

Environmental Action Plan and Results for FY2006

Komatsu has formulated an Environmental Action Plan (implementation policies) in each field for the practical implementation of the Komatsu Earth Environment Charter. Komatsu specifies its operational targets every fiscal year and keeps checking yearly developments, facilitating establishment of a strong base to implement the Action Plan.

Environmental Management

Implementation policies	Objectives for FY2006	Results (Asterisks indicate results for FY2006)	Medium- and long-term objectives	Further information
1. Implement Environmental Action Plan	Draw up and promote the Plan	*Conducted internal environmental auditing *Held regional (Europe, China) Environmental Affairs Meeting and conducted environmental inspections	•Strengthen sales- and service-related environmental activities •Strengthen environmental activities outside Japan	P. 20 P. 21
2. Environmental education and training: Implement the Plan	Draw up and promote the Plan	*Held 13 lectures for over 8,000 attendees	Continue activities in Japan and extend activities to facilities outside Japan	P. 21
3. Environmental communication: Publish an environmental & social report	Formulate and publish the communication plan	*Published the report in July 2007 with enhanced coverage of environmental and social aspects	Reinforce quality of content; release report earlier than in previous years	—
4. Environmental accounting: Manage operations using standard indices for assessing environmental impact	Establish control with a standard set of indices in Komatsu Group facilities	*Compared the development of Komatsu's four manufacturing facilities by applying standard indices for assessing environmental impact	Expand horizontally to Group manufacturing facilities	P. 22-23

Research and Development

Implementation policies	Objectives for FY2006	Results (Asterisks indicate results for FY2006)	Medium- and long-term objectives	Further information
1. Reduce the environmental impact of construction equipment •Develop lower-emitting diesel engines •Proactively meet exhaust emission standards	Develop engine compliant with standards	*Met Tier 3 emission standards, effective 2006	Develop engine compliant with Tier 4 emission standards in the U.S., Europe, and Japan, effective 2011	P. 24-27
•Develop environment-friendly construction and mining equipment (GALEO series)	Develop wheel loader Develop hydraulic excavator Develop bulldozer	*Developed WA500/600-6 large-size wheel loader, achieving an improvement of over 20% in work capacity per unit of fuel *Developed PC128/138US-8 short tail swing hydraulic excavator, which is environment-friendly through compliance with emission and noise standards	Expand number of models compliant with Tier 3 emission standards, effective 2006	P. 25
•Meet noise and vibration standards	Take measures prior to enforcement of standards	EU noise standards: Had met the more stringent noise control directive that went into effect in 2002	Comply with EU Stage II standards on noise emission levels and EU standards on operators, effective 2006	—
•Meet medium-term targets for development of environmental technology	Promote through GALEO series	*Reduction of substances of environmental concern: Worked to substitute for chromium (VI) and reduce use of chloroprene rubber *Started preparations for new EU regulation on chemical substances (REACH)	Attain medium-term targets for development of environmental technology	P. 24
2. Reduce the environmental impact of industrial machinery •Address environmental issues from forge rolling machines	Develop large AC servo press	*Developed large 3000 ton AC servo TR press, realizing improvements in productivity (1.2 times) and substantial reductions in electrical energy used and noise (~20dB)	Expand number of servo press models	P. 26
3. Reduce the environmental impact of industrial vehicles •Develop environment-friendly forklift	Develop forklift	*Developed electric hybrid forklift trucks, achieving energy conservation of up to 20%	Expand number of electric hybrid forklift truck models	P. 26
4. Provide solutions for customers' environmental activities •Promote on-site recycling using mobile crushers/recyclers	Expand scope of application and promote social recognition of on-site recycling engineering	*Promoted on-site recycling of construction residuals at point of generation by mobile crushers/recyclers	Expand range of machines in the mobile crusher/recycler series; expand areas of applicability	P. 27
5. Promote reuse and recycling •Promote Reman business	Expand and promote Reman business	*Promoted Reman business (remanufacturing of used components [parts]) on a global basis	Promote reuse and recycling through further improvements in recycling-related technology for parts	P. 27

