulnerable".

*2:The resplendent quetzal (Kingdom: Animalia, Phylum: Chordata, Class: Aves, Order: Trogoniformes, Family: Trogonidae, Genus: Pharomachrus) is known as a beautiful bird with vivid colors. Its head to its back is glossy dark green, and its breast is crimson. Their population has been decreasing due to destruction of cloud forests (which serve as their habitats) in line with the recent expansion of farmland. The conservation status of the resplendent quetzal is categorized as "Near Threatened".

Communicating Environmental Commitment

Biodiversity

Brother Group's biodiversity conservation activities

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

Restoring forests by planting seedlings in Canada

Brother International Corporation (Canada) Ltd. (BIC(Canada)) helps restore the forests for the benefit of the global environment and future generations (in partnership with Tree Canada* and local organizations) as one of the partnership programs with the Arbor Day Foundation. This activity helps protect habitats for wildlife, and prevents soil erosion and improves the water quality of the Red River Basin.



Building forests in Canada by planting seedlings
©Arbor Day Foundation

Details of support to environmental conservation activities that have received funding from Brother Click for the Earth donations

Fiscal year	2011	2012	2013	2014
Details of support	4,538 seedlings of pine were planted.	4,538 seedlings of pine were planted.	3,226 seedlings of pine were planted.	2,017 seedlings will be planted (in 2015).

*:Tree Canada is a nonprofit organization that conducts various programs in partnership with local communities, government bodies, companies, and individuals to maintain a healthy forest environment in Canada.

► 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 Group's biodiversity conservation activities

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

Contributing to reforestation at a former quarry site

Since 2006, Brother Industries (U.K.) Ltd. (BIUK) has supported reforestation activities at the Millennium Eco Centre, an environmental education facility for students located at a former quarry site. Thus far, more than 4,500 seedlings have been planted. BIUK is proud to be part of a project for creating natural woodland and new habitats for animals. These activities have been covered by the Click for the Earth donation program*, which visitors to brotherearth.com, Brother's special website on the environment, can join.



Planting seedlings

Details of support using donations via Click for the Earth

Fiscal year	Details
2011	Purchased a container for the Millennium Eco Centre to set up a wooden outdoor classroom, set up a bulletin board for the Butterfly Garden, provided a banner for a bus that was converted into a classroom, and purchased 1,000 trees to be planted.
2012	Built pathways at the Millennium Eco Centre, purchased seedlings, work vests, cotton work gloves, and shovels for planting seedlings, helped to update the website and purchase equipment, etc.
2013	Covered expenses for the biodiversity project and seedling planting activities at the Millennium Eco Centre (e.g. seedling planting activities by four elementary schools, purchase of industrial long range radios, trees, and other equipment).
2014	Donated more than 500 seedlings, eight camping kettles, a printer and ink cartridges, and two cameras to the Millennium Eco Centre

BIUK was recognized as a responsible business operator in Wales for developing activities to contribute to the local community, and won BIG TICK 2014 under the Finance Wales Responsible Small Business Award.

*: 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).

► Environmental Commendation and Awards

<http://www.brother.com/en/eco/management/award/index.htm>

Communicating Environmental Commitment

Biodiversity

Brother Group's biodiversity conservation activities

Brother International Europe Ltd. [Europe]

Protecting tropical rainforests in Peru

Brother International Europe Ltd. (BIE) has been carrying out the Cool Earth Eco-Rewards initiative in collaboration with Brother's 20 sales facilities in Europe, and in partnership with Cool Earth, a U.K.-based NPO working to protect the environment of the Amazon Basin since 2009. The Cool Earth Eco-Rewards initiative aims to donate funds raised, depending on the volume of consumables (including toner and ink cartridges) collected, to Cool Earth. The funds are used for activities supported by Cool Earth to protect tropical rainforests and the habitats of endangered species of wild animals in the Republic of Peru.

Since FY2010, donations made from the Click for the Earth donation program*1, which visitors to the Brother Group's special website on the environment (brotherearth.com) can join, have been used to support these activities.

Cool Earth estimates that Click for the Earth donations help protect 19 endangered species, 8,157 species of animals, and more than 3,268,000 liters of water per year.



