## Dai Nippon Printing Co., Ltd.

#### Companies' approach A general picture of GHG emissions management across the entire supply chain **Background** and purpose Scope 3 Fuel and energy-related activities Capital goods 2 of accounting Scope 2 Indirect emissions from use of Upstream transportation electrical power and steam 4 & distribution Manufacturing **DNP Group** of materials Manufacturing of goods Scope 1 Direct emissions from fuel combustion, etc. Processing of 15 Investments V sold products 67 Business travel and employee commuting 10 Processing of End of life treatment Use of sold products of sold products 9 Downstream transportation & End of life treatment of sold products 11 Use of sold products • As we believe it's important to reduce GHG emissions across the product life cycle, we have accounted not only GHG emissions from our production phase, but also indirect emissions (Scope 3) throughout our supply chain and implemented reduction countermeasures. As a result, GHG emissions have been getting reduced every year since FY 2010. To enable these efforts for emissions reduction, keeping track of and understanding GHG emissions across our business activities are key and essential, and therefore from 2014 our supply chain emissions accounting was based on the DNP Group as a whole, including overseas activities. Based on the accounting results, we will promote emissions reductions throughout the supply chain. **Utilization of** By establishing certain accounting methods for the DNP Group's overall emissions across the entire supply chain, including overseas business and production sites, we will be able to confirm the quantitative changes in emissions over accounting time. In addition, we will be able to clarify the problems in data accuracy and thereby improve it. results With respect to handling a wide range of products, we will be able to learn accounting methods for emissions for the entire supply chain, and will aim to create a database for volume data, etc. By gradually refining our emissions data for the entire supply chain for our overall corporate activities, we will be able to collect (carbon footprint) data by product group, customer, and individual product, so that we will be able to cope with customer's disclosure requests which are likely to increase in the future.

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		Companies' approach		
3	Benefits of accounting	Through the above usage methods, we will be able to clarify reduction potential, refine accounting methods, and cope with customer requests for disclosing data.		
4	Internal system for accounting	<ul> <li>Data is collected from the relevant departments and divisions across the company and the associated companies, and then calculated by the Environmental Department.</li> <li>Responsible dept. and company collecting data for each Categories         <ul> <li>Procurement: Category 1,4</li> <li>Accounting: Category 2</li> <li>Environment: Category 3,4,5</li> <li>Labor: Category 6,7</li> <li>Administration: Category 9,11,12</li> <li>the associated companies: Category 15</li> </ul> </li> </ul>		
5	Efforts to reduce supply chain emissions	<ul> <li>We are making efforts to reduce emissions by promoting "green" procurement, development and sales of environmentally friendly products, and using more efficient means of transportation as a cargo owner.</li> <li>In particular, for Category 1 emissions from the "procurement of materials," which represent more than 50% of our total GHG emissions, we will be looking to reduce these emissions as a priority target area.</li> </ul>		
6	Issues in supply chain emissions accounting	<ul> <li>Because many Dai Nippon Printing products are intermediate products, it is difficult to account for our emissions from use (Category 11) of those products we have sold downstream, so only emissions from the domestic use of PET bottle preforms (i.e. energy used to cool products made into PET bottles and sold as drinks) were accounted for.</li> <li>With respect to the processing and use of other parts, either their part of the overall weight of the finished product is small or no energy is used in processing and use, so these were not included.</li> </ul>		
7	Other	To ensure the validity and transparency of the accounting, we received third party verification.		

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Category	Accounting methods    ※Accounting period : April 2020 – March 2021		
Category	Activity data	Emission factor	
Category 1: Purchased goods and services	Materials procurement amount (in both weight and value terms) (The priority should be weight over value)	CFP Basic, and other available DB     3EID(Use CFP before 3EID)	
Category 2: Capital goods	Amount of money needed to purchase land/buildings and machinery	• 3EID	
Category 3: Fuel and energy related activities not included in Scope 1 or 2	Fuel, electricity and steam energy usage	Emission factor DB*     CFP Basic DB (for overseas)	
Category 4: Transportation and delivery (upstream)	Cargo owner shipments (ton-km) and estimated supplier shipments (ton-km) (*) (* Scenarios should be set up for load capacity, load percentage and shipment distances to estimate the ton-km based on purchased weight. For items for which purchased weight is not know, the unit price per weight for known items should be used. The weight will be estimated by the purchased amount.)	CFP Basic DB	
Category 5: Waste generated in operations	Weight of waste by type and disposal method	Emission factor DB*	
Category 6: Business travel	Estimated travel expenses for business trips and nearby travel (*), nearby transportation expenses paid, days spent in accommodations (* Set up scenarios for typical travel routes by means of transportation and calculate from the number of times used.)	Emission factor DB*	
Category 7: Employee commuting	Commuting expenses paid by means of transportation	Emission factor DB*	
Category 8: Leased assets (upstream)	Energy consumed for leased assets (calculated in scope 1 and scope 2)	• -	
Category 9: Transportation and delivery (downstream)	Estimated shipment ton-km (*), sales volume and sales prices by type for five types of products, including paper printed products. (* Set up scenario for each type of accounting subject based on the CFP system PCR.)	CFP Basic DB	
Category 10: Processing of sold products	Not accounted for because the sold products were not processed or because their percentage of the sold products.	ne final product was very small.	
Category 11: Use of sold products	Estimated electric power used domestically to refrigerate drinks in PET bottles. (* Estimated based on PCR.)	CFP Basic DB	
Category 12: End-of-life treatment of sold products	Amount of waste discharged, by disposal method, for five types of products including paper printed products. (* Estimated based on PCR.)	CFP Basic , and other available DBs	
Category 13: Leased assets (downstream)	Not included in the scope of calculations, because there are no relevant activities		
Category 14: Franchises	1		
Category 15: Investments	GHG emissions of the associated companies (Equity-method affiliate)		
Other	Not included in the scope of calculations, because it is an option category		

<sup>\* &</sup>quot;Emission Factor Database on Accounting for Greenhouse Gas Emissions Throughout the Supply Chain (Ver.3.1) "

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#### **Supply chain emissions: Accounting results**