Social Action Plan and Results for FY2006

Implementation policies (indicates objectives for FY2006)	Results (Asterisks indicate results for FY2006)	Medium- and long-term objectives	Further information
1. Communicate with company stakeholders Establish relationship of trust through the disclosure of appropriate information in a timely manner	*Convened shareholders' meetings in Oyama and Sendai, Japan *Provided more substantial information on Komatsu IR web page	Further implement these activities	P. 36-37
2. Employee affairs Develop human resources and create an organization with dynamism	*Introduced an Active Aging Plan, a post-retirement career support program *Strengthened systematic fostering of engineers through Meister advanced training system and newly-founded Komatsu Training Institute *Held management seminars for subsidiaries outside Japan	Extend The KOMATSU Way and TQM education company-wide; develop human resources globally	P. 38-39
3. Health and safety Ensure a safe work environment that enables peace of mind and improve maintenance of the health of employees Introduce Occupational Safety and Health Management Systems (OSHMSs) Provide more substantial activities to manage health, including mental health	*Conducted activities for introducing OSHMSs in all Komatsu plants *Launched trial of computer-based diagnosis for prevention of lifestyle-related diseases and conducted stress diagnosis for self-provided mental health care	Eradicate work-related accidents through participation of all employees in safety activities and firm establishment of OSHMSs Improve maintenance of the mental and physical health of employees, including their family members, through health-related education and awareness activities	P. 40
Create management systems for occupational safety and health at Komatsu sales agencies and rental companies in Japan Conduct follow-up activities to enhance the quality of activities	*Provided guidance regarding implementation of the system from persons at Komatsu overseeing occupational health and safety	Conduct continuous follow-up activities	
4. Social contributions Promote social contribution activities as a member of the local community	*Provided assistance to areas affected by large-scale natural disasters (two instances) Promoted ongoing activities Formulated guidelines for the provision of disaster recovery assistance	Further implement these activities	P. 41-43

Manufacturing

Implementation policies	Objectives for FY2006	Results (Asterisks indicate results for FY2006)	Medium- and long-term objectives	Further information
1. Environmental management system**: Encourage Komatsu Group manufacturing facilities both in and outside of Japan to acquire ISO14001 certification by the end of FY2005	Acquire certification at one facility outside Japan Acquire certification at new plants in Japan	*No newly-acquired certification *Had new plants undergo inspection (certification acquired in May 2007) while four other plants at Komatsu had surveillance audits conducted	Acquire integrated certification for the entire Komatsu company	P. 20
2. Mitigation of climate change (energy conservation) •Make a 25% improvement by FY2010 in the volume of CO ₂ emissions per unit of manufacturing value from the level of achievement in FY1990 at Komatsu manufacturing facilities •Make a 13% improvement by FY2010 in the volume of CO ₂ emissions per unit of manufacturing value from the level of achievement in FY2000 at the Komatsu Group's manufacturing facilities in Japan	Improve 1.5% year on year	*Improved 27.3% from the level of achievement in FY1990; attained a 12.5% improvement over the previous year	Achieve by FY2010	P. 28-29
		*Improved 22.4% from the level of achievement in FY2000; attained a 13.1% improvement over the previous year	Achieve by FY2010	P. 28-29
3. Effective utilization of resources •Maintain or make further progress on attainment of zero emissions at the Komatsu Group's manufacturing facilities in Japan	Attain recycling ratio of 99% or more	*Attained recycling ratio of 99.6% across the entire Komatsu Group	Maintain zero emissions; attain zero emissions at the Komatsu Group manufacturing facilities outside Japan	P. 29
•Achieve a reduction of more than 15% by FY2010 in the volume of waste generated per unit of manufacturing value from the level of achievement in FY2005 at the Komatsu Group's manufacturing facilities in Japan	Improve 3% year on year	*Accomplished a 0.1% reduction in the volume of waste generated per unit of manufacturing value from the level of achievement in FY2005	Achieve by FY2010	P. 29
•Achieve a reduction of more than 10% by FY2010 in the volume of water used per unit of manufacturing value from the level of achievement in FY2005 at the Komatsu Group's manufacturing facilities in Japan	Improve 2% year on year	*Accomplished a 11.3% reduction in the volume of water used per unit of manufacturing value from the level of achievement in FY2005	Achieve by FY2010	P. 29
4. Environmental risk management •Implement voluntary reductions on the release of chemical substances Substitute reductions in the volume of VOCs released, which accounts for the majority of the volume released •Implement voluntary reductions on VOCs Achieve a reduction of more than 20% and 50% by FY2008 and FY2010, respectively, in the volume of VOCs released per unit of manufacturing value from the level of achievement in FY2005	Firmly ensure the control of chemical substances and reduce volume of released chemical substances	*Volume of VOCs released per unit of manufacturing value increased 2.4% from the level of achievement in FY2005	Achieve by FY2008 and FY2010	P. 30-31
•Implement permanent measures required to renovate underground tanks in operation for 20 or more years by the end of FY2001 at the Komatsu Group's manufacturing facilities in Japan	No tanks requiring renovations	*All 142 tanks renovated in FY2004	Address sequentially all underground tanks in operation for 20 or more years	P. 30

