



Environmental Action Plan and Performance

Murata has formulated its strategy for reducing its impact on the environment in stages in its 4th Environmental Action Plan, with 2010 as the target year. The Group carries out annual action plans to facilitate achievement of the 2010 goals.

Performance for Fiscal 2007

Attained 28 of 30 Targets

In fiscal 2007, we expanded our goals to include international locations as well as our domestic sites. We also increased the number of objectives by 10 from fiscal 2006 to 30 items.

The result of that strategy was progress as planned, although we have not yet reached our targets for overseas waste recycling rate improvements or for domestic plant VOC atmospheric emission reductions.

We succeeded in reducing VOC atmospheric emissions 1.2% compared with the previous year by revising and improving process conditions; however, with the rapid expansion in production volume, we were unable to reach our goal of a maximum of fiscal 2000 levels. We plan to continue with emission reductions by implementing new practices in fiscal 2008.

Production expansion at some of our main overseas plants led to an increased volume of difficult-to-recycle waste emissions. We therefore did not reach our goal of a minimum of a 70% recycling rate. We plan to intensify efforts by building on our success at domestic plants to meet our goals in fiscal 2008.

Future Targets and Plans

Introduction of the Eco-Factory System and Other New Goals

The Group is continuing to work toward achieving the goals of the 4th Environmental Action Plan in fiscal 2010. In fiscal 2008, we began efforts on new objectives, such as the implementation of the eco-factory system and Murata Forest Conservation activities.

In addition, we are already actively addressing reductions in CO₂ emissions and other issues taking center stage in the coming years, with a view to fiscal 2010 and beyond.



About Comparisons per Unit of Net Production

The emissions ratio is a value that indicates the amount of environmental impact emitted in the process of producing a given product quantity (monetary value). This monetary value is calculated by adjusting net production for deflation using the domestic corporate goods price index (for electronic components and devices) announced by the Bank of Japan.

4th Environmental Action Plan: Targets and Results for Fiscal 2007 and Plans for Fiscal 2008

Item		Targets for FY2007
Environmental Management	Enhance environmental management system (EMS)	① Complete EMS integration in Japan
		② Hold environmental management officer meetings in Japan, China and ASEAN countries (To be held regularly thereafter)
		③ Commence operation of environmental cost management systems overseas
Supplying environmentally friendly products	Environmentally conscious design	① Continue product assessments
		② Investigate methods to compile LCA data efficiently from each site's environmental data
	Reducing use of environmentally hazardous substances in products	① Revise list of RoHS exemptions → Clarify reductions and full phaseouts and set targets
		② Polyvinyl chloride (PVC) → Establish investigative subcommittee to study countermeasures (Clarify substances to be reduced/Establish priorities for evaluations of alternatives)
		③ Brominated flame retardant → Establish investigative subcommittee to study countermeasures (Clarify substances to be reduced and set targets)
Managing information related to environmentally hazardous chemical substances	Develop product database (for ASC/modules)	
Reducing use of packaging materials and conserving	① Reduce amount of taped packaging used for chip monolithic ceramic capacitors and chip ferrite beads per unit of production amount at domestic sites by at least 42% relative to FY2000	
	② Reduce CO ₂ emissions from distribution per unit of net production in Japan by at least 30% relative to FY2000	
	Green procurement	Continue to promote greenness surveys for compliance with legal regulations in Japan and overseas, and maintain a green procurement ratio of 100% for production materials
Eco-Friendly Business Activities	Global warming prevention	① Reduce CO ₂ emissions per unit of net production † in Japan by at least 23.5% relative to FY1990
		② Assess the status of CO ₂ emissions at overseas manufacturing plants
		③ Convert 55% of the domestic Company fleet to low-pollution vehicles
	Conserve resources and "Reduce, Reuse, Recycle" waste	① Reduce total waste emissions per unit of net production in Japan by at least 40% relative to FY2000
		② Assess the status of waste generation at overseas manufacturing plants
		③ Clarify definition of "zero emissions" at overseas manufacturing plants and attain a waste recycling rate of at least 70% using this definition
		④ Reduce water consumption per unit of net production in Japan by at least 40% relative to FY2000
	Managing and reducing environmentally hazardous chemical substances used in production processes	① Reduce atmospheric emissions of VOCs in Japan to a maximum of FY2000 levels
		② Reduce atmospheric emissions of PFCs in Japan by at least 38% relative to FY2002
		③ Investigate reductions of PRTR-designated substance emissions (Establish reduction targets for FY2010)
Risk management	① Continue remediation of soil and groundwater pollution building on past experiences and maintain a system with minimal environmental risk	
	② Reduce soil pollution and other environmental risks when conducting work that involves landscaping	
Environmental communications	① Continue to issue annual and site-specific CSR reports	
	② Hold environmental roundtable discussions (tentative name) with local university students	
Social activities	Community / social contribution activities	① Inaugurate a Murata Park (tentative name) Preparation Committee and determine scope
		② Continue implementing environmental education programs for elementary and junior high school children, participating in environmental fairs and other related events and regional cleaning activities, and supporting NPO/NGOs
		③ Continue developments under the Mid-Term Green Plan
		④ Gain SEGES certification (Yokaichi Technical Center and Yasu and Yokaichi Plants)