Certificate of donation issued by Cool Earth to BIE (May 2014)

Details of support

Fiscal year	Location	Area protected	Number of trees protected*2	Amount of CO2 fixed*3
2011	Ene River (Río Ene) valley (Ashaninka Community)	236 acres (approx. 95.5 hectares)	56,640	61,360t
2012		456 acres (approx. 184.5 hectares)	109,440	118,560t
2013		567 acres (approx. 229.5 hectares)	136,080	147,420t
2014		610 acres (approx. 246.8 hectares)	146,400	158,600t

BIE will continue to support these activities.

*1: 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).

*2: The number is calculated based on 240 trees per acre.

*3: The number is calculated based on 260 t per acre.

▶ 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 Group's biodiversity conservation activities

Brother Industries (Shenzhen), Ltd., Brother Technology (Shenzhen) Ltd. [Asia / Oceania]

Contributing to an environmental conservation program in Shenzhen City

In FY2007 (April 1, 2007-March 31, 2008), Brother Technology (Shenzhen) Ltd. (BTSL) and Brother Industries (Shenzhen), Ltd. (BISZ) started to take part in the seedling planting program organized by the Urban Management Bureau of Shenzhen Municipality.

In April of FY2014, about 90 employees of BTSL and BISZ took part in this program to plant 100 seedlings. In May, about 600 employees of BTSL and BISZ were engaged in a promotional campaign for environmental protection on the World Environment Day. In August, about 120 employees took part in an environmental protection knowledge competition. In November and December, an educational program was organized to raise the environmental awareness at the Longcheng Junior High School.



Planting seedlings

Number of seedlings that have been planted*1

Fiscal year	2011	2012	2013	2014
Location	Zhongshan Park, Longcheng Park (in Longgang District)	Longcheng Park (in Longgang District)	Longcheng Park (in Longgang District)	Longcheng Park (in Longgang District)
Number of seedlings planted	200	100	100	100

These activities have been covered by the Click for the Earth donation program*2, which visitors to brotherearth.com, Brother's special website on the environment, can join.

*1: The number of seedlings planted from FY2007 to FY2010 is indicated in p. 109 of the 2014 Brother Group Corporate Social Responsibility Report (Environmental Activities) .

*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 (1 yen per point).

Communicating Environmental Commitment

Biodiversity

Brother Group's biodiversity conservation activities

Brother (China) Ltd. [Asia / Oceania]

Restoring the environment of Inner Mongolia to eliminate sandstorms

Brother (China) Ltd. (BCN) has been working on a project to prevent desertification in Alashan area of Inner Mongolia in collaboration with OISCA*1, a public interest incorporated foundation, since FY2012.

BCN has been promoting the greening of desert areas through donations to OISCA. In addition, BCN has shown long-term commitment to improving the living standards of local agro-pastoral people who make a living by growing plants that are used as raw ingredients for Chinese medicine and by grazing emus (a bird related to the ostrich), etc.

BCN's ongoing activities help mitigate the yellow sand problems by preventing desertification and promoting environmental education for local children. These activities also help make employees more aware of their social and environmental contributions and boost their pride.

BCN remains committed to these activities in addition to planting seedlings, cleaning up the environment, and raising funds for greening that it has worked on near its offices in different regions such as Shanghai and Beijing. As a "good corporate citizen," BCN wishes to develop and grow with China.



Planting seedlings of saxaul (Haloxylon ammodendron)



Planted saxaul (Haloxylon ammodendron) trees that have grown during the past 10 years



Drilling a well using a drilling machine

Track record of activities

Fiscal year	Details
2012	BCN employees planted seedlings of Russian olive (<i>Elaeagnus angustifolia</i>), a plant well adapted to the desert environment, in collaboration with the Alashan Desert Ecological Research and Training Center*2 and with local junior high school students.
2013	About 30 individuals including BCN employees, OISCA staff members, university students from Xian, and local junior high school students planted about 500 seedlings of saxaul (<i>Haloxylon ammodendron</i>)*3 which is resistant to dry weather.
2014	About 54 individuals including OISCA staff members, university students from Xian, local elementary school students, and Chinese media staff planted 8,600 seedlings. A well was drilled using a drilling machine purchased with the donations from FY2013.

These activities have been covered by the Click for the Earth donation program*4, which visitors to brotherearth.com, Brother's special website on the environment, can join.

*1: OISCA is a public interest incorporated foundation in Japan established in 1969 to promote the basic philosophy of the Organization for Industrial, Spiritual and Cultural Advancement-International (an international NGO headquartered in Japan) by working on specific activities. OISCA envisions a world where all people harmoniously coexist by transcending differences and live in harmony with nature.

