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# Yamaha Corporation

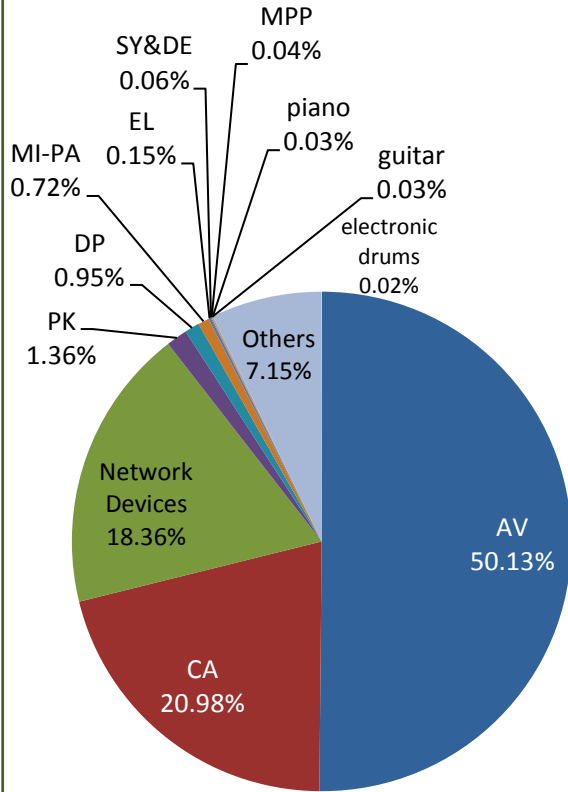
	Companies' approach
<p>❑ <b>Background and purpose of accounting</b></p>	<p><b>Currently</b></p> <ul style="list-style-type: none"> <li>To roughly estimate the total amount of GHG emissions across the entire value chain and per category.</li> </ul> <p><b>In the future</b></p> <ul style="list-style-type: none"> <li>To use the data for managing GHG.</li> </ul>
<p>❑ <b>Utilization of accounting results</b></p>	<ul style="list-style-type: none"> <li>Developing effective strategies towards GHG emissions reduction.</li> <li>Disclosure of information.</li> </ul>
<p>❑ <b>Benefits of accounting</b></p>	<ul style="list-style-type: none"> <li>Important categories can be identified, and issues and priority initiatives can be organized.</li> </ul>
<p>❑ <b>Internal system for accounting</b></p>	<ul style="list-style-type: none"> <li>The environmental and safety management office at our headquarters is mainly in charge, and the purchasing division, the design and development division, the sales division, the human resources division, and the administration division share roles.</li> </ul>

	<b>Companies' approach</b>
<p><b>□ Efforts to reduce supply chain emissions</b></p>	<ul style="list-style-type: none"> <li>• While being aware of the numerical goals for society after COP21, we continuously strive to efficiently reduce emissions, while maintaining the balance between reduction activities and our internal issues.</li> <li>• In addition to surely implementing measures for reducing Scope 1 and Scope 2 emissions, we will preferentially manage Scope 3 categories (category 1, 4, 11 etc.) which have higher emissions, and likely reflects our activities.</li> </ul>
<p><b>□ Issues in supply chain emissions accounting</b></p>	<ul style="list-style-type: none"> <li>• For manufacturers that conduct high-mix low-volume production, it is extremely difficult to individually calculate CO2 emissions by actual measurements.</li> <li>• There are many cases which emission factors are insufficient, and suitable factors cannot be found.</li> <li>• Estimates from emission factors, makes it difficult to reflect our reduction measures.</li> <li>• It is difficult to survey the emission factors by electricity usage for each country and region.</li> <li>• It is difficult to set up product usage times for musical instruments, and audiovisual equipment etc. (manufacturers develop attractive products because they want consumers to use their products for a long period of time, but GHG emissions increases due to usage time).</li> <li>• Calculations of category 12 emissions are especially difficult because the end-of-life treatment for products varies depending on each product, each country, and each region.</li> </ul>
<p><b>□ Other remarks</b></p>	<ul style="list-style-type: none"> <li>• Currently we are implementing initiatives for substantially reducing GHG emissions such as structural reform in manufacturing activities, improving logistic efficiency, and local production for local consumption.</li> </ul>

