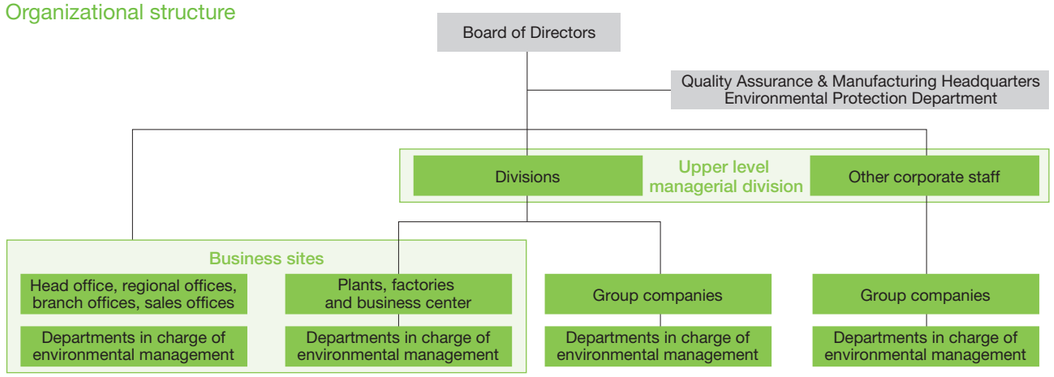
Promoting Environmental Management

The KUBOTA Group has identified the three objectives of “Stop climate change,” “Work towards a recycling-based society” and “Control chemical substances” as a part of efforts to map out its basic direction of corporate environment management. In order to achieve these objectives, the Group is endeavoring to reduce the environmental loads associated with its production activities and to enhance the environmental friendliness of its products (see pages 45-50). As the foundation for these endeavors, we are striving to bolster our environmental management system.

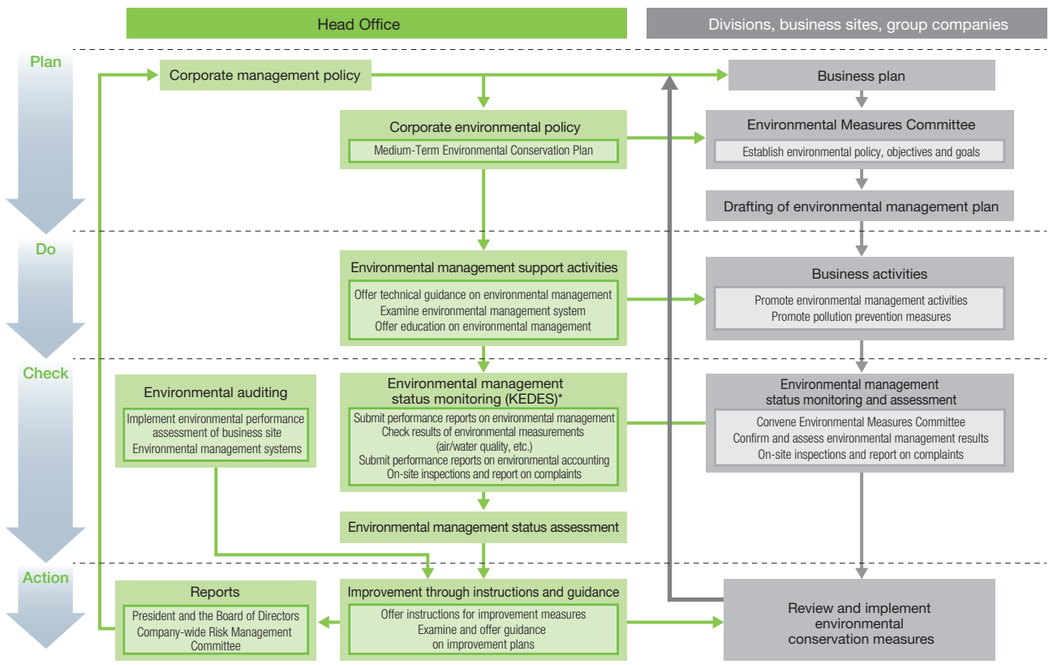
Environmental management promotion system

The KUBOTA Group is promoting its environmental management, which is based on the environmental management system, through an organizational structure in which the Board of Directors serves as the highest decision-making body.

Organizational structure



KUBOTA Group environmental management system



*KEDES: Kubota Ecology Data E-System

Environmental management

Based on rules established by the KUBOTA Group, every effort is being made to create environmental management systems and energize activities at each business site. With the globalization of its business in recent years, the Group is endeavoring to build environmental management systems that also include its overseas business sites, promote the acquisition of ISO 14001 certification, and upgrade and expand environmental education activities. Moreover, the KUBOTA Group is working to further enhance environmental awareness and raise the level of environmental conservation activities.

Environmental auditing

Each year environmental audits are conducted by the KUBOTA Environmental Protection Department, based on the internal control system of the KUBOTA Group.

Audits in FY2013 were conducted by means of paper audits and field audits with factors that have the potential to cause environmental accidents listed as priority checklist items, focusing on production sites, service sites, offices and construction departments in Japan as well as overseas production sites.

Also, at production sites in Japan and overseas, in addition to environmental audits conducted by the Environmental Protection Department, internal environmental audits are also implemented by the staff of each site with the aim of raising the level of environmental management.

■ FY2013 Environmental audit implementation status

[Number of subject sites and departments]
173 sites and departments

[Number of audit items]
83 items (for production sites)

[Audit details]
- Environmental management system
- Water & Air quality management
- Noise & Vibration management
- Waste material & Chemical substance management
- Climate change prevention
- Response to abnormalities and emergencies

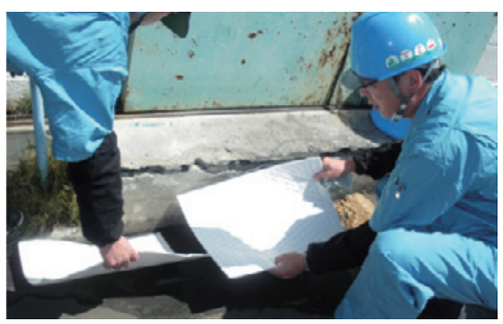
Audit of overseas production site
(Kubota Manufacturing of America Corporation)

Audit of business site in Japan
(Shin-yodogawa Environmental Plant Center)

Drills for responding to abnormal and emergency situations

The KUBOTA Group is making efforts to identify and minimize the environmental risks associated with its business activities. It carries out regular training based on the procedures established to respond to specific risks at each site to mitigate the impact on the ambient environment in case of an environmental accident.

Drainage outlet blockage training (KUBOTA Construction Machinery Japan Corporation, SANKO KUBOTA KENKI CO., LTD.)



Effluent recovery training (KUBOTA Air Conditioner Ltd.)

Environmental education

The KUBOTA Group conducted training sessions targeting each job class in order to stimulate awareness toward environmental issues and promote widespread understanding of environmental management. In addition, the Environmental Protection Department is taking the lead in conducting specialized education in such fields as pollution prevention technology and energy conservation while training ISO environmental auditors as a part of efforts to ensure the steadfast practice of environmental conservation. Moreover, individual and tailor-made environmental education activities are being conducted at each business site and Group company. Our energies are also being channeled toward cooperating with the environmental education activities of external organizations.

Results of environmental education in FY2013

Classification	Course title	Frequency	No. of participants	Course descriptions
Education by employee-level	Training for new recruits	3	150	Regional and global environmental issues as well as environmental conservation activities
	CSR training (Employees of “creative” personnel who have worked for nine years)	3	158	Environmental issues and environmental risk management
	Training for employees promoted to managerial positions	3	129	The KUBOTA Group’s environmental management
	Training for newly appointed foremen	1	11	On-site environmental management and the role and responsibilities of foremen
	Training for newly appointed supervisors	2	55	On-site environmental management and the role and responsibilities of supervisors
Professional education	Basics of environmental management education	1	10	Basic knowledge on environmental management
	Pollution prevention technology education	1	9	Pollution control laws and pollution control technology
	Energy saving technology education	1	9	Energy saving laws, energy saving technology
	Waste management education	2	39	Waste Management and Public Cleansing Law, practical training in consignment contracts and manifests, etc.
	Education to train ISO 14001 environmental auditors	2	32	The ISO 14001 standard, environment-related laws, audit techniques
	Training aimed at raising the skill levels of ISO 14001 environmental auditors	8	96	On-site audit perspectives and the identification of non-compliance
	General education for ISO 14001 environmental auditors (China)	1	28	Internal audit procedures and improvement measures
	Environmental management technology education for production engineers	1	11	Pollution prevention technology and environmental risk management, energy saving technology
	Waste information management system education	4	26	Waste disposal consignment contract and manifest management
	Education regarding the management of products containing chemical substances	1	104	Trends in environment-related laws and regulations including REACH
	Total	34	867	
Support to education in outside organizations	Japanese Association of Metal, Machinery and Manufacturing Workers (JAM)	1	10	Hanshin Plant environmental conservation initiatives

Training in connection with the management of products containing chemical substances (Kyuhoji Business Center)

Basic education for ISO 14001 environmental auditors (Kubota Agricultural Machinery (SUZHOU))

Status of environmental management system certification acquisition (ISO 14001 and EMAS)

All of the KUBOTA Group’s production sites in Japan were awarded ISO 14001 certification by the end of FY2007. Currently, efforts to obtain ISO 14001 and other certifications are underway at its overseas production sites. In FY2013, two sites in the U.S. and two in Thailand acquired ISO 14001 certification. One site in Germany also acquired EMAS certification.

