

1 Nissan Chemical Corporation

	Companies' approach
① Background and purpose of accounting	<ul style="list-style-type: none"> Nissan Chemical has promoted Responsible Care (RC) activities, that aim to secure environment, health and safety (EHS) performance on a voluntary basis throughout the entire process, from development of chemical substances to manufacture, distribution, use, final consumption and disposal / recycling and form communication with society through the announcement of their results. To ensure our EHS initiatives, we have selected “countermeasure to address climate change” as the material issue and calculated our indirect GHG emissions via value chain, from purchasing raw materials to use and disposal by customers. We’d like to set our targets for reducing GHG emissions based on “2 °C targets” to declare that Nissan Chemical is a sustainable company, when disclosing ESG information to stakeholders involving investors.
② Utilization of accounting results	<ul style="list-style-type: none"> The accounting results have been applied to responding to CSR questionnaires from CDP and other organizations. We have disclosed the accounting results by our annual report and website pages to share with stakeholders and used them at dialogues.
③ Benefits of accounting	<ul style="list-style-type: none"> The accounting results are helpful to comprehend the status of GHG emissions in the value chain and develop our policy for reducing GHG emissions. Ensuring social reliability for our company by disclosing information of accounting results, we could expect long term investments.

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④ Internal system for accounting	<ul style="list-style-type: none"> • Environment, Safety and Quality Assurance dept. collects data of amount of activities from following related business divisions and departments and calculates GHG emissions. • Data for purchasing raw materials • facility investments • business trips and commutation (from the financial dept.), outsourcing production (from related business divisions) and logistics (from the subsidiary logistic company and related business divisions) are collected. • CSR & Public Relations Office confirms the calculated data.
⑤ Efforts to reduce supply chain emissions	<ul style="list-style-type: none"> • To develop compact agrochemical formulations that contain a high concentration of active ingredients to reduce packaging materials, waste products and GHG emissions from manufacturing and delivering. • To supply performance materials to contribute to manufacturing environmentally friendly products. • To promote developments of environmentally friendly products. • To reduce GHG emissions for logistics through measures such as promoting modal shifts, enhancement of transporting unit, improvement of load efficiency, replacing vehicles with energy-saving and practicing eco-driving. • To encourage value chain to reduce GHG emissions with focus on contract manufacturers, based on calculated data of GHG emissions.
⑥ Issues in supply chain emissions accounting	<ul style="list-style-type: none"> • It is difficult to improve accuracy of calculated data since collecting actual data at upstream of value chain is limited. • Social system which enables easier data collection and calculation is required. • Further smart accounting system is required.
⑦ Other	

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Category	Accounting methods ※Accounting period : April 2017 - March 2018	
	Activity data	Emission factor
Category 1: Purchased goods and services	<ul style="list-style-type: none"> Items and money amounts of all purchased goods and services 	<ul style="list-style-type: none"> SC-DB (based on money amounts)
Category 2: Capital goods	<ul style="list-style-type: none"> Facility investments 	<ul style="list-style-type: none"> SC-DB [6] Emission rate for prices of capital goods
Category 3: Fuel and energy related activities not included in Scope 1 or 2	<ul style="list-style-type: none"> Procurement volume for each category of energy 	<ul style="list-style-type: none"> SC-DB [7] Emission rate of electricity and energy use
Category 4: Transportation and delivery (upstream)	<ul style="list-style-type: none"> GHG emission data annually reported by specific cargo owner in accordance with Energy Saving Act. 	<ul style="list-style-type: none"> CFP-DB
Category 5: Waste generated in operations	<ul style="list-style-type: none"> Disposed amounts for each category of wastes 	<ul style="list-style-type: none"> SC-DB [9] Emission rate for each category of wastes
Category 6: Business travel	<ul style="list-style-type: none"> Amount of payments for traffic expenses 	<ul style="list-style-type: none"> SC-DB [11]
Category 7: Employee commuting	<ul style="list-style-type: none"> Amount of payments for traffic expenses 	<ul style="list-style-type: none"> SC-DB [11]
Category 8: Leased assets (upstream)	<ul style="list-style-type: none"> N/A, involved in Scope 1 and 2 	
Category 9: Transportation and delivery (downstream)	<ul style="list-style-type: none"> Ton-kilometer based on distribution (transport and sales) scenario for each product in the project for trial of carbon foot print 	<ul style="list-style-type: none"> SC-DB [2] emission factor ③ for [transportation] in the calculation / report / disclosure system based on the global warming law, ton-kilometer method
Category 10: Processing of sold products	<ul style="list-style-type: none"> Calculated by sales amounts using GHG emission data at main customers 	
Category 11: Use of sold products	<ul style="list-style-type: none"> Calculated by sales amounts of GHG products 	

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Category	Accounting methods ※Accounting period : April 2017 - March 2018	
	Activity data	Emission factor
Category 12: End-of-life treatment of sold products	<ul style="list-style-type: none"> Calculated by container weights data responding to Containers and Packaging Recycling Act and sales amounts of products 	<ul style="list-style-type: none"> SC-DB [9] Emission rate for each category of wastes
Category 13: Leased assets (downstream)	<ul style="list-style-type: none"> Area of rental buildings 	<ul style="list-style-type: none"> SC-DB [16] Emission rate for each use of buildings
Category 14: Franchises	<ul style="list-style-type: none"> N/A 	
Category 15: Investments	<ul style="list-style-type: none"> N/A 	
Other	<ul style="list-style-type: none"> Nothing 	

SC-DB : Emission rate database for calculating GHG emissions through supply chain (Ver.2.5)

CFP-DB: Basic database of carbon foot print communication program, ver.1.01

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Supply chain emissions : Accounting results

