

2015

Environmental Report Digest

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Editorial Policy

- The Environmental Report Digest 2015 is a digest regarding environmental activities, based on content from the "Environmental Report" and "Data" from the website.
- As part of the initiatives in the environmental field, we have presented the new main initiatives or representative activities.
- The content of the "Environmental Report" and "Data" can be viewed on our website, as well as (1) general information, such as policies and general rules, (2) information on ongoing activities and initiatives, and (3) a comprehensive disclosure of detailed and related information.
- Each item of the "Environmental Report" and "Data" on this website indicates that it has received an independent practitioner's assurance.
Website: <http://www.komatsu.com/CompanyInfo/csr/>

Scope of This Report

- **Komatsu (parent company) manufacturing facilities, specifically the following eight plants**
The Awazu Plant [including the Komatsu NTC Ltd (KM Division).], the Kanazawa Plant [including the Kanazawa-Daiichi Plant and the Kanazawa-Daini Plant], the Osaka Plant [including the Rokko Plant], the Ibaraki Plant and the Oyama Plant [including Komatsu Cummins Engine Co., Ltd., Industrial Power Alliance Ltd. and GIGAPHOTON, Inc.], the Koriyama Plant, and the Shonan Plant [including KELK Ltd.], the Tochigi Plant.
Komatsu Group manufacturing facilities in Japan, specifically the above eight plants and the following four business units
Komatsu Castex Ltd., Komatsu Cabtec Co., Ltd., Komatsu NTC Ltd. and Komatsu House Ltd.
- **Komatsu Group manufacturing facilities outside Japan, specifically the following 20 plants**
Komatsu America Corp., [Chattanooga Manufacturing Operation], [Peoria Manufacturing Operation], [Newberry Manufacturing Operation], Komatsu do Brasil Ltda., Hensley Industries, Inc. (The Americas), Komatsu UK Ltd., Komatsu Hanomag GmbH (Germany), Komatsu Mining Germany GmbH, Komatsu Manufacturing Rus, LLC, Komatsu Italia Manufacturing S.p.A (Italy), Komatsu Forest AB (Sweden), PT Komatsu Indonesia Tbk, PT Komatsu Undercarriage Indonesia, Bangkok Komatsu Co., Ltd., Komatsu India Pvt. Ltd., Komatsu Shantui Construction Machinery Co., Ltd., Komatsu (Changzhou) Construction Machinery Corporation, Komatsu (Changzhou) Foundry Corp., Komatsu (Shandong) Construction Machinery Corp. and Komatsu Undercarriage China Corp.
Komatsu Group manufacturing facilities including outside Japan: All of the 32 above-mentioned offices are shown.

Period Covered

This report principally covers data for the period from April 2014 to the end of March 2015, with some information from after April 2015.

A Message from the Environment Supervisor

Desire to contribute to sustainable development while providing a richer life for people.

Tell us about establishing new mid- and long-term objectives.

In regards to CO₂ emissions, each country is setting new objectives for 2020 and beyond in preparation for COP21. Accordingly, Komatsu has also established new mid- and long-term objectives for 2020 and 2030. In setting these objectives, we took into consideration not only CO₂, but our products life cycle, including fuel consumption of products, waste and water input as well as efficient use of resources.

When looking at CO₂ in terms of lifecycle, it has been estimated that 90% of all emissions comes from construction equipment products, making it clear the importance of reducing this amount. In addition, while aiming for further growth in productivity, we have set even more aggressive target values for CO₂ emissions from production. We have also set targets for waste and water input, in order to work towards the efficient use of resources, not only for our plants in Japan but for our plants all over the world.

Tell us about CO₂ reduction in construction equipment products.

In terms of how to reduce CO₂ emissions from construction equipment, we have developed products such as hybrid construction equipment that have excellent fuel efficiency. In 2015, our sphere of activity has been expanded further to include the way in which construction equipment is used, so that we can now offer the new solution "SMART CONSTRUCTION". This is a solution that provides an automated control of innovative work equipment, a revolutionary topographical survey technology, and a system called "KomConnect" to connect data, in order to dramatically improve efficiency on the work site through topographical survey, design, construction management and use of highly advanced automated ICT construction equipment. Based on this development, efficiency can be dramatically improved, and CO₂ emissions from construction equipment will also be greatly reduced.

How are you engaging in the activities involved in production?

The electricity reduction activities that started after the Great East Japan Earthquake of 2011 are progressing to meet the objectives set for 2015.

In 2014, we took a major step forward with the start-up of Awazu's new assembly shop making groundbreaking configuration and high levels of energy conservation capabilities a reality, and with the use of biomass heat supply and electric power generators being instituted at the Awazu plant. Biomass handles both heat supply and electricity generation, making overall high energy efficiency possible. Also, the supply of timber for fuel is being co-produced with the local forest industry, starting up a new activity called "local production for local consumption" to make the most of the local specialty.

Of course, the basics of environmental activities such as "compliance to law", "efficient use of resources" and "improvement of greening ratio" are being consistently pursued as activities to be steadily maintained.

Komatsu will continue to contribute to sustained development while making life richer for people, through products and solutions that have excellent environmental qualities born of advanced technology, and through pursuing revolutionary efficiency at our production sites.

Komatsu
Senior Executive Officer
President, Production Division Supervising Environment

Yoshisada Takahashi



Special Story

Reducing CO₂ Emissions from Construction Equipment

Reducing CO₂ emissions through a synergistic action of "Dantotsu" products, services and solutions



Komatsu's assessments of the CO₂ emissions by Scopes 1, 2 and 3 reveal that CO₂ emissions from the construction equipment being in use account for nearly 90% of the total amount of CO₂ emissions produced throughout its lifecycle, from material procurement to manufacture, usage and disassembly (Refer to "Amount of CO₂ Emissions by Scope 3" on page 14). With this in mind, Komatsu has taken a three-step approach to cutting CO₂ emissions from its products.

- Step 1** Improve the fuel efficiency of construction equipment ("Dantotsu" products)
- Step 2** Cut the fuel consumption of construction equipment through suggested usage improvements ("Dantotsu" services)
- Step 3** Drastically enhance construction efficiency and thereby reduce fuel consumption by using automatic control on construction equipment ("Dantotsu" solutions)

Komatsu is broadening the scope of its approach to CO₂ emissions reduction by offering solutions as well as products, and by providing innovative ways to cut CO₂ emissions to its customers.

CO₂ emissions from products account for nearly 90% of the total amount of emissions



Lifecycle of Construction Equipment

Step 1 Reduce CO₂ Emissions with "Dantotsu" Product

Komatsu delivers fuel-efficient products to reduce CO₂ emissions. Examples are the hybrid hydraulic excavators launched into the global market for the first time in 2008, which have reduced fuel consumption by 25% on the average when compared with other then-available models.



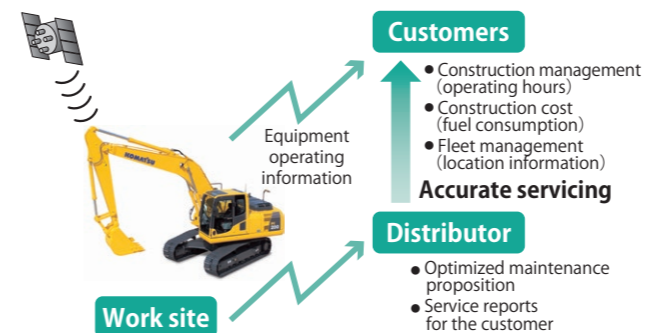
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Step 2 Reduce CO₂ Emissions from Products with "Dantotsu" Services (KOMTRAX Usage)

In addition to improving fuel efficiency of products, Komatsu advises its customers on how to use construction equipment to reduce fuel consumption by offering them "visualized" presentations of equipment usage condition data.

A Komatsu-developed vehicle information management system used to this end, KOMTRAX automatically collects operating and health information from the construction vehicles in use around the globe to aid in remote vehicle monitoring, management and analysis. Information collected is not only made available to customers via the Internet but is used to "visualize" equipment operating hours and work hours, usage and fuel efficiencies, to come up with suggested improvements.

This is how Komatsu supports its customers in their effort to improve fuel efficiencies (that is, reduce CO₂ emissions).



Vehicle Information Management System (KOMTRAX)

Step 3 Reduce CO₂ Emissions across Construction Work Flow with "Dantotsu" Solutions (from computer-aided construction to Smart Construction)

Commitment to computer-aided construction

Computer-aided construction is a plan of activity in which electronic information on one out of a sequence of processes relevant to the implementation of construction works—from surveying and designing, to constructing, testing, inspection and management—that has been obtained using ICT (information and communications technology) is applied to other processes to ensure enhanced productivity, quality, etc. across the process sequence.

Construction equipment loaded with a computer-aided construction system verifies operating equipment location information and 3D design data against each other to assist the operator at work and implement automatic controls, thereby drastically saving previously required finishing stake work and surveying work during construction, and the consequent corrections. The results are shorter construction periods, better construction equipment availability and reduced CO₂ emissions.

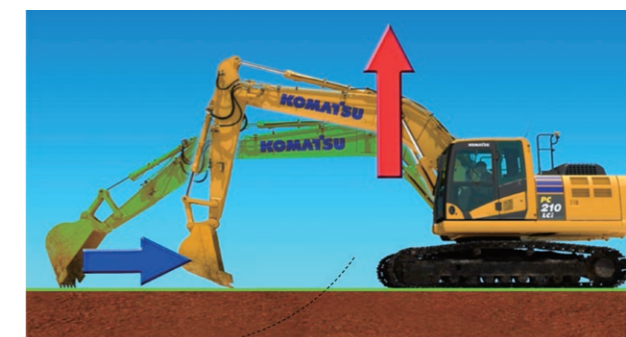
In 2013, Komatsu introduced the world's first ICT computer-aided construction bulldozer, the D61PXi-23 featuring an automatic blade control capability—on the North American, European and Japanese markets. Then in 2014, Komatsu introduced the world's first hydraulic excavator, PC210LCi-10, featuring a semiautomatic control capability into the North American and European markets and the PC200i-10 into the Japanese market. Komatsu expects that these flagship models will help computer-aided construction expand to a broader range of construction sites.

Both models carry a new-generation engine that greatly reduces Nitrogen Oxide (NO_x) and Particulate Matter (PM) emissions to address new emissions regulations in effect since 2014 in the U.S. and Europe.

ICT construction equipment features

Ground leveling assistance

The boom lifts automatically so that the bucket moves along the construction surface when the arm is manipulated. This feature allows the operator to carry out rough excavation work without concern for the construction surface and do the final finishing excavation work merely as an arm lever operation. A boom lowering operation may be included to broaden the sphere of construction.



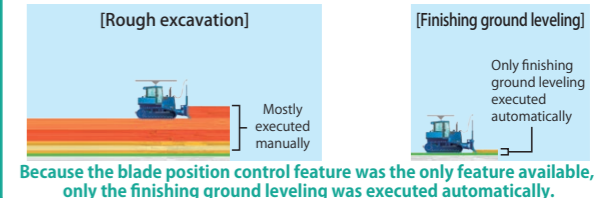
Automatic stop control

When the blade edge of the bucket reaches the construction surface during boom or bucket operation, the operating equipment stops automatically to avoid harming the construction surface. The blade edge is also easy to position.

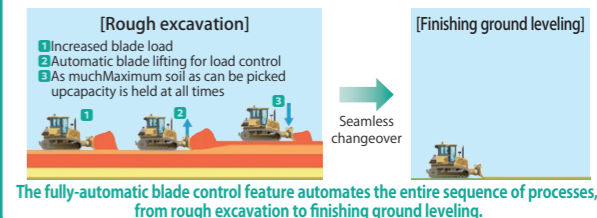


Intelligent Machine Control Hydraulic Excavator Feature

Previous computer-aided construction



Intelligent Machine Control



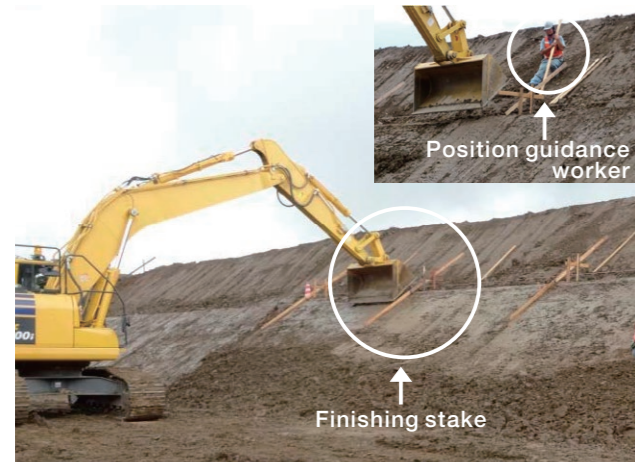
Intelligent Machine-Controlled Bulldozer Features

Effect on CO₂ Emissions Reduction by ICT Construction Equipment

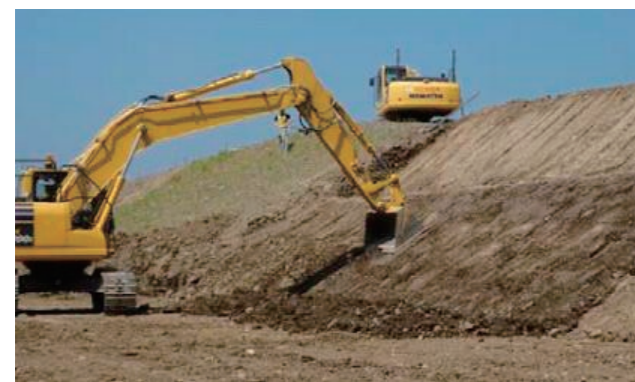
For example, preliminary calculations based on the data collected from an in-house test execution using an ICT hydraulic excavator indicate that an approximately 30% saving in fuel consumption has been achieved in a banked slope trimming operation with a PC200i-10, thereby reducing CO₂ emissions.

Effects of CO₂ Emissions Reduction in Power Excavators by Computer-Aided Construction

*These are the results from a test execution carried out in-house and does not guarantee an equivalent effect for all executions.