【I】 ISO 14001 Certification

■ KUBOTA in Japan

No	Name	Other included organizations and subsidiaries	Main business	Inspecting/ Certifying organ	Date of certification
1	Tsukuba Plant	• Eastern Main Parts Center • KUBOTA F.I.M. Service Ltd. KS Tsukuba Training Center • Kanto Kubota Precision Machinery Co.,Ltd.	Engines, tractors, etc.	LRQA	November 28, 1997
2	Keiyo Plant	• Distribution Center	Ductile iron pipes, spiral welded steel pipes	LRQA	July 16, 1998
3	Ryugasaki Plant	• KUBOTA Vending Service Co., Ltd. Ryugasaki Plant • KUBOTA Kanto Vender Center Inc. Ryugasaki Plant	Vending machines	DNV	November 13, 1998
4	Hanshin Plant	• Marushima Factory	Ductile iron pipes, rolls, potassium titanate	LRQA	March 5, 1999
5	Kyuhoji Business Center	• KUBOTA Environmental Service Co., Ltd • KUBOTA Membrane Corp. • KUBOTA Keiso Corp.	Measuring instruments, measuring systems, CAD systems, rice-milling products, waste shredder systems, submerged membranes, and mold temperature controllers	DNV	March 19, 1999
6	Hirakata Plant		Valves, cast steel, new ceramic materials, and construction machinery	LRQA	September 17, 1999
7	Okajima Business Center		Industrial cast iron products, drainage pipes, and other cast iron products	JICQA	December 22, 1999
8	Sakai Plant/Sakai Rinkai Plant		Engines, tractors, small-size construction machinery, etc.	LRQA	March 10, 2000
9	Shiga Plant		FRP products	JUSE	May 18, 2000
10	Water Engineering & Solution Business Unit	• Shin-yodogawa Environmental Plant Center	Sewage & sludge water purification, waste water treatment facilities	LRQA	July 14, 2000
11	Pumps Business Unit	• KUBOTA Kiko Ltd.	Sewage & water purification plants, pumps and pump stations	LRQA	July 14, 2000
12	Water Engineering & Solution Business Unit (membrane filtration system)		Filtration membrane unit	LRQA	July 14, 2000
13	Utsunomiya Plant	• KUBOTA F.I.M. Service Ltd. KS Utsunomiya Training Center	Rice transplanters and combine harvesters	LRQA	December 8, 2000

■ KUBOTA Group: Companies in Japan

No	Name	Other included organizations and subsidiaries	Main business	Inspecting/ Certifying organ	Date of certification
1	Nippon Plastic Industry Co., Ltd.	• Head office and plant, Mino Plant	Plastic pipes, plastic sheets, etc.	JSA	October 27, 2000
2	KUBOTA Construction Co., Ltd.		Design and construction of civil engineering structures and buildings	JQA	December 22, 2000
3	KUBOTA Environmental Service Co., Ltd.		Installation, maintenance and management of environmental systems for service water, sewage, landfill disposal, raw waste and waste plants, etc.	MSA	November 20, 2002
4	KUBOTA-C.I. Co., Ltd.	• Tochigi Plant • Sakai Plant • Odawara Plant • Kyushu KUBOTA Chemical Co., Ltd.	Plastic pipes and couplings	JUSE	March 27, 2003 (integrated authentication in 2011)
5	KUBOTA Air Conditioner Co., Ltd.	• Tochigi Plant	Central air conditioning systems	JQA	August 27, 2004
6	KUBOTA Pipe Tech Co.		Design, construction, installation and management of pipelines	JCQA	January 24, 2005
7	KUBOTA Precision Machinery Co., Ltd.		Hydraulic valves, hydraulic cylinders, transmissions, hydraulic pumps, hydraulic motors, etc.	LRQA	March 17, 2007
8	KUBOTA KASUI Corporation		Design, construction and maintenance management of environmental conservation facilities	BCJ	February 1, 2010

■ KUBOTA Group: Overseas companies

No	Name	Main business	Inspecting/ Certifying organ	Date of certification
1	SIAM KUBOTA Corporation Co.,Ltd. (Navanakorn, Thailand)	Small diesel engines and agricultural machinery	MASCI	February 28, 2003
2	P.T. Kubota Indonesia(Indonesia)	Diesel engines and agricultural machinery	LRQA	February 10, 2006
3	Kubota Materials Canada Corporation (Canada)	Cast steel products	SGS (U.S.)	June 15, 2006
4	P.T.Metec Semarang (Indonesia)	Vending Machines	TÜV	March 16, 2011
5	Kubota Precision Machinery (Thailand) Co.,Ltd. (Thailand)	Equipment for tractors	SGS	August 27, 2012
6	Kubota Manufacturing of America Corporation (U.S.)	Small-sized tractors, mowers, Utility Vehicles and tractor implements	BSI	September 20, 2012
7	SIAM KUBOTA Corporation Co.,Ltd. (Amata Nakorn, Thailand)	Tractors and combine harvesters	BV	September 27, 2012
8	Kubota Industrial Equipment Corporation (U.S.)	Tractor implements and tractors	DEKRA	November 28, 2012
9	KUBOTA SANLIAN PUMP (ANHUI) Co., Ltd. (China)	Pumps	CCSC	May 29, 2013

LRQA : Lloyd’s Register Quality Assurance Limited (U.K.)
DNV : DNV Certification B.V. (Netherlands)
JICQA : JIC Quality Assurance Ltd. (Japan)
JUSE : Union of Japanese Scientists and Engineers ISO Center
JSA : Japanese Standards Association
JQA : Japan Quality Assurance Organization
MSA : Management System Assessment Center (Japan)
JCQA : Japan Chemical Quality Assurance Ltd.
BCJ : The Building Center of Japan

MASCI : Management System Certification Institute (Thailand)
SGS (U.S.) : Systems & Services Certification, a Division of SGS North America Inc. (U.S.)
TÜV : TÜV Rheinland Cert GmbH (Germany)
SGS : SGS United Kingdom Limited (U.K.)
BSI : BSI Assurance UK Limited (U.K.)
BV : Bureau Veritas Certification Holding SAS—UK Branch (U.K.)
DEKRA : DEKRA Certification, Inc. (U.S.)
CCSC : China Classification Society Certification Company (China)

【II】 EMAS certification

■ KUBOTA Group: Overseas companies

No	Name	Main business	Inspecting/ Certifying organ	Date of certification
1	Kubota Baumaschinen GmbH (Germany)	Construction Machinery	IHK	January 3, 2013

IHK: Industrie- und Handelskammer für die Pfalz (Germany)

Trends in Major Environmental Indicators

Medium-term environmental conservation plan / Management indicators (KPI)

Issues	Actions	Management Indicators*1	Units	FY2009	FY2010	FY2011	FY2012	FY2013
Stopping climate change	Reduce CO_2	CO_2 emissions per unit of sales	tons CO_{2e}/billion¥	520	513	477	464	492
		CO_2 emissions	kilotons CO_{2e}	575	478	445	468	575
	Reduce CO_2 during distribution*2	CO_2 emissions per unit of sales	tons CO_{2e}/billion¥	41.3	41.8	41.4	40.0	37.6
Working towards a recycling-based society	Reduce waste	Waste discharge per unit of sales	tons/billion¥	85.0	79.8	75.0	77.6	76.8
		Ratio of business sites that have achieved zero emissions	%	36.7	46.7	50.0	39.4	41.0
	Conserve water resources	Water consumption per unit of sales	m^3/million¥	4.60	5.01	4.53	4.42	3.85
Controlling chemical substances	Reduce PRTR-designated substances*2	Release & transfer per unit of sales	kg/billion¥	717	714	546	495	479
	Reduce chemical substances in products	Ratio of models with reduced RoHS-designated substances	%	24.1	24.2	22.2	28.0	36.0

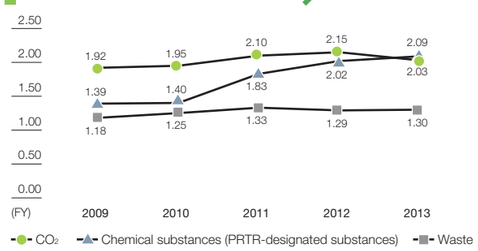
*1 Per unit data refers to the value of environmental impact divided by consolidated net sales *2 Data for business sites in Japan

Indicators listed in the overview of environmental loads (P48)

Environmental indicators				Unit	FY2009	FY2010	FY2011	FY2012	FY2013
INPUT	Total energy input			TJ	10,510	9,050	9,060	9,480	11,010
		Fossil fuel		TJ	4,060	3,550	3,360	3,560	4,060
		Purchased electricity		MWh	589,330	503,400	523,500	543,100	642,400
		Transportation fuel (business sites in Japan)		TJ	671	561	564	587	641
	Water consumption			million m^3	5.09	4.66	4.23	4.45	4.50
			Overseas business sites included in the above	million m^3	0.49	0.40	0.44	0.52	0.83
		Service water		million m^3	1.03	0.93	0.86	0.87	1.03
		Water for industrial use		million m^3	2.97	2.69	2.36	2.56	2.46
		Groundwater		million m^3	1.09	1.04	1.01	1.02	1.01
	Amount of PRTR-designated substances handled (business sites in Japan)			tons	6,621	5,507	5,277	5,321	5,667
	Amount of chemical substances handled (overseas business sites)			tons	—	—	2,667	4,488	4,138
OUTPUT	Atmospheric discharge	CO_2 emissions		kilotons CO_{2e}	575	478	445	468	575
			Overseas business sites included in the above	kilotons CO_{2e}	73	64	70	90	125
		Energy sources		kilotons CO_{2e}	566	470	439	462	569
		Other than the above		kilotons CO_{2e}	9	8	6	6	6
		Distribution CO_2 (business sites in Japan)		kilotons CO_{2e}	46	39	39	40	44
		SOx emissions*1		tons	3.9	3.8	5.2	2.9	6.6
		NOx emissions*1		tons	60.3	49.5	66.1	61.7	64.3
		Soot and dust emissions*1		tons	5.6	3.8	5.5	6.4	5.7
		Amount of PRTR-designated substances released (business sites in Japan)		tons	574	475	389	384	422
			VOC (included in the above)	tons	574	475	389	384	422
		Amount of chemical substances released (overseas business sites)		tons	—	—	81	119	211
			VOC (included in the above)	tons	—	—	—	119	175
	Water system discharge	Public water areas	Wastewater discharge	million m^3	4.48	3.86	3.78	3.82	3.48
			COD*2 (business sites in Japan)	tons	11.7	9.5	10.6	11.9	10.4
			Nitrogen discharge*2 (business sites in Japan)	tons	13.9	9.7	9.5	10.2	9.7
			Phosphorous discharge*2 (business sites in Japan)	tons	0.36	0.25	0.35	0.29	0.30
			Amount of PRTR-designated substances released (business sites in Japan)	kg	40	33	35	40	9.0
		Sewage lines	Wastewater discharge	million m^3	0.90	0.99	0.94	1.01	1.34
			Amount of PRTR-designated substances released (business sites in Japan)	kg	48	20	21	20	20
	Waste	Amount of waste discharge		kilotons	94.1	74.3	70.0	78.2	89.7
			Overseas business sites included in the above	kilotons	3.9	9.9	10.2	14.5	25.4
		Landfill waste		kilotons	10.2	3.9	4.3	4.1	7.2
		Amount of construction waste, etc. discharge (business sites in Japan)		kilotons	26.2	21.5	18.9	32.7	31.8

*1 Data for overseas business sites is included from FY2011 onwards. *2 Data for total discharge from business sites subject to total emission control.

Eco-efficiency indicators



- Eco-efficiency indicator for CO_2 = Consolidated net sales (million¥) / CO_2 emissions (tons CO_{2e})
- Eco-efficiency indicator for waste = Consolidated net sales (million¥) / Waste discharge (hundred kg)
- Eco-efficiency indicator for chemical substances =Consolidated net sales (million¥) / The amount of PRTR-designated substances released and transferred (kg) (business sites in Japan)

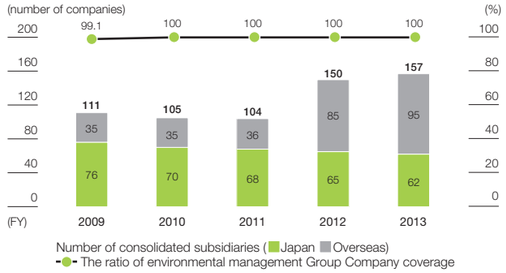
The eco-efficiency indicators for the amount of waste discharge recorded and the amount of PRTR-designated substances released and transferred improved from the previous fiscal year. Meanwhile, the eco-efficiency indicator for CO_2 declined owing mainly to the increase in the electric power CO_2 emission coefficient resulting from the suspension of operations at nuclear power generation plants in Japan.