*2: The Alashan Desert Ecological Research and Training Center in Alashan, Inner Mongolia, which was set up by OISCA, takes a comprehensive approach to research and popularization of environmental conservation-oriented industries, etc. (e.g., greening activities by planting seedlings, etc., activities to grow herbal plants used as raw ingredients for Chinese medicine to help local residents earn a stable income).

*3: Saxaul (*Haloxylon ammodendron*) is used as the host of *Cistanche salsa* (a plant that is completely parasitic on other plants and which is highly valued and appreciated as a Chinese medicine).

*4: 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).

▶ 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) <http://www.brotherearth.com/en/top.html>
 ▶ [Project for Combating Desertification in Inner Mongolia](http://www.brotherearth.com/en/environmental-views/inner_mongolia.html) http://www.brotherearth.com/en/environmental-views/inner_mongolia.html

Communicating Environmental Commitment

Biodiversity

Brother Group's biodiversity conservation activities

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

Supporting activities to plant seedlings and help improve the global environment

Brother International (HK) Ltd. (BIHK) provided financial support to "Tree Planting Challenge 2014", an event for planting seedlings in Hong Kong on April 27, 2014, and eight employees joined this event.

The eight employees, who participated in this event, climbed Mount Ma On Shan (elevation 702 m) carrying 60 seedlings, and planted them in Ma On Shan Country Park which is located around the ninth station of the mountain.

Organized by Friends of the Earth, an international environmental organization, this event aims to conserve the environment of Hong Kong and raise participants' awareness. During the past 10 years, more than 7,000 participants in total have planted about 83,000 seedlings.

These activities have been covered by the Click for the Earth donation program*, which visitors to brotherearth.com, Brother's special website on the environment, can join from FY2012 to FY2014.



Employees carrying seedlings

Details of support to environmental conservation activities that have received funding from Brother Click for the Earth donation

Fiscal year	2013	2014
Location	Ma On Shan Country Park	Ma On Shan Country Park
Number of seedlings planted	30	60

*: 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).

► 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 Group's biodiversity conservation activities

Brother Commercial (Thailand) Ltd. [Asia / Oceania]

Ecosystem showing signs of recovery thanks to the growth of mangrove forests

In FY 2009 (April 1, 2009-March 31, 2010), Brother Commercial (Thailand) Ltd. (BCTL) started to help protect and restore local mangrove forests*1.

In November 2014, 226 individuals including BCTL employees, dealers, students, and customers and citizens who were solicited to participate via SNSs, took part in the seedling planting activities. The participants helped each other to plant 215 mangrove seedlings at locations where mud was deep.

As the mangrove forests have grown, many species of birds and aquatic animals have been observed. BCTL will continue with these activities.



Participants helping each other to walk to the spots to plant seedlings



Mangrove seedlings planted in 2009 that grew several meters tall

Number of seedlings that have been planted*2

Year	2011	2012	2013	2014
Month	Cancelled due to the impact of flooding	November	November	November
Number of seedlings planted		500	500	215

These activities are covered by the Click for the Earth donation program*3, which visitors to brotherearth.com, Brother's special website on the environment, can join.

*1: Mangrove forests are home to a wide range of creatures; the network of mangrove roots reinforces the seashore and serves as a buffer which reduces the impact of tsunami, however in recent years in Thailand, mangrove forests have been rapidly diminishing due to the development of salt and shrimp farms.

*2: The number of seedlings planted from FY2009 to FY2010 is indicated in p.112 of the 2014 Brother Group Corporate Social Responsibility Report (Environmental Activities).

*3: 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).

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

▶ [Mangrove Reforestation Project in Thailand](http://www.brotherearth.com/en/environmental-views/thailand.html)
<http://www.brotherearth.com/en/environmental-views/thailand.html>

Communicating Environmental Commitment

Biodiversity

Brother Group's biodiversity conservation activities

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

Supporting a survey on the biology and ecology of manta rays via Click for the Earth donations

To maintain the diversity of marine organisms and Australia's unique coastal habitats, Brother International (Aust.) Pty. Ltd. and Earthwatch, an NPO involved in conserving the nation's biodiversity, have been working with Dr. Kathy Townsend of the University of Queensland and the Commonwealth Scientific and Industrial Research Organisation to help conduct a survey on the biology and ecology of manta rays (*Manta birostris*)*1 which are an icon of Australia's oceans and seas and to protect the species.



