

Environmental Impact Report

**WATERBOMB
2024**



About This Report

Report Overview

MADEONE has published its first Environmental Impact Report in 2024 to examine the environmental impact of WATERBOMB and engage closely with consumers. The company is committed to continuously collecting and managing environmental data, ensuring transparent disclosure of relevant outcomes in the future.

Reporting Period and Scope

This report is based on data collected during the WATERBOMB Seoul 2024 event, held from July 5 to July 7, 2024, at the Outdoor Global Stage of KINTEX Exhibition Center 2 in Goyang, Gyeonggi Province.

Reporting Standards

This report adheres to the international standard for event sustainability, ISO 20121, and the Global Reporting Initiative (GRI) Standards 2021 for sustainable management reporting. Key issues specific to the industry have been selected with reference to the industry-specific reporting standards of the Sustainability Accounting Standards Board (SASB).

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Message From CEO

This is Ik Soo Han, CEO of MADEONE.

The value of festivals, where artists and audiences breathe and communicate together in real-time, shines even brighter in a modern society where so much happens online. At MADEONE, we believe in the power of cultural content. That belief has driven us to tirelessly build the unique style of WATERBOMB over the past nine years.

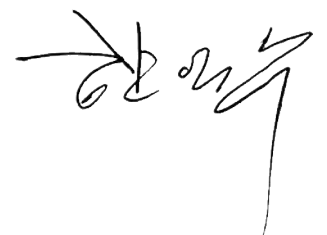
Having left a successful mark in the global cultural content market through WATERBOMB, MADEONE is now embarking on a new challenge toward sustainability. The climate crisis is not an issue for future generations—it is a real and pressing crisis we face today. In light of this, MADEONE recognizes the need for WATERBOMB to go beyond being a festival of enjoyment and embrace its role as a corporate citizen committed to a sustainable future. We pledge to look beyond short-term gains and take a broader perspective, hosting festivals that consider the sustainable development of all stakeholders and society as a whole.

In alignment with the evolving environmental awareness of our key stakeholders—our audience—MADEONE is striving to minimize the festival's environmental impact in various ways, such as utilizing reusable structures and offering vegan menu options. Through this report, we aim to thoroughly assess the sustainability of WATERBOMB and share MADEONE's efforts to create sustainable value.

Starting with this report, we will work to establish an ESG management system across all aspects of our operations, striving for improvements in environmental, social, and governance practices. We hope this report serves as a cornerstone for the sustainable growth of WATERBOMB, and we kindly ask for your continued interest and support.

Thank you.

November 2024
Ik Soo Han
CEO, MADEONE



Event Overview



Event Name	WATERBOMB Seoul 2024
Date	July 5, 2024 - July 7, 2024
Venue	Outdoor Global Stage, KINTEX Exhibition Center 2
Attendance	64,891 people
Organizer	MADEONE
CEO	IK SOO HAN

WATERBOMB has introduced a new paradigm in festivals by combining water fights with music. As a pioneer and leading brand in the domestic festival industry, WATERBOMB delivers a distinctive customer experience with performances by top-tier artists and diverse content.

This year, the festival is being held in nine cities across Korea, including Seoul, Jeju, Daegu, Busan, Incheon, Daejeon, Sokcho, Suwon, and Yeosu. Additionally, WATERBOMB is expanding its global presence through a world tour in five international cities: Hong Kong, Dubai, Fukuoka, Tokyo, and Singapore.

Moving forward, WATERBOMB aims to connect fans around the globe through music and solidify its position as a leading content platform.



Report Background

Report Background

MADEONE has strived to create a platform for cultural exchange through WATERBOMB, providing audiences with vitality and inspiration in their daily lives. However, concerns over the negative environmental impacts of large-scale events, which draw significant crowds, are growing worldwide. International music festivals have long been adopting various environmental protection measures, such as using renewable energy, establishing resource recycling systems, and implementing carbon offset initiatives to ensure sustainability.

Recognizing the gravity of these issues, MADEONE has felt an urgent need to contribute to sustainable event practices and has begun efforts to transform WATERBOMB into a sustainable festival in line with global trends.

This report marks the first step toward analyzing the environmental impact of WATERBOMB and identifying potential improvement measures. Through objective data collection and analysis, MADEONE aims to quantitatively assess the festival's environmental impact and set specific improvement goals based on the findings. Furthermore, we are committed to transparently disclosing all relevant information, engaging with stakeholders, and maintaining ongoing efforts to enhance sustainability.



Sustainability Issue

To ensure that WATERBOMB remains a source of joy for its audience each year, MADEONE is committed to minimizing the festival's environmental impact. The first step in this effort is identifying key sustainability issues. Six primary agendas have been established, along with