How to read the indicators

The improvement of the indicators means that the sales per unit of environmental load have increased, which is considered to indicate higher eco-efficiency.

The Ratio of Environmental Management Group Company Coverage

All the consolidated subsidiaries in Japan and overseas have been subject to environmental management since FY2010.

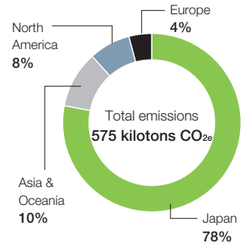


Climate Change Prevention-Related Data

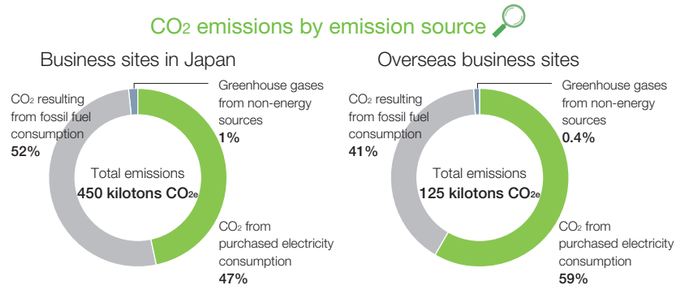
The data are supplementary information about “Stopping Climate Change” on P49 of KUBOTA REPORT 2013.

CO_2 emissions (FY2013 results)

CO_2 emissions by region

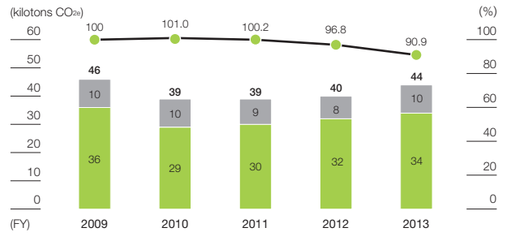


CO_2 emissions by emission source

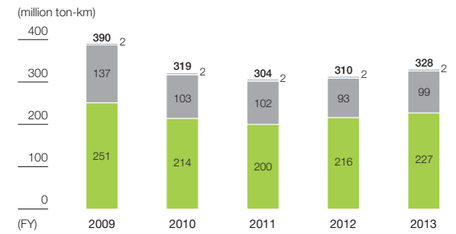


CO_2 emissions during distribution (business sites in Japan)

Trends in CO_2 emissions during distribution and emissions per unit of sales

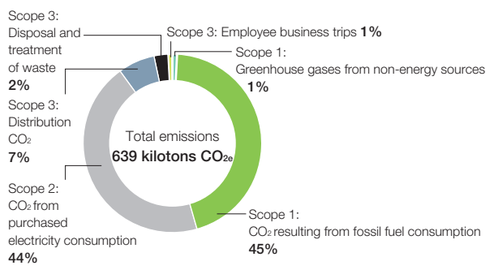


Trends in freight traffic



* CO_2 emissions during distribution per unit of sales = CO_2 emissions during distribution / Consolidated net sales

CO_2 emissions by scope* (FY2013 results)



* The scope of business emissions as defined in the Greenhouse Gas (GHG) Protocol
Scope 1: Direct GHG emissions from businesses themselves
Scope 2: Indirect emissions associated with the consumption of electric power, heat, and steam supplied by others
Scope 3: Indirect emissions other than scope 2 (others emissions related to business activities)

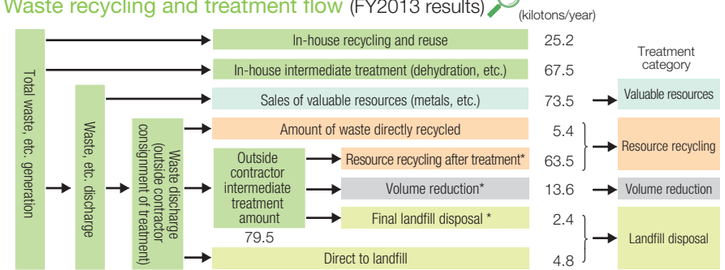
Data Concerning Resource Recycling

The data are supplementary information about “Working towards a Recycling-based Society” on P49 of KUBOTA REPORT 2013.

Waste

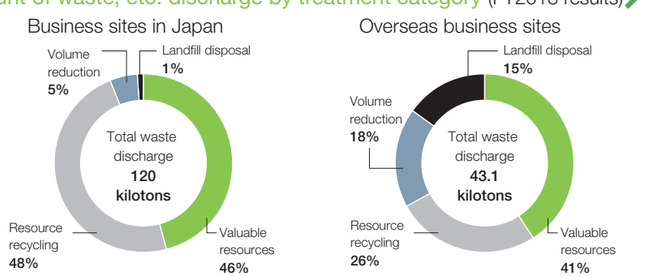
Waste recycling and treatment flow (FY2013 results)

(kilotons/year)

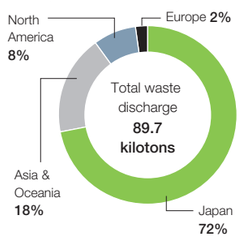


* The amounts of resource recycling after treatment, volume reduction, and final landfill disposal were the results of surveys conducted by outside intermediate treatment companies.

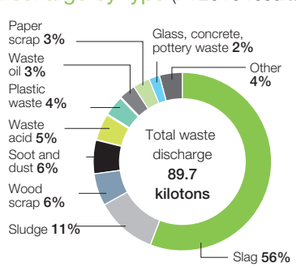
Amount of waste, etc. discharge by treatment category (FY2013 results)



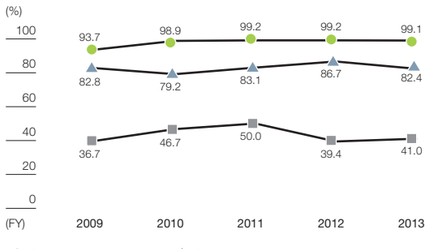
Waste discharge by region (FY2013 results)



Amount of waste discharge by type (FY2013 results)

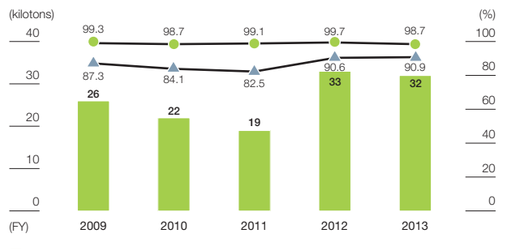


Trends in ratio of business sites that have achieved zero emissions, and recycling ratio



*1 Recycling ratio (excluding volume reduction) (%) = (Sales of valuable resources + resource recycling) / (Waste, etc. discharge - Volume reduction in intermediate treatment by outside contractors) x 100 The resource recycling does not include heat recovery. The volume of reduction in intermediate treatment conducted by outside contractors refers to reduction through dehydration, incineration, etc.
*2 The FY2012 recycling ratio (overseas) has been adjusted in order to improve accuracy.
*3 The ratio of business sites that have achieved zero emissions is calculated using the number of KUBOTA Group production sites as a denominator.
(FY2009–FY2011: 30 sites, FY2012: 33 sites, FY2013:39 sites)

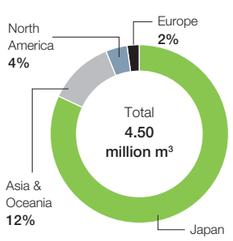
Trends in the amount construction waste, etc. discharge and recycling ratio (Business sites in Japan)



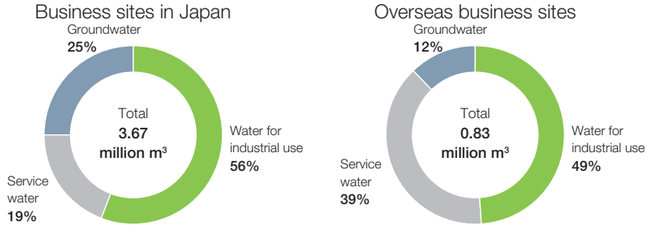
*1 The FY2012 amount of construction waste, etc. discharge and recycling ratio have been adjusted in order to improve accuracy.
*2 Recycling rate =[sales of valuable resources + resource recycling + volume reduction (heat recovery)]/ amount of construction waste, etc. discharge (including sales of valuable resources) x 100 (%)

Total water consumption (FY2013 Results)

Total water consumption by region



Total water consumption by type



Chemical Substance-Related Data

This is supplementary information for P50 “Controlling Chemical Substances” in KUBOTA REPORT 2013.

PRTR-designated substances and VOCs (FY2013 results)

Results of PRTR reporting (Production sites in Japan)

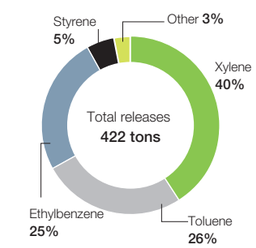
Unit: kg/year (Dioxins: mg-TEQ/year)

Number specified in Cabinet Order	Chemical substance	Releases				Transfrts	
		Atmosphere	Public water areas	Soil	On-site landfills	Sewerage	Transfers to off-site
1	Water-soluble zinc compounds	0.0	9.0	0.0	0.0	20	1,322
53	Ethylbenzene	106,517	0.0	0.0	0.0	0.0	21,475
71	Ferric chloride	0.0	0.0	0.0	0.0	0.0	0.0
80	Xylene	169,039	0.0	0.0	0.0	0.0	34,921
87	Chromium and chromium (III) compounds	0.0	0.0	0.0	0.0	0.0	3,871
132	Cobalt and its compounds	0.0	0.0	0.0	0.0	0.0	3.3
188	N,N-Dicyclohexylamine	0.0	0.0	0.0	0.0	0.0	1,205
239	Organic tin compounds	0.0	0.0	0.0	0.0	0.0	12
240	Styrene	21,831	0.0	0.0	0.0	0.0	0.0
243	Dioxins	0.095	0.0	0.0	0.0	0.0	0.860
277	Triethylamine	0.0	0.0	0.0	0.0	0.0	0.0
296	1, 2, 4-trimethylbenzene	8,487	0.0	0.0	0.0	0.0	6,603
297	1, 3, 5-trimethylbenzene	2,148	0.0	0.0	0.0	0.0	30
300	Toluene	111,211	0.0	0.0	0.0	0.0	19,174
302	Naphthalene	2,647	0.0	0.0	0.0	0.0	0.0
305	Lead compounds	5.8	0.0	0.0	0.0	0.0	14,792
308	Nickel	1.2	0.0	0.0	0.0	0.0	447
309	Nickel compounds	0.0	0.0	0.0	0.0	0.0	843
349	Phenol	0.0	0.0	0.0	0.0	0.0	0.0
354	Di-n-butyl phthalate	0.0	0.0	0.0	0.0	0.0	185
392	n-Hexane	0.0	0.0	0.0	0.0	0.0	0.0
400	Benzene	2.1	0.0	0.0	0.0	0.0	0.0
405	Boron compounds	0.0	0.0	0.0	0.0	0.0	1,546
411	Formaldehyde	283	0.0	0.0	0.0	0.0	0.0
412	Manganese and its compounds	0.0	0.0	0.0	0.0	0.0	30,327
438	Methylnaphthalene	13.1	0.0	0.0	0.0	0.0	0.0
448	Methylenebis (4, 1-phenylene) diisocyanate	0.0	0.0	0.0	0.0	0.0	0.0
453	Molybdenum and its compounds	0.0	0.0	0.0	0.0	0.0	0.0
Total		422,185	9.0	0.0	0.0	20	136,756

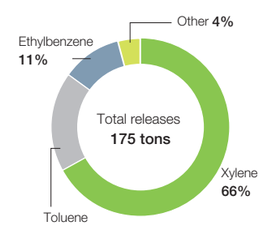
* The annual total amount handled by each production site in Japan is calculated with regard to one ton or more (or 0.5 ton or more in case of Specific Class I Designated Chemical Substances).
:Volatile Organic Compound (VOC)

Amount of VOC emissions by substance

Business sites in Japan



Overseas business sites



Groundwater monitoring (FY2013)

Results of groundwater measurements conducted on the premises of the business sites that used organic chlorine-based compounds in the past are as shown below.