A manta ray subject to a biology and ecology survey
©Chris Gillies

Little is known about the biology and ecology of manta rays. For this reason, the research group including Dr. Townsend has been working on Project Manta to understand the behavior, biology, ecology and migration patterns of manta rays and thereby help protect the species. As of March 2015, the identification database covers more than 850 and 750 manta rays on the east and west coasts, respectively.

Since FY2011, these activities have been covered by the Click for the Earth donation program*2, which visitors to brotherearth.com, Brother's special website on the environment, can join.

Details of support to environmental conservation activities that have been funded by Brother Click for the Earth donations

Fiscal year	Details of support
2011	Six pop-up satellite archival tags*3 to be attached to manta rays and track their movements were purchased.
2012	Ten acoustic tags*4 to be attached to manta rays and track their movements were purchased, and the safety equipment in the boat was updated.
2013	Pop-up satellite archival tags were attached to 15 manta rays, and acoustic tags were attached to 24 manta rays to survey their behavior.
2014	Costs for the maintenance of two engines of a Crusader boat were provided. An eight-day investigation was conducted on Lady Elliot Island located on the east coast of Australia. Activities to protect the Great Barrier Reef were conducted for one year.

In FY2014, BIA employees supported an eight-day investigation on Lady Elliot Island.

*1: Manta rays, the largest species of ray in the world, measure up to seven meters across the pectoral fins.

*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 (1 yen per point).

*3: The pop-up satellite archival tags, which are attached to and carried by manta rays, log data of water depth, water temperature, and light intensity, thus assisting research on the migration patterns and marine environment in particular, of manta rays. These tags are designed to self-release automatically on a predetermined date at a predetermined time and float to the surface, to minimize the impact on the rays.

*4: Acoustic tags, which are designed to transmit unique acoustic signals, are attached to manta rays to observe their behavioral patterns. Acoustic signals transmitted from the tags are picked up by receivers placed around Lady Elliot Island (an isolated island located in the southernmost part of the Great Barrier Reef which is designated as a UNESCO World Heritage site).

► 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 Group's biodiversity conservation activities

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

Protecting endemic endangered species in New Zealand

Since 2011, Brother International (NZ) Ltd. (BINZ) has been sponsoring Friends of Mana Island Incorporated*¹ (FOMI), and supporting activities to conserve shore plover.

This endemic species of New Zealand is designated as an endangered species. Shore plover used to inhabit tidal flats, shore reefs, coastal areas, etc. across New Zealand, but went extinct on the mainland of the country due to predation by alien species, etc. Today, only a few hundred birds survive on the Chatham Islands. In recent years, activities are underway to promote artificial breeding and release the birds on Mana Island and other remote islands that are not inhabited by predators, in an effort to restore the population.

In June 2014, BINZ employees and their families worked with the staff of the Department of Conservation and FOMI to plant about 400 seedlings in parks on the mainland of New Zealand, for the birds that migrate from remote islands to the mainland to build nests. After planting seedlings, they were joined by local volunteer citizens to travel to Mana Island by boat. They took part in an observation tour on the island to deepen understanding about the activities to conserve the species.

These activities have been covered by the Click for the Earth donation program*², which visitors to brotherearth.com, Brother's special website on the environment, could join in FY2014.



Shore plover



Planting seedlings

*1: Friends of Mana Island Incorporated (FOMI) is a nonprofit organization established in 1998 to support ecosystem restoration activities. FOMI is certified by the Department of Conservation.

*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 (1 yen per point).

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, 2015).

*: 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.

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 1: Awareness increased	People recognize the value of biodiversity and related activities.	Companies actively promote biodiversity education for employees so that the importance of biodiversity conservation is widely recognized. Also, companies disseminate information about the status of activities and work with stakeholders to help raise awareness in society.	<ul style="list-style-type: none"> •The biodiversity basic policy was established based on the Brother Group Environmental Policy, and all employees were informed of the policy. •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.

