

Calculation Standards of Environmental Performance Indicators for the KUBOTA Group CSR Report 2009

■ Period covered:

April 1, 2008 to March 31, 2009, for data on business sites in Japan (January 1, 2008 to December 31, 2008 for data in other countries)

■ Organizations covered:

KUBOTA Corporation and its 76 consolidated subsidiaries in Japan and 34 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 Global Warming	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 ₂ emissions	ton-CO ₂ Amount of electricity purchased x CO ₂ emission coefficient*1 + Σ (amount of each fuel consumed x per-unit heat value of each fuel*1 x CO ₂ emission coefficient*1 of each fuel) + CO ₂ emissions from non-energy sources*2 + non-CO ₂ greenhouse gas emissions*2
	CO ₂ emissions per unit of sales (KUBOTA Group)	% CO ₂ emissions per unit of sales = total CO ₂ emissions of KUBOTA Group/consolidated sales Rate of change is calculated by: CO ₂ emissions per unit of sales of each fiscal year/CO ₂ emissions per unit of sales of FY 2005 x 100 (%)
	CO ₂ emissions per unit of sales (KUBOTA production plants)	% CO ₂ emissions per unit of sales = total CO ₂ emissions of KUBOTA production plants/sales of KUBOTA Corporation Rate of change is calculated by: CO ₂ emissions per unit of sales of each fiscal year/CO ₂ emissions per unit of sales of FY 1991 x 100 (%)
	Freight volume	ton km Σ (Freight volume per shipment [ton] x distance traveled [km])
	CO ₂ emissions during distribution	ton-CO ₂ "Conversion coefficient" as shown at http://www.kubota.co.jp/english/c-data/csr/2009.html The data of KUBOTA Corporation and consolidated production subsidiaries in Japan are considered in the calculation.
	CO ₂ emissions during distribution per unit of sales	% CO ₂ emissions during distribution/consolidated sales Rate of change is calculated by: CO ₂ emissions during distribution per unit of sales of each fiscal year/CO ₂ emissions during distribution per unit of sales of FY 2007 x 100 (%)
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	% FY 2007 and earlier: Amount of waste direct to landfill/amount of waste discharged x 100 (%) FY 2008 and after: (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.
	Waste discharge per unit of sales	% Waste discharge per unit of sales = amount of waste discharged/consolidated sales Rate of change is calculated by: Waste discharge per unit of sales of each fiscal year/waste discharge per unit of sales of FY 2005 x 100 (%)
	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 PTR-designated substances (VOCs) released (included in the PRTR-designated substances)	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 Rate of change is calculated by: 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 FY 2005 x 100 (%)
Others	Amount of water consumption	m ³ Total amount of service water, industrial water, and ground water consumed
	Amount of waste water discharge (to public water areas and through sewage)	m ³ 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.
	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 _x emissions	tons Amount of fuel consumed (kg) x sulfur content in the fuel (on a weight basis: %) / 100 x (1 - desulfurization efficiency) / 100, or amount of SO _x emitted per hour (m ³ /h) x annual operation hours of the relevant facility (h) x 64/22.4 x 10 ⁻³ 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 _x emissions	tons NO _x concentration (ppm) x 10 ⁻⁶ x amount of gas emitted per hour (m ³ /h) x annual operation hours of the relevant facility (h) x 46/22.4 x 10 ⁻³ 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 ³ N) x amount of gas emitted per hour (m ³ /h) x annual operation hours of the relevant facility (h) x 10 ⁻⁶ 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, nitrogen, and phosphorus discharge	tons COD, nitrogen, or phosphorus concentration (mg/l) x amount of waste water discharged to public water area (m ³) x 10 ⁻⁶ 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 ₂)	million yen/t-CO ₂ Consolidated sales/amount of CO ₂ emitted by the KUBOTA Group
	Eco-efficiency indicator (waste)	million yen/100 kg 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/total amount spent to purchase items subject to green purchasing x 100 (%) The data of the KUBOTA Group's business sites in Japan where internet purchasing systems are used to purchase office supplies are considered in the calculation.	

*1 The conversion coefficient is as shown in <http://www.kubota.co.jp/english/c-data/csr/2009.html>

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