Construction in a manual operation in which finishing stakes are checked visually (previous procedure)



Construction under semiautomatic control [Slope trimming] (ICT construction equipment)

Further, preliminary calculations based on the data collected from an in-house test execution using an ICT excavator indicate that an approximately 25% saving in fuel consumption has been achieved in a leveling-off operation with a D61PXi-23 – an equivalent of the cut in CO₂ emissions available with an ICT hydraulic excavator.

Effects of CO₂ Emissions Reduction in Bulldozers by Computer-Aided Construction

*These are the results from a test execution carried out in-house and does not guarantee an equivalent effect for all executions.



Construction in a manual operation in which finishing stakes are checked visually (previous procedure)



Construction under fully-automatic control (ICT construction equipment)

Evolving into Smart Construction

On January 20, 2015, Komatsu unveiled its Smart Construction initiative in Japan.

To encourage wider usage of computer-aided construction by its customers, Komatsu proposes to make the work flow on construction sites more efficient by measuring the current terrain using drones and 3D scanners to prepare 3D drawings in the preconstruction processes in order to "visualize" the work of planned construction processes and the progress of planned activities with computer-aided construction equipment. Komatsu expects that simplifying construction processes and making the on-site workflow more efficient can result in the secondary benefits of CO₂ emissions reduction.

Furthermore, the entire sequences of construction processes can be compiled on electronic databases, making the administrative work paperless to further reduce the environmental load.

In its commitment to computer-aided construction, Komatsu is driving the global deployment of Smart Construction, including North America, Europe and Japan, not only to compile information about construction equipment used in construction processes on to databases, but to also reduce the environmental load across all construction works.

Pursuing Environmental Management

Komatsu promotes environmentally-friendly activities throughout the entire Group to realize its vision of "What Komatsu Can Do and What It Must Do" for the environment and sustainable development.

Komatsu's Relationship with the Environment

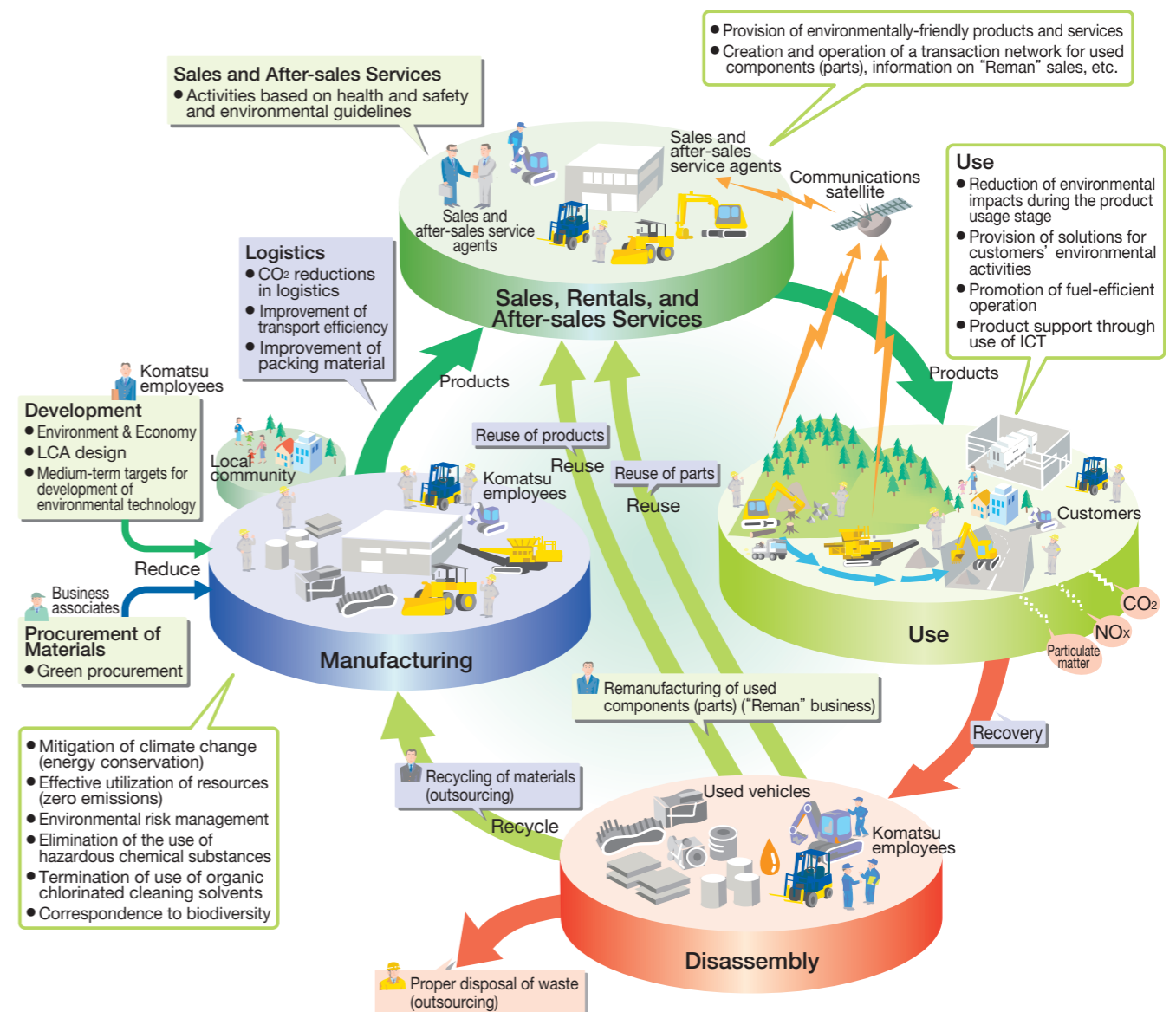
In recognition of the fact that our business activities affect the environment on a regional and global level, we, at Komatsu, have placed the focus on the following four key areas:

- 1) Climate Change
- 2) Establishment of a Sound Material-Cycle Society
- 3) Conservation of Air, Water and Other Natural Resources as well as Management of Chemical Substances
- 4) Biodiversity

In line with the Komatsu Earth Environment Charter revised in 2010, the Komatsu Group embarks on global initiatives across business areas guided by the fundamental principles of

- (1) Contributions to Realization of Sustainable Society,
- (2) Simultaneous Realization of Environmental and Economic Performance, and
- (3) Observance of Corporate Social Responsibility.

Relationship of the Komatsu Group's Business Activities with the Environment



Komatsu Earth Environment Charter (June 2010 revision) 〈Corporate Principles〉

1. Contributions to Realization of Sustainable Society

Mankind must not only promote the further growth of a rich and comfortable society but also pass down this indispensable environment of our planet earth to future generations in a sound and healthy condition.

We, at the Komatsu Group, define environmental conservation efforts as one of the highest priority management tasks, and endeavor to contribute to the sustainable growth of society by integrating advanced technologies into environmental conservation efforts in all our business activities. This is represented by our hybrid construction equipment which features a substantial reduction of CO₂ emissions while in operation and by our superior manufacturing.

2. Simultaneous Realization of Environmental and Economic Performance

We are committed to improving both environmental performance and economic efficiency, as a group of companies working toward superior manufacturing for customer satisfaction. To this end, we constantly take up the challenge of advancing technologies to develop creative products that improve both environmental performance throughout the product's life cycle and the product's economic performance at the same time.

3. Observance of Corporate Social Responsibility

Each company of the Komatsu Group promotes environmental conservation by not only complying with the applicable laws and regulations of the concerned host community, region and country but also by establishing its voluntary standards which consider global and local environmental concerns. Each company of the Group also strives to fulfill its corporate social responsibility by actively participating in local environmental conservation programs and thereby promoting close-knit communication with local communities, while striving to become a company trusted by all Komatsu stakeholders.

〈Guidelines for Corporate Activity〉

1. Basic Stances on Earth Environmental Problems

We, at the Komatsu Group, work for sustainable society and earth environment through our global business operations by addressing the following four environmental problems with the stances discussed below.

1) Climate Change

We will reduce the use of energy and emissions of greenhouse gas in all phases of our business activities ranging from research and development, procurement, production and logistics to sales and service as well as in the total life cycle of our products and services.

2) Establishment of a Sound Material-Cycle Society

Through our business processes, we work to minimize the use of natural resources, such as materials and water, promote their re-use or recycle them as much as possible, and expand Zero Emissions from our manufacturing activities around the world. At the same time we ensure the thorough management of waste materials in all our business domains, including our suppliers and distributors. We also continuously work to increase the recyclability rate of products at the time of disposal.

3) Conservation of Air, Water and Other Environments as well as Management of Chemical Substances

We comply with not only local laws and regulations but also with our established standards concerning the conservation of water quality, prevention of air pollution, noise and vibrations.

As much as possible, we also ensure the thorough management of chemical substances for use in our business activities, while continuously reducing the use of potentially harmful chemical substances or replacing them with alternative substances for discontinuation of their use.

4) Biodiversity

We recognize biodiversity as one of the important issues concerning the earth environment, evaluate, understand and analyze impact on it in all our business domains, and work on our tasks according to the criteria of the highest impact and/or the most effective actions.

2. Framework of Global, Group-wide Environmental Management System

The Komatsu Head Office, as well as the manufacturing facilities and main companies of the Komatsu Group, already with ISO certifications, will work to maintain and improve their environmental management system, while other manufacturing facilities and suppliers will also work to establish their environmental management systems and reduce their environmental impact.

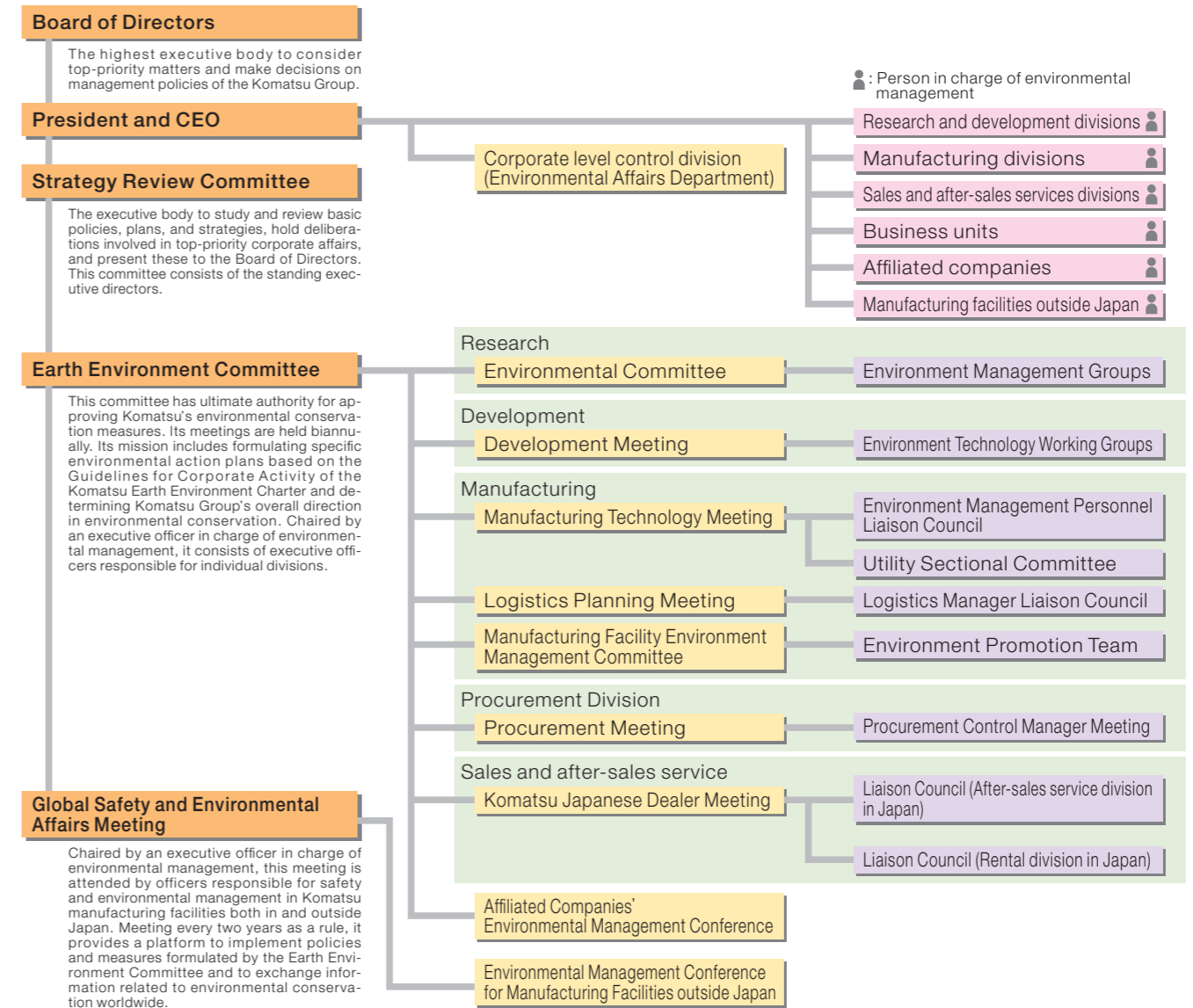
The Komatsu Environmental Committee develops environmental action plans and common guidelines for the Komatsu Group. Based on these Group-wide plans and guidelines, each division or company sets up its own mid- to long-term targets, develops and implements specific action plans, reviews them regularly and works to continuously improve them.

3. Environmental Education and Communication

We believe that it is important to enhance the environmental awareness of each and every employee and thereby actively promote environmental awareness and education programs for all employees.

We will gather environment-related information concerning not only our manufacturing facilities but also other related entities, such as major affiliated companies and suppliers, and strive to disclose such information, thereby facilitating proactive communication with all our stakeholders, such as customers, employees, local communities and suppliers and further expanding the content of environmental communication.

Organizational Chart of the Environmental Management Structure



Acquiring ISO14001

Komatsu has implemented a Group-wide initiative to acquire ISO14001 certification, an international standard for environmental management systems. The objective is to enhance management quality by strengthening systematic steps towards environmental conservation.

Since 1997, several manufacturing facilities both inside Japan and abroad received certification. In FY2005, the four plants belonging to Komatsu Ltd. (the parent company), the Awazu, Osaka, Mooka, and Oyama Plants, acquired integrated certification. As the second step, in FY2007 Komatsu added its major affiliates in Japan and yet-to-be-certified non-manufacturing facilities – notably the Head Office – to the above four plants, with integrated certification attained by the Group in Japan in May 2008.

