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Kajima Corporation

	Companies' approach
<p>□ Background and purpose of accounting</p>	<ul style="list-style-type: none"> • To take action to tackle global warming, we realize the importance of understanding our overall environmental impacts, including both upstream and downstream activities. • Underlying this awareness are the following reasons: <ul style="list-style-type: none"> - The construction industry involves, as its products, buildings and other structures, which are social infrastructures intended for long-term use. => What matters environmentally is the environmental impacts buildings will have while they are in service. - The construction industry is a representative resource-intensive industry. => What also matters is the environmental impacts arising from the production, transfer, handling and disposal of building materials.
<p>□ Utilization of accounting results</p>	<ul style="list-style-type: none"> • Identify and focus on priority issues to be addressed. • Evaluate the results of our efforts and activities. • Disclosing information to stakeholders.
<p>□ Benefits of accounting</p>	<ul style="list-style-type: none"> • Enabled to evaluate the relevant environmental aspects quantitatively.
<p>□ Internal system for accounting</p>	<ul style="list-style-type: none"> • The Environmental Management Committee, a subcommittee of the Corporate Environmental Committee, deals with and organizes the task of supply chain emissions accounting.

	Companies' approach
<p>❑ Efforts to reduce supply chain emissions</p>	<ul style="list-style-type: none"> • Continuously improve the energy-saving performance of buildings designed by us. => We account for, and draw on, CO2 emissions of created and constructed buildings while they are in service as one of the indicators to evaluate the results of our efforts. • Promote the utilization of recycled materials as building materials. => We account for, and draw on reductions of CO2 emissions arising from the production of key materials as one of the indicators to measure the implications of the use of recycled materials. • Promote an effective use of construction sludge. => We account for and draw on those CO2 emissions data for waste disposal as one of the indicators to measure the importance of construction sludge in waste disposal.
<p>❑ Issues in supply chain emissions accounting</p>	<ul style="list-style-type: none"> • Validity of emission factors used, periodic review or revision of emission factors, social authorization of emission factors. • We use emission factors for the calculations , so it is difficult to visualize the evaluations of the results of our efforts for CO2 reduction. • Because the construction industry is based on orders received, the related supply chains differ by orders, covering a broad range. Therefore, calculation of CO2 emissions without using emission factors is very hard work..
<p>❑ Other remarks</p>	<ul style="list-style-type: none"> • When it comes to the construction industry, a wide variety of materials are used at ever-moving, transient construction or production sites. In this context, we will need to compromise to some extent in the accuracy or details, while ensuring a certain level of validity, when we undertake the task of supply chain emissions accounting.

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Category	Accounting methods	
	Activity data	Emission factor
Category 1: Purchased goods and services	<ul style="list-style-type: none"> Amount of construction materials procured 	<ul style="list-style-type: none"> Architectural Institute of Japan “LCA Guidelines 2006”
Category 2: Capital goods	<ul style="list-style-type: none"> The main business activity in the construction industry is a transient workplace, so we perceive that the percentage of capital goods are small 	
Category 3 Fuel- and energy-related activities not included in Scope 1 and 2	<ul style="list-style-type: none"> Amount of energy consumed by electricity and steam 	<ul style="list-style-type: none"> Basic Guidelines on Accounting for Greenhouse Gas Emissions Throughout the Supply Chain (Ver 2.2)
Category 4: Transportation and delivery (upstream)	<ul style="list-style-type: none"> Amount of construction materials procured 	<ul style="list-style-type: none"> Emission factor per average volume in ton-kilometers for main construction materials (based on industry groups’ surveys)
Category 5: Waste generated in operations	<ul style="list-style-type: none"> Amount of waste discharged, by type 	<ul style="list-style-type: none"> Emission factor by waste item (based on our own surveys)
Category 6 :Business travel	<ul style="list-style-type: none"> Not included in the scope of calculations, because we perceive that the impacts to the entire supply chain is small 	
Category 7: Employee commuting	<ul style="list-style-type: none"> The commuting location for about of half of our employees are transient workplaces, so we are verifying a suitable method to calculate and understand under this condition 	

Category	Accounting methods	
	Activity data	Emission factor
Category 8: Leased assets (upstream)	<ul style="list-style-type: none"> Emissions from the office building which we moved-in as a tenant is included in the Scope 1 and Scope 2 emissions calculations 	
Category 9 :Downstream transportation and distribution	<ul style="list-style-type: none"> Emissions from surplus soil generated from construction and wastes, which were carried out of the yard , are included in Scope 1 emissions calculations based on Japan Federation of Construction Contractors' accounting manual 	
Category 10 :Processing of sold products	<ul style="list-style-type: none"> Not applicable, because our principal business is construction not processing and sales of intermediate products, and its impacts are very small 	
Category 11: Use of sold products	<ul style="list-style-type: none"> Total floor area of buildings we designed and constructed 	<ul style="list-style-type: none"> Ministry of Environment Mandatory Greenhouse Gas Accounting and Reporting System List of Emission Factors
Category 12: End-of-life treatment of sold products	<ul style="list-style-type: none"> Emissions from demolition work, is included in the calculations of emissions from the construction division CO2 emissions related to waste treatment due to demolition work is included in the Scope 3 Category 5 emissions calculations 	
Category 13: Leased assets (downstream)	<ul style="list-style-type: none"> Amount of energy used by leased buildings 	<ul style="list-style-type: none"> Ministry of Environment Mandatory Greenhouse Gas Accounting and Reporting System List of Emission Factors
Category 14: Franchises	<ul style="list-style-type: none"> Not applicable because we are not a franchise. 	

Category	Accounting methods	
	Activity data	Emission factor
Category 15: Investments	<ul style="list-style-type: none">Not applicable because investments from construction companies makes little sense as a business	
Other	<ul style="list-style-type: none">Calculations are ignored because it is an option category	

Accounting Results

■ FY2014 accounting results:

【Scope1】

- Direct emissions 204,000t-CO₂/yr

【Scope2】

- Indirect emissions originating from energies 73,000 t-CO₂/yr

【Scope3】

- Category 1 : Purchased goods and services 961,000 t-CO₂/yr
- Category 3 :Fuel- and energy-related activities not included in Scope 1 and 2 5,000 t-CO₂/yr
- Category 4 :Upstream transportation and distribution 20,000 t-CO₂/yr
- Category 5 :Waste generated in operations 19,000 t-CO₂/yr
- Category 11: Use of sold products 337,000 t-CO₂/yr
- Category 13 : Downstream leased assets 24,000 t-CO₂/yr

FY2014 CO2 Emissions Ratio Per Scope

