

# Conversion Factor

## ■ Calculation of greenhouse gas emissions

### \*Heat conversion coefficients

- in and before fiscal 2004  
Fuel: Coefficients are used from the “Table of heat generation by energy source” (revised on March 30, 2001) (Agency for Natural Resources and Energy).  
Electricity: 9.83MJ/kWh is used from the “Enforcement ordinance of Low Concerning the Rational Use of Energy” (revised on December 27, 2002)
- in and after fiscal 2005  
Coefficients are used from the “Enforcement ordinance of Low Concerning the Rational Use of Energy” (revised on March 29, 2006)

### \*Carbon dioxide emission coefficients

- in fiscal 1990  
It is calculated using the formula below.  
$$\text{Carbon dioxide equivalent (t-CO}_2\text{)} = \text{carbon equivalent (t-C)} \times 3.664$$
  
And coefficients are used from the “Report on survey on carbon dioxide emissions (1992)” (Environment Agency).
- from fiscal 2003 to fiscal 2004  
Coefficients are used from the “Guideline for calculation method of greenhouse gas emissions from private companies (draft ver.1.5) (July 2003, Ministry of the Environment).
- in and after fiscal 2005  
Fuel: Coefficients are used from the “Department regulation concerning calculation of greenhouse gas emissions from the business activities of the specified polluters”. (March, 2006; the third department regulation of Ministry of Economy, Trade and Industry and Ministry of the Environment)  
Electricity: Coefficients are used from the Department regulation above and emission coefficients by electricity supplier for domestic values.  
Coefficients are used from the “Report on estimated survey on carbon dioxide emissions per unit electric generation in electric generation divisions in each country-Ver.3 (June 2006)” (The Japan Electrical Manufacturers’ Association)

### \*Targeted area of calculation of carbon dioxide emissions

- Only plants and factories of Kubota are targets in fiscal 1990. Non-producing shops and subsidiaries also become the targets in and after fiscal 2003. The number of targeted business places is increasing.
- The amounts of carbon dioxide emissions in fiscal 1990 and 2003 are smaller than those which were disclosed in the past, because the amounts of carbon dioxide emissions in our housing exterior products division which became a separate company are excluded this year.
- Greenhouse gases other than energy-originated carbon dioxide are newly added to calculation in and after fiscal 2006. But the values which were calculated in and before fiscal 2005 are not recalculated.

## ■ Calculation of carbon dioxide emissions in transportation

### \*Calculation method of carbon dioxide emissions

- Using conventional ton-kilometer method (carbon dioxide emission = ton-kilometer of transportation × carbon dioxide emissions per unit ton-kilometer by transport vehicle)

### \*Carbon dioxide emissions per unit ton-kilometer in truck transportation

- in fiscal 2004: It is calculated using the values in the item of “energy consumption to carry a baggage of one metric ton in a distance of one kilometer (in fiscal 2004)” in the “Directory of energy relating to transportation for 2006” (Ministry of Land, Infrastructure and Transport).
- in and after fiscal 2005: It is calculated using the values in the item of “energy consumption to carry a baggage of one metric ton in a distance of one kilometer (in fiscal 2005)” in the “Directory of energy relating to transportation for 2007” (Ministry of Land, Infrastructure and Transport).

### \*Carbon dioxide emissions per unit ton-kilometer except for truck transportation

- The values are used in the item of “carbon dioxide emissions per ton-kilometer of transportation by transport vehicle” in the “Manual for calculation and report of greenhouse gas emissions (Ver.1.1)” (Ministry of the Environment and Ministry of Economy, Trade and Industry).

### \*Targeted area of calculation of carbon dioxide emissions is gradually expanding.

- Only Kubota itself is targeted in fiscal 2004. Some subsidiaries and affiliates also become targets in and after fiscal 2005.

### \*We revised the values of ton-kilometer of fiscal 2006, scrutinizing anew the values in our CSR Report 2007 published