Communicating Environmental Commitment

Biodiversity

Brother Group's commitment to Aichi Biodiversity Targets

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 production and consumption	All parties concerned implement their plans for sustainable production and consumption.	<p>Companies actively promote the following activities (including their in-house production activities and supply chains) in respective life cycle stages to achieve sustainable production and consumption.</p> <ul style="list-style-type: none"> •Promote activities in line with the Commitment to a Low Carbon Society <ul style="list-style-type: none"> - Continuously work on activities to reduce CO2 emissions in production processes - Supply products and services that help achieve a low-carbon society •Promote activities based on the Voluntary Action Plan on the Environment (Section on the Establishment of a Sound Material-Cycle Society) <ul style="list-style-type: none"> - Reduce the amount of waste subject to final disposal - 3R activities (reduce, reuse, and recycle) •Promote activities that contribute directly to biodiversity conservation <ul style="list-style-type: none"> - Promote biodiversity-conscious procurement of raw materials, etc. 	<ul style="list-style-type: none"> •Resource conservation has been promoted, with reductions in size and weight, collection, and recycling of products in mind, from the development phase. •CO2 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 CO2 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.
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.	To protect habitats and reduce degradation and fragmentation, companies actively promote biodiversity-conscious green space management at business sites, social contribution activities, establishment of ecosystem networks in the surrounding areas, etc.	<ul style="list-style-type: none"> •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. •In Inner Mongolia, Brother has worked on a project to prevent desertification and promote greening, and planted seedlings of Russian olive (<i>Elaeagnus angustifolia</i>), a plant well adapted to the desert environment and saxaul (<i>Haloxylon ammodendron</i>) which is resistant to dry conditions.

Communicating Environmental Commitment

Biodiversity

Brother Group's commitment to Aichi Biodiversity Targets

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 8: Pollution due to chemical substances, etc. reduced	Pollution caused by chemical substances, fertilizers, and pesticides is reduced to the extent that is no longer harmful.	To prevent pollution that is harmful to the ecosystem and biodiversity, companies endeavor to ensure proper management of chemical substances from a global perspective and actively minimize adverse impacts on ecosystems.	<ul style="list-style-type: none"> • 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.
Target 9: Alien species	Invasive alien species are controlled or eradicated.	To prevent and control the impact of invasive alien species, companies actively promote efforts to exterminate and prevent invasion of invasive alien species (primarily in product transport, green space management at business sites, social contribution activities) and raise awareness.	<ul style="list-style-type: none"> • In Okazaki, Japan, Brother has removed moso bamboo shoots (a fast-growing alien species) in Chiharazawa designated as a nature conservation area by the prefectural government, to allow sunlight to reach broad-leaved indigenous trees, such as <i>Stewartia monadelphica</i> and <i>Malus tschonoskii</i>, which are rarely found on plains, and protect these species. • In China, Brother has participated in activities to remove <i>Mikania micrantha</i>, a weed designated as one of the "100 of the World's Worst Invasive Alien Species." • In New Zealand, Brother has supported activities to protect the shore plover, an endemic species that is designated as an endangered species due to predation by alien species, etc.

Communicating Environmental Commitment

Biodiversity

Brother Group's commitment to Aichi Biodiversity Targets

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: Conservation of protected areas	At least 17% and 10% of the land and marine areas are designated as protected areas, etc. for conservation.	Companies actively promote (i) biodiversity-conscious management of green space at company-owned land and business sites that contribute to protected areas and (ii) conservation of external protected areas, in order to expand the protected areas that are important for biodiversity.	<ul style="list-style-type: none"> • 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. • 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. • 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.
Target 14: Ecosystem services	Ecosystems that offer the blessings of nature are restored and conserved.	Companies actively promote activities to conserve and restore ecosystems so that ecosystem services can be used in a sustainable manner.	<ul style="list-style-type: none"> • 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.

Communicating Environmental Commitment

Biodiversity

Brother Group's commitment to Aichi Biodiversity Targets

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 and technology improved and popularized	Relevant knowledge, science and technology are improved.	To improve knowledge, scientific basis, and technologies, companies actively promote (i) development and popularization of biodiversity monitoring technologies using information communication technologies, and (ii) data accumulation based on biodiversity monitoring, etc.	<ul style="list-style-type: none"> ·In Australia, Brother has supported a survey on the biology and ecology of manta rays (<i>Manta birostris</i>) 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. ·In Gujo, Gifu, Japan, Brother has planted seedlings of indigenous deciduous trees such as <i>Quercus serrata</i> Murray and <i>Quercus crispula</i> Blume as well as <i>Magnolia salicifolia</i> (willow-leaved 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.