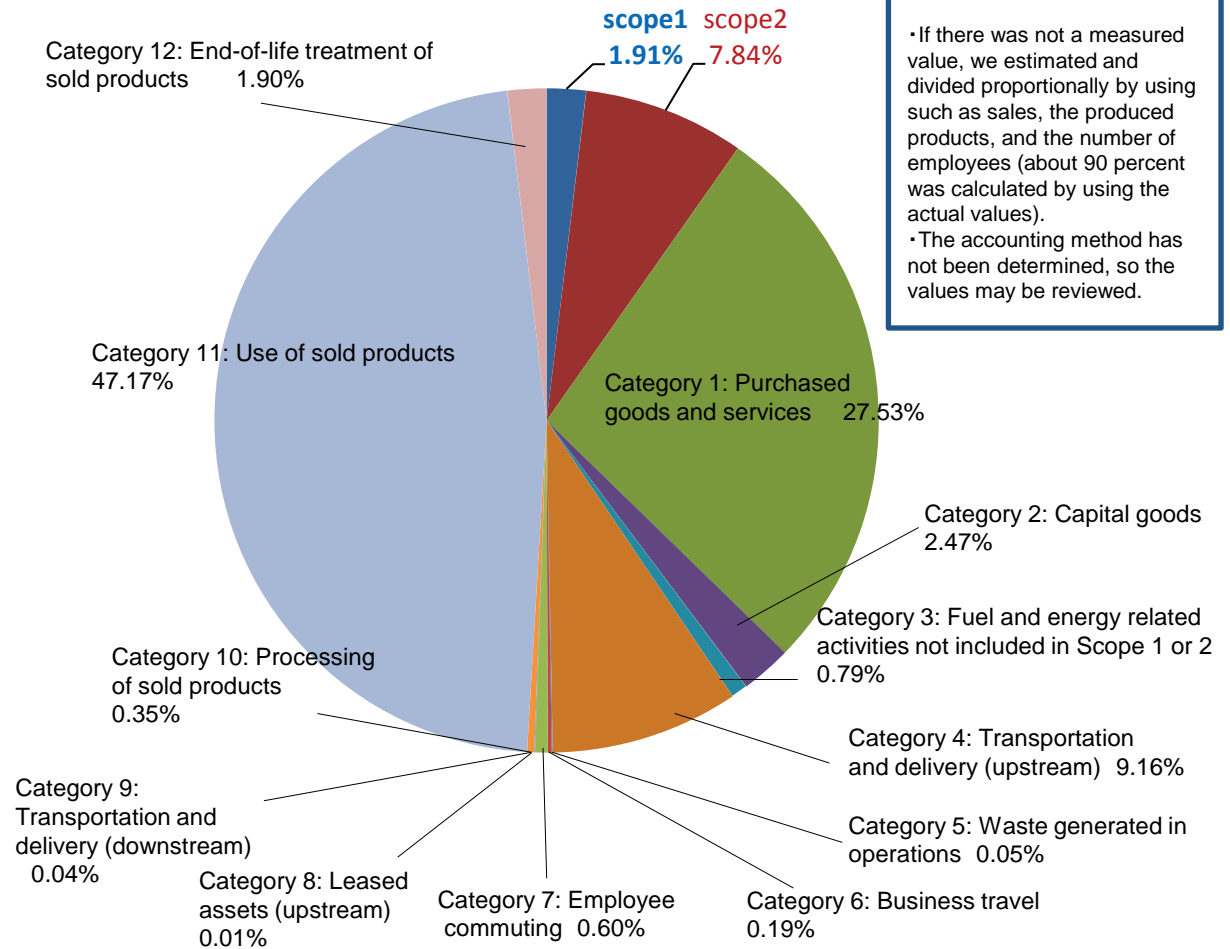
Category	Accounting methods	
	Activity data	Emission factor
Category 1: Purchased goods and services	<ul style="list-style-type: none"> <li>Amount of (raw) materials procured (monetary basis)</li> </ul>	<ul style="list-style-type: none"> <li>3EID base emission factor per amount (*1)</li> </ul>
Category 2: Capital goods	<ul style="list-style-type: none"> <li>Purchased amount for capital goods</li> </ul>	<ul style="list-style-type: none"> <li>3EID base emission factor per amount (*1)</li> </ul>
Category 3: Fuel and energy related activities not included in Scope 1 or 2	<ul style="list-style-type: none"> <li>Amount of energy consumed by use of electricity or steam</li> <li>Amount of gasoline and fuel oil A consumed</li> </ul>	<ul style="list-style-type: none"> <li>Emission factor per energy type (*1)</li> <li>Emission factor per fuel type (*2)</li> </ul>
Category 4: Transportation and delivery (upstream)	<ul style="list-style-type: none"> <li>The following amount of fuel consumption related to transportation by cargo owner (ton-kilometer) (procurement of wood, overall domestic distribution, overseas container transportation)</li> </ul>	<ul style="list-style-type: none"> <li>Emission factor by mode of transportation (ton-kilometer method) (*1)</li> </ul>
Category 5: Waste generated in operations	<ul style="list-style-type: none"> <li>Amount of waste discharged, by type</li> </ul>	<ul style="list-style-type: none"> <li>Emission factor by type of waste(*1)</li> </ul>
Category 6: Business travel	<ul style="list-style-type: none"> <li>Number of employees</li> </ul>	<ul style="list-style-type: none"> <li>Emission factor per number of employees(*1)</li> </ul>
Category 7: Employee commuting	<ul style="list-style-type: none"> <li>Number of employees, business days for each office by urban class</li> </ul>	<ul style="list-style-type: none"> <li>Emission factor per number of employees, business days(*1)</li> </ul>
Category 8: Leased assets (upstream)	<ul style="list-style-type: none"> <li>Electricity usage of leased distribution warehouses</li> </ul>	<ul style="list-style-type: none"> <li>Emission factor by the act on the rational use of energy(*1)</li> </ul>