Upon completing the March 2012 recertification, the KOMATSU Way Global Institute and Komatsu NTC Ltd. were included in the integrated certification. The Group conducted the recertifica-

tion qualification again in March 2015, and will continue to work on improving the quality of management in Japan.

Komatsu aims for 100% of overseas production facilities to acquire certification by FY2015, and in FY2013 "Komatsu (Shandong) Construction Machinery Corp.", "Komatsu Manufacturing Rus. LLC", and "Hensley Lingfeng Co., Ltd (China)" acquired certification, and in FY2014 "Cabtec (Thailand)" acquired certification as well.



ISO14001 Integrated Certification

Pursuing Environmental Management

Environmental Action Plan and Results for FY2014

To promote the Komatsu Earth Environment Charter, the company formulates environmental action plans (implementation policies) for each field, establishes action targets for each fiscal year, and steadily advances its policies, while fol-

lowing up on their implementation status. The detailed Environmental Action Plan and Results for each field are as follows.

Environmental Management

Implementation policies	Objectives for FY2014	Results for FY2014	Medium- and long-term objectives
1. Strengthen environmental management systems	<ul style="list-style-type: none"> Receive a certificate renewal audit and continue the certification. Certification of overseas production sites (1 company) 	<ul style="list-style-type: none"> Received a certificate renewal audit and continued the certification One company (CABTEC THAI Co., Ltd.) obtained certification 	<ul style="list-style-type: none"> Acquisition of integrated certification by the Komatsu Group Manufacturing Facilities in Japan Certification acquired for overseas subsidiaries (Production)
2. Environmental education and training: Implement the education plan	Draw up and promote the education plan	Held 14 courses with over 6,600 participants	Continue to organize courses and expand them to overseas locations
3. Conduct environmental audits for overseas subsidiaries	Environmental Inspection of American States affiliated companies	Implemented environmental survey at KAC(3 plants) and KDB	Continuation of activity
4. Environmental communication: Publish a CSR & Environmental report	Formulate a communication plan and publish the report	Published the Japanese version (Web) in July 2014 and the English version (Web) in July 2014	Enhance the quality of the content; release report earlier than in previous years

Research and Development

Implementation policies	Objectives for FY2014	Results for FY2014	Medium- and long-term objectives
1. Reduce the environmental impact of construction equipment Develop low-emission construction equipment (compliant to emission standards)	Develop vehicles compliant with Tier4 emission standards	<ul style="list-style-type: none"> Developed vehicles equipped with engines compliant with Tier4 final emission standards (PC210LC-11, D85EX/PX-18, HM300-5, etc.) Achieved 14% to 15% reduction in emissions with vehicles compliant to Tier4 final emission standards (PC210LC-11, PC360LC-11) 	Development of Tier4 final (STAGE IV) emission standard compliant vehicle in Japan, US, and EU by 2014
Reduce CO ₂ emissions from construction equipment (improve fuel efficiency of products)	Reduction in emissions with Tier4 emission standard (Hydraulic excavators: 10-13% reduction compared to Tier3)	<ul style="list-style-type: none"> Development of Tier4 final compliant hydraulic excavator (under development) Decrease emissions by 35% from Tier4 standard compliant hybrid vehicles (hydraulic excavators) by FY2015 	Decrease emissions by 10% from Tier4 standard compliant vehicles (hydraulic excavators) by FY2015
Reduce CO ₂ Emissions from construction equipment (Biodiesel Fuel (BDF) measures: Carbon Offset)	B5/B7 mixed light oil measures	B20 mixed light oil measure (be in progress)	Use of B20, light oil blended with BDF (standard construction equipment)
Improving recyclability rate of construction equipment	Achieve 99% for recyclability rate equipment compliant with the next developed vehicles	Achieved 99% recyclability with Tier4 compliant vehicles	Achieve recyclability rate of 99.5 ± 0.5%
Strictly control and reduce substances of environmental concern in construction equipment	<ul style="list-style-type: none"> Maintain reduction of hazardous substances at 75% reduction compared to 1998 levels Reduce the use of lead in vehicles compliant with Tier4 emission standards Utilize a separate hazardous substances control system for each product type (to comply with REACH regulations) 	<ul style="list-style-type: none"> Maintained 80% reduction of hazardous substances with newly developed vehicles as compared to 1998 levels Additional reduction of lead usage in crawler type construction equipment (active) Policy made to ban lead solder usage in the vehicles to be developed for the subsequent periods in principle (except those on-board) from 2015 Registered additional new 10 substances of SVHC under the EU REACH regulation, and controlled the usage of those SVHC substances. Conducted surveys of substances for EU destination models and EU mass production and development models (Implementation of component-specific substance surveys) The control system is being deployed in other overseas countries (other than EU) 	<ul style="list-style-type: none"> Reduce lead usage by 90% as compared to 1998 levels by 2017 Manage substances of each component pursuant with new data
2. Reduce the environmental impact of industrial machinery Market high-performance AC servo presses	Expand business affiliations for AC servo presses	Promoted the development of H1F200 (pressure 200 tons) and H1F150 (pressure 150 tons)	Expand AC servo press sales ratio
Market high-efficiency wire saws for solar cells	Expand business affiliations for specialized machinery for diamond wire	Participated in activities to slim down silicon materials through the national project "Next Generation Crystalline Silicon PV Consortium"	Slimming down silicon material (finer wires) and expand applications
Market compact machining center	Expand business affiliations for compact machining center	Promoted development of next generation machine tools for energy- and space-saving	Expand business affiliations Develop production support technology for the reduction of LCC
Market the energy-saving fiber laser cutting machine	Development of the fiber laser cutting machine	Mounted Komatsu's own oscillator onto the fiber laser three dimensional laser beam cutting machine(TLH)	Expand business affiliations and applications
Market thermoelectric power generation that uses waste heat from plants	Development of thermoelectric generation system	Promoting the practicalization of thermoelectric generators	Commercialization
3. Promote reuse and recycling	Promote and expand the Reman business	<ul style="list-style-type: none"> Innovation of new recycling-related technologies (expand to hydraulic pump parts) Expanded the menu of "Reman" products(newly listing engine sub-components and long block engines) Newly established 12th Reman Center and expanded "Reman" products supply areas 	<ul style="list-style-type: none"> Promote reuse and recycling through further improvements in recycling-related technologies for parts Stimulate reuse and recycling worldwide by expanding Reman bases to accommodate demands

Manufacturing

Implementation policies	Objectives for FY2014	Results for FY2014	Medium- and long-term objectives
1. Mitigation of climate change (energy conservation) Make a 54% improvement by FY2015 in the amount of CO ₂ emissions per unit of manufacturing value compared to the FY2000 level at the Komatsu Group manufacturing facilities in Japan	An improvement of 42% compared to FY2000	Improved 36.9% from the FY2000 level (6.2 point reduction compared to the previous year)	The former reduction goal (a 43% reduction for FY2020 from the FY1990 level) is under review now
Make a 41% improvement by FY2015 in the amount of CO ₂ emissions per unit of manufacturing value compared to the FY2005 level at the Komatsu Group manufacturing facilities outside Japan	An improvement of 41% in FY2015 compared to FY2005	Improved 33% compared to FY2005 (0.3 point increase compared to the previous year)	Achieve a 44% reduction by FY2020 compared to the FY2005 levels
2. Effective utilization of resources Maintain or make further progress in attaining 99.5% or greater recyclability rate by FY2015 (improvement towards zero emissions) (Komatsu Group manufacturing facilities in Japan)	Attain a recycling rate of 99.4% or greater	Attained a recycling rate of 99.6% across the Komatsu Group (Japan)	By FY2015, Japan: Attain a recycling rate of 99.5% or greater
Maintain or make further progress in attaining 95% or greater recyclability rate by FY2015 (Komatsu Group manufacturing facilities in Overseas)	Attain a recycling rate of 95% or greater by FY2015	Attained a recycling rate of 91.4% across the Komatsu Group (overseas)	By FY2015, Overseas: Attain a recycling rate of 95% or greater
Achieve a reduction of more than 20% by FY2015 in the amount of waste generated per unit of manufacturing value compared to the FY2005 level (Komatsu Group manufacturing facilities in Japan)	Improve 1% over the previous fiscal year	Achieved a 42.7% reduction in the amount of waste generated per unit of manufacturing value compared to the FY2005 level (improvement of 9.5 point compared to the previous year)	Achieve a 20% reduction by FY2015 compared to the FY2005 level
Achieve a reduction of more than 50% by FY2015 in the amount of water used per unit of manufacturing value compared to FY2005 (Komatsu Group manufacturing facilities in Japan)	Improve 3% over the previous fiscal year	Achieved a 63.3% reduction in the amount of water used per unit of manufacturing value compared to the FY2005 level (improvement of 10.4 point compared to the previous year)	Achieve a 50% reduction in FY2015 from the FY2005 level

Implementation policies	Objectives for FY2014	Results for FY2014	Medium- and long-term objectives
3. Environmental risk management Implement voluntary reductions in the release of chemical substances including volatile organic compounds ("VOCs"), which constitute the majority of chemical substances released	Establish a control system for chemical substances and reduce the amount of released chemical substances	Accomplished a 49.5% reduction in the amount of VOCs released per unit of manufacturing value over the FY2005 level	Achieve a 50% reduction compared to the FY2005 level
Undertake soil and groundwater remediation (Komatsu Group manufacturing facilities in Japan)	Continue the cleanup	In progress	Complete the cleanup work
Sequentially address each underground tank that has been in operation for 20 years or more (Komatsu Group manufacturing facilities in Japan)	No applicable underground tanks	No applicable underground tanks	Sequentially address each underground tank that has been in operation for 20 years or more
4. Other Improve greenery rate by 20% or greater by FY2015 across the Komatsu Group. (Komatsu Group manufacturing facilities)	Greenery Rate 19.5% or greater	Komatsu Group achieved a total rate of 20.1%	Rate of 20% or greater by FY2015