Performance Data

Material Balance

Identifying the environmental impact of business operations

Overview of main environmental impact associated with the Brother Group operations

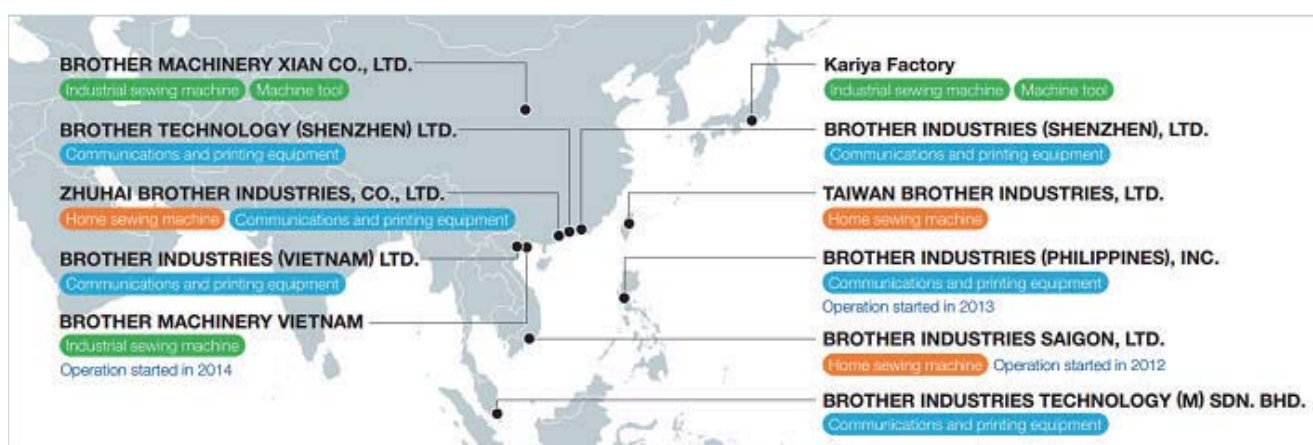
The Brother Group facilities are engaged in processing and assembly to manufacture products. The environmental impacts (including resource consumption, CO₂ emissions, and waste generated) associated with all business operations are quantitatively monitored and summarized to reduce environmental impacts.

Input of Resources, Production & Emission of Substances in FY2014 (April 1, 2014-March 31, 2015)

Resource and energy inputs in FY2014

Resource consumption				Total energy consumption		Water consumption	
Product material		Other materials (main materials)		Crude petroleum equivalent	48,489kL	Total amount of water consumption	860,941m ³
Metal	79,654t	Expanded polystyrene for packaging	3,065t	Breakdown		Clean water	787,474m ³
Plastic	73,703t	Corrugated fiberboard	31,013t	Electricity	42,789kL		
Other	35,597t	Paper	8,440t	Steam	0kL	Industrial water	11,841m ³
				LPG/LNG	272kL		
				City gas	3,944kL	Underground water	61,626m ³
				Oil, etc.	1,484kL		

Brother Group in FY2014 (main manufacturing facilities)



Performance Data

Material Balance

Identifying the environmental impact of business operations

Production & Emission of Substances in FY2014

Brother products		CO2*		Amount of waste		Water consumption	
Brother products	231,472t	CO2	77,582t-CO2	Production-related waste	10,878t	Amount of wastewater	829,205m ³
				Amount of waste recycled	10,877t	Amount of recycled water	200m ³

*: Includes Nissei Corporation, XING Inc., Brother Sales, Ltd. (excluding sales offices), and 52 sales companies outside Japan.

Calculation method

Resource and energy inputs in FY2014		
Resource consumption	Material input amount for main products shipped in FY2014	
Total energy consumption	Total amount of electricity, steam, LPG/LNG, city gas, and oil, etc. consumed at target business sites in FY2014	
	Crude petroleum equivalent	Calculated by converting electricity, oil, etc., 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 FY2014	
	Clean water	Measurement using a water meter
	Industrial water	Same as above
	Underground water	Same as above

Production and emission of substances in FY2014		
Brother products	Consumption of raw materials per product x number of products shipped in FY2014	
CO2	CO2	CO2 emissions attributed to energy consumption at target business sites in FY2014 (energy consumption x CO2 conversion factor) *: The CO2 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.
Water consumption	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 recycled water	The amount is calculated based on the results of respective manufacturing facilities.
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 FY2014
	Amount of waste recycled	Amount of production-related waste (above) recycled