Category 9: Transportation and delivery (downstream)	<ul style="list-style-type: none"> <li>Distribution from chain stores</li> </ul>	<ul style="list-style-type: none"> <li>Emission factor by CFP track scenario(*1)</li> </ul>
Category 10: Processing of sold products	<ul style="list-style-type: none"> <li>Electricity usage during the implementation of sales of semiconductor substrates</li> </ul>	<ul style="list-style-type: none"> <li>Emission factor based on the internal actual measured value(*1)</li> </ul>
Category 11: Use of sold products	<ul style="list-style-type: none"> <li>Assumed electricity usage for each principal item in each category.</li> </ul>	<ul style="list-style-type: none"> <li>Emission factor by the act on the rational use of energy(*1)</li> </ul>
Category 12: End-of-life treatment of sold products	<ul style="list-style-type: none"> <li>(Weight of materials in the shipped products for this fiscal year)</li> </ul>	<ul style="list-style-type: none"> <li>Emission factor by type of waste(*1)</li> </ul>
Category 13: Leased assets (downstream),	<ul style="list-style-type: none"> <li>There are no relevant activities</li> </ul>	
Category 14: Franchises	<ul style="list-style-type: none"> <li>There are no relevant activities</li> </ul>	
Category 15: Investments	<ul style="list-style-type: none"> <li>Not included in the scope of calculations, because we determined that we do not conduct investing to earn profit and we are not a financial service providing company</li> </ul>	
Other	<ul style="list-style-type: none"> <li>Calculations are ignored, because it is an option category</li> </ul>	

\*1 Emission Factor Database on Accounting for Greenhouse Gas Emissions Throughout the Supply Chain Ver.2.2

\*2 Carbon Footprint Communication Program Basic Database Ver. 1.01 (domestic data)



**Category 11 breakdown**



• If there was not a measured value, we estimated and divided proportionally by using such as sales, the produced products, and the number of employees (about 90 percent was calculated by using the actual values).  
 • The accounting method has not been determined, so the values may be reviewed.