Business site	Substance	Measured groundwater value	Environmental standard
Tsukuba Plant	Trichloroethylene	Non detected (Less than 0.0001mg/L)	Less than 0.03 mg/L
Utsunomiya Plant	Trichloroethylene	Non detected (Less than 0.001mg/L)	Less than 0.03 mg/L

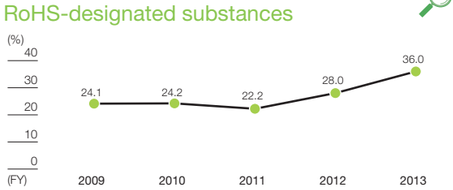
Controlling chemical substances contained in products

Reduction of chemical substances contained in products

EU’s RoHS Directive*1 and ELV Directive, and similar laws and regulations in other countries and regions, are targeted at electrical and electronic equipment and/or automobiles. Although most of the industrial machinery provided by the KUBOTA Group is not included in the scope of these regulations as of 2013, the Group has promoted proactive measures to systematically reduce the use of the six RoHS-designated substances: lead, mercury, cadmium, hexavalent chromium, PBB and PBDE.

The ratio of models with reduced RoHS-designated substances*2 in FY2013 stood at 36.0%, failing to reach the preset target of 40%. However, progress is being made on the use of alternatives on a component unit basis.

Trends in the ratio of models with reduced RoHS-designated substances



Response to regulations related to chemical substances

As a response to the REACH Regulation*3 and other regulations related to chemical substances, the KUBOTA Group has established and enforced rules to identify the chemical substances contained in its products and ensure their appropriate control. Since FY2011, the Group has categorized chemicals contained in products into the three control levels listed below. The Group also undertakes researches on chemicals contained in products on a global basis, with support from its suppliers.

- Control levels -

1. Substances to be Prohibited; Should not be contained in products
2. Substances to be Restricted; Should not be contained in products under certain conditions and applications
3. Substances to be Controlled; Their presence in products should be recognized

*1 RoHS Directive: EU’s Directive for Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment
*2 Ratio of the value of shipped products that contain RoHS-designated substances (lead, hexavalent chromium, mercury, cadmium, PBB and PBDE) in amounts equal to or less than the threshold limits (except products used for applications exempted from the RoHS Directive and ELV Directive) against the total value of products shipped in FY2013 (excluding plants, facilities, construction, services and software development).
*3 REACH Regulation: EU’s Regulation for Registration, Evaluation, Authorisation and Restriction of Chemicals

Environmental Accounting

The KUBOTA Group takes steps to ascertain the costs undertaken to protect the environment as well as their effect on a quantitative basis.

Environmental conservation costs

(Yen in millions)

Classifications		Main activities	FY2012		FY2013	
			Investment	Expenses	Investment	Expenses
Within the business area cost			654	1,423	722	1,424
	Local environmental conservation cost	Prevention of air and water pollution, soil contamination, noise, vibration, etc.	273	524	160	393
	Global environmental conservation cost	Prevention of climate change	287	171	453	217
	Resource recycling cost	Minimizing waste production, reducing quantity of waste, and recycling	94	728	109	814
Upstream and downstream costs		Collection of used products and commercialization of recycled products	0	21	0	24
Management activities cost		Environmental management personnel, ISO maintenance and implementation, environmental information dissemination	12	1,304	4	1,225
R&D cost		R&D for reducing of product environmental load and developing environment conservation equipment	743	5,088	339	5,262
Social activities cost		Local cleanup activities and membership fees and contributions to environmental groups, etc.	0	1	0	1
Environmental remediation cost		Contributions and impositions, etc.	0	203	0	200
Total			1,409	8,040	1,065	8,136

Total capital investment (including land) for the corresponding period (consolidated data)	48,700
Total R&D costs for the corresponding period	31,200

Environmental conservation effects

Effects	Items	FY2012	FY2013
Environmental effect related to resources input into business activities	Energy consumption (Except for transportation fuel) [units of heat; in terajoules (TJ)]	7,270	7,660
	Water consumption (million m^3)	3.94	3.67
Environmental effect related to waste or environmental impact originating from business activities	CO_2 emissions (Energy related) (kilotons CO_2)	373	444
	SOx emissions (tons)	2.5	4.1
	NOx emissions (tons)	56.1	58.0
	Soot and dust emissions (tons)	3.8	3.5
	Releases and transfers of PRTR-designated substances (tons)	499	559
	Waste discharge (kilotons)	63.8	64.3
	Waste to landfills (kilotons)	0.9	1.0

Economic effects

(Yen in millions)

Classifications	Details	Annual effects
Energy conservation measures	Reduce waste including standby electricity by visualizing energy use; increase the efficiency of compressor and boiler energy consumption; other	515
	Improve loading and distribution efficiency; other	19
Zero-emissions measures	Reduce the amount of industrial waste; promote resource recycling; other	11
	Sales of valuable resources	836
Total		1,381

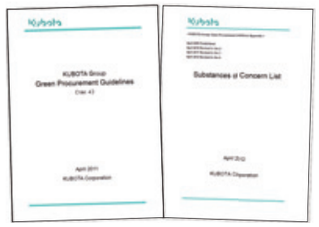
<Environmental accounting principles>
1) The period covered spans from April 1, 2012 to March 31, 2013.
2) The data of business sites in Japan are considered in the calculation.
3) Data was calculated referring to the Environmental Accounting Guidelines 2005, published by Japan's Ministry of the Environment.
4) "Expenses" includes depreciation costs. Depreciation cost was calculated based on the standards applied to KUBOTA's financial accounting, and assets acquired in and after 1998 were considered in the calculation. "Management activities" and "R&D costs" include personnel expenses.
"Resource recycling costs" does not include costs incurred during disposal of construction waste at construction sites.
"R&D costs" represents that which was spent on environmental purposes, calculated on a pro-rata basis.
5) "Economic effects" is obtained only by adding up tangible results and does not include estimated effects.
6) The amount of R&D cost expenditure in FY2012 has been revised to enhance accuracy.

Green Procurement

For the purpose of providing products that are friendly to the global and local environment, the KUBOTA Group is seeking to procure products with reduced environmental impacts from eco-friendly suppliers.

In order to effectively promote eco-friendly sourcing activities, the Group presents its policy for green procurement in the KUBOTA Group's Green Procurement Guidelines, to request the understanding and cooperation of suppliers.

Please refer to WEB http://www.kubota-global.net/environment/procure.html for details regarding the KUBOTA Group Green Procurement Guidelines.

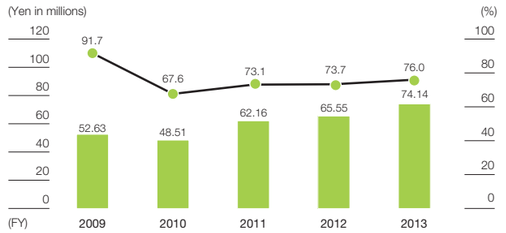


KUBOTA Group's Green Procurement Guidelines and Appendix

Green Purchasing

The KUBOTA Group is promoting the purchase of "green" office supplies (paper, stationery, etc.). In FY2013, the ratio of the amount spent on green products to total purchasing amount was 76.0%.

Amount spent on green products and the ratio to total purchasing amount (Business sites in Japan)



* From FY2010 onwards, the target items of green purchasing were changed.

Conservation of Biodiversity

Conservation of biodiversity is set as one of the targets for the KUBOTA Group's "Eco-First Commitment."
In its business activities and social contribution initiatives, the Group endeavoring to ensure that care is taken to conserve biodiversity and protect the natural environment.

Relationships between the KUBOTA Group and biodiversity

Management and reduction of environmental loads involved in its business activities

In each stage of business activities, the KUBOTA Group reduces environmental loads and consider its influence on biodiversity.

Input (resources)	Business activities/product life-cycles	Output (environmental loads)	Impact on biodiversity (issues to be considered)
Raw materials, sub-materials, water resources, energy sources	Design, procurement, manufacturing, logistics, use of products, maintenance, disposal	CO_2 emissions, wastewater, waste, noise, etc.	Excessive consumption of resources, loss of habitats due to climate change or pollution, transfer of exotic species
Land use: Construction of business sites, etc.	Control of pollution of the air, water bodies and soil		

Impact reduction and environmental contributions through its businesses (products/services)

The KUBOTA Group reduces environmental impacts of its business activities, and contribute to conservation of ecosystems.

Business fields		
Food, water and the environment	Environmental loads due to product use, etc.	CO_2 emissions, exhaust gas, waste, noise, vibration, etc.
	Contributions to conservation of ecosystems	Water treatment business (conservation of water bodies), agricultural machinery business (conserving ecosystems by rice transplanters with a pesticide-reduction function and low-emission engines; improving agricultural crop yields)

Symbiosis with the natural environment through social contribution initiatives

As a corporate citizen, the KUBOTA Group devotes efforts to preserving the natural environment.

KUBOTA e-Project (supporting reclamation of abandoned farmland), KUBOTA e-Day (environmental beautification volunteers), Planting trees and installing biotopes on the grounds of business sites, etc.