Performance Data

Material Balance

Identifying the environmental impact of business operations

Environmental impact data of main facilities within the scope of disclosure

Name of site
<p>▶ Business sites in Japan [PDF/159KB] 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/2015/data_bil.pdf</p>
<p>▶ Nissei Corporation [PDF/174KB] http://download.brother.com/pub/com/en/eco/pdf/2015/data_nissei.pdf</p>
<p>▶ Mie Brother Precision Industries, Ltd. [PDF/107KB] http://download.brother.com/pub/com/en/eco/pdf/2015/data_mieb.pdf</p>
<p>▶ Brother Industries (U.K.) Ltd. [PDF/106KB] http://download.brother.com/pub/com/en/eco/pdf/2015/data_biuk.pdf</p>
<p>▶ Brother Industries (Slovakia) s.r.o. [PDF/112KB] http://download.brother.com/pub/com/en/eco/pdf/2015/data_bisk.pdf</p>
<p>▶ Taiwan Brother Industries, Ltd. [PDF/108KB] http://download.brother.com/pub/com/en/eco/pdf/2015/data_taiwanb.pdf</p>
<p>▶ Brother Industries Technology (M) Sdn. Bhd. [PDF/130KB] http://download.brother.com/pub/com/en/eco/pdf/2015/data_bitm.pdf</p>
<p>▶ Zhuhai Brother Industries, Co., Ltd. [PDF/107KB] http://download.brother.com/pub/com/en/eco/pdf/2015/data_zuhaib.pdf</p>
<p>▶ Brother Machinery Xian Co., Ltd.* [PDF/104KB] http://download.brother.com/pub/com/en/eco/pdf/2015/data_bmx.pdf</p>
<p>▶ Brother Industries (Shenzhen), Ltd. [PDF/107KB] http://download.brother.com/pub/com/en/eco/pdf/2015/data_bisz.pdf</p>
<p>▶ Brother Industries (Vietnam) Ltd. [PDF/107KB] http://download.brother.com/pub/com/en/eco/pdf/2015/data_bivn.pdf</p>
<p>▶ Brother Technology (Shenzhen) Ltd. [PDF/108KB] http://download.brother.com/pub/com/en/eco/pdf/2015/data_btssl.pdf</p>
<p>▶ Brother Industries Saigon, Ltd. [PDF/128KB] http://download.brother.com/pub/com/en/eco/pdf/2015/data_bisg.pdf</p>
<p>▶ Brother Industries (Philippines), Inc. [PDF/104KB] http://download.brother.com/pub/com/en/eco/pdf/2015/data_biph.pdf</p>
<p>▶ Brother Machinery Vietnam Co., Ltd. [PDF/102KB] http://download.brother.com/pub/com/en/eco/pdf/2015/data_bmv.pdf</p>

*: 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.

▶ Environmental impact data for before FY2011 (April 1, 2011-March 31, 2012) is available on the CSR Report PDF Download page. <http://www.brother.com/en/csr/download/index.htm>

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 2015 Mid-term Environmental Action Plan (2011-2015), which is a specific roadmap to fulfill its mission, set ambitious environmental targets to be achieved by 2015 in respective areas. In FY2014 (April 1, 2014-March 31, 2015), which is the fourth 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 FY2014

► **Brother Group 2015 Mid-term Environmental Action Plan (2011-2015)**

http://www.brother.com/en/eco/management/action_plan/index.htm

- **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	FY2012	FY2013	FY2014
Eco-conscious products				
Number of products for which Brother acquired environmental labels*1		163 models Including 30 consumable	147 models Including 28 consumables	234 models Including 24 consumables
Blue Angel		12 models	43 models	49 models
Eco Mark		64 models Including 30 consumables*2	56 models Including 28 consumables*2	56 models Including 17 consumables*2
Ten Circle Mark		35 models	9 models	12 models
Reducing environmental impact of business sites				
		Each graph, refer to page 131.		
Changes in CO ₂ emissions: On a group basis*3	Graph1	70,847t-CO ₂	75,528t-CO ₂	77,582t-CO ₂
Changes in CO ₂ emissions: Business sites in Japan		35,891t-CO ₂	36,275t-CO ₂	35,737t-CO ₂
Changes in CO ₂ emissions: Facilities outside Japan		34,955t-CO ₂	39,253t-CO ₂	41,845t-CO ₂
Water consumption	Graph2	830,368m ³	852,231m ³	860,941m ³
Waste generated	Graph3	6,200t	10,226t	10,878t
Recycle rate		99.96%	99.95%	99.98%

*1: This is the number of products that acquired Type I, Type II, and Type III labels.