Procurement and Logistics

Implementation policies	Objectives for FY2014	Results for FY2014	Medium- and long-term objectives
1. Green procurement Promote improvements at suppliers through the establishment of environmental management systems ("EMSs") and by specifying matters that require environmental consideration	Provide guidance and support to member companies of the Komatsu "Midori-ka" for acquiring integrated certification of their environmental management systems	All subject companies acquired certification for a total of 164 certified companies, and are promoting environmental management activities	Within three years, have newly admitted Komatsu "Midori-ka" admission company masters attestation of environmental management systems (ISO 14001, Eco-stage, etc.)
2. Environmental conservation in logistics Reduce CO ₂ emissions per unit of cargo weight generated through shipping of products and components (Komatsu manufacturing facilities in Japan) (in the scope of revised Law concerning the Rational Use of Energy of Japan)	Improve CO ₂ emission per cargo weight (kg-CO ₂ /ton) by 24% compared to FY2006 levels	<ul style="list-style-type: none"> Achieved 25.6% improvement compared to FY2006. CO₂ emissions decreased by 5.8%, 20.7→19.5(kg-CO₂/ton) compared to the previous fiscal year. Increased the domestic vessel usage rate of Tohoku-bound coastal shipping, one prioritized area of improvement since FY2011, and also the usage rate of railway transport, another since FY2014 (distances of 500 km or longer subjected to a modal shift), have resulted in transportation at the lower rate of energy consumption and cuts in long-distance cargo trucking, still another area of improvement. 	Improve the basic unit of CO ₂ emissions generated through shipping of products and components by 27% compared to FY2006 by FY2015 (14 Komatsu logistics facilities in Japan)
Shift to means of shipping with low environmental impact	Promote modal shifts in shipping from trucks to inland ferries or rail	<ul style="list-style-type: none"> The total modal shift rate in FY2014 was 29.1% (+12.8% compared to FY2006: +5.8% by railway, +7.0% by domestic vessels) By proactively increasing the usage of domestic vessels in place of long-distance trucking to the north-east, which increased due to the Great Eastern Japan Earthquake Disaster after FY 2011. A higher rate of railway transport has been pursued as a prioritized area of improvement since FY2013. The rate of railway transport in FY2014 improved 1.7% to reach 6.1% (modal shift rate: 28.7% → 29.1% (+0.4%)), modal shift rate for distances of 500 km or longer needing improvement: 47.6% → 49.2% (+1.6%). 	Continue to promote modal shift. Curb the increase in CO ₂ emissions through the modal shift, switching long-distance trucking to domestic vessel shipment, in the transportation of products from Awazu and Osaka to north-east Japan. Improve the transportation of products from Tochigi plant to Shikoku and Kyushu as well. Expand rail usage for Oyama, Koriyama, and Awazu plant components: engines, hydraulic equipment, transmission, etc.
Shift to battery powered forklifts	Shift to battery powered forklifts	Forklifts used for in-plant logistic purposes have been shifted to hybrid and battery-powered models to lessen their environmental impact. In FY2014, the number of hybrid and battery-powered forklifts accounts for 45.9% of all forklifts, up 25.5% from its FY2005 level. (Ratio of the number of battery-powered forklifts: 46.4% in FY2013 → 45.9% in FY2014, down 0.5%)	Promote reduction in environmental strain by increasing the ratio of battery powered and particularly hybrid forklifts.
Strive to eliminate the procurement of new wrapping materials through promotion of returnable packaging containers.	Promote the returnability of packaging containers	<ul style="list-style-type: none"> Expanding scope of returnable general-purpose wooden packaging container usage, which had been pursued on a priority basis, has helped cut wooden packaging requirements. Ratio of general-purpose packaging container returnability for CKD parts: 49.0% → 60.2% (+11.2%) Ratio of general-purpose packaging container returnability for spares: 53.7% → 57.7% (+4.0%) 	Proceed with further improvement efforts to achieve "zero" procurement of new packaging materials as a prioritized area of improvement. Continue improvement in the returnability ratio of containers designated for CKD parts. Further improve the returnable rate of general-purpose containers for CKD/spare parts.
Measures for protecting biodiversity and reduction in wood used in packaging containers (Avoid tree trimming and the risks of immigration and emigration of nonnative species in wood)	Reduction in the usage of wooden/cardboard packaging containers Reduce the basic unit of usage per cargo weight (kg-CO ₂ /ton) by 8% compared to FY2010	<ul style="list-style-type: none"> Efforts continued into FY2014 to cut packaging material requirements, mainly wooden materials, with a view to protect biodiversity. Amount of wood/cardboard used in FY2014: 5,404 tons Achieved an reduction by 30.7% compared to FY2010 (Approaches to cutting wooden packaging material: Change in packaging material, improvement of higher returnability ratio, cut in packaging material requirements through VE) 	10% improvement in ratio of wood and cardboard packaging material used per shipment weight by FY2015 compared to the FY2010 level.
Increase the size of shipped units to large lots	Increase the size of shipped units to large lots	<ul style="list-style-type: none"> The continued improvement through the use of vans in CKD plants enhanced improvement from 98.4% to 99.3% (+0.9%), while upsized transportation units resulting from an expanding scope of containerized transportation have been kept at a predefined maintenance and management level since FY2013. The usage of vans at supply component plants, which we have been focused on improving since FY2012, increased from 99.0% to 99.3% (+0.3%) to reach a predefined maintenance and management level since FY2014. 	Prioritized improvement activities come to completion as upsized transportation units resulting from an expanding scope of containerized transportation have reached a predefined management maintenance and management level.
Promote reduction in shipping distances and improvements in shipping efficiency	Continue improving to reduce the distance per shipment by utilizing nearby ports	<ul style="list-style-type: none"> <Suppression Measures for Increased Transport Distance and the Worsening CO₂ Emission Basic Unit Due to Changes in Domestic Transport Configuration> The configuration of domestic transport destinations greatly changed since the Great East Japan Earthquake in 2011 due to increased long-distance transport to the Tohoku region as well as export CKD with shorter transport distances and a sharp decline in export models (mining) produced at the port factories of Kanazawa and Ibaraki. As a result, the average transport distance of truck trailers increased to 189km/case in FY2014 and the rate of increase was +19% compared to FY2010. This increase in average distance directly translated to a worsening of the CO₂ emissions basic unit. Viewing the promotion of modal shifts as a prioritized area of improvement for checking the worsening of the raw unit of CO₂ emissions, Komatsu embarked on a program to expand modal shifts in 2011, switching long-distance trucking to coastal shipping and railway transport in pursuit of transportation at a lower rate of energy consumption and cuts in long-distance trucking. The average trucking distance, which had trended worse since 2011, narrowed 7% FY2014 from the previous year, with the result of improved CO₂ emissions per unit of transportation. <Improvements in Transport Distance Reduction by Utilizing Nearby Ports> Kanazawa Port utilization improved by 1.3% from FY2013 to 46.1% against a mid-term target of 50%. Hirachinaka Port utilization is 97.4% against the mid-term goal of 95%, thereby maintaining the achievement of the mid-term plan. Implementation of monthly tracking of data for CO₂ produced by shipment in 10 major plants in the Americas (2 in US, 1 in Brazil), EU (1 in UK, 1 in Germany) China (3), and Asia (1 in Indonesia, 1 in Thailand). FY2014 status of the basic unit of CO₂ emissions per cargo weight The basic unit of CO₂ emissions per cargo weight advanced 0.1%, more or less sideways, from its FY2011 level but has improved by 3.0% from the previous year. 58.3 → 56.5 (kg-CO₂/ton) As a principal improvement item, the need for long-distance trucking in the U.S. has been cut as a result of cross-sourcing North America-bound products from the CMO (Chattanooga, America) plant (with 44% of the total volume of North America-bound products having been switched to imports from Osaka Plant in Japan and the EKC plant in Thailand). Changes in the shipping destinations, coupled with improvements implemented at the CMO, have cut the average land trucking distance in overseas plants by 6%, contributing to improve the basic unit of CO₂ emissions per cargo weight. 	Continue reducing transportation distance by utilizing near-by ports. A target usage rate has been achieved for Hirachinaka Port. It will be maintained and managed at 95% at least from now on. A FY2015 target usage rate (products) of 50% will be set for Kanazawa Port and will be approached through improvement efforts.
From 2011 Implement environmental conservation activities in global logistics (both national and international) Improve CO ₂ emission per cargo weight of shipping products and parts. (10 major overseas plants)	The basic unit of CO ₂ emissions per cargo weight (kg-CO ₂ /ton) has improved 6% from its FY2011 level.		8% improvement in the ratio of CO ₂ emission per shipment weight in the logistics of products and parts by FY2015 compared to FY2011 levels. (10 major overseas Komatsu Group Plants)

Sales and After-sales Services

Implementation policies	Objectives for FY2014	Results for FY2014	Medium- and long-term objectives
Encourage Komatsu Group sales agencies and rental companies in Japan to reduce their environmental impact	Enhance awareness of the environment through education and training based on the Group's environmental guidelines	Carried out activities for improvement through guidance provided during onsite visits to total 52 sites Regularly issued the Safety and Environment Newsletter (24 editions published yearly)	Support environmental conservation activities by Komatsu Group sales agencies and rental companies in Japan based on the Group's environmental guidelines

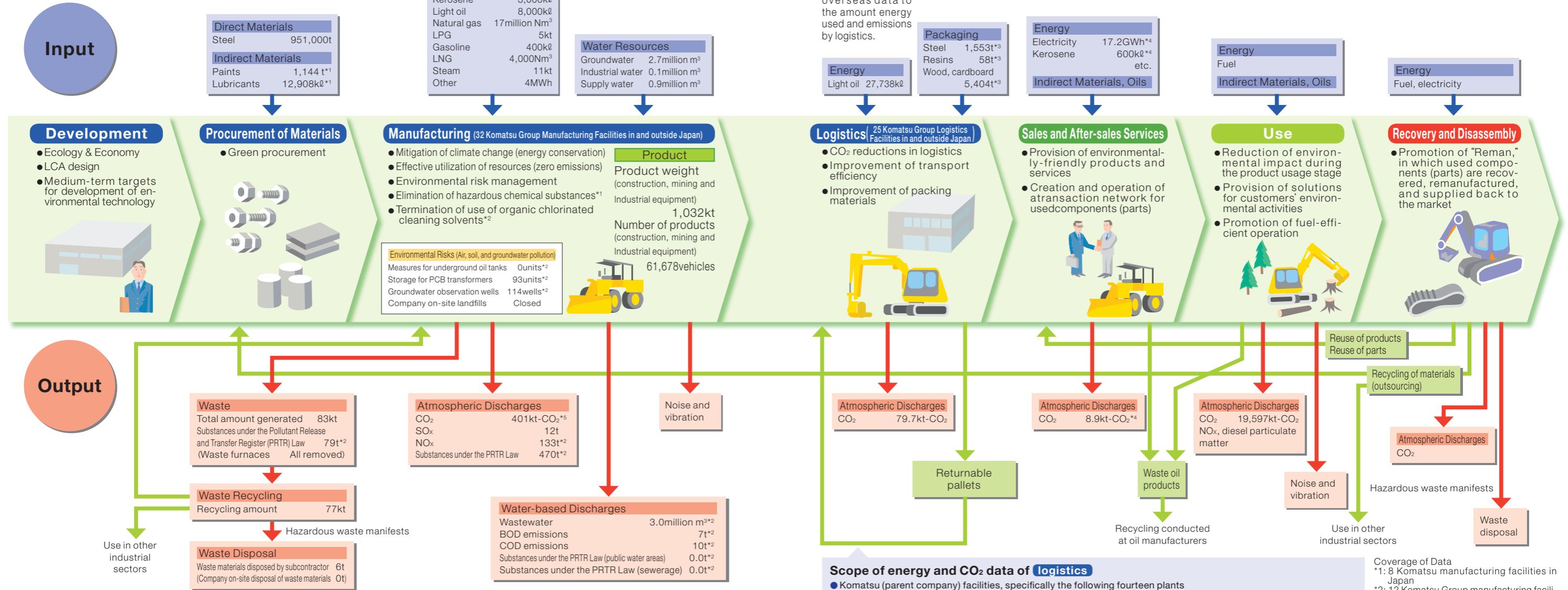
Pursuing Environmental Management

Relationship between Business Activities and the Environment

The Komatsu Group procures various parts and materials and, through the manufacturing process, utilizes the earth's resources, including raw materials, water, energy, and chemical substances, among others, to provide products to customers. Such business activities have the potential to impact the environment at each stage in the process.

The Komatsu Group will continue to provide high value-added products and services while assessing the environmental impacts resulting from its business activities, formulating medium- and long-term objectives, and introducing measures to reduce such impacts.

Environmental Impact Resulting from Business Activities of Komatsu Group Companies, including Facilities outside Japan (FY2014)



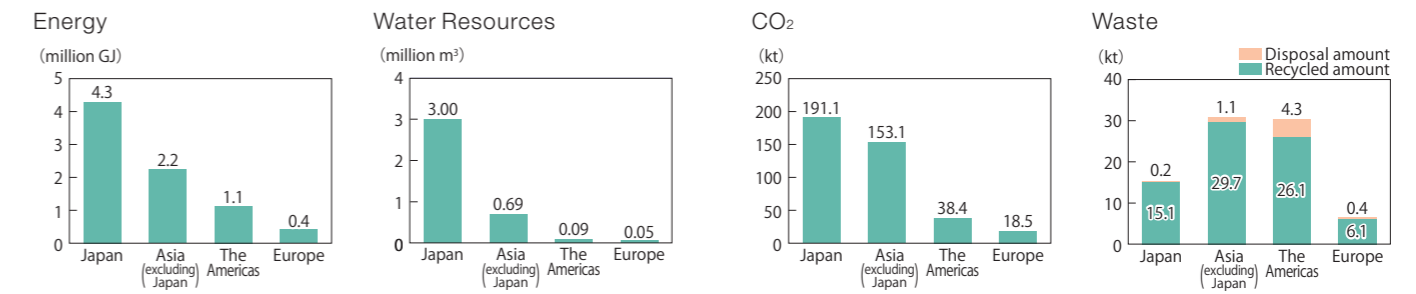
CO₂ emissions: Calculated by multiplying the electric power, heavy oil, etc. consumed (see Energy section of Input column) by the CO₂ emission coefficient (according to the Greenhouse Gas Emissions Calculation - Reporting Manual of the Ministry of the Environment based on the Act on Promotion of Global Warming Countermeasures)

SO_x emissions: Calculated by multiplying the "density" and the "S content by percentage" (based on element tables of suppliers) by the amounts of heavy oil, kerosene, light oil, and coke used.

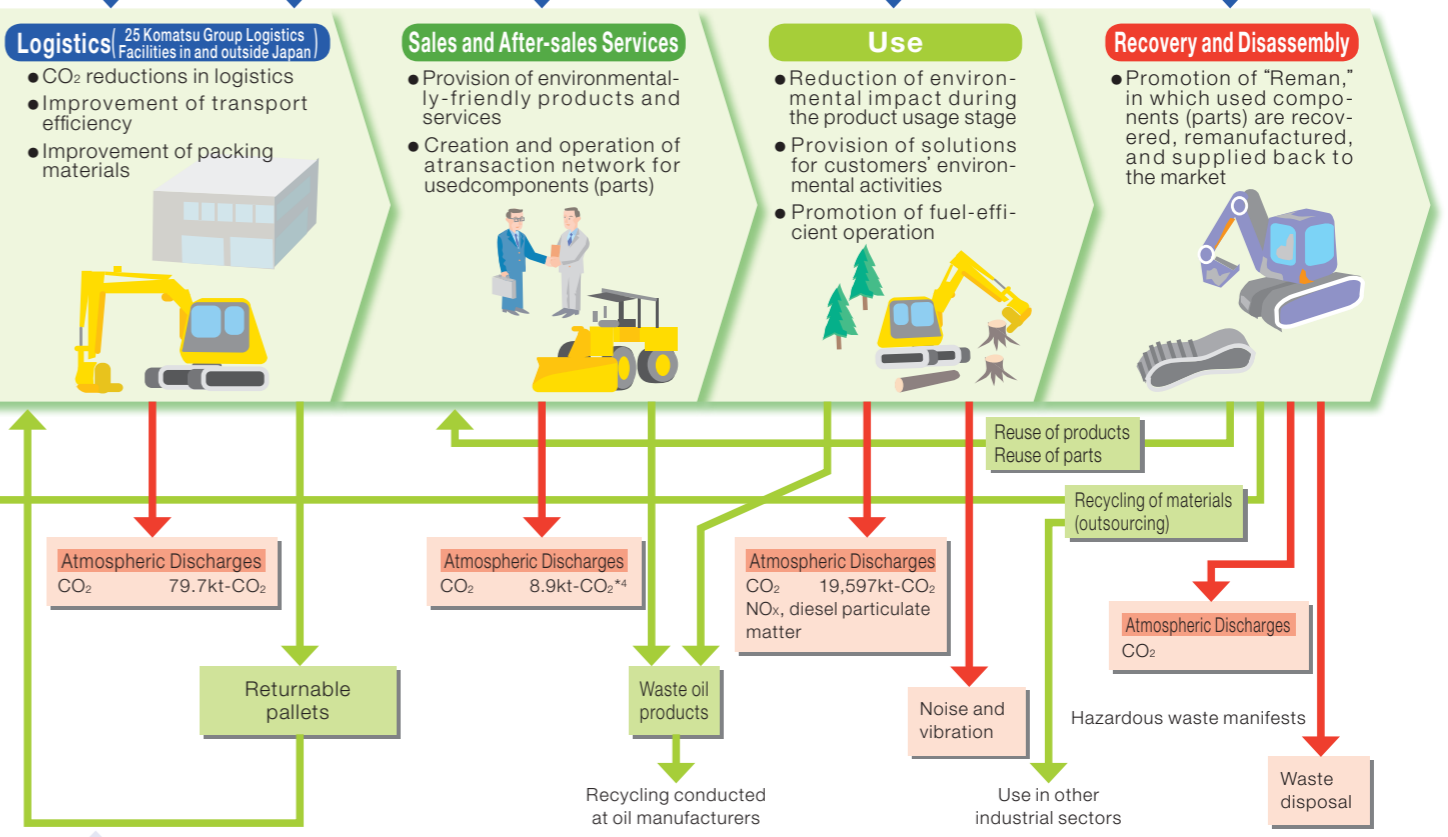
NO_x emissions: Calculated by multiplying the "nitrogen oxide emissions units" (obtained at each Komatsu facility) by the amounts of heavy oil, kerosene, light oil, natural gas, and LPG used.