KUBOTA Group Production Sites Data (results of FY2013)

Data on KUBOTA production sites in Japan

Item \ Business site			Hanshin Plant (Mukogawa, Marushima)		Hanshin Plant (Amagasaki)		Keiyo Plant (Funabashi, Distribution Center)		Keiyo Plant (Ichikawa)		Hirakata Plant		Okajima Business Center		Sakai Plant		Sakai Rinkai Plant		Utsunomiya Plant		Tsukuba Plant		Kyuhoji Business Center *4		Ryugasaki Plant *4		Shiga Plant	
INPUT																												
Energy		Unit	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ
	Fossil fuel	Crude oil equivalent kL	16,511	639,961	5,758	223,170	23,092	895,031	86	3,320	5,705	221,124	5,226	202,553	4,153	160,984	2,932	113,661	1,296	50,238	5,750	222,870	240	9,302	250	9,684	690	26,732
	Purchased electricity	MWh	42,095	412,277	32,600	325,024	46,523	453,960	4,675	46,612	46,513	454,625	40,328	391,430	35,431	345,762	16,494	160,794	5,737	56,667	46,472	452,902	2,309	22,658	3,488	34,776	2,251	22,445
	Total	Crude oil equivalent kL	27,148	1,052,238	14,143	548,194	34,804	1,348,991	1,288	49,932	17,434	675,749	15,325	593,983	13,074	506,746	7,081	274,455	2,758	106,905	17,435	675,772	825	31,960	1,147	44,460	1,269	49,177
Water usage		thousand m³	754		211		950		11		176		90		133		54		110		214		14		13		92	
OUTPUT																												
CO_2 emission	CO_2 emissions from energy sources	tons CO_{2e}	71,925		25,815		100,212		2,381		32,377		37,736		25,230		14,546		5,539		34,001		1,549		2,111		2,346	
Waste	Discharge amount	tons	10,526		5,271		18,415		142		3,975		15,995		1,286		702		313		2,943		141		120		181	
	Recycling ratio	%	99.6		99.8		99.9		99.9		100.0		100.0		99.7		100.0		98.9		99.8		99.5		99.2		97.4	
Exhaust gas*1	Main smoke and soot generating facilities*2		Melting furnaces			Heating furnaces			Melting furnaces			No smoke and soot generating facilities	Heating furnaces			Melting furnaces			Drying furnaces			No smoke and soot generating facilities	Boilers			Boilers			No smoke and soot generating facilities	Boilers			Boilers		
		Unit	Control content	Control value	Measurement	Control content	Control value	Measurement	Control content	Control value	Measurement		Control content	Control value	Measurement	Control content	Control value	Measurement	Control content	Control value	Measurement		Control content	Control value	Measurement	Control content	Control value	Measurement		Control content	Control value	Measurement	Control content	Control value	Measurement
	SOx	Total emission control and K-value control: m³N/h	K-value control	0.22	0.002	Use of town gas with zero sulfur content			Total emission control	19.3	0.349		Use of town gas with zero sulfur content			Total emission control	2.859	0.05	Total emission control	1.477	0.145		Use of town gas with zero sulfur content			K-value control	17.5	0		Use of town gas with zero sulfur content			Use of town gas with zero sulfur content		
	NOx	Total emission control: m³N/h, Concentration control: ppm	Total emission control	24.32	2.46	Total emission control	2.24	0.052	Total emission control	41.4	2.31		Total emission control	1.189	0.062	Total emission control	2.4	0.40	Total emission control	1.535	0.34		Concentration control	150	25	Concentration control	230	100		Concentration control	230	60	Concentration control	180	35
	Soot and dust	Concentration control: g/m³N	Concentration control	0.1	0.0014	Concentration control	0.1	0.0016	Concentration control	0.1	0.0021		Concentration control	0.1	0.005	Concentration control	0.05	0.02	Concentration control	0.1	0.025		Concentration control	0.1	0.001	Concentration control	0.25	0.01		Concentration control	0.2	Less than 0.01	–	–	–

*1 Total emission control: Control value (including agreed value) by plant or facility and the measurement value. K-value control and concentration control: Control value (including agreed value) of major smoke and soot generating facilities and the measurement value (maximum value).
*2 Smoke and soot generating facilities: Those subject to the laws concerning emissions into the atmosphere.

			Unit	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement
Drainage*3	Public water areas	pH	Minimum value, Maximum value	5.8～8.6	6.9, 7.6	—	—	5.0～9.0	6.8, 7.8	5.0～9.0	6.5, 7.6	5.8～8.6	7.1, 7.3	—	—	—	—	5.8～8.6	6.4, 7.7	5.8～8.6	7.1, 7.6	5.8～8.6	7.3, 7.7	—	—	—	—	6.0～8.5	7.6, 8.0
		BOD	mg/L	30	6	—	—	—	—	60	—	25	4.3	—	—	—	—	30	19.0	25	11.6	20	4.6	—	—	—	—	30	6.6
		COD	mg/L	20	6	—	—	20	6.4	60	13.8	25	5.1	—	—	—	—	30	19.5	—	—	20	7.2	—	—	—	—	30	7.6
		Nitrogen	mg/L	120	7.5	—	—	20	3.72	70	16.3	120	5.9	—	—	—	—	120	54.7	—	—	60	8.5	—	—	—	—	12	0.7
		Phosphorus	mg/L	16	0.2	—	—	2	0.05	7	1.9	16	0.39	—	—	—	—	16	3.78	—	—	8	1.0	—	—	—	—	1.2	Non-detected
		Hexavalent chromium	mg/L	0.35	Non-detected	—	—	0.05	Non-detected	—	—	0.05	Non-detected	—	—	—	—	0.5	Non-detected	—	—	0.5	Non-detected	—	—	—	—	0.05	Non-detected
		Lead	mg/L	0.1	Non-detected	—	—	0.1	Non-detected	0.1	Non-detected	0.01	Non-detected	—	—	—	—	0.1	Non-detected	—	—	0.1	0.01	—	—	—	—	0.1	Non-detected
		COD, total emission control	kg/day	97.44	13.2	—	—	110.5	12.3	4.0	0.44	38.0	2.11	—	—	—	—	3.30	0.89	—	—	—	—	—	—	—	—	—	—
		Nitrogen, total emission control	kg/day	40.51	15.2	—	—	114.7	7.3	2.865	0.48	38.3	2.58	—	—	—	—	13.20	2.10	—	—	—	—	—	—	—	—	—	—
		Phosphorus, total emission control	kg/day	1.424	0.5	—	—	11.65	0.08	0.391	0.052	4.4	0.20	—	—	—	—	1.76	0.06	—	—	—	—	—	—	—	—	—	—
	Sewage lines	pH	Minimum value, Maximum value	5.7～8.7	6.6, 8.1	5.7～8.7	6.8, 7.9	—	—	—	—	—	—	5.7～8.7	6.8, 7.2	5.7～8.7	7.2, 7.4	—	—	—	—	—	—	5.7～8.7	6.8, 7.6	5～9	6.2, 7.0	—	—
		BOD	mg/L	300	8	300	11	—	—	—	—	—	—	600	64	300	180	—	—	—	—	—	—	300	7	600	58	—	—
		COD	mg/L	—	—	—	—	—	—	—	—	—	—	—	—	—	110	—	—	—	—	—	—	—	—	—	—	—	—
		SS	mg/L	300	4	300	24	—	—	—	—	—	—	600	8	300	14	—	—	—	—	—	—	300	8	600	35	—	—

*3 Total emission control: Control value (including agreed value) by plant and the measurement value. Concentration control: Control value (including agreed value) by plant and the measurement value (maximum value).
*4 Includes Group company data within the same site.

Results of PRTR Reporting (Unit: kg/year)

Business site	Substance name	Cabinet Order No.	Released amount				Transferred amount	
			Atmosphere	Public water areas	Soil	On-site landfills	Sewerage	Transfers to off-site
Hanshin Plant (Mukogawa)	Ethylbenzene	53	7,086	0.0	0.0	0.0	0.0	61
	Xylene	80	9,907	0.0	0.0	0.0	0.0	90
	Triethylamine	277	0.0	0.0	0.0	0.0	0.0	0.0
	1, 2, 4-trimethylbenzene	296	2,969	0.0	0.0	0.0	0.0	0.0
	Toluene	300	12,272	0.0	0.0	0.0	0.0	1,547
	lead compounds	305	0.0	0.0	0.0	0.0	0.0	8,001
	Nickel	308	0.0	0.0	0.0	0.0	0.0	223
	Phenol	349	0.0	0.0	0.0	0.0	0.0	0.0
	Methylenebis (4,1-phenylene) diisocyanate	448	0.0	0.0	0.0	0.0	0.0	0.0
Hanshin Plant (Marushima)	Ethylbenzene	53	11,277	0.0	0.0	0.0	0.0	8.0
	Xylene	80	28,640	0.0	0.0	0.0	0.0	11
	Toluene	300	28,316	0.0	0.0	0.0	0.0	199
	Nickel	308	0.0	0.0	0.0	0.0	0.0	189
Hanshin Plant (Amagasaki)	Chromium and Chromium (III) compounds	87	0.0	0.0	0.0	0.0	0.0	312
	Toluene	300	2,036	0.0	0.0	0.0	0.0	0.0
	Nickel	308	1.2	0.0	0.0	0.0	0.0	0.35
	Boron compounds	405	0.0	0.0	0.0	0.0	0.0	1,540
	Manganese and its compounds	412	0.0	0.0	0.0	0.0	0.0	9,516
	Molybdenum and its compounds	453	0.0	0.0	0.0	0.0	0.0	0.0

Business site	Substance name	Cabinet Order No.	Released amount				Transferred amount	
			Atmosphere	Public water areas	Soil	On-site landfills	Sewerage	Transfers to off-site
Keiyo Plant (Funabashi)	Ethylbenzene	53	19,648	0.0	0.0	0.0	0.0	332
	Xylene	80	30,276	0.0	0.0	0.0	0.0	494
	Triethylamine	277	0.0	0.0	0.0	0.0	0.0	0.0
	1, 2, 4-trimethylbenzene	296	1,872	0.0	0.0	0.0	0.0	8.0
	Toluene	300	52,121	0.0	0.0	0.0	0.0	793
	lead compounds	305	0.0	0.0	0.0	0.0	0.0	6,320
	Nickel	308	0.0	0.0	0.0	0.0	0.0	26
	Phenol	349	0.0	0.0	0.0	0.0	0.0	0.0
	Di-n-butyl phthalate	354	0.0	0.0	0.0	0.0	0.0	116
	Manganese and its compounds	412	0.0	0.0	0.0	0.0	0.0	14,072
	Methylenebis (4,1-phenylene) diisocyanate	448	0.0	0.0	0.0	0.0	0.0	0.0
Keiyo Plant (Distribution Center)	Ethylbenzene	53	6,294	0.0	0.0	0.0	0.0	129
	Xylene	80	22,018	0.0	0.0	0.0	0.0	449
	Toluene	300	7,893	0.0	0.0	0.0	0.0	161
Keiyo Plant (Ichikawa)	Manganese and its compounds	412	0.0	0.0	0.0	0.0	0.0	0.0
Hirakata Plant	Ethylbenzene	53	1,319	0.0	0.0	0.0	0.0	17,335
	Xylene	80	2,114	0.0	0.0	0.0	0.0	26,584
	Chromium and Chromium (III) compounds	87	0.0	0.0	0.0	0.0	0.0	2,505
	Cobalt and its compounds	132	0.0	0.0	0.0	0.0	0.0	3.3
	1, 2, 4-trimethylbenzene	296	165	0.0	0.0	0.0	0.0	2,213
	Toluene	300	1,327	0.0	0.0	0.0	0.0	15,122
	Nickel	308	0.0	0.0	0.0	0.0	0.0	8.1
	Boron compounds	405	0.0	0.0	0.0	0.0	0.0	6.5
	Manganese and its compounds	412	0.0	0.0	0.0	0.0	0.0	4,871
	Molybdenum and its compounds	453	0.0	0.0	0.0	0.0	0.0	0.0