	Results for FY2007	Achievement	Plans for FY2008
	Completed EMS integration in Japan. Improvements will continue to be made.	Yes	• Implement Eco-Factory evaluations for domestic plants
	Held environmental management officer meetings in Japan and China. ASEAN meeting will be held in July 2008.	Yes	
	Operation will begin in FY2009 with commencement of operation of the new internal accounting system for reasons of coordination.	—	
	Moved ahead with eco-friendly design and development, including product miniaturization and low power consumption as well as energy-saving manufacturing processes	Yes	<ul style="list-style-type: none"> • Continued product assessments • Initiated life-cycle evaluation method training for developers • Comply with Europe's EuP Directive • Calculate products' environmental impact of business activities and prepare the groundwork for environmental impact reduction activities based on the calculated values
	Product-based environmental impact data has been compiled for some products from plant environmental data.	Yes	
	Reduction targets for FY2010 were established as follows. <ul style="list-style-type: none"> • Actual volume used: 20% reduction relative to FY2007 • Alternative products (technical development): Development of 50% relative to FY2007 complete 	Yes	
	Reduction targets for FY2010 were established as follows. <ul style="list-style-type: none"> • Actual volume used: 5% reduction relative to FY2007 • Alternative products (technical development): Development of 50% relative to FY2007 complete 	Yes	<ul style="list-style-type: none"> • Revise list of RoHS exemptions → Conduct development and evaluations of alternative products • Polyvinyl chloride (PVC) → Set reduction targets and conduct development and evaluations of alternative products in order of their priorities • Brominated flame retardant → Conduct development and evaluations of alternative products
	Reduction targets for FY2010 were established as follows. <ul style="list-style-type: none"> • Actual volume used: 4% reduction relative to FY2006 • Alternative products (technical development): Development of 50% relative to FY 2006 complete 	Yes	
	We decided against developing the current product database (for EI) for ASC/modules, and instead accelerated creation of an integrated chemical substance management database and set the conditions. Specifically, we linked the current chemical substance management database and the purchased molded products database to create a product database for not only EI but also ASC/modules.	Yes	• Develop a system for an integrated chemical substance management database
	Amount of taped packaging used for chip monolithic ceramic capacitors and chip ferrite beads per unit of production amount at domestic sites reduced by 43% relative to FY2000	Yes	<ul style="list-style-type: none"> • Reduce amount of taped packaging used for chip monolithic ceramic capacitors and chip ferrite beads per unit of production amount at domestic sites by at least 45% relative to FY2000 • Reduce CO₂ emissions from distribution per unit of net production in Japan by at least 36% relative to FY2000
	CO ₂ emissions from physical distribution per unit of net production reduced 34% compared with FY2000	Yes	
	Maintained a 100% green procurement rate	Yes	• Continue to promote greenness surveys for compliance with legal regulations in Japan and overseas, and maintain a green procurement ratio of 100% for production materials
	CO ₂ emissions per unit of net production reduced 49% compared with FY1990	Yes	<ul style="list-style-type: none"> • Reduce CO₂ emissions per unit of net production in Japan by at least 35% relative to FY1990 • Set total volume reduction targets for CO₂ emissions at overseas manufacturing plants • Maintain 93% of the domestic Company fleet as low-pollution vehicles
