

Environmental Accounting (Detailed Data: FY2013-FY2017)

Environmental Conservation Effects

Content of Environmental Conservation Effects		Classification of Index to Measure Environmental Conservation Effects		In Japan					Outside Japan				
				FY2013	FY2014	FY2015	FY2016	FY2017	FY2013	FY2014	FY2015	FY2016	FY2017
Effects resulting from business area cost	Effects related to resource input into business operations	Total energy input (kL: converted into crude oil quantity)	10,715	10,483	10,116	10,231	10,929	17,051	18,838	18,820	23,515	26,408	
		Water input (m ³)	104,890	101,060	93,989	87,772	88,322	612,757	663,961	698,704	703,515	720,417	
	Effects related to environmental impact and waste released from business operations	Release into the atmosphere from energy use	CO ₂ (t-CO ₂ /year)	16,033	15,659	15,117	22,298	23,111 ¹⁾	28,034	31,085	30,993	55,741	55,738 ¹⁾
			NO _x (kg/year)	2,031	2,046	2,020	2,155	2,404	3,329	3,603	2,894	5,276	5,540
			SO _x (kg/year)	8	8	8	8	11	81	88	72	123	125
Generation of waste	Amount of waste generation (t)	1,937	2,302	1,998	1,702	1,772	4,362	4,851	5,766 ²⁾	6,105	7,172		
	Landfill waste (t)	0	0	0	0	0	0	5	2	1	121	121	

¹⁾ In FY2016, the CO₂ emission factors were changed from the values in accordance with the Act on Promotion of Global Warming Countermeasures to the values based on the international standards.

The calculated values for FY2017 using the emission factors of the Act were 16,318 in Japan and 39,659 outside Japan.

²⁾ For Brother Industries (Philippines), Inc., some wastes were found to have been omitted from the scope of aggregation in FY2015. Thus, the amount of waste generation for FY2015 has been updated.

Economic Effects Derived from Environmental Conservation Measures

(Unit: millions of Yen)

Content of Economic Effects		In Japan					Outside Japan				
		FY2013	FY2014	FY2015	FY2016	FY2017	FY2013	FY2014	FY2015	FY2016	FY2017
Income	Operating income from recycling of waste generated from main business operations	6.8	6.9	2.9	2.5	5.5	41.5	55.6	81.3	46.6	60.2
Cost reduction	Reduction in energy cost by energy-saving	1.4	3.0	8.2	18.0	17.5	26.3	25.3	12.8	20.6	80.2
	Reduction in waste treatment cost due to resource-saving and recycling	29.3	31.7	27.6	32.9	32.5	31.9	11.3	29.7	24.8	19.1
Other	Publicity effects, such as newspaper reporting, calculated in terms of advertising expenses	3.7	2.3	3.1	1.4	0.8	3.1	17.2	13.9	0.4	0.4
Total		41.2	43.9	41.8	54.8	56.3	102.9	109.4	137.7	92.4	159.9

Environmental Conservation Costs

(Unit: millions of Yen)

Classification of Environmental Conservation Costs		Details of Main Implementation and the Effects		In Japan					Outside Japan				
				Investment Amount					Expense Amount				
				FY2013	FY2014	FY2015	FY2016	FY2017	FY2013	FY2014	FY2015	FY2016	FY2017
1. Business area costs: Costs for reducing direct environmental impacts occurring within the facility area				113	124	141	332	189	167	168	208	342	288
Breakdown:	(1) Pollution prevention cost	Pollution prevention measures (including air, water, vibration and noise)	3	4	24	2	16	29	20	21	25	38	
	(2) Global environmental conservation cost	Global warming prevention (energy-saving) measures	109	120	117	329	171	61	63	83	160	125	
	(3) Resource circulation cost	Recycling and reduction in waste generation	1	0	0	1	2	77	85	104	157	125	
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	5	0	0	0	1	99	95	89	60	71	
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	98	155	33	101	143	323	358	329	349	306	
4. R&D cost: R&D costs for reducing environmental impact		Development of eco-conscious products and technologies such as energy conservation and resource conservation designs; implementation of product environmental assessments; design improvement	2	58	10	12	10	132	145	152	149	135	
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	11	0	0	0	3	12	13	12	10	13	
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	0	3	3	4	3	2	
Total			229	337	184	445	346	737	782	794	913	815	

(Unit: millions of Yen)