Emissions and transfer of substances covered by the PRTR Law: Calculated by the "content ratio of specific chemical substances" contained in indirect materials multiplied by the "discharge or transfer rate." This calculation is based on the PRTR Law, which was designed to mandate the disclosure of the amount of specific chemical substances released into the environment to promote the management of such substances.

Environmental Impact Indicators by Region



Note: Komatsu has begun to include parts of overseas data to the amount energy used and emissions by logistics.



Scope of energy and CO₂ data of logistics

- Komatsu (parent company) facilities, specifically the following fourteen plants**
The Awazu Plant, the Osaka Plant, the Rokko Plant, the Ibaraki Plant, the Tochigi Plant, the Kanazawa Plant, the Shonan Plant, the Oiyama Plant, the Koriyama Plant, and Komatsu Logistics Corp (Parts Logistics Division) (The Kanto Parts Distribution Center, the Kansai Parts Distribution Center, the Awazu Parts Distribution Center, the Hokkaido Parts Distribution Center, the Kyusyu Parts Distribution Center).
- Komatsu Group manufacturing facilities in Japan, specifically the above fourteen plants and the following one business unit**
Komatsu Castex Ltd.
- Komatsu Group manufacturing facilities outside Japan, specifically the following ten plants**
Komatsu America Corp., [Chattanooga Manufacturing Operation], [Peoria Manufacturing Operation], Komatsu do Brasil Ltda., Komatsu UK Ltd., Komatsu Mining Germany GmbH, Komatsu Shantui Construction Machinery Co., Ltd., Komatsu (Changzhou) Construction Machinery Corporation, Komatsu (Changzhou) Foundry Corp., Komatsu (Shandong) Construction Machinery Corp, PT Komatsu Indonesia Tbk, Bangkok Komatsu Co., Ltd..

Coverage of Data

- *1: 8 Komatsu manufacturing facilities in Japan
- *2: 12 Komatsu Group manufacturing facilities in Japan
- *3: Logistics of business sites in Japan. However, this excludes data from the Awazu Distribution Center, Hokkaido Parts Distribution Center, and Kyushu Parts Distribution Center
- *4: Sales agencies and rental companies in Japan (Komatsu Construction Equipment Sales and Service Japan Ltd., Komatsu Rental Ltd., and Komatsu Forklift Japan Ltd.) were added
- *5: Including the usage of forklifts in the premises of a factory

Pursuing Environmental Management

Environmental Inspection

Environmental Inspection of American States affiliated companies

In accordance with the "Earth Environment Charter", environmental protection guidelines are being established for the purpose of improving the environmental protection level and reducing the environmental risks in developing countries.

In 2014, although not a developing country, the affiliated companies in the U.S. (KAC: 3 offices) and Brazil (KDB: 1 office) were visited for an inspection of their environmental facilities and to exchange views on environmental preservation. All four offices were conducting appropriate energy conservation activities, air and water quality measurements, and sorting of waste, and no major environmental risks were found.

Environmental inspections of overseas affiliated companies will continue to be carried out and the environmental efforts of the entire Komatsu Group will continue to be improved.



Environmental Inspection at KDB

Past Environment Inspections

Year	Location
2007	China
2008	—
2009	Thailand and Indonesia
2010	India
2011	Brazil
2012	Russia and Czech Republic
2013	United States
2014	United States and Brazil

Global Safety and Environmental Affairs Meeting

For 3 days, from November 5 through 7, 2014, the Sixth Global Safety and Environmental Affairs Meeting was held at the Komatsu Way Global Institute with the participation of 36 officers responsible for safety and environmental management from 12 different countries.

It was a productive meeting that included an explanation of Komatsu's policies regarding the environment, as well as time for officers from each manufacturing facility to divide into small discussion groups to exchange information.

It was decided that this meeting would be held annually starting in 2015, to further the sharing of cases in Japan, and facilitate the communication among participants, in order to promote environmental activities on a global scale.



Global Safety and Environmental Affairs Meeting (at the Komatsu Way Global Institute)

Setting New Mid- and Long-Term Objectives

In 2010, Komatsu set mid- and long-term objectives (2015, 2020) for the production department in regards to CO₂ reduction and started reduction activities. While mid- and long-term objectives for CO₂ reduction is being set for the world at the COP21 in 2015, Komatsu has reevaluated its mid- and long-term objectives thus far (up to 2020) and set new mid- and long-term objectives up to 2030 in order to contribute to the environmental change measures.

Among these objectives, the stringent objectives have been set increasingly in regard to CO₂ reduction particularly in domestic production, taking into consideration the electricity situation after the Great Eastern Japan Earthquake of 2011. Also, in addition to the targets set for CO₂ reduction, targets will also be determined in terms of production, for our domestic and overseas factories regarding the amounts of waste generated and water input, in order to promote the efficient use of resources.

In addition, mid- and long-term objectives up to 2030 were set for logistics CO₂ for the first time.

Further, in looking at CO₂ generated in the life cycle of construction equipment products, we found that CO₂ emissions during construction equipment use makes up approximately 90% of total emissions. Therefore, fuel efficiency goals for construction equipment products were also set this time, up to 2030, in order to promote CO₂ reduction over the entire life cycle.

Area	Object	Application	Index	Base Year	New Objectives (Reduction Rate)	
					2020	2030
Production	CO ₂	Japan	Improvement rate per unit of production	2000	57%	65%
		Overseas	Improvement rate per unit of production	2010	32%	40%
	Waste	Japan	Improvement rate per unit of production	2010	10%	20%
		Overseas	Improvement rate per unit of production	2010	10%	20%
	Water	Japan	Improvement rate per unit of production	2010	40%	50%
		Overseas	Improvement rate per unit of production	2010	10%	20%
Logistics	CO ₂	Japan	Improvement rate per unit of logistics	2006	32%	39%
		Overseas	Improvement rate per unit of logistics	2011	13%	22%
Construction Machinery Products	CO ₂	Hybrid Hydraulic Excavator	Fuel Consumption Reduction Rate	2007	40%	45%
		Normal Hydraulic Excavator (non-hybrid)			20%	25%

Amount of CO₂ Emissions by Scope 3

From actual data gathered by KOMTRAX, Komatsu has gained perspective on the amount of CO₂ emissions (Scope 3 Category 11) produced by our products in operation world-wide.

The calculation was performed as follows.

[Calculation of Emissions from Customer Use]

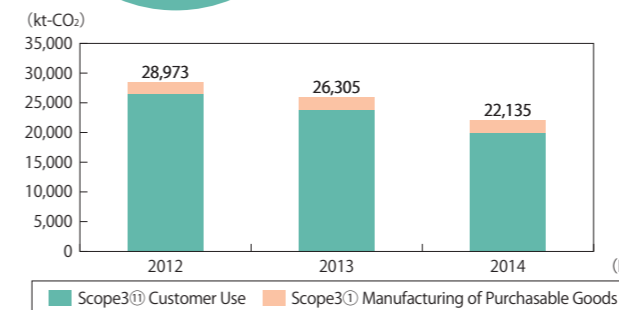
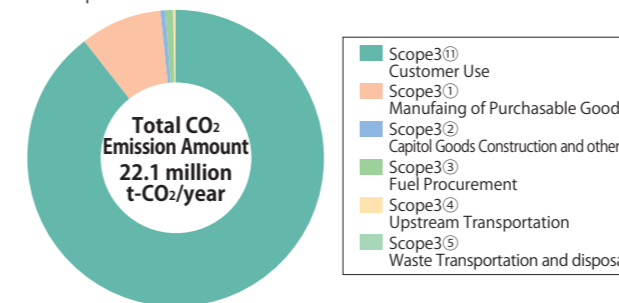
(1) Calculate the following by each model

CO₂ emissions over the life of each model
 = (2014 Production Volume) × (Fuel Consumption; L/kWh) × (Engine Output; kW) × (Engine Life; as product life; h) × (CO₂ Conversion Factor)

(2) Calculated for each model in (1) above, Total these values

*For models available to collect fuel consumption, KOMTRAX collected the actual values of fuel consumption and operating time from representative models of each size. We back calculated data from development for other models.

For others, including the 14 remaining categories, the general CO₂ emissions was calculated. The result is shown in the pie chart below.



*1: LCA is the environmental impact assessment method for individual products at each stage, from manufacture, transportation, sale, use, disposal, to reuse
 *2: Scope 1 is direct CO₂ emissions by operator (ex: private power generation)
 *3: Scope 2 is indirect CO₂ emissions by operator (ex: power purchase)
 *4: Scope 3 is CO₂ emissions by operator from supply chain (ex: emissions of product during operation, emissions from suppliers, transportation, business trips and commuting)

Amount of CO₂ Emissions Date by Scope 3

Category	Rate %	Summary Data t-CO ₂
Scope3 (11) Customer Use	88.5	19,597
Scope3 (1) Manufaing of Purchasable Goods	9.6	2,124
Scope3 (2) Capitol Goods Construction and others	0.5	109
Scope3 (3) Fuel Procurement	0.8	183
Scope3 (4) Upstream Transportation	0.1	18
Scope3 (5) Waste Transportation and disposal	0.0	7
Scope3 (6) Business Tips	0.1	27
Scope3 (7) Commuting	0.1	20
Scope3 (8) Upstream Leased Assets Operation	—	—
Scope3 (9) Downstream Transportation	0.2	50
Scope3 (10) Processing Sold Products	—	—
Scope3 (12) Transportation for Product Disposal	—	—
Scope3 (13) Downstream Leased Assets Operation	—	—
Scope3 (14) Franchies Member Companies	—	—
Scope3 (15) Investment Management	—	—
Total CO₂ Emission Amount (t-CO₂/year)	100.0	22,135

- Although it is calculating in the total range of domestic and an overseas in calculation of each category, the category (4) and (5) is calculating only domestic data. Moreover, presumption of a category (3) goes into overseas data in part.

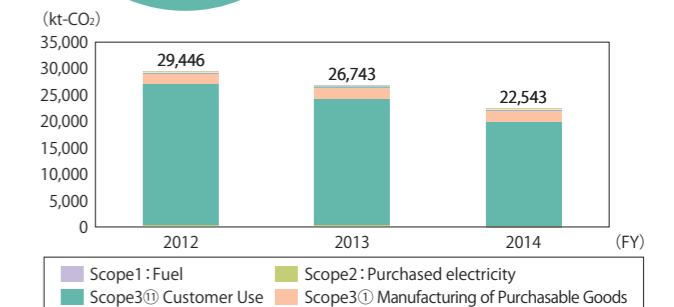
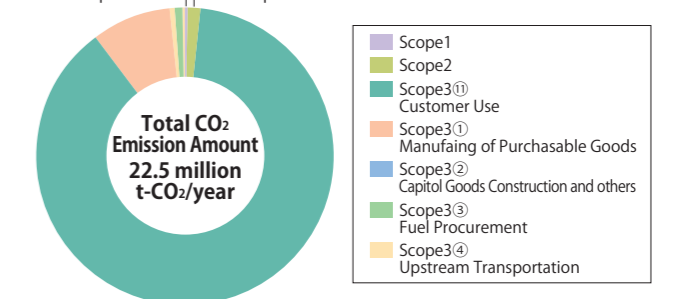
As evident from the results above, emissions during product use makes up approximately 90% of total emissions.

From this, we can see that fuel-efficient products have a significant effect on reducing CO₂ emissions.

Komatsu is committed to developing hybrid construction machinery (improving fuel efficiency by 25%) and DANTOTSU products (over 10% improvement in fuel efficiency) and accelerating the pace of ICT-based computer-aided construction.

In addition, the result of the understanding in the LCA *1 (Life Cycle Assessment) is the pie chart below.

Pie Chart of Scope 1, 2, 3



Mitigating Climate Change

Mitigating Climate Change through Products and Services

Tier4 Final Compliant Models Released

Komatsu has released one model after another that greatly reduce nitrogen oxide (NOx) and particulate matter (PM) emissions and meet the emissions controls of Japan (Emissions from Non-Road Special Motor Vehicles 2014 Standards), North America (EPA Tier4 Final), and Europe (EU StageIV).

Below are some examples.

Medium-Sized Hydraulic Excavator "PC490LC-11"*1

With "Quality and Reliability" as a foundation, Komatsu has pursued an ever higher level of environment, safety and ICT qualities, and released to the market PC490LC-11, which adds an outstanding fuel efficiency to this generation's environmental capabilities.

This model has a new type of engine that meets the North America EPA Exhaust Emissions Tier 4 Regulations (Tier4 Final) as well as Europe Exhaust Emissions Regulations Stage IV to further promote "clean & economy".

Fuel consumption has been decreased by a maximum of 11% compared to the previous model (PC490LC-10).

*1: For Europe and North America



PC490LC-11

Main Specifications

Item	Unit	PC490LC-11
Machine Mass	kg	48400
Net Engine Rated Output	kW/min ⁻¹	268/1900

Large-Sized Bulldozer "D155AX/AXi-8"

With "Quality and Reliability" as a foundation, Komatsu has pursued environment, safety and ICT qualities to release to the market D155AX/AXi-8, which meets the next generation exhaust emissions regulations (Japan: 2014 Regulations, North America: Tier4 Final, Europe: StageIV) which have been in effect since 2014.

In particular, the D155AXi-8 is the first ICT construction equipment compliant to the next generation exhaust emission regulations of Japan, USA and Europe. By building in, for the first time, an automatic blade control function to a

large-sized bulldozer which bears the large burden of heavy excavation work in land preparation, quarrying and mining, this large-sized bulldozer performs with great effectiveness, making possible an improvement in work efficiency (decreased the fuel consumption rate per amount of work) of approximately 8% compared to models without the automatic blade control.



D155AX/AXi-8

Main Specifications

Item	Unit	D155AX/AXi-8
Machine Mass	kg	40500
Net Engine Rated Output	kW/min ⁻¹	264/1900

Dump Truck "HM400-5"*1

The HM400-5, by incorporating the Komatsu Diesel Particulate Filter (KDPF) and Selective Catalytic Reduction (SCR), significantly reduced the emission of nitrogen oxide (NOx) and particulate matter (PM) to meet the North America EPA Exhaust Emission Tier4 Final Regulations (Tier4 Final) and Europe Exhaust Emission Regulations StageIV.