Business site	Substance name	Cabinet Order No.	Released amount				Transferred amount	
			Atmosphere	Public water areas	Soil	On-site landfills	Sewerage	Transfers to off-site
Okajima Business Center	Chromium and Chromium (III) compounds	87	0.0	0.0	0.0	0.0	0.0	1,054
	Triethylamine	277	0.0	0.0	0.0	0.0	0.0	0.0
	1, 2, 4-trimethylbenzene	296	2,771	0.0	0.0	0.0	0.0	0.0
	1, 3, 5-trimethylbenzene	297	831	0.0	0.0	0.0	0.0	0.0
	Nickel	308	0.0	0.0	0.0	0.0	0.0	0.0
	Phenol	349	0.0	0.0	0.0	0.0	0.0	0.0
	Formaldehyde	411	283	0.0	0.0	0.0	0.0	0.0
	Manganese and its compounds	412	0.0	0.0	0.0	0.0	0.0	1,612
	Methylenebis (4,1-phenylene) diisocyanate	448	0.0	0.0	0.0	0.0	0.0	0.0
Sakai Plant	Water-soluble zinc compounds	1	0.0	0.0	0.0	0.0	20	0.0
	Ethylbenzene	53	3,174	0.0	0.0	0.0	0.0	223
	Xylene	80	4,679	0.0	0.0	0.0	0.0	383
	1, 2, 4-trimethylbenzene	296	308	0.0	0.0	0.0	0.0	22
	1, 3, 5-trimethylbenzene	297	215	0.0	0.0	0.0	0.0	7.6
	Toluene	300	1,399	0.0	0.0	0.0	0.0	101
Sakai Rinkai Plant	Ethylbenzene	53	68	0.0	0.0	0.0	0.0	28
	Xylene	80	201	0.0	0.0	0.0	0.0	80
	Toluene	300	318	0.0	0.0	0.0	0.0	124
	Benzene	400	2.1	0.0	0.0	0.0	0.0	0.0
Utsunomiya Plant	Water-soluble zinc compounds	1	0.0	9.0	0.0	0.0	0.0	472
	Ethylbenzene	53	9,593	0.0	0.0	0.0	0.0	2,298
	Xylene	80	13,473	0.0	0.0	0.0	0.0	2,916
	1, 2, 4-trimethylbenzene	296	210	0.0	0.0	0.0	0.0	127
	Toluene	300	110	0.0	0.0	0.0	0.0	67
	Naphthalene	302	1,363	0.0	0.0	0.0	0.0	0.0
	n-hexane	392	0.0	0.0	0.0	0.0	0.0	0.0

Business site		Substance name	Cabinet Order No.	Released amount				Transferred amount	
				Atmosphere	Public water areas	Soil	On-site landfills	Sewerage	Transfers to off-site
Tsukuba Plant		Water-soluble zinc compounds	1	0.0	0.0	0.0	0.0	0.0	850
		Ethylbenzene	53	47,123	0.0	0.0	0.0	0.0	1,003
		Xylene	80	49,532	0.0	0.0	0.0	0.0	3,706
		1, 2, 4-trimethylbenzene	296	191	0.0	0.0	0.0	0.0	4,233
		1, 3, 5-trimethylbenzene	297	1,102	0.0	0.0	0.0	0.0	22
		Toluene	300	2,946	0.0	0.0	0.0	0.0	728
		Naphthalene	302	1,284	0.0	0.0	0.0	0.0	0.0
		Nickel compounds	309	0.0	0.0	0.0	0.0	0.0	843
		Manganese and its compounds	412	0.0	0.0	0.0	0.0	0.0	256
		Methylenebis (4,1-phenylene) diisocyanate	448	0.0	0.0	0.0	0.0	0.0	0.0
Ryugasaki Plant	KUBOTA	Ethylbenzene	53	935	0.0	0.0	0.0	0.0	59
		Xylene	80	1,164	0.0	0.0	0.0	0.0	69
	KUBOTA Vending Service Co., Ltd.	Xylene	80	4,995	0.0	0.0	0.0	0.0	137
		Toluene	300	1,206	0.0	0.0	0.0	0.0	332
	KUBOTA Kanto Vender Center Inc.	Xylene	80	1,907	0.0	0.0	0.0	0.0	0.0
		Toluene	300	1,267	0.0	0.0	0.0	0.0	0.0
Shiga Plant		Styrene	240	21,831	0.0	0.0	0.0	0.0	0.0
		Di-n-butyl phthalate	354	0.0	0.0	0.0	0.0	0.0	69
		Methylenebis (4,1-phenylene) diisocyanate	448	0.0	0.0	0.0	0.0	0.0	0.0

Data on KUBOTA group production sites in Japan

Item \ Business site			KUBOTA-C.I. (Sakai)		KUBOTA-C.I. (Odawara)		KUBOTA-C.I. (Tochigi)		KUBOTA Air Conditioner (Tochigi)		KUBOTA Precision Machinery		Nippon Plastic Industry		Kyushu KUBOTA Chemical	
INPUT																
Energy		Unit	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ
	Fossil fuel	Crude oil equivalent kL	72	2,783	124	4,798	244	9,475	246	9,553	748	28,995	64	2,484	2	66
	Purchased electricity	MWh	12,479	121,790	31,192	302,270	21,215	204,340	2,347	23,402	13,010	126,282	14,558	141,046	7,609	73,219
	Total	Crude oil equivalent kL	3,214	124,573	7,922	307,068	5,516	213,815	850	32,955	4,006	155,277	3,703	143,538	1,891	73,286
Water usage		thousand m^3	18		38		274		69		17		201		6	
OUTPUT																
CO_2 emission	CO_2 emissions from energy sources	tons CO_{2e}	5,293		14,728		10,497		1,569		7,334		7,680		3,999	
Waste	Discharge amount	tons	22		83		226		169		471		33		18	
	Recycling ratio	%	99.9		99.8		100.0		100.0		99.8		99.1		100.0	

Exhaust gas*1	Main smoke and soot generating facilities*2			Boilers			Boilers									
		Unit		Control content	Control content	Measurement	Control content	Control content	Measurement							
	SOx	K-value control: m^3N/h	No smoke and soot generating facilities	K-value control	14.5	1.0	Use of town gas with zero sulfur content			No smoke and soot generating facilities	No smoke and soot generating facilities		No smoke and soot generating facilities			
	NOx	Concentration control: ppm		Concentration control	—	68	Concentration control	230	Less than 5							
	Soot and dust	Concentration control: g/m^3N		Concentration control	—	Less than 0.005	Concentration control	0.2	Less than 0.005							

*1 K-value control and concentration control: Control value (including agreed value) of major smoke and soot generating facilities and the measurement value (maximum value).
*2 Smoke and soot generating facilities: Those subject to the laws concerning emissions into the atmosphere.

			Unit	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement
Drainage*3	Public water areas	pH	Minimum value, Maximum value	5.8~8.6	6.6, 7.7	5.8~8.6	7.3, 8.3	5.8~8.6	8.0, 8.3	5.8~8.6	7.3, 7.8	—	—	5.8~8.6	7.0, 7.4	—	—		
		BOD	mg/L	25	4	60	1.4	20	3.1	30	3.2	—	—	160	1.6	—	—		
		COD	mg/L	25	6	60	1.5	—	—	—	—	—	—	160	1	—	—		
		Nitrogen	mg/L	60	42	120	0.5	60	0.84	—	—	—	—	—	—	—	—		
		Phosphorus	mg/L	8	5.6	16	Non-detected	1	Non-detected	—	—	—	—	—	—	—	—		
		Hexavalent chromium	mg/L	0.5	Non-detected	0.5	Non-detected	0.1	Non-detected	0.1	Non-detected	—	—	—	—	—	—		
		Lead	mg/L	0.1	0.07	0.1	Non-detected	0.1	0.06	0.1	Non-detected	—	—	0.1	Non-detected	—	—		
		COD, total emission control	kg/day	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
		Nitrogen, total emission control	kg/day	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
		Phosphorus, total emission control	kg/day	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
	Sewerage lines	pH	Minimum value, Maximum value	—	—	—	—	—	—	—	—	No specific facilities		—	—	No specific facilities			
		BOD	mg/L	—	—	—	—	—	—	—	—			—	—				
		COD	mg/L	—	—	—	—	—	—	—	—			—	—				
		SS	mg/L	—	—	—	—	—	—	—	—			—	—				

*3 Concentration control: Control value (including agreed value) by plant and the measurement value (maximum value).

Results of PRTR reporting (Unit: kg/year)

Business site	Substance name	Cabinet Order No.	Released amount				Transferred amount	
			Atmosphere	Public water areas	Soil	On-site landfills	Sewerage	Transfers to off-site
KUBOTA-C.I. (Sakai)	Xylene	80	135	0.0	0.0	0.0	0.0	0.0
	Lead compounds	305	1.0	0.0	0.0	0.0	0.0	16
KUBOTA-C.I. (Odawara)	Organic tin compounds	239	0.0	0.0	0.0	0.0	0.0	8.6
	Lead compounds	305	0.0	0.0	0.0	0.0	0.0	121
KUBOTA-C.I. (Tochigi)	Organic tin compounds	239	0.0	0.0	0.0	0.0	0.0	2.2
	Lead compounds	305	0.0	0.0	0.0	0.0	0.0	240
	Methylnaphthalene	438	13	0.0	0.0	0.0	0.0	0.0
KUBOTA Air Conditioner (Tochigi)	Ferric chloride	71	0.0	0.0	0.0	0.0	0.0	0.0
	Methylenebis (4, 1-phenylene) diisocyanate	448	0.0	0.0	0.0	0.0	0.0	0.0
KUBOTA Precision Machinery	N,N-Dicyclohexylamine	188	0.0	0.0	0.0	0.0	0.0	1,205
Nippon Plastic Industry	Lead compounds	305	3.5	0.0	0.0	0.0	0.0	5.8
Kyushu KUBOTA Chemical	Organic tin compounds	239	0.0	0.0	0.0	0.0	0.0	1.1
	Lead compounds	305	1.3	0.0	0.0	0.0	0.0	88

Data on KUBOTA Group Overseas Production Sites

Region			North America						Europe					
Item \ Business site			Kubota Manufacturing of America Corporation		Kubota Industrial Equipment Corporation		Kubota Materials Canada Corporation		Kubota Baumaschinen GmbH		Kverneland Group Operations Norway AS		Kverneland Group Soest GmbH	
INPUT														
Energy		Unit	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ
	Fossil fuel	Crude oil equivalent kL	1,362	52,797	1,688	65,439	2,753	106,705	588	22,795	2,787	108,030	409	15,856
	Purchased electricity	MWh	22,570	225,019	15,859	158,109	17,200	171,484	2,159	21,527	39,501	393,827	2,281	22,737
	Total	Crude oil equivalent kL	7,168	277,816	5,768	223,548	7,177	278,189	1,144	44,322	12,948	501,858	996	38,593
Water usage		thousand m^3	61		16		46		6		28		2	
OUTPUT														
CO_2 emission	CO_2 emissions from energy sources	tons CO_{2e}	17,280		12,925		8,326		2,176		6,414		1,804	
Waste	Discharge amount	tons	1,714		828		2,799		279		349		276	
	Recycling ratio	%	88.7		97.8		17.7		95.0		93.7		89.3	

Exhaust gas*1	Main smoke and soot generating facilities*2			Boilers												
		Unit		Control content	Control value	Measurement										
	SOx	Concentration control: m^3N/h	No smoke and soot generating facilities	Use of town gas with zero sulfur content			No smoke and soot generating facilities	No smoke and soot generating facilities	No smoke and soot generating facilities	No smoke and soot generating facilities	No smoke and soot generating facilities					
	NOx	Concentration control: ppm		Concentration control	—	34										
	Soot and dust	Concentration control: g/m^3N		Concentration control	—	—										

*1 Concentration control: Control value (including agreed value) of major smoke and soot generating facilities and the measurement value (maximum value).
*2 Smoke and soot generating facilities: Those subject to the laws concerning emissions into the atmosphere.