*2: Excluding tape cassettes for Brother P-touch

*3: In FY2013 (April 1, 2013-March 31, 2014), a group company (Brother Industries (Philippines), Inc.) was added to the scope of aggregation in FY2012 (April 1, 2012-March 31, 2013). In FY2014 (April 1, 2014-March 31, 2015), a group company (Brother Machinery Vietnam Co., Ltd.) was added to the scope of aggregation in FY2013.

Performance Data

In-depth Data

Targets and accomplishments in FY2014

Priority items	FY2012	FY2013	FY2014
Complying with laws, regulations and social trends			
Number of chemical substances (groups) subject to investigation in green procurement	171 substances (groups)	185 substances (groups)	196 substances (groups)
Number of requests made to conduct investigations to comply with the REACH Regulation in green procurement	More than 80,000	More than 82,000	More than 85,000
Number of fluorescent x-ray measurements performed to comply with EU RoHS	More than 95,000	More than 100,000	More than 120,000
Environmental communication			
Number of facilities that have introduced the Brother eco point program	54 facilities	43 countries and regions*	44 countries and regions
Number of environmental and social contribution activities in which employees were involved	32 activities	More than 90	More than 100
Cumulative total number of employees who participated in the Brother eco point program	14,776 persons	21,440 persons	25,908 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)
http://www.brother.com/en/eco/facility/iso_14001/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.

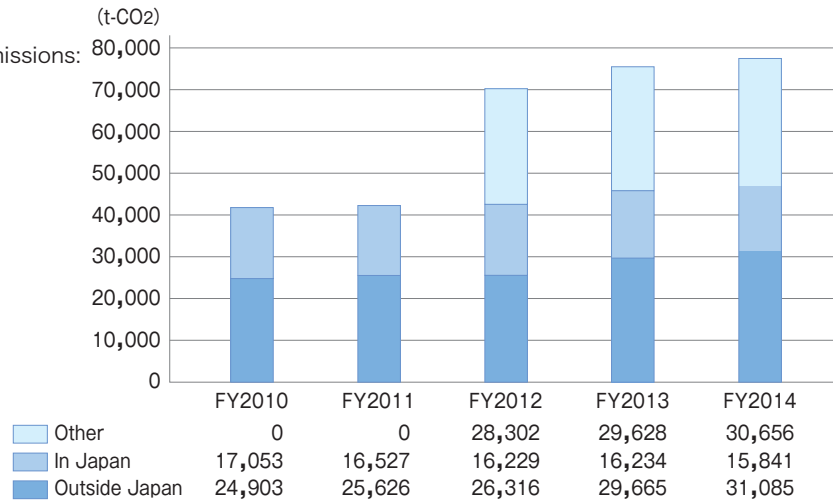
► In-depth data for before FY2011 (April 1, 2011-March 31, 2012) is available on the [CSR Report PDF Download](http://www.brother.com/en/csr/download/index.htm) page.
<http://www.brother.com/en/csr/download/index.htm>

Performance Data

In-depth Data

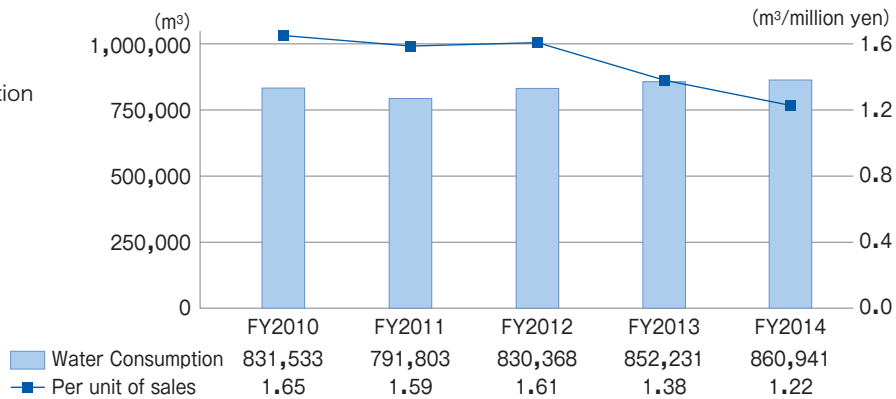
■ Graph1

Changes in CO2 emissions:
On a group basis



■ Graph2

Water consumption



■ Graph3

Waste generated
Recycle rate

