

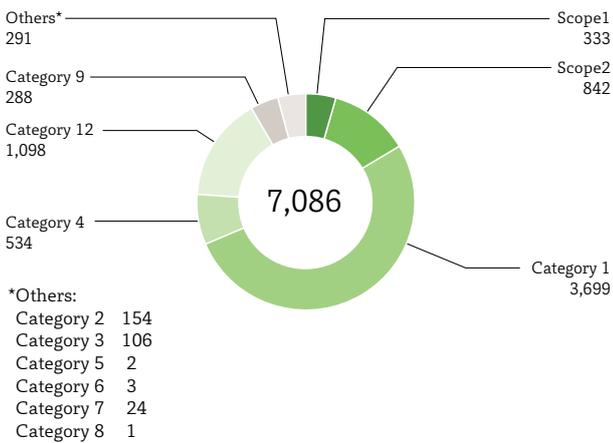
Scope 1, 2, 3 Greenhouse Gas Emissions

Activity results, performance data

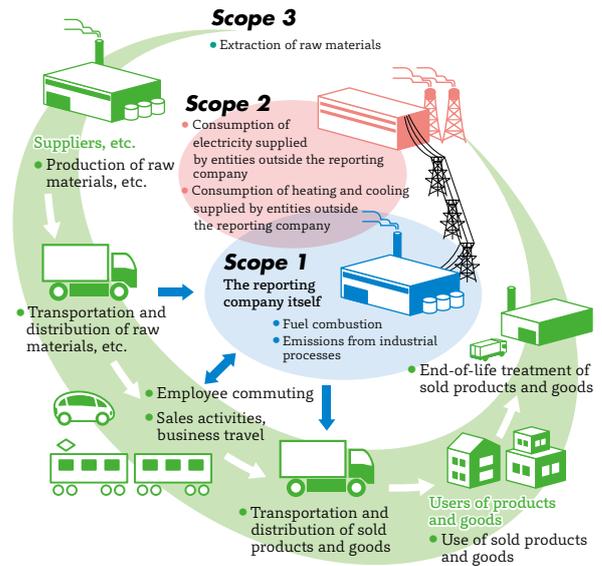
Based on the fiscal 2020 results, Toppan calculated its Groupwide Scope 3 greenhouse gas (GHG) emissions (indirect emissions not included in Scope 2, associated with business operations throughout the entire value chain of the Group) to identify the categories of corporate activity that represented larger sources of GHG emissions and to establish priority targets in the Group's GHG-emission reduction

strategy. This calculation showed that four categories related to raw material consumption collectively accounted for the largest share of the Group's GHG emissions: category 1 (manufacturing of products purchased by Toppan), categories 4 and 9 (transportation and distribution of products purchased and sold by Toppan), category 12 (end-of-life treatment of products sold by Toppan).

Scope 1, 2, 3 Greenhouse Gas Emissions (kt-CO₂e)



Calculating Scope 3 Emissions



Details of the Scope 1, 2, and 3 Categories

Emissions Types	
Direct emissions (Scope 1)	Direct emissions from industrial processes or fuels consumed at the reporting company
Indirect emissions (Scope 2)	Indirect emissions associated with the consumption of electricity, heating, or cooling purchased or acquired by the reporting company

- For Scope 1 and 2 emissions, greenhouse gas (GHG) emissions associated with electricity consumption at domestic sites are calculated using the basic emission factor from the method specified in the Ministerial Ordinance Concerning the Calculation of Greenhouse Gas Emissions from Business Activities of Specified Dischargers (the latest amendment on April 30, 2015) issued by the Ministry of the Environment (MOE) of Japan. GHG emissions associated with electricity consumption at overseas sites are calculated using country-specific conversion factors published by the International Energy Agency (IEA).
- GHG emissions associated with fuel consumption, excluding electricity consumption, are calculated globally by the MOE method specified in the Ministerial Ordinance Concerning the Calculation of Greenhouse Gas Emissions from Business Activities of Specified Dischargers (the latest amendment on April 30, 2015).