For the HM400-5 equipped with the SCR, an AdBlue®*2 becomes necessary. However, by keeping the total cost of light oil + AdBlue® equal to the conventional model (HM400-3), a low fuel consumption rate has been achieved (fuel efficiency improved by 2.0%).

In addition, the fuel consumption waste that occurs during times such as waiting for loading has been eliminated by the use of an auto-idle-stop. Further decrease in fuel consumption will become possible.

*1: For Europe and North America

*2: AdBlue® is a registered trade mark of Verband der Automobilindustrie e.V.(VDA)



HM400-5

Main Specifications

Item	Unit	HM400-5 (Overseas General Specification)
Machine Mass	kg	35000
Net Engine Rated Output	kW/min ⁻¹	348/2000

Market Introduction of Newly Developed Forklifts "FE25-1"

"FE25-1" which was introduced to the market in April 2014, is an innovative battery-powered forklift that combines the outdoor capacity (waterproof, dust-proof qualities) and ease of use (rehydration unnecessary as well as rapid recharging capabilities of recharging up to 80% over a one hour lunch break) with the environment-friendliness and economy of a battery-powered forklift.

With the growing interest in "food safety and security", in places such as fishing ports and wholesale market of fisheries products and fresh produce, the FE25-1 is being chosen by many customers for its low operating cost as well as its "clean" characteristic of not producing any exhaust gas, smells or noise.

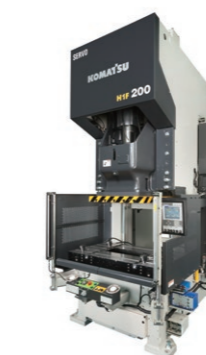
Also, in airport terminal warehouses, wood processing industry, wood products manufacture and sales companies, ceramic manufacturers, and cast and wrought iron industries—all of which are outdoor works affected by weather, fugitive dust (sand, etc.), and fine particles that make them unsuitable for battery-powered forklifts—the FE25-1 has been highly rated for proving its outdoor capabilities and low operating cost demonstrated in actual work situations. The cumulative total of domestic orders has already exceeded 700 forklifts.



FE25-1 operating at a fishing port

Introducing to the Market the AC Servo Press "H1F200-2"

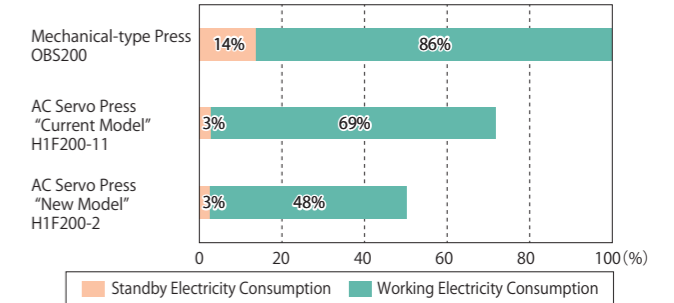
Komatsu Industries Corporation has developed the AC Servo Press "H1F200-2" with improved productivity and energy conservation. This machine stores regenerated electricity in a condenser, and supplies electricity when necessary from the condenser. As a result, the consumption of electricity is decreased by approximately 50% compared to previous mechanical presses. In addition, based on this system, the electricity supply peak can be controlled, making it possible to operate it at the same electrical capacity as past mechanical presses, thereby contributing to energy conservation and decrease in contracted electricity for the user.



H1F200-2

We will continue to expand the range of products in the environment friendly H1F series.

AC Servo Press Electricity Consumption



Awarded the Excellent Energy Conserving Machinery "The Japan Machinery Companies Association Chairman Award"

Fiber Laser Cutting Machine KFL Series

The fiber laser cutting machine "KFL series", marketed by Komatsu Industries Corp. since 2013, was selected to receive the "The Japan Machinery Companies Association Chairman Award" at the 2014 Excellent Energy Conserving Machinery Awards.

This award program is sponsored by the Japan Machinery Companies Association and has been held annually since 1980 for the purpose of promoting the development of energy conserving machinery, as well as popularizing the use of excellent energy conserving machinery by awarding a person, companies and other organizations which are recognized as contributing to promoting the efficient use of energy by developing and putting to practical use such excellent energy-saving machinery.

This is a laser-processing machine that aims to down-size the oscillating machine output while securing the productivity of sheet-metal processing for thin stainless steel sheets. Because the processing speed of sheet metal is proportionate to the energy density of the laser irradiating the material, it is important to guide the oscillating beam to the processing point without letting its quality deteriorate.

By directly connecting the process fiber running from the feed fiber of the oscillator to the processing point, we developed a method to guide a high quality beam to the processing point in this machine. As a result, while securing the same productivity level with 2kW output as the conventional type fiber 4kW, by downsizing the oscillator output, the oscillator's energy consumption was decreased. Also, by condensing the nitrogen gas in the air for use as incision gas, the running cost at the sheet metal incision point was reduced.



KFL2051

Mitigating Climate Change

Initiatives to Mitigate Climate Change in Business Operations

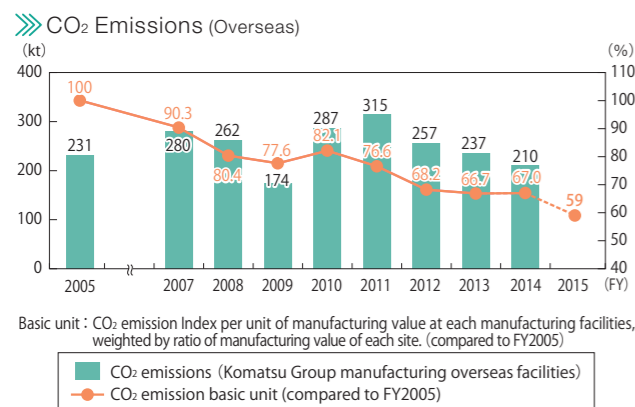
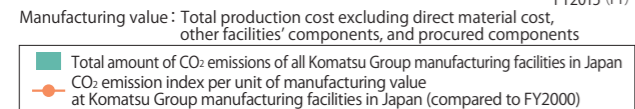
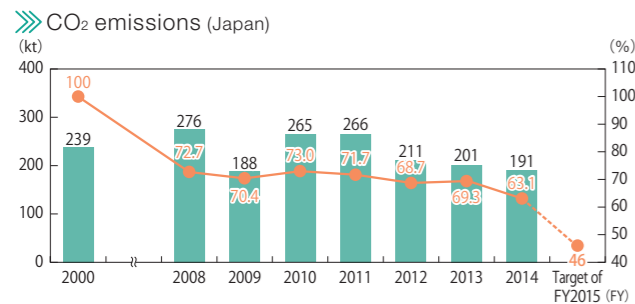
Reducing CO₂ Emissions in Manufacturing Operations

As part of our efforts to mitigate climate change, Komatsu has adopted an indicator of CO₂ emissions per unit of manufacturing value with respect to the amount of electricity, fuel gas, fuel oil, and other types of energy used in manufacturing operations, the company established more aggressive mid to long term objectives in FY2013.

In 2010, to contribute to Post Kyoto Protocol climate change measures, a mid-term goal for 40% reduction compared to 1990 levels by 2015 was established but following the start of activities to halve power consumption, activities are under way to achieve an ambitious 54% reduction compared to FY2000 levels.

Energy-saving activities were undertaken through the establishment and start of high efficiency lines and removal of old lines along with adopting renewable energy and horizontal expansion of various production improvements revolving around the "Company-Wide Power Reduction Project Team" established in May 2012. As a result, the index for the CO₂ emissions per unit of manufacturing value was reduced 36.9% compared to FY2000. CO₂ emissions at Komatsu's overseas manufacturing sites have also been cut 33% compared to FY2005 as a result of fuel conversion and lateral spread of typical improvements across domestic plants.

Komatsu will continue its effort into this fiscal year to achieve further reductions in the CO₂ emissions index by renewing aged buildings of over 40 years with a building that adopts the latest energy-saving technology and by making steady efforts on-site.



Halving Electricity Usage Project

As part of its continuing effort to reduce environmental burdens by cutting CO₂ emissions, Komatsu has decided to accelerate its pace of power usage reduction by boosting productivity drastically in anticipation of lingering nationwide power shortages in 2012 and after since their out-breaks in the service areas of Tokyo Electric Power Company, Inc. and Tohoku Electric Power Company, Inc. in the wake of the Great East Japan Earthquake in 2011.

Since an ultimate reduction of 50% or more has come into sight after in-depth analyses of electricity usage status, Komatsu is now geared at pursuing a new goal of cutting the peak power 50% from its summer 2010 level while checking its electricity usage to reduce environmental burdens.

Conceptual Approaches to Reducing Electricity Usage

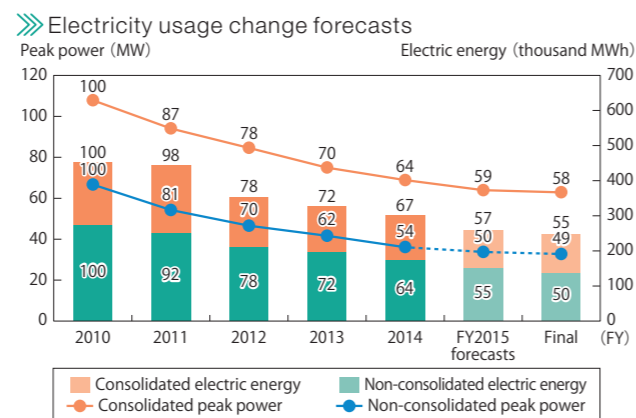
Komatsu is committed to three basic concepts of reducing electricity usage as follows:

- (1) Visualize electricity usage to eliminate waste
- (2) Production reform
- (3) Use alternative energy sources

FY2014 Status

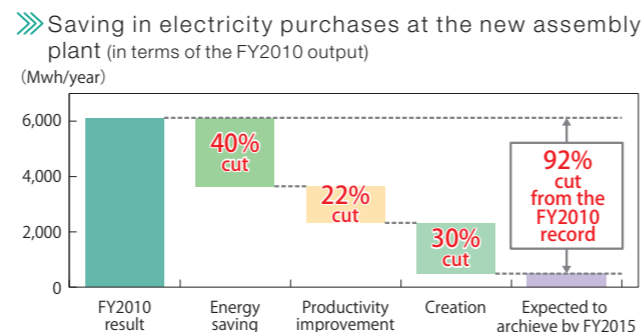
(1) Status of Group-wide electricity usage reduction

The peak power reduction effort has progressed successfully, suggesting that Komatsu's own target reduction of 50% will be attained in FY2015.



(2) Status of electricity usage reductions at a new assembly shop at Awazu Plant

With impetus mainly from a full launch of biomass power generation scheduled for FY2015, electricity usage reductions at a new assembly shop at Awazu Plant commissioned into service in 2014 are expected to reach 92% as planned.



Assembly line made easier to work with

Wood Biomass Power Generation

A wood biomass power generation system has been set up at Awazu Plant, jointly with the KAGA Forest Association in Ishikawa Prefecture in which the plant is located, to make effective use of the timber from forest thinning that had been heretofore left unused in the neighboring mountain forest.

The system has boilers fueled by wood chips supplied from the KAGA Forest Association (7,000 tons per year) and the steam generated by the boiler is used to power the compressor, generator and absorption refrigerators anticipating to save about 1,400 MWh of electricity and 800 kl of heavy oil annually.

Waste heat used for power generation and air conditioning boosts energy utilization efficiency to as high as 65% in the winter time.



Boiler

Generator

Reducing CO₂ Emissions in Logistics

Lower CO₂ Emissions of Global Transport (Basic Unit of CO₂ Emissions per Cargo Weight)

In FY2011, Komatsu began improving its assessment of CO₂ emissions from logistics operations for its 10 major international business locations.

Since FY2006, improvements have started in domestic locations, and now been implemented on a globally consolidated basis at all 25 business locations.

Focusing the following points, Komatsu has been achieving improvement of transportation base unit and reduction of transportation distance by truck in Japan. One is to expand the use of Tohoku-bound coastal shipping, one prioritized area of improvement since FY2011, and the other is to expand the use of railway transport, another prioritized area of improvement since FY2014.

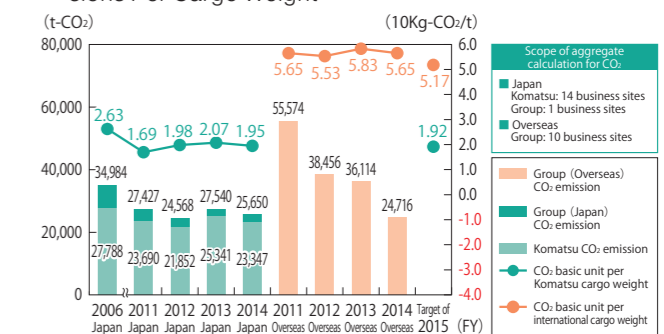
Changes in the shipping destinations, coupled with improved modal shifts, have cut the average land trucking

distance for domestic plants by 7.4%, with the basic unit of domestic CO₂ emissions improving by 5.8% compared to the previous year.

In the overseas scene, the need for long-distance trucking in the U.S. has been cut as a result of cross-sourcing North America-bound products from the CMO (Chattanooga, America) plant (with 44% of the total volume of North America-bound products having been switched to imports from the Osaka Plant in Japan and the BKC plant in Thailand).

Again, changes in the shipping destinations, coupled with the improvement at the CMO, have cut the average land trucking distance for overseas plants by 6%, with the basic unit of overseas CO₂ emissions improving by 3.0% compared to the previous year.

Global Shipment CO₂ Emissions Volume and CO₂ Emissions Per Cargo Weight



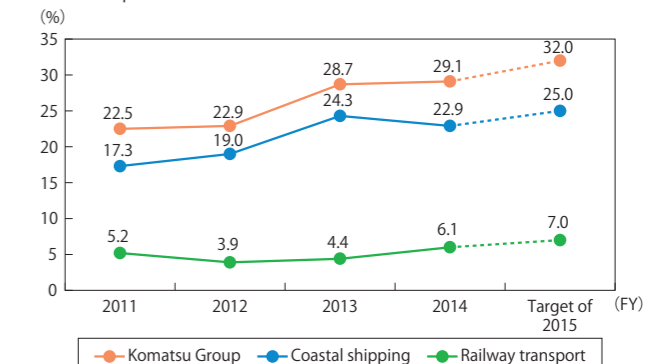
Improving the Rate of Modal Shift in Japan

The rate of modal shift improved up to 29.1% in FY2014. By making proactive use of coastal shipping in place of long-distance trucking, which had increased since the outbreak of the Great East Japan Earthquake in 2011, the rate of coastal shipping has expanded.