			Unit	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement
Drainage*3	Public water areas	pH	Minimum value, Maximum value	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		BOD	mg/L	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		COD	mg/L	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Nitrogen	mg/L	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Phosphorus	mg/L	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Hexavalent chromium	mg/L	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Lead	mg/L	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		COD, total emission control	kg/day	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Nitrogen, total emission control	kg/day	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Phosphorus, total emission control	kg/day	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Sewerage lines	pH	Minimum value, Maximum value	6.0~9.5	7.5	6.0~9.0	8.3	(Sewage discharge)		6.5~9.0	6.5, 8.8	(Sewage discharge)		(Sewage discharge)			
		BOD	mg/L	900	70.1	250	26.8			—	—						
		COD	mg/L	—	—	—	—			1,000	230						
		SS	mg/L	900	28.4	250	23.0			—	—						

*3 Concentration control: Control value (including agreed value) by plant and the measurement value (maximum value).

Results of chemical substances reporting
Reporting to National Pollutant Release Inventory (Canada) (Unit: kg/year)

Business site	Substance name	Control law number	Release quantity	Amount of off-site recycled waste
Kubota Materials Canada Corporation	Chromium (and its compounds)	NA-04	185	68
	Manganese (and its compounds)	NA-09	189	4,374
	Nickel (and its compounds)	NA-11	73	189
	PM10-Particulate Matter≦10μm	NA-M09	16,077	0.0
	PM2.5-Particulate Matter≦2.5μm	NA-M10	15,996	0.0

Toxics Release Inventory (TRI) Program (U.S. EPA) (Unit: kg/year)

Business site	Substance name	CAS Number	On-site disposal and amount of emissions	Recycled Off-site	Off-site disposal and amount of emissions
Kubota Industrial Equipment Corporation	Chromium	7440-47-3	0.15	0.0	0.0
	Manganese	7439-96-5	97.98	0.03	0.0
	Nickel	7440-02-0	0.06	0.0	0.0
Kubota Manufacturing of America Corporation	Chromium	7440-47-3	545	19,105	0.0
	Manganese	7439-96-5	2,225	76,421	0.0
	Nickel	7440-02-0	585	19,232	1.5
	Ethylene glycol	107-21-1	0.0	0	371
	Lead	7439-92-1	15	509	0.0

Data on KUBOTA Group Overseas Production Sites (Continued from page 50-⑭)

Region			Europe				Asia																					
Item \ Business site			Kverneland Group Nieuw-Vennep B.V.		Kverneland Group Kerteminde AS		Kubota Agricultural Machinery (SUZHOU) Co., Ltd.		Kubota Construction Machinery (WUXI) Co., Ltd.		Kubota Guozhen Environmental Engineering (ANHUI) Co., Ltd.		SIAM KUBOTA Corporation (Headquarter)		SIAM KUBOTA Corporation (Amata Nakorn Plant)		SIAM KUBOTA Metal Technology		KUBOTA Engine (Thailand)		Kubota Precision Machinery (Thailand)		P.T.Kubota Indonesia		P.T.Metec Semarang		Kubota Saudi Arabia Company	
INPUT																												
Energy		Unit	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ
	Fossil fuel	Crude oil equivalent kL	946	36,664	1,226	47,513	1,499	58,085	68	2,640	13	520	237	9,199	244	9,475	16	632	98	3,813	15	595	342	13,240	500	19,363	3,240	125,592
	Purchased electricity	MWh	2,348	23,405	5,680	56,630	9,198	91,704	2,130	21,238	2	23	6,778	67,580	21,215	204,340	21,216	211,526	3,045	30,360	231	2,306	2,426	24,192	5,548	55,312	0	0
	Total	Crude oil equivalent kL	1,550	60,069	2,687	104,143	3,865	149,789	616	23,878	14	543	1,981	76,779	5,516	213,815	5,474	212,158	882	34,173	75	2,901	966	37,432	1,927	74,675	3,240	125,592
Water usage		thousand m^3	8		26		90		63		3		58		137		71		13		7		33		44		7	
OUTPUT																												
CO_2 emission	CO_2 emissions from energy sources	tons CO_{2e}	2,762		4,842		10,188		1,739		37		4,008		10,497		10,930		1,820		159		2,715		5,291		8,419	
Waste	Discharge amount	tons	306		247		602		52		0		301		5,039		8,969		40		40		9		313		623	
	Recycling ratio	%	94.7		97.6		83.5		77.1		—		95.6		91.6		82.1		82.5		74.0		96.5		92.9		0.0	
Exhaust gas*1	Main smoke and soot generating facilities*2		No smoke and soot generating facilities		No smoke and soot generating facilities		Boilers			Drying furnaces			No smoke and soot generating facilities		Drying furnaces		Drying furnaces		Electric Furnaces			No smoke and soot generating facilities		No smoke and soot generating facilities		Drying furnaces			No smoke and soot generating facilities	
		Unit					Control content	Control value	Measurement	Control content	Control value	Measurement			Control content	Control value	Measurement	Control content	Control value	Measurement	Control content	Control value	Measurement				Control content	Control value	Measurement		
	SOx	Concentration control: m^3N/h					(mg/m^3)	100	2.0	Concentration control	4.72	2.18			Concentration control	500	1.3	Concentration control	60	1.23	(ppm)	500	5.7				(mg/m^3)	800	23.04		
	NOx	Concentration control: ppm					Concentration control	400	28.3	Concentration control	—	—			Concentration control	—	4	Concentration control	200	1.26	Concentration control	—	—				(mg/m^3)	1000	18		
	Soot and dust	Concentration control: g/m^3N					Concentration control	50	34	Concentration control	—	—			Concentration control	0.1	0.032	Concentration control	0.32	0.013	Concentration control	0.02	0.0006				Concentration control	0.35	0.016		

*1 Concentration control: Control value (including agreed value) of major smoke and soot generating facilities and the measurement value (maximum value).
*2 Smoke and soot generating facilities: Those subject to the laws concerning emissions into the atmosphere.

			Unit	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement
Drainage*3	Public water areas	pH	Minimum value, Maximum value	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.0～9.0	7.0	6.0～9.0	8.5	—	—
		BOD	mg/L	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	100	17.0	100	86.0	—	—
		COD	mg/L	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	250	39.0	250	153.3	—	—
		Nitrogen	mg/L	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Phosphorus	mg/L	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Hexavalent chromium	mg/L	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.1	0.0003	0.5	Non-detected	—	—
		Lead	mg/L	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.1	0.005	0.1	Non-detected	—	—
		COD, total emission control	kg/day	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Nitrogen, total emission control	kg/day	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Phosphorus, total emission control	kg/day	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Sewerage lines	pH	Minimum value, Maximum value	(Sewage discharge)		(Sewage discharge)		(Sewage discharge)		(Sewage discharge)		(Sewage discharge)		6.0～9.0	7.4, 9.0	(Sewage discharge)		(No external water discharge)		(No external water discharge)		(Sewage discharge)		—	—	—	—	(Sewage discharge)	
		BOD	mg/L											450	280									—	—	—	—		
		COD	mg/L											600	259									—	—	—	—		
		SS	mg/L											—	—									—	—	—	—		

*3 Concentration control: Control value (including agreed value) by plant and the measurement value (maximum value).

Calculation Standards of Environmental Performance Indicators in KUBOTA REPORT 2013

