

## Calculation Standards of Environmental Performance Indicators for the KUBOTA Group CSR Report 2010

### ■ Period covered:

April 1, 2009 to March 31, 2010, for data on business sites in Japan (January 1, 2009 to December 31, 2009 for data in other countries)

### ■ Organizations covered:

KUBOTA Corporation and its 70 consolidated subsidiaries in Japan and 35 consolidated subsidiaries in other countries

### ■ Calculation method:

The Environmental Reporting Guidelines 2007 (from Japan's Ministry of the Environment) were used as references. For specific details, refer to the following table.

Environmental performance indicators	Unit	Calculation method
Stopping Climate Change	Total energy input	PJ Amount of electricity purchased x per-unit of heat input*1+Σ (amount of each fuel consumed x per-unit heat value of each fuel*1)
	CO <sub>2</sub> emissions	ton-CO <sub>2</sub> Amount of electricity purchased x CO <sub>2</sub> emission coefficient*1 + Σ (amount of each fuel consumed x per-unit heat value of each fuel*1 x CO <sub>2</sub> emission coefficient*1 of each fuel)+CO <sub>2</sub> emissions from non-energy sources*2+non-CO <sub>2</sub> greenhouse gas emissions*2
	CO <sub>2</sub> emissions per unit of sales (KUBOTA Group)	% CO <sub>2</sub> emissions per unit of sales=total CO <sub>2</sub> emissions of KUBOTA Group/consolidated sales Rate of change is calculated by: CO <sub>2</sub> emissions per unit of sales of each fiscal year/CO <sub>2</sub> emissions per unit of sales of FY2005 x 100 (%) (as shown in the graph on page 39 of the CSR Report)
	CO <sub>2</sub> emissions per unit of sales (KUBOTA production plants)	% CO <sub>2</sub> emissions per unit of sales=total CO <sub>2</sub> emissions of KUBOTA production plants/sales of KUBOTA Corporation Rate of change is calculated by: CO <sub>2</sub> emissions per unit of sales of each fiscal year/CO <sub>2</sub> emissions per unit of sales of FY1991 x 100 (%) (as shown in the graph on page 39 of the CSR Report)
	Freight shipping volume	ton km Σ (Freight volume per shipment [ton] x distance traveled [km])
	CO <sub>2</sub> emissions during distribution	ton-CO <sub>2</sub> "Conversion coefficient" as shown at <a href="http://www.kubota.co.jp/csr/report/r2010.html">http://www.kubota.co.jp/csr/report/r2010.html</a> The data of KUBOTA Corporation and consolidated production subsidiaries in Japan are considered in the calculation.
	CO <sub>2</sub> emissions during distribution per unit of sales	% CO <sub>2</sub> emissions during distribution/consolidated sales Rate of change is calculated by: CO <sub>2</sub> emissions during distribution per unit of sales of each fiscal year/CO <sub>2</sub> emissions during distribution per unit of sales of FY2007 x 100 (%) (as shown in the graph on page 39 of the CSR Report)
Working towards a Recycling-based Society	Amount of waste discharge etc.	tons Amount of valuable resources sold+amount of waste treated by outside contractors
	Amount of waste discharge	tons Amount of waste treated by outside contractors=amount of industrial waste+amount of general waste from business
	Amount of landfill disposal	tons Amount of waste direct to landfill+amount of waste to final landfill after intermediate treatment
	Landfill ratio	% (Amount of waste direct to landfill+amount of waste to final landfill disposal after intermediate treatment)/ (amount of valuable resources sold+amount of waste discharged) x 100 (%) The data of KUBOTA Group's business sites in Japan are considered in the calculation in and before FY2009, and the data of overseas business sites are included in the calculation in FY2010.
	Waste discharge per unit of sales	% Waste discharge per unit of sales=amount of waste discharged/consolidated sales Waste discharge per unit of sales of each fiscal year/waste discharge per unit of sales of FY2005 (as shown in the graph on page 40 of the CSR Report)
	Amount of construction waste discharge	tons Amount of construction waste discharge (including waste generating from construction other than specific construction materials)+amount of valuable resources (generated from construction) sold
	Recycling rate of construction waste (all materials) Recycling rate of construction waste (specific construction materials)	% Recycling rate of construction waste (all materials) refers to the recycling rate of construction waste, including waste generated from construction other than specific construction materials. Recycling rate of construction waste (specific construction materials) refers to the recycling rate of waste construction materials stipulated in the Construction Material Recycling Law. Recycling rate=(amount of valuable resources sold+amount recycled+amount reused+amount reduced (heat recovery))/amount of construction waste discharge (including valuable resources) x 100 (%)