Indirect Emissions Not Included in Scope 2 (Scope 3)			Calculation Methods	
			Activity Quantity	Basic Unit from
Category 1	Purchased goods and services	Emissions associated with activities up to the point of the production of raw materials, components, goods, sales-related materials, or the like purchased or acquired by the reporting company	Materials purchased or acquired (by weight)	CFP-DB ²
Category 2	Capital goods	Emissions that occur during the construction or production of capital goods purchased or acquired by the reporting company	Capital investments by business field	MOE-DB ¹
Category 3	Fuel- and energy-related activities (not included in Scope 1 or Scope 2)	Emissions associated with the procurement of fuels supplied by entities outside the reporting company or fuels necessary for the generation, etc. of electricity, heating, cooling, etc. consumed by the reporting company	1. Electricity and steam consumption 2. Fuel consumption	1. MOE-DB ¹ 2. CFP-DB ²
Category 4	Upstream transportation and distribution	Emissions associated with logistics up to the point of the arrival of incoming raw materials, components, goods, sales-related materials, or the like purchased or acquired by the reporting company; transportation and distribution of products sold by the reporting company	1. Freight ton-kilometers as a designated shipper classified under the Energy Saving Act of Japan 2. Estimated freight ton-kilometers of procurement logistics	1. Energy Saving Act of Japan 2. CFP-DB ²
Category 5	Waste generated in operations	Emissions associated with the transportation and treatment of waste generated at the reporting company	Waste discharge by type	MOE-DB ¹
Category 6	Business travel	Emissions associated with business travel by employees	Business travel expenses by transport mode	MOE-DB ¹
Category 7	Employee commuting	Emissions associated with the commuting of employees between their homes and worksites	Commuter fares or petrol costs	MOE-DB ¹
Category 8	Upstream leased assets	Emissions associated with the operation of assets leased by the reporting company (lessee), excluding Scope 1 and Scope 2 emissions	Electricity and gas consumed at tenant premises	Emission factors by business
Category 9	Downstream transportation and distribution	Emissions associated with the transportation, storage, loading, or retailing of sold products after delivery to customers	Estimated freight ton-kilometers by product	CFP-DB ²
Category 10	Processing of sold products	Emissions associated with the processing of sold intermediate products by downstream companies	Excluded from calculation because there are no scenarios or units that apply universally to Toppan's diversified products	
Category 11	Use of sold products	Emissions associated with the end use of sold products by users (consumers, downstream companies)	Not applicable	
Category 12	End-of-life treatment of sold products	Emissions associated with the transportation and treatment of sold products at the end of their life by users (consumers, downstream companies)	Waste disposal by product (estimated)	CFP-DB ²
Category 13	Downstream leased assets	Emissions associated with the operation of assets owned by the reporting company (lessor)	Not applicable	
Category 14	Franchises	Emissions from franchise members	Not applicable	
Category 15	Investments	Emissions related to the operation of investments	Excluded from calculation	

Notes

- Toppan calculates the Group's Scope 3 GHG emissions for categories 1-9 and 12.
- The calculation boundary covers Groupwide GHG emissions associated with Toppan Inc. and Group entities consolidated for accounting purposes.
- For "freight ton-kilometers as a designated shipper classified under the Energy Saving Act of Japan" in category 4, "business travel" in category 6, and "employee commuting" in category 7, Toppan has estimated total values across the calculation boundary in terms of the proportion of production volume or employee numbers based on the values counted for organizations whose activities are quantifiable.
- *1 MOE-DB: Emission unit database for calculating the greenhouse gas emissions, etc. of organizations throughout the entire supply chain (ver. 2.5) issued by the Ministry of the Environment of Japan
- *2 CFP-DB: Standard database (ver. 1.01) of the Japan Environmental Management Association for Industry (JEMAI) Carbon Footprint of Products (CFP) Communication Program