Classification		Details of Main Implementation and the Effects		Outside Japan					Expense Amount				
				Investment Amount					Expense Amount				
				FY2013	FY2014	FY2015	FY2016	FY2017	FY2013	FY2014	FY2015	FY2016	FY2017
1. Business area costs: Costs for reducing direct environmental impacts occurring within the facility area				169	137	115	42	37	70	165	237	119	162
Breakdown:	(1) Pollution prevention cost	Pollution prevention measures (including air, water, vibration and noise)	0	0	49	6	8	34	84	86	66	96	
	(2) Global environmental conservation cost	Global warming prevention (energy-saving) measures	169	137	66	36	28	5	25	92	15	14	
	(3) Resource circulation cost	Recycling and reduction in waste generation	0	0	0	0	1	30	56	59	38	52	
2. Upstream/downstream cost: Costs incurred to reduce environmental impact when procuring parts and materials and after selling products		Green procurement activities; collection and recycling of used products/consumables	0	0	0	0	31	1	2	15	0	0	
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	0	0	0	0	0	42	55	35	31	32	
4. R&D cost: R&D costs for reducing environmental impact		Development of eco-conscious products and technologies such as energy conservation and resource conservation designs; implementation of product environmental assessments; design improvement	0	0	0	0	0	0	0	4	5	6	
5. Social activity cost: Costs of environmental conservation that is not directly linked with corporate activities		Support for environmental conservation groups and organizations; support for environmental activities by local citizens; information services	0	0	0	0	0	3	11	4	3	10	
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	0	0	0	0	0	0	
Total			169	137	115	42	68	116	233	295	158	210	

Scope of aggregation

Fiscal year	Target Period	Name of Site	Outside Japan
FY2013	April 1, 2013–March 31, 2014	In Japan	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., ²⁾ Brother Industries (Vietnam) Ltd., Brother Industries Saigon, Ltd.
		Head office, Mizuho Manufacturing Facility, Hoshizaki Manufacturing Facility, Minato Manufacturing Facility, ¹⁾ Momozono Manufacturing Facility, Kariya Manufacturing Facility, Research & Development Center, Logistics Center ²⁾	
FY2014	April 1, 2014–March 31, 2015	In Japan	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., ²⁾ Brother Industries (Vietnam) Ltd., Brother Industries Saigon, Ltd., Brother Machinery Vietnam Co., Ltd.
		Head office, Mizuho Manufacturing Facility, Hoshizaki Manufacturing Facility, Minato Manufacturing Facility, ¹⁾ Momozono Manufacturing Facility, Kariya Manufacturing Facility, Research & Development Center, Logistics Center ²⁾	
FY2015	April 1, 2015–March 31, 2016	In Japan	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., ²⁾ Brother Industries (Vietnam) Ltd., Brother Industries Saigon, Ltd., Brother Machinery Vietnam Co., Ltd., Brother Industries (Philippines), Inc.
		Head office, Mizuho Manufacturing Facility, Hoshizaki Manufacturing Facility, Minato Manufacturing Facility, ¹⁾ Momozono Manufacturing Facility, Kariya Manufacturing Facility, Research & Development Center, Logistics Center ²⁾	
FY2016	April 1, 2016–March 31, 2017	In Japan	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., ³⁾ Brother Technology (Shenzhen) Ltd., ³⁾ Brother Industries Technology (M) Sdn. Bhd., ^{2,4)} Brother Industries (Vietnam) Ltd., Brother Industries Saigon, Ltd., Brother Machinery Vietnam Co., Ltd., Brother Industries (Philippines), Inc.
		Head office, Mizuho Manufacturing Facility, Hoshizaki Manufacturing Facility, Minato Manufacturing Facility, ¹⁾ Momozono Manufacturing Facility, Kariya Manufacturing Facility, Research & Development Center, Logistics Center ²⁾	
FY2017	April 1, 2017–March 31, 2018	In Japan	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 Technology (Shenzhen) Ltd., ³⁾ Brother Industries (Vietnam) Ltd., Brother Industries Saigon, Ltd., Brother Machinery Vietnam Co., Ltd., Brother Industries (Philippines), Inc.
		Head office, Mizuho Manufacturing Facility, Hoshizaki Manufacturing Facility, Minato Manufacturing Facility, ¹⁾ Momozono Manufacturing Facility, Kariya Manufacturing Facility, Research & Development Center, Logistics Center ²⁾	

¹⁾ The Minato Manufacturing Facility stopped production on September 30, 2017.

²⁾ For Logistics Center and Brother Industries Technology (M) Sdn. Bhd. in FY2016, only "Environmental Conservation Effects" was aggregated.

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

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