The rate of railway transport advanced by 1.7% to reach 6.1% in FY2014 after a continual effort to expand it having been pursued since FY2013 as a prioritized area of improvement.

Plants at which such effort was directed have gained a CO₂ emissions reduction of 298 (t-CO₂/year).

Promoting the Rate of Modal Shift across the Komatsu Group



Promoting Recycling

Promoting the Remanufacturing Business

In our Reman business, the Komatsu Group remanufactures used engines, transmissions, and other key components (parts) of construction and mining equipment into "remanned" components that have the same high quality as newly manufactured components. We then put these components back on the market. The Group is promoting the Reman business at 12 Reman Centers around the world.

Promoting the Reman Business to the World

Reman, an abbreviation for remanufacturing, offers the following advantages to customers:

- Quality and performance that is the same as new components
- Lower cost for "remanned" components
- Reduced idle time for construction equipment because of adequate inventory of "remanned" components
- Resource conservation and waste reduction through reuse and recycling of components.

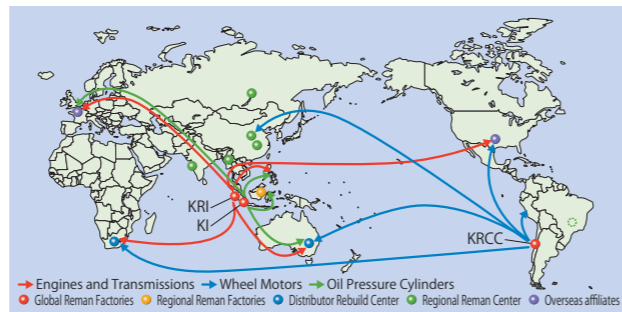
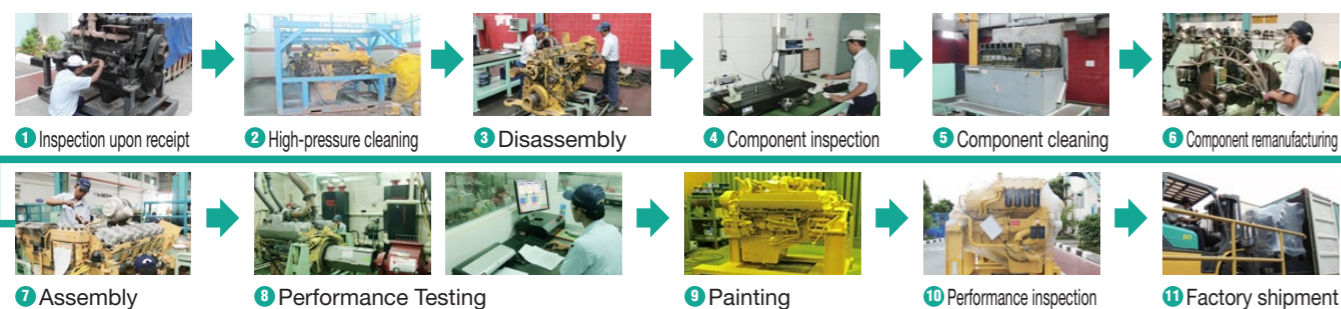
As the global center, Komatsu established PT Komatsu Reman Indonesia (KRI), which supplies parts, such as engines and transmissions for large-size construction machinery, and PT Komatsu Indonesia (KI), which supplies hydraulic cylinders. Komatsu also established another global center, Komatsu Reman Center Chile (KRCC), which provides components for electric dump trucks.

Additionally, Komatsu established PT KOMATSU REMANUFACTURING ASIA (KRA) in Indonesia to recycle all components of large-size construction machinery exclusively for the Indonesian market. For countries that are not part of our global supply chains (China, Russia, India and Brazil), we have established individual Reman Centers, and in April 2015 the 12th Reman Center was established in Myanmar.



The Myanmar (KMM) Reman Center established in April 2015

Reman Process



Reman Factories and Centers map

Providing Reman-related Information

The Komatsu Group has set up "Reman-Net" as a network for Komatsu Reman Centers around the world. The Group is actively using this network to develop Reman operations for reuse and recycling of components at the global level.

IC tags and two-dimensional bar codes are used to manage each item's remanufacturing history, and to track quality and durability information. This important information is reported to the Group, to help develop components with optimal service life.

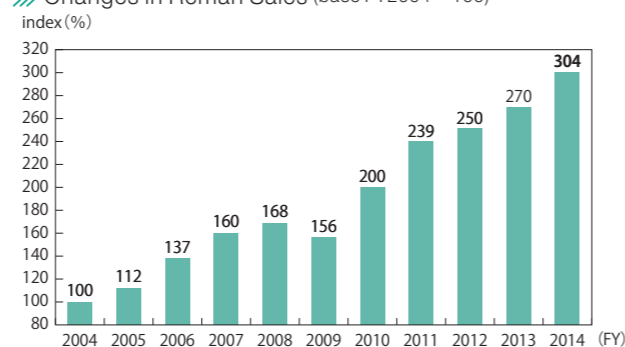
Future Steps

To further increase the reuse rate of used components, the Komatsu Group is reducing the number of disposed parts by:

- Developing parts for remanufacturing, oversized parts, etc
- Developing recycling-related technologies (assessment and measurement for reuse, remanufacturing worn-out parts, cleaning, heat treatment, etc.)

to reduce waste components, and thereby further increase reuse and recycling activities.

Changes in Reman Sales (base FY2004 = 100)



Effective Utilization of Resources in Manufacturing Operations (Waste)

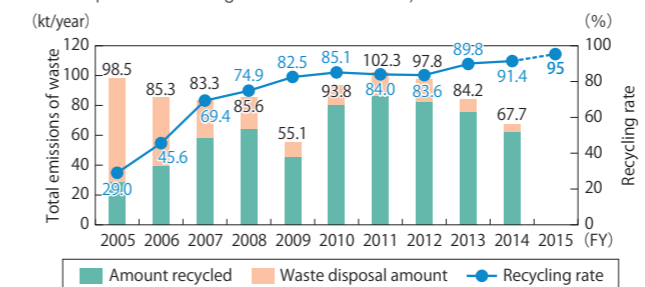
In tandem with reducing the amount of waste produced during manufacturing operations, Komatsu engages in "zero emissions" activities to use waste materials as resources. Starting in FY2011, Komatsu set new medium-term goals for our recycling rate and for the amount of waste generated per unit, and we are working toward those goals. In an effort to attain zero emissions, Komatsu raised the target recycling rate up to 99.5% or greater by FY2015. Then in FY2014, the recycling rate was 99.6%, making it the fourth year in a row to achieve the mid-term goal early. And Komatsu's mid-term goal is to have an above 95% recycling rate in our overseas operations by FY2015, and is working towards effective re-use of waste accordingly. The recycling rate at Komatsu's overseas manufacturing facilities picked up to 91.4% in FY2014.

Komatsu had projected cuts in the amount of waste materials generated per unit of manufacturing value in FY2015 of 20% or greater, compared to the FY2005 level. As a result of strict adherence to separated-waste collection and increased conversion of waste materials to resources, the amount of waste materials generated per unit has been trimmed by 42.7%, compared to the FY2005 level. Komatsu aims to continue its effective separated waste collection policy to achieve its medium-term goals.

Amount of Waste Generated (Data coverage: Komatsu Ltd. and the Komatsu Group manufacturing facilities in Japan)



Amount of Waste Generated (Data coverage: The Komatsu Group manufacturing facilities in overseas)



Effective Utilization of Resources in Manufacturing Operations (Water Resources)

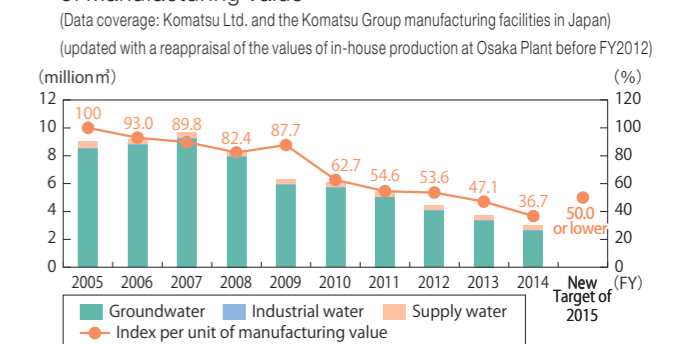
In FY2014, Komatsu set a new medium-term target of achieving a 50% or greater reduction in the amount of water used per unit of manufacturing by FY2015, compared to the FY2005 level. An effort has been made to save the consumption of underground water at Komatsu facilities located in

the Hokuriku District, which are major users of underground water. The Company has achieved reductions in the amount of water used per unit of manufacturing by 63.3% compared to the FY2005 level, through the reuse of water during processing and the elimination of wasteful day-to-day practices.

In particular, the Awazu Plant significantly reduced its groundwater consumption through measures such as adjusting the pump discharge, reevaluating the temperature of cooling water used for heat treatment, and the installation of water-circulation equipment. As a result, the Awazu Plant was able to reduce water usage by more than 80% per unit of manufacturing value.

Komatsu will continue efforts to save water resources to achieve its medium-term goals.

Amount of Water Resources Used and Index Per Units of Manufacturing Value



TOPICS

Selected for CDP's CPLI and CDLI for 2 Consecutive Years

In the "CDP Japan 500 Climate Change Report 2014" published by CDP^{*1}, Komatsu was one of the companies awarded the highest rank of A for greenhouse gas reduction performance. We were also awarded a high score of 99 for information disclosure. As a result, Komatsu was selected for two consecutive years by both the CPLI^{*2} (Climate Performance Leadership Index) and the CDLI^{*3} (Climate Disclosure Leadership Index) of the 2014 CDP Japan 500. We also made it on to the "The A List," which lists all global companies that received the A ranking.



Komatsu believes that environmental activities are a top priority issue for a company to fulfill social responsibility and foster sustainable development. Therefore, activities to reduce environmental impact is being actively promoted across all aspects of business activities.

For example, ICT construction machinery, hybrid hydraulic excavators, activities to halve power consumption, and biodiversity conservation activities are being promoted. The result of these climate change initiatives contributed to the high evaluation of our activities. Preservation of the global environment is essential for companies to achieve sustainable growth, and Komatsu will continue to advance its environmental activities more than ever.

*1: The CDP is environmental disclosure information referenced by 767 institutional investors with a total of 92 trillion US dollars in assets under management, which accounts for half of the invested capital of the world.

*2: The CPLI is an index that selects leading companies with an especially excellent track record for initiatives regarding climate change.

*3: The CDLI is an index that selects leading companies with an especially excellent track record for information disclosure regarding climate change.

Biodiversity

Initiatives that Deal with Biodiversity

Komatsu will maintain our commitment to protecting biodiversity in our business activities, recognizing the impact of those activities on the ecosystem.

◆ Initiatives that Deal with Biodiversity

With the establishment of Komatsu's "Declaration of Biodiversity" and "Biodiversity Guideline" in January 2011, Komatsu business units worldwide began activities designed to preserve biodiversity.

Komatsu promotes initiatives to preserve biodiversity on two levels.

First, the Company continues to promote ongoing efforts to reduce the environmental impact of Komatsu's business activities. Komatsu also considers biodiversity when deciding how land is to be used, such as when building factories.

Second, Komatsu is becoming directly involved in the preservation of biodiversity, and at the same time expanding our "one-site, one-theme activities" to raise employee's awareness of the need to preserve local ecosystems.

◆ Initiatives of Each Business Facility

Practical Test Section of Development Division : Efforts to Make the Most of Surrounding Nature

We conduct distribution studies of rare species on facility grounds, maintain the Land of Fireflies as well as try to attract more fireflies.

We are also working on creating an environment friendly to the habitation of living organisms by exterminating the Goldenrod, a foreign species, from the facility grounds and attempting the recovery of vegetation native to the district.



Land of Fireflies



Goldenrod extermination

KOMATSU CASTEX : Biotope Construction and Rare Species Conservation

We constructed a biotope by refurbishing the pond, which was already a part of the facility grounds, and its surroundings. Efforts are being made to protect rare species by releasing the local district's rare species of fish into the pond.

At another pond, activities to promote natural revival are continuing with the transplanting of some euryale ferox, categorized as extinct in the wild.



Constructed biotope

Oyama Plant : Social Contributions Making Use of Satoyama

At the biotope that was constructed within the Oyama Plant, Biotope Satoyama (Komatsu Manabino Mori), we participated in the Reconstruction Support Activity by cultivating Japanese black pine seedlings to be transplanted to Fukushima prefecture.



Japanese black pine seedling cultivated at Satoyama



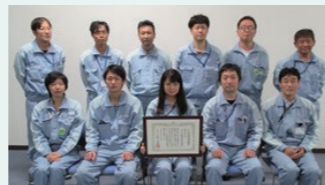
Planting Japanese black pine trees in Fukushima

TOPICS

Kanazawa Plant was awarded the "Great Kanazawa Environmental Activities Award" by the City of Kanazawa

As a biodiversity project based in the local district, our environment conservation activities, such as the planting of insect-resistant black pine in the neighboring "Awagasaki Yasuragino Hayashi," as well as the clearing of the underbrush 3 times a year, the cleaning of local beaches, and energy conservation, were highly evaluated and awarded a certificate of achievement by the City of Kanazawa in November, 2014.

The Staff of Kanazawa Factory that Received the Award.



Environmental Risk Management

Promoting Legal Compliance, and Pollution Mitigation and Prevention

Komatsu Group companies periodically report and archive environmental measurement results, in accordance with applicable laws and regulations of national and local authorities. In FY2014, no major accidents or legal violations occurred that would threaten environmental contamination.

◆ Addressing Soil and Groundwater Contamination

Komatsu has established guidelines for testing soil and groundwater at our Japan facilities, and we perform investigations according to applicable laws and regulations at business units that are to be sold, closed, or demolished. If contamination is found, the Company takes appropriate measures under the supervision of local authorities. We are performing voluntary investigations at currently operating business units to check for contamination from volatile organic compounds (VOC) from cleaning solvents that were used in the past.

