

Environmental Management and Environmental Accounting

Courses in Environmental Education and Training in Japan (excluding general environmental courses)

Organizer	No.	Course name	Target	Participants			
				FY2007	FY2008	FY2009	FY2010
Head Office	1	Advanced environmental education (held every two years)	Environmental specialists (Komatsu and affiliates)	19	—	16	—
	2	Overview of the ISO14000 series	Administrators (Komatsu, affiliates, and business associates)	36	32	55	83
	3	Training of internal auditors / Refresher courses	Environmental auditors (Komatsu, affiliates, and business associates)	51	41	40	273
	4	Development and manufacturing (introductory)	Development and manufacturing staff (for second-year employees)	97	139	182	112
	5	Environmental training for manufacturing engineers	Assistant foremen/ foremen/ manufacturing engineers/ students of Komatsu Institute of Technology	50	66	91	114
	6	Training new employees	New Employees (Komatsu and affiliates)	186	227	115	200
	7	Lectures on the environment, experience-oriented education	Komatsu Group managers and employees	308	1,329	398	1,002
	8	Education for enhanced environmental understanding (e-Learning)	Komatsu Group managers	—	—	—	—
	9	Education to refresh environmental understanding (e-Learning)	Komatsu Group managers and employees	191	164	237	194
Divisions overseeing environmental management at plants	1	Education in the basics of auditing	Managers and employees	371	153	98	99
	2	Overview of the ISO14000 series	Managers and employees	2,138	302	836	468
	3	Training of internal auditors	Environmental auditors	30	59	7	26
	4	Training new employees	New Employees	666	675	1,116	1,240
	5	Regulatory education and personnel exchange	Employees	788	1,276	517	448
	6	Specialist training	Environmental conservation practitioners (persons involved in regulatory affairs, etc.)	113	1,776	2,466	952

In addition to the education and training courses listed above, Komatsu also held courses dealing with environmental issues intended for sales agents.

Number of Persons Having Environment-related Certificate

Certificate name	Number of persons with certificate*			
	FY2007	FY2008	FY2009	FY2010
Pollution control administrators	192 (51)	195 (49)	177 (39)	178 (33)
Energy administrators	39 (14)	40 (13)	48 (13)	42 (10)
Environmental management system auditors	8	8	7	6

Effects on Society during the Product Use Stage*

Environmental impact reduction effects	Tangible benefits
<ul style="list-style-type: none"> ● Environmental impact reduction resulting from on-site recycling methods ● Environmental impact reduction resulting from product operation ● Waste components reduction resulting from "Reman" business 	<ul style="list-style-type: none"> ● Reduction of expenses for processing waste materials ● Savings in operating and maintenance costs ● Reduction of repair costs

* Concerning the effects on society derived from product use by customers, the major items of qualitative information are shown here as a reference.

Environmental Costs (Investments and expenses)

Komatsu and Komatsu Group manufacturing facilities in Japan

Category	Investment			Expenses		
	FY2009	FY2010	Contents	FY2009	FY2010	Contents
	Investment* (millions of yen)	Investment* (millions of yen)		Expenses* (millions of yen)	Expenses* (millions of yen)	
(1) Business area cost	1,228	1,544		2,671	3,692	
1. Pollution prevention cost	871	1,107	● Investment for installation and conversion of pollution mitigation/prevention facilities (installation of effluent processing facilities, conversion of painting booths, etc.)	700	1,191	● Cost of maintaining equipment for mitigation/prevention of air and water pollution and for noise and vibration prevention (labor and depreciation costs)
2. Global environmental conservation cost	337	291	● Investment for implementing energy conservation measures (installation of new ventilation systems, etc.)	866	1,162	● Cost of maintaining energy conservation facilities, such as cogeneration systems (labor and depreciation costs)
3. Resource circulation cost	20	146	● Investment for reducing the volume of waste materials (conversion of recycling facilities, introduction of equipment for separating waste, etc.)	1,105	1,339	● Waste material processing cost
(2) Upstream/downstream cost	0	1		218	259	● Reduction of the environmental impact of components, etc. shipped outside Japan ● Reduction of the environmental impact of mass-production units
(3) Administration cost	2	23	● Investment for beautifying manufacturing sites	702	929	● Cost of maintaining environmental management systems ● Cost of creating green spaces and beautifying manufacturing sites
(4) R&D cost	295	172	● Investment in research facilities for reduction of environmental impact	12,039	14,128	● Cost of R&D activities to reduce the environmental impact of products ● Cost of R&D activities to develop environmentally-friendly construction equipment
(5) Social activity cost	0	0		11	13	
(6) Environmental remediation cost	0	0		746	418	● Cost of conducting surveys and remedial countermeasures related to soil and groundwater contamination
Total	1,526	1,740		16,387	19,440	

* All figures are rounded off to the nearest million yen.

Environmental Effects

Komatsu and Komatsu Group manufacturing facilities in Japan

Environmental impact reduction effects			Economic benefits			
Items of environmental impact	Reduction amount (t/year)	Rate of year-on-year changes (%)	Tangible benefits		Avoidance benefits of environmental risks (see Note below)	Contribution to profits (see Note below)
			Type	Monetary value* (millions of yen)	Major activities	
CO ₂ emissions	76,791	40.4	Energy conservation	332	● Energy conversion, etc.	<ul style="list-style-type: none"> ● There were no accidents or pollution in Japan during FY2010 that led to violations of the law. ● No litigation costs were required in Japan during FY2010.
Water consumption	680,098	12.5	Resource conservation	1		
			Waste materials reduction	793	● Promotion of recycling through thoroughgoing sorting	
			Gain on sale of valuables	473	● Reuse of furnace slag for roadbed materials	
Waste materials generation	5,501	38.9	Other	3		
			Total	1,602		

* Figures are rounded off to the nearest million yen.

Note: Komatsu used statements instead of numeral figures to describe the "Avoidance benefits of environmental risks" and the "Contribution to profits." The company will further develop concepts and ways to understand effects in these categories. The sales amounts of businesses for content presented in "Contributions to profits" in FY2010 are as follows:

- Mobile recycling equipment business: 1.0 billion yen
- Engine business: 120.8 billion yen (Total for intra-Group sales from the Engine Business Division)
- "Reman" business: 35.3 billion yen (Worldwide Reman business sales from April 2010 to March 2011)