	Assessed the status of CO ₂ emissions at overseas manufacturing plants	Yes	
	Converted 93% of the domestic Company fleet to low-pollution vehicles	Yes	
	Total waste emissions per unit of net production reduced 42% compared with FY2000	Yes	<ul style="list-style-type: none"> • Reduce total waste emissions per unit of net production in Japan by at least 45% relative to FY2000 • Formulate plans to reduce waste emissions volume at overseas plants • Attain a waste recycling rate of at least 80% at overseas plants • Reduce water consumption per unit of production in Japan by at least 45% relative to FY2000
	Assessed the status of waste generation at overseas plants	Yes	
	"Zero emissions" was defined as the Japanese standard for overseas plants as well. The waste recycling rate at overseas plants by this definition reached 68%.	No	
	Water consumption per unit of net production reduced 45% compared with FY2000	Yes	<ul style="list-style-type: none"> • Formulate policies to reduce atmospheric emission volume of VOCs by at least 20% relative to FY2000 • Reduce atmospheric emissions of PFCs in Japan by at least 45% relative to FY2002
	Emissions increased 8.8% relative to FY2000. The target was not yet reached, but emissions were reduced 1.2% compared with the previous fiscal year.	No	
	Reduced emissions by 38% relative to FY2002	Yes	
	When investigating reduction of PRTR-designated substances, we discovered that many of these substances used at Murata are also VOCs. We therefore decided to continue reducing VOCs rather than set separate targets for PRTR-designated substances.	Yes	<ul style="list-style-type: none"> • Continue remediation of soil and groundwater pollution building on past experiences and maintain a system with minimal environmental risk • Reduce soil pollution and other environmental risks when conducting work that involves landscaping
	Remediation projects implemented at relevant plants and progressing as planned	Yes	
	Conducted soil surveys at relevant construction sites and processed them appropriately	Yes	
	Issued 2007 annual CSR and site-specific CSR reports	Yes	• Continue to issue annual and site-specific CSR reports
	Held environmental roundtable discussions with local university students	Yes	• Continue to hold environmental roundtable discussions with local university students
	We signed agreements with related sites (Kyoto Model Forest Association, Kameoka City, Kyoto Prefecture) and land use right memorandums with local land owners as part of our forest conservation activities. We also worked with experts to investigate forest maintenance methods and developed an action plan for forest conservation activities to begin in FY2008.	Yes	<ul style="list-style-type: none"> • Begin Murata Forest conservation activities • Continue implementing environmental education programs for elementary and junior high school children, participating in environmental fairs and other related events and regional cleaning activities, and supporting NPO/NGOs • Continue developments under the Mid-Term Greening Plan • Gain SEGES certification (Izumo Murata, Toyama Murata, Okayama Murata, Fukui Murata, Kanazawa Murata, and Komatsu Murata)
	Murata Group held 56 environmental education programs for elementary and junior high school children (3,550 persons) and continued to participate in regional environmental events and to support NPO/NGOs.	Yes	
	Continued developments under the Mid-Term Greening Plan	Yes	
	Gained SEGES certification for the Yokohama Technical Center and the Yasu and Yokaichi Plants	Yes	