Komatsu has been surveying soil and groundwater for VOC contamination at Group business units in Japan since 2005. Business unit sites at which contamination has been detected have implemented countermeasures. The Company has selected methods to clean up the sites as quickly as possible.

Work at the Oyama Plant was completed in FY2009. The clean up work at the other sites are continuing.

In FY2013, change in land character notifications were filed for the Awazu Plant, in accordance with the provision of Article 4, Amended Soil Contamination Countermeasures Act. However, no survey order was issued from administrative authorities in relation to these sites because there was no concern regarding possible contamination.

Going forward, along with driving the clean up activities, we will monitor the site boundaries to make sure that off-site outflow of groundwater does not exceed the standards.

▶▶ Status of Soil and Groundwater Cleanup in Japan

Business unit	Cleanup method	Cleanup status
Awazu Plant	Excavation and removal, soil vapor extraction, groundwater withdrawal and aeration, bioremediation*	In process
Komatsu Plant (formerly)	Excavation and removal, groundwater withdrawal and aeration, bioremediation	In process
Osaka Plant	Soil vapor extraction, air sparging, groundwater withdrawal and aeration, bioremediation	In process
Shonan Plant	Excavation and removal, groundwater withdrawal and aeration	In process
Tochigi Plant	Excavation and removal, bioremediation	In process

*Bio-remediation is purification process of hazardous materials through utilizing micro organisms and returning the soil to a non-hazardous state.

-Surveys revealed no contamination for the Koriyama Plant, Research Division in Hiratsuka, Techno Center in Izu and Field Testing Department in Oita.

◆ Managing PCB (Polychlorinated Biphenyl) Waste

Komatsu stores and manages PCB-containing waste, such as transformers, in accordance with Japan's "Law Concerning Special Measures Against PCB Waste" and the "Waste Disposal and Public Cleansing Law." In FY2008, Komatsu entrusted PCB disposal to the Japan Environmental Safety Corporation (JESCO). A total of 560 PCB-contain-

ing capacitors were disposed of by FY2013. In FY2014, JESCO disposed of an additional 9 capacitors.

Continuing through 2015, we plan to carry out further disposal work to locate low-concentration PCB waste as well.

▶▶ Number of PCB-containing Transformers and Capacitors in Storage

Company	Site	Capacitors, etc.		Stabilizers	
		Number of disposal in FY2014	Number of awaiting disposal	Number of disposal in FY2014	Number of awaiting disposal
Komatsu Ltd.	Head office	0	0	0	35
	Awazu Plant	0	18	0	62
	Osaka Plant	0	0	0	137
	Oyama Plant	9	63	0	0
	Shonan Plant	0	2	0	0
	Tochigi Plant	0	5	0	0
	Field Testing Department	0	0	0	4
	Construction & Mining Equipment Marketing Division	0	0	0	131
Subtotal of Komatsu		9	88	0	369
Komatsu NTC Ltd.		0	2	0	0
Komatsu Cabtec Co., Ltd.		0	2	0	0
Komatsu House Ltd.		0	1	0	0
Komatsu Construction Equipment Sales and Service Japan Ltd.		0	12	0	490
Total of Komatsu group		0	17	0	490
Total		9	105	0	859

-The share from the former Komatsu Plant was transferred to the Awazu Plant. The share from the former Mooka Plant was transferred to the Oyama Plant.

Management of Chemical Substances and Pollution Prevention

◆ Reducing the amount of PRTR-related substances

The number of substances covered by PRTR* with a handling volume of 1 ton or more (0.5 ton or more for Class I Specified) in FY2014 has remained at 23, unchanged from the previous year. The handling volume (1 ton or more) has been reduced about 10% from the previous year.

Among all PRTR-listed substances, the three substances of xylene, ethyl benzene and toluene account for approximately 94% of the emissions from Komatsu and Komatsu Group manufacturing facilities. Most of the emissions are released into the atmosphere.

At domestic Komatsu group production facilities, initiatives, such as switching to paints with a lower proportion of PRTR-listed substances, using high-solid paints, improving coating efficiency and reducing film thickness, are being undertaken for the continuous reduction of handling volumes. Also, substances handled in large volumes are being changed to secondary materials that contain chemical substances having less impact on the human body. The amount of emissions in FY2014 has been reduced by about 12% from the previous year.

*PRTR: Law designed to mandate the disclosure of the amount of specific chemical substances released into the environment to promote the management of such substances (The notification system based on the PRTR Law)

Environmental Risk Management

Reducing the amount of VOC released

The majority of VOC emissions are from VOC contained in paint such as Ethylbenzene and Xylene.

The amount of emissions in FY2014 has been reduced by about 15% from the previous year by switching to paints having a less content of volatile matter, migrating to paints having a higher coating efficiency and so on.

Further improvement efforts continue in pursuit of further reductions.



A painting operation at Osaka Plant using a paint having a high-coating efficiency

Names of Class I Designated Chemical Substances and the Amounts (Released and Transferred from Komatsu Group Manufacturing Facilities in Japan) (handling 1 ton or more, or 0.5 ton or more for Class I Specified Chemical Substances) (applicable PRTR substances from April 2010) (Unit: t)

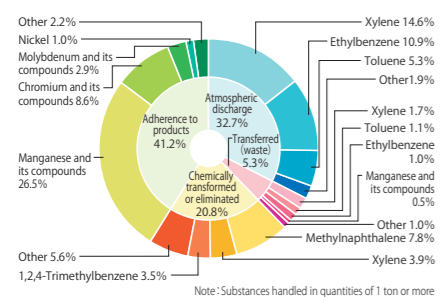
Number under the PRTR Law	Name	Amount handled	Amount released				Amount transferred		Chemically transformed or eliminated	Amount Contained in Products
			Air	Water	Soil	Buried	Sewage	Waste		
412	Manganese and its compounds	384.2	0.6	0.00	—	—	—	7.4	0.0	376.2
80	Xylene	286.5	207.6	—	—	—	—	23.8	54.7	0.4
53	Ethylbenzene	188.5	154.8	—	—	—	—	15.1	18.2	0.4
87	Chromium and chromium (III) compounds	123.8	0.0	—	—	—	—	1.7	—	122.1
438	Methylna phtalene	111.7	0.6	—	—	—	—	—	111.1	—
300	Toluene	98.4	74.7	—	—	—	—	15.5	8.1	—
296	1,2,4-trimethyl benzene	68.4	16.1	—	—	—	—	2.2	50.1	0.0
453	Molybdenum and its compounds	41.1	—	—	—	—	—	0.0	—	41.1
448	Methylenebis (4,1 phenylene) = diisocyanate	31.7	—	—	—	—	—	0.0	31.4	0.3
308	Nickel	14.5	—	—	—	—	—	0.0	—	14.5
321	Vanadium compounds	11.3	—	—	—	—	—	0.0	—	11.3
88	Chromium (VI) compounds *1 *2	11.0	0.0	—	—	—	—	2.7	—	—
297	1,3,5-trimethyl benzene	9.1	4.4	—	—	—	—	0.6	4.1	—
207	2,6-Di-tert-butyl-4-methylphenol	8.9	0.0	—	—	—	—	1.1	—	7.8
277	Triethylamine	8.6	1.9	—	—	—	—	0.0	6.6	—
132	Cobalt and its compounds	7.6	—	—	—	—	—	0.9	—	6.7
258	1,3,5,7-tetraaza tricyclo[3,3,1,1(3,7)] decane *3	4.8	—	—	—	—	—	—	2.5	2.3
188	N,N-dicyclohe xylamine	4.6	0.3	0.0	—	—	—	4.0	0.2	0.1
349	Phenol *3	4.3	0.0	—	—	—	—	0.0	4.3	0.0
392	n-hexane	3.2	—	—	—	—	—	—	1.9	—
302	Naphthalene	2.7	1.2	—	—	—	—	0.5	1.0	—
83	Isopropyl benzene	1.6	0.9	—	—	—	—	0.1	0.6	—
1	Zinc compounds (water- soluble)	1.2	—	—	—	—	—	0.1	—	1.1

*1: During chrome plating, chromium (VI) compounds become chromium compounds. Therefore, the amount transferred and the amount contained in products are entered as chromium and chromium(III) compounds.

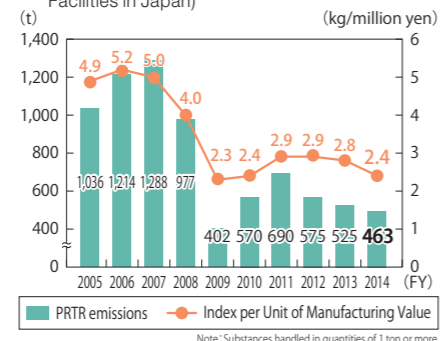
*2: PRTR Class I Specified Chemical Substances

*3: Although the amount contained is below the amount that requires registration with the PRTR, we report the data because the amount released exceeds one ton.

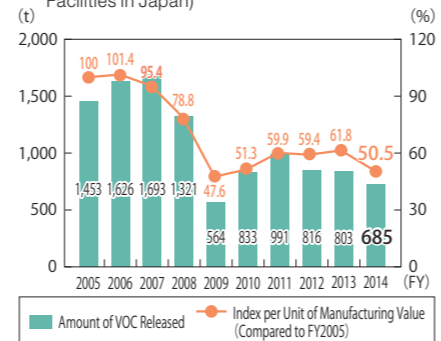
Breakdown of the Amount of PRTR-related Substances (Released and Transferred from Komatsu Group Manufacturing Facilities in Japan)



Amount of PRTR-related Substances (Released from Komatsu Group Manufacturing Facilities in Japan) (kg/million yen)



Amount of VOC (Released from Komatsu Group Manufacturing Facilities in Japan) (%)



Reducing the Use of Substances of Environmental Concern and Complying with the EU REACH Regulation

Komatsu has been making efforts from an early stage to reduce the use of asbestos, lead, and other substances of environmental concern. In FY1999, Komatsu created its own list of banned substances and substances approved for use only in limited circumstances (Refer to "Substances of Environmental Concern Banned or to Be Reduced for Use in Products"), which was based in part on the chemical substances banned under Japan's Law Concerning the Examination and Regulation of Manufacture of Chemical Substances Control, as well as regulations in other countries.

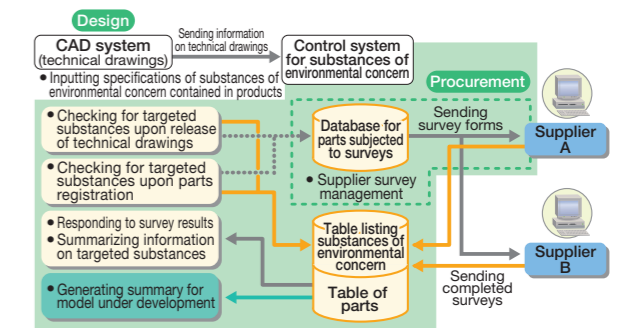
In addition, Komatsu has begun comprehensive control of substances of environmental concern. Recently, in compliance with REACH*1, Komatsu began revising its listing of substances designated as approved for limited use, "to be reduced," and "banned." Through the cooperation of suppliers, the Company has initiated a system to strengthen control of substances of environmental concern in its products. This system has been deployed in Japan and Europe, and is also being implemented in other overseas subsidiaries.

By using this system, we identify SVHC (substances of

very high concern) in vehicles currently in production and in newly developed vehicles. Furthermore, we also regularly check for new SVHCs to be added to the list.

There are currently 161 SVHCs registered, but more are added on a bi-yearly basis. In future, it is said that the number of SVHC will increase up to 1,500. Komatsu has devised a workflow to monitor control of these substances.

Control System for Substances of Environmental Concern



Substances of Environmental Concern Banned or to Be Reduced for Use in Products

Rank	Number	Chemical Substance
Banned	14	<ul style="list-style-type: none"> Hexavalent Chromium PCB Triethanolamine Cadmium Asbestos Hexachlorobenzene Mercury Specified CFCs/Alternative CFCs (HCFC) PFOS (Perfluorooctanesulfates) PBB/PBDE Tri-substituted Organostannic Compounds Trichloroethylene
To be reduced (Subject to limited use)	15	<ul style="list-style-type: none"> Lead Specified phthalate ester (DEHP/DBP/BBP/DIBP) *2 *3 Specified Brominated Flame Retardants (HBCDD) *3/ Specified Chlorinated Flame Retardants (TCEP) Polycyclic Aromatic Hydrocarbons (PAH) Methanol Arsenic DZ Selenium BNST Alternative CFCs (HFC) RCF (Fire-Resistant Ceramic Fibers) (Alumina and Scilica Types) *3
Substances of Very High Concern (SVHC) under the EU REACH Regulation	(161)*4	<p>Komatsu is subject to control the following substances, which might be used in Komatsu products.</p> <ul style="list-style-type: none"> DEHP/DBP/BBP/DIBP RCF HBCDD/Trisphosphates (2-Chloroethyl) Specified Lead Compounds (SOC 4)

*1: REACH: EU regulations for Registration, Evaluation, Authorization and Restriction of Chemicals

*2: Diethylhexyl phthalate, dibutyl phthalate, benzyl butyl phthalate, diisobutyl phthalate

*3: Review for stricter limits due to regulatory trends.

*4: The number of substances registered up until December, 2014 (progressively updated). Includes materials that are not contained in Komatsu construction equipment.

Recent External Commendations and Evaluations on Komatsu's Environmental Conservation and Social Activities

2014	September	Selected for inclusion in the Dow Jones Sustainability Indices (World and Asia Pacific)
	October	Selected by CDP for "Climate Performance Leadership" and "Climate Disclosure Leadership" in the CDP Japan 500 report for 2014
	November	Ranked 17th overall (out of 538 companies) under the "NICES" company rating system by Nihon Keizai Shimbun, Inc.
2015	January	Ranked 8th (out of 419 companies) in the Manufacturing Sector in Nihon Keizai Shimbun's 18th Environmental Management Survey
	January	KFL Series fiber laser cutting machine received the Japan Machinery Federation Chairman's Award in the 2014 Energy-Efficient Machinery Award

