

Environmental Action Plan and Results for FY2007

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 FY2007	Results for FY2007	Medium- and long-term objectives	Further information
1. Implement Environmental Action Plan	Draw up and promote the Plan	<ul style="list-style-type: none"> Conducted internal environmental auditing Held Environmental Affairs Meeting in Europe 	Strengthen sales- and service-related environmental activities Strengthen environmental activities outside Japan	P. 11
2. Environmental education and training: Implement the Plan	Draw up and promote the Plan	<ul style="list-style-type: none"> Held 14 types of courses with over 4,700 participants Conducted environmental education and training for personnel in charge of environmental affairs at Chinese subsidiaries 	Continue activities in Japan and extend activities to facilities outside Japan	P. 11 P. 42
3. Environmental communication: Publish an environmental & social report	Formulate and publish the communication plan	<ul style="list-style-type: none"> Published the Japanese version in July and the English version in August 	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	<ul style="list-style-type: none"> Compared the development of Komatsu's four manufacturing facilities by applying standard indices for assessing environmental impact 	Expand horizontally to Group manufacturing facilities	P. 40

Research and Development

Implementation policies	Objectives for FY2007	Results for FY2007	Medium- and long-term objectives	Further information
1. Reduce the environmental impact of construction equipment <ul style="list-style-type: none"> Develop lower-emitting diesel engines 	Develop engine compliant with standards	<ul style="list-style-type: none"> Under research/development 	Develop engine and vehicles compliant with Tier 4 emission standards in the U.S., Europe, and Japan, effective 2011	P. 12–P. 13
<ul style="list-style-type: none"> Proactively meet exhaust emission standards 	Develop wheel loader Develop hydraulic excavator Develop bulldozer	<ul style="list-style-type: none"> Developed D31/D37/D39-22 small bulldozer to comply with emission standards Developed PC2000 super-large hydraulic excavator, improving fuel efficiency by 10% 	Expand number of models compliant with Tier 3 emission standards, effective 2006	P. 12–P. 13
<ul style="list-style-type: none"> Meet noise and vibration standards 	Promote the plan	<ul style="list-style-type: none"> EU noise standards: Continued to meet 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	—
<ul style="list-style-type: none"> Meet medium-term targets for development of environmental technology 	Promote the plan	<ul style="list-style-type: none"> 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) (Prepared to introduce a system to control chemical substances contained in products) 	Attain medium-term targets for development of environmental technology	P. 17 P. 14
2. Reduce the environmental impact of industrial machinery <ul style="list-style-type: none"> Address environmental issues from forge rolling machines 	Develop small AC servo press	<ul style="list-style-type: none"> Developed small AC servo press, realizing improvements in productivity (1.4 times) and substantial reductions in electrical energy used (CO₂ emission reductions of 55%) 	Expand number of servo press models	P. 14
3. Reduce the environmental impact of industrial vehicles <ul style="list-style-type: none"> Develop environment-friendly forklift trucks 	Develop hybrid electric forklift trucks	<ul style="list-style-type: none"> Developed and commercialized hybrid electric forklift trucks, achieving energy conservation of up to 20% 	Expand number of hybrid electric forklift truck models	P. 12
4. Provide solutions for customers' environmental activities <ul style="list-style-type: none"> Promote on-site recycling using mobile crushers/recyclers 	Expand scope of application and promote social recognition of on-site recycling engineering	<ul style="list-style-type: none"> 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. 16
5. Promote reuse and recycling <ul style="list-style-type: none"> Promote Reman business 	Expand and promote Reman business	<ul style="list-style-type: none"> 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. 17

Topics

Receiving an Award from the Minister of the Environment of Japan for Environmental Conservation at the Oyama Plant

Shinichi Kobayashi, Section Head of the Environment and Energy Conservation Group in the General Affairs Department, has spent much of his career preventing pollution and conserving the environment at the Oyama Plant. Kobayashi disclosed the know-how gained through creating the framework for the Oyama Plant's zero emissions activities, which were a first for the construction equipment industry. This has led to the spread of zero emissions activities across the construction equipment industry while helping to achieve zero emissions throughout the Oyama Industrial Park.

His quiet dedication highly regarded, Kobayashi was recognized in June 2008 by the Minister of the Environment of Japan with an award for being a Contributor to Local Environmental Conservation.



Manufacturing

Implementation policies	Objectives for FY2007	Results for FY2007	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 integrated certification for the Komatsu Group in Japan	•Acquired integrated certification for Komatsu Group manufacturing facilities in Japan and major Group companies in Japan, including the Komatsu Head Office	Acquire integrated certification for the entire Komatsu company	P. 10
2. Mitigation of climate change (energy conservation) •Make a 20% or more improvement by FY2010 (average results from FY2008 to FY2012) in the volume of CO ₂ emissions per unit of manufacturing value from the level of achievement in FY2000 at the Komatsu Group manufacturing facilities in Japan	Improve 1% year on year	•Improved 21.7% from the level of achievement in FY2000; attained a 3.6% improvement over the previous year	Further promote improvements	P. 15
3. Effective utilization of resources •Maintain or make further progress on attainment of zero emissions at the Komatsu Group 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. 18
•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% over previous fiscal year	•Accomplished a 4.4% reduction in the volume of waste generated per unit of manufacturing value from the level of achievement in FY2005	Achieve by FY2010	P. 18
•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% over previous fiscal year	•Accomplished a 10.7% reduction in the volume of water used per unit of manufacturing value from the level of achievement in FY2005	Further promote reductions	P. 18
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	•Accomplished a 3.6% reduction in the volume of VOCs released per unit of manufacturing value from the level of achievement in FY2005	Achieve by FY2008 and FY2010	P. 19 P. 43
•Implement permanent measures required to renovate underground tanks in operation for 20 or more years by the end of FY2001 at the Komatsu Group manufacturing facilities in Japan	No tanks requiring renovations	•All 142 tanks renovated by FY2004	Address sequentially all underground tanks in operation for 20 or more years	P. 43

*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 FY2007	Results for FY2007	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 business associates (64 companies participating) to support activities to introduce environmental management systems	Have all suppliers acquire environmental management system certification by FY2008	P. 11
2. Environmental conservation in logistics •Develop and commercialize integrated Information Clearing House (ICH) system in heavy material logistics in Japan beyond individual corporate frameworks •Achieve "zero packaging": Conserve resources and reduce waste through the reuse of packaging materials	Fully implement integrated transport reform in Japan	•Reduced CO ₂ emissions per unit of net sales by 6.7% compared with the level of achievement in FY2006 •Shipped 75% of products manufactured at the Ibaraki Plant through the port of Hitachinaka •Shipped 75% of products manufactured at the Kanazawa Plant through the port of Kanazawa	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. 15
	Improve logistics through constructing new plants at portside	•Finalized decision to build Kanazawa Plant No. 2	Assess effectiveness	P. 15
	Make general-purpose containers returnable	•Reduced CO ₂ emissions per unit of net sales generated during the production and disposal processes for packaging materials by 10% compared with the previous fiscal year	Continue to revise packaging	P. 18

Sales and Services

Implementation policy	Objective for FY2007	Results for FY2007	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 11 sales agencies and rental companies to give instruction at sessions •Conducted education and training by means of <i>Safety and Environment Newsletter</i>	Support activities by all sales agencies and rental companies through the Group's environmental guidelines	P. 11