Environmental performance indicators		Unit	Calculation method
Energy and CO_2-related	Total energy input[*1] ($TJ:10^{12}J$)	TJ	【Calculation formula】• Amount of purchased electricity x per-unit heat value + Σ[amount of each fuel consumed x per-unit heat value of each fuel] • Per-unit heat value is determined in accordance with the Enforcement Regulation for the Law Concerning the Rational Use of Energy 【Calculation scope】• Purchased electricity and fossil fuel used at business sites • Transportation fuel used in distribution (business sites in Japan)
	CO_2 emissions[*1]	kilotons CO_{2e}	【Calculation formula】• Amount of purchased electricity x CO_2 emission coefficient +Σ [amount of each fuel consumed at business sites x per-unit heat value of each fuel x CO_2 emission coefficient of each fuel] + non-energy source greenhouse gas emissions • Non-energy source greenhouse gas emissions = CO_2 emissions from non-energy sources + non-CO_2 greenhouse gas emissions • The method for calculating non-energy source greenhouse gas emissions is based on the Guidelines for Calculating Greenhouse Gas Emissions from Businesses of Japan's Ministry of the Environment. [CO_2 emission coefficients] FY1991: Based on the Report on Survey of Carbon Dioxide Emissions (Japan's Environment Agency 1992) and the Guideline for Measures to prevent Global Warming (Japan's Environment Agency 1993) CO_2 emissions=carbon equivalent (tons C) x 3.664 FY2009 Fuel: Based on the Manual for Calculation and Report of Greenhouse Gas Emissions (Ver.2.4) (Japan's Ministry of the Environment and Ministry of Economy, Trade and Industry March 2009) Electricity: Data for Japan are emission coefficients published by electricity utilities Overseas data is based on the Report on the CO_2 Emissions Intensity of the Power Sector of Various Countries -Ver.3 (the Japan Electrical Manufacturers' Association June 2006) From FY2010 to FY2013 Fuel: Based on the Manual for Calculation and Report of Greenhouse Gas Emissions (Ver.2.4) (Coefficients used after revision in March 2010; Japan's Ministry of the Environment and Ministry of Economy, Trade and Industry March 2009) Electricity: Data for Japan are effective emission coefficients published by electricity utilities (before reflecting carbon credits) Overseas data are emission coefficients of respective countries published in the Greenhouse Gas Protocol Initiative 【Calculation scope】• Non-energy source greenhouse gas data up to FY2011 are for business sites in Japan only • Data are for HFC, PFC and SF6 emissions from January to December included in non-energy source greenhouse gases
	CO_2 emissions per unit of sales	tons CO_{2e}/billion¥	【Calculation formula】• Group-wide CO_2 emissions per unit of sales = total CO_2 emissions / consolidated net sales • KUBOTA Corporation production site CO_2 emissions per unit of sales = KUBOTA Corporation production site CO_2 emissions / KUBOTA Corporation non-consolidated net sales
		%	【Calculation formula】• [Group-wide] CO_2 emissions per unit of sales for each fiscal year / FY2009 CO_2 emissions per unit of sales x 100 [KUBOTA Corporation production site] KUBOTA Corporation production site CO_2 emissions per unit of sales for each fiscal year / KUBOTA Corporation production site CO_2 emissions per unit of sales in FY1991 x 100 (as shown in the graph on page 49 of KUBOTA REPORT 2013)
	Freight traffic	ton-km	【Calculation formula】• Σ[Heavy freight transportation (tons) × distance traveled (km)] 【Calculation scope】• Transportation in Japan
	CO_2 emissions during distribution	kilotons CO_{2e}	【Calculation formula】• Truck transportation: Fuel consumption during transportation = freight traffic x fuel consumption per ton-kilometer x per-unit heat value; CO_2 emissions = fuel consumption during transportation x CO_2 emission coefficient x 44 / 12 • Other than truck transportation: Fuel consumption during transportation = freight traffic x fuel consumption per ton-kilometer x per-unit heat value; CO_2 emissions = freight traffic x CO_2 emissions per ton-kilometer by means of transportation • The method of calculation is based on the ton-kilometer method stipulated under the Manual for Calculation and Report of Greenhouse Gas Emissions (Ver.2.4) (Japan's Ministry of the Environment and Ministry of Economy, Trade and Industry March 2009) 【Calculation scope】• Transportation in Japan
	CO_2 emissions during distribution per unit of sales	tons CO_{2e}/billion¥	【Calculation formula】• CO_2 emissions during distribution / consolidated net sales
		%	【Calculation formula】• CO_2 emissions per unit of sales of each fiscal year / CO_2 emissions per unit of sales in FY2009 x 100 (as shown in the graph on page 50-⑥ of KUBOTA REPORT 2013)
	Scope 3 emissions (disposal and treatment of waste; employee business trips)	kilotons CO_{2e}	【Calculation formula】• Disposal and treatment of waste: CO_2 emissions = Σ [(amount of waste discharge by type) x (emissions per unit)] • Employee business trips: CO_2 emissions =Σ [(transportation expenses paid by mode of transport) x (emissions per unit)] • The calculation method is based on the Basic Guidelines regarding the Calculation of Greenhouse Gas Emissions throughout the Supply Chain (Ver. 2.0) and the Emissions per Unit Database for the Purpose of Calculating the Greenhouse Gas and Other Emissions of Organizations throughout the Supply Chain (Ver. 2.0) (Japan's Ministry of the Environment and Ministry of Economy, Trade and Industry March 2013) 【Calculation scope】• The amount of transportation expenses paid is the portion traveled based on airline tickets (domestic and international) and railway tickets (domestic) issued by Group companies
Waste-related	Amount of waste, etc. discharge[*1]	tons	【Calculation formula】• Sales of valuable resources + amount of waste discharge
	Amount of waste discharge[*1]	tons	【Calculation formula】• Amounts of resource recycling and waste reduction + landfill disposal • Amount of industrial waste discharge + amount of general waste discharged from business activities
	Waste discharge per unit of sales[*1]	tons CO_{2e}/billion¥	【Calculation formula】• Amount of waste discharge / consolidated net sales
		%	【Calculation formula】• Waste discharge per unit of sales of each fiscal year / waste discharge per unit of sales in FY2009 x 100 (as shown in the graph on page 49 of KUBOTA REPORT 2013)
	Amount of landfill disposal[*1]	tons	【Calculation formula】• Direct landfill + final landfill following external intermediate treatment
	Ratio of business sites that have achieved zero emissions	%	【Calculation formula】• Number of the production sites certified by the Environmental Protection Department of KUBOTA as having achieved the zero emissions (landfill ratio of 0.5% or less) / number of the production sites in Japan and overseas x 100 • Landfill ratio(%) = amount of landfill disposal / amount of waste, etc. discharge x 100 • Number of production sites in Japan and overseas: FY2009～FY2011: 30 sites, FY2012: 33 sites, FY2013: 39 sites
	Ratio of recycled waste (excluding volume reduction)	%	【Calculation formula】• (Sales of valuable resources + resource recycling) / (waste, etc. discharge - volume reduction in intermediate treatment by outside contractors) x 100
	Amount of construction waste, etc. discharge	tons	【Calculation formula】• Amount of construction waste discharge (Including construction waste other than specific construction materials) + sales of valuable resources (generated from construction) 【Calculation scope】• Business sites in Japan
	Recycling rate of construction waste	%	【Calculation formula】• (Sales of valuable resources + resource recycling + amount reduced (with heat recovery)) / amount of construction waste, etc. discharge (including sales of valuable resources) x 100

Environmental performance indicators		Unit	Calculation method
Water-related	Water consumption [*1]	million m^3	【Calculation formula】• Total amount of service water, industrial water and groundwater consumption
	Water consumption per unit of sales	m^3/million¥	【Calculation formula】• Water consumption / consolidated net sales
		%	【Calculation formula】• Water consumption per unit of sales for each fiscal year / Water consumption per unit of sales for FY2009 x 100 (as shown in the graph on page 49 of KUBOTA REPORT 2013)
	Wastewater discharge (public water areas, sewage lines) [*1]	million m^3	【Calculation formula】• Total wastewater discharge to public water areas and sewage lines (including rain and spring water)
	Amount of COD, nitrogen and phosphorus discharge	tons	【Calculation formula】• COD, nitrogen or phosphorous concentration (mg/L) x amount of effluent discharged to public water area (m^3) x 10^{-6} 【Calculation scope】• Business sites subject to total emission control in Japan
	Amount of recycled water	million m^3	【Calculation formula】• Amount of water purified in on-site effluent treatment facilities and recycled (excluding the recycled cooling water used)
Chemical substance-related	Amount of PRTR-designated substances handled	tons	【Calculation formula】• Total amount of chemical substances handled, which are designated as Class I 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 amount handled by each business site is one ton or more (or 0.5 ton or more for Specific Class I Designated Chemical Substances) per year 【Calculation scope】• Business sites in Japan (business sites subject to legal notification only) • FY2013 data includes designated chemical substances derived from recycled resources in accordance with revisions to the Manual for PRTR Release Estimation Methods in the Steel Industry (Ver. 12 FY2013 use)
	Amount of PRTR-designated substances released and transferred	tons	【Calculation formula】• Total release and transfer amount of the chemical substances which are designated as Class I under the PRTR Law and whose annual total amount handled by each business site is one ton or more (or 0.5 ton or more in case of Specific Class I Designated Chemical Substances). • Amount released = amount discharged to the atmosphere + amount discharged to public water areas + 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 Manual for PRTR Release Estimation Methods Ver. 4.1 (March 2011) of the Ministry of the Environment and the Ministry of Economy, Trade and Industry, and Manual for PRTR Release Estimation Methods in the Steel Industry Ver. 12 (March 2013) of the Japan Iron and Steel Federation. 【Calculation scope】• The same scope of calculation as the amount of PRTR-designated substances handled
	Amount of PRTR-designated substances released and transferred per unit of sales	kg/billion¥	【Calculation formula】• Amount of PRTR-designated substances released and transferred / consolidated net sales
		%	【Calculation formula】• PRTR-designated substances released and transferred per unit of sales of each fiscal year / PRTR-designated substances released and transferred per unit of sales in FY2009 x 100 (as shown in the graph on page 50 of KUBOTA REPORT 2013)
	Amount of chemical substances handled [*1]	tons	【Calculation formula】• Total amount of chemical substances handled at business sites covered by laws and regulations + the total amount of VOCs handled 【Calculation scope】• Overseas business sites • The subject laws and regulations are the Toxics Release Inventory (TRI) Program, US EPA, the European Pollutant Emission Register (EPER), the European Pollutant Release and Transfer Register (E-PRTR), and Reporting to the National Pollutant Release Inventory (Canada) • VOCs are toluene; ethylbenzene; xylene; 1, 2, 4-trimethylbenzene; 1, 3, 5-trimethylbenzene that are handled in amounts of one ton or more per year (only toluene, ethylbenzene, xylene in FY2012)
	Chemical substance released [*1]	tons	【Calculation formula】• The total amount of chemical substances released at business sites covered by laws and regulations + the total amount of VOCs released 【Calculation scope】• The same scope of calculation as the amount of chemical substances handled
	SOx emissions [*2]	tons	【Calculation formula】• Amount of fuel consumed (kg) x sulfur content in the fuel (Wt %) / 100 x 64 / 32 x [(1 - desulphurization efficiency) / 100] x 10^{-3}, or amount of SOx emitted per hour (m^3N/h) x annual operation hours of the relevant facility (h) x 64 / 22.4 x 10^{-3} 【Calculation scope】• Until FY2010, the smoke and soot generating facilities of business sites in Japan as defined by the Air Pollution Control Law. • From FY2011, the facilities of overseas business sites subject to the law are included
	NOx emissions [*2]	tons	【Calculation formula】• NOx concentration (ppm) x 10^{-6} x amount of gas emitted per hour (m^3N/h) x annual operation hours of the relevant facility (h) x 46 / 22.4 x 10^{-3} 【Calculation scope】• The same scope of calculation as SOx emissions
	Soot and dust emissions[*2]	tons	【Calculation formula】• Soot and dust concentration (g/m^3N) x amount of gas emitted per hour (m^3N/h) x annual operation hours of the relevant facility (h) x 10^{-6} 【Calculation scope】• The same scope of calculation as SOx emissions
	Ratio of models with reduced RoHS-designated substances	%	【Calculation formula】• Ratio of the value of shipped products that contain RoHS-designated substances (lead, hexavalent chromium, mercury, cadmium, PBB and PBDE) in less than the threshold limits (except products used for applications exempted from the RoHS Directive and ELV Directive) against the total value of products shipped (excluding plants, facilities, construction, services and software development).
Other	CO_2 eco-efficiency indicators	million¥/tons CO_{2e}	【Calculation formula】• Consolidated net sales / CO_2 emissions
	Waste eco-efficiency indicators	million¥/hundred kg	【Calculation formula】• Consolidated net sales / amount of waste discharge
	Chemical substance eco-efficiency indicators	million¥/kg	【Calculation formula】• Consolidated net sales / total amount of PRTR-designated substances released and transferred by production sites in Japan
	Green purchasing ratio	%	【Calculation formula】• Amount spent to purchase eco-friendly office supplies (paper, stationery, etc.) / total amount spent to purchase items subject to green purchasing x 100 • Green products are items purchased through the office supply procurement site operated by Group companies 【Calculation scope】• Business sites in Japan

*1 Of the overseas subsidiaries added to the scope of compilation in FY2013, calculations for the Kverneland group are based on estimates, except for its four major production companies (covering more than 80% of the revenues in FY2013 of the Kverneland group production subsidiaries).
*2 Of the overseas subsidiaries added to the scope of compilation in FY2013, only the data for the four major production companies of the Kverneland group (covering more than 80% of the revenues in FY2013 of the Kverneland group production subsidiaries) are included. This is because estimates are difficult to ascertain for the indicators in Note 2 due to their attributes.