Chemical Substance Controls	Amount of PRTR-designated substances released and transferred	tons Total release and transfer amount of the chemical substances designated as Class 1 under the Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof (the PRTR Law), whose total volume handled annually by each business site is one ton or more (or 0.5 ton or more in case of Class 1-specified chemical substances). - Amount released=amount discharged to the atmosphere+amount discharged to public water area+amount discharged to soil+amount disposed of by landfill in the premises of the business site - Amount transferred=amount discharged to sewerage+amount transferred out of the business site as waste The amount of each substance released and transferred is calculated in accordance with the Manual for Calculating the Quantity of Released Pollutant under the PRTR System Third Edition (Ministry of Economy, Trade and Industry and Ministry of the Environment). The data of KUBOTA Group's business sites in Japan are considered in the calculation.
	Amount of RTR-designated substances (VOCs) released	tons Amount of VOCs (volatile organic compounds) released to the atmosphere (included in the PRTR-designated substances)
	PRTR-designated substance release and transfer per unit of sales	% PRTR-designated substance release and transfer per unit of sales=amount of PRTR-designated substances released and transferred/consolidated sales PRTR-designated substance release and transfer per unit of sales of each fiscal year/PRTR-designated substance release and transfer per unit of sales of FY2005 (as shown in the graph on page 41 of the CSR Report)
Other	Water resource input	million m <sup>3</sup> Total amount of service water, industrial water, and ground water consumed
	Amount of waste water discharge (to public water areas and through sewage)	million m <sup>3</sup> Amount of waste water discharged to public water areas or through sewage The data of KUBOTA Group's business sites in Japan are considered in the calculation in and before FY2008, and the data of overseas business sites are included in the calculation in and after FY2009.
	Amount of PRTR-designated substances handled	tons Total amount of the chemical substances handled, which are designated as Class 1 under the PRTR Law and whose total volume handled annually by each business site is one ton or more (or 0.5 ton or more in case of Class 1-specified chemical substances) The data of KUBOTA Group's business sites in Japan are considered in the calculation.
	Amount of SO <sub>x</sub> emissions	tons Amount of fuel consumed (kg) x sulfur content in the fuel (on a weight basis: %)/100 x 64/32 x (1-desulphurization efficiency)/100, or amount of SO <sub>x</sub> emitted per hour (m <sup>3</sup> /h) x annual operation hours of the relevant facility (h) x 64/22.4 x 10 <sup>-3</sup> The data of KUBOTA Group's soot- and smoke-emitting facilities in Japan specified in the Air Pollution Control Law are considered in the calculation.
	Amount of NO <sub>x</sub> emissions	tons NO <sub>x</sub> concentration (ppm) x 10 <sup>-6</sup> x amount of gas emitted per hour (m <sup>3</sup> /h) x annual operation hours of the relevant facility (h) x 46/22.4 x 10 <sup>-3</sup> The data of KUBOTA Group's soot- and smoke-emitting facilities in Japan specified in the Air Pollution Control Law are considered in the calculation.
	Amount of soot and dust emissions	tons Soot and dust concentration (g/m <sup>3</sup> N) x amount of gas emitted per hour (m <sup>3</sup> /h) x annual operation hours of the relevant facility (h) x 10 <sup>-6</sup> The data of KUBOTA Group's soot- and smoke-emitting facilities in Japan specified in the Air Pollution Control Law are considered in the calculation.
	Amount of COD and nitrogen discharge	tons COD or nitrogen concentration (mg/l) x amount of waste water discharged to public water area (m <sup>3</sup> ) x 10 <sup>-6</sup> The data of KUBOTA Group's business sites in Japan to which the total emission control standard is applied are considered in the calculation in and before FY2009. The data of overseas business sites are included in the calculation in FY2010.
	Amount of phosphorus discharge	tons Phosphorus concentration (mg/l) x amount of waste water discharged to public water area (m <sup>3</sup> ) x 10 <sup>-6</sup> The data of KUBOTA Group's business sites in Japan to which the total emission control standard is applied are considered in the calculation.
	Eco-efficiency indicator (CO <sub>2</sub> )	million yen/t-CO <sub>2</sub> Consolidated sales/amount of CO <sub>2</sub> emitted by the KUBOTA Group
	Eco-efficiency indicator (waste)	million yen/100kg Consolidated sales/amount of waste discharged by the KUBOTA Group
Eco-efficiency indicator (chemical substances)	million yen/kg Consolidated sales/amount of PRTR-designated substances released and transferred by the KUBOTA Group business sites in Japan	
Green purchasing ratio	% Amount spent to purchase "green" office supplies (paper, stationery)/total amount spent to purchase items subject to green purchasing The data of KUBOTA Group's business sites in Japan are considered in the calculation.	

\*1 The conversion coefficient is as shown in <http://www.kubota.co.jp/english/c-data/csr/2010.html>

\*2 The calculation uses the method stipulated in the Guidelines for Calculating Greenhouse Gas Emissions from Businesses (Ministry of the Environment).