**Komatsu is responsible for setting overall direction for Komatsu Group companies regarding environmental management. Each subsidiary is responsible for the implementation of related policies and measures.

Procurement and Logistics

Implementation policies	Objectives for FY2006	Results (Asterisks indicate results for FY2006)	Medium- and long-term objectives	Further information
1. Green procurement •Promote improvements at suppliers through the establishment of environmental management systems and by specifying matters that require environmental consideration	Conduct support and awareness-raising activities for the establishment of environmental management systems at suppliers	*Established Midori-kai Environment Committee for partner companies (58 companies participating) to support activities to introduce environmental management systems	Have all suppliers acquire environmental management system certification by FY2008	P. 32
2. Environmental conservation in logistics •Develop and commercialize integrated Information Clearing House (ICH) system in heavy material logistics in Japan beyond individual corporate frameworks	Fully implement integrated transport reform in Japan	*Attained a 90% truck loading ratio (objective for FY2006 was 85%) *Attained a 78% trailer loading ratio (objective for FY2006 was 75%)	Include as priority activities and promote the improvement of the loading ratio during transport and the increase in size of transport containers, both of which are effective in reducing CO ₂ emissions	P. 32-33
	Improve logistics through constructing new plants at portside	*Founded new plants at portside N.B.: Estimated forthcoming reductions: Ibaraki Plant: 2,300 t/year Kanazawa Plant: 200 t/year	Assess effectiveness	P. 32-33

Sales and Services

Implementation policy	Objective for FY2006	Results (Asterisks indicate results for FY2006)	Medium- and long-term objective	Further information
1. Carry out occupational health and safety and environmental conservation activities at sales agencies and rental companies based on relevant guidelines	Enhance awareness of environmental issues through sessions to explain contents of guidelines	*Visited 13 sales agencies and rental companies to give instruction at sessions *Conducted education and training by means of Safety and Environment Newsletter	Support activities by all sales agencies and rental companies through the Environmental Guidelines	P. 33

Joining the National Initiative "Team Minus 6%"**

Komatsu has been participating in the national movement in Japan to mitigate climate change known as "Team Minus 6%." Among efforts to reduce its CO₂ emissions further, Komatsu sets the air conditioning to 28°C and encourages employees to wear clothing appropriate for hot and humid weather while at work in the summer (known in Japan as "Cool Biz"). Moreover, in the days around the summer solstice, the company participates in the Light Down Campaign, in which lighting on billboards is turned off.

**The name "Team Minus 6%" refers to Japan's greenhouse gas emissions reduction target of 6% under the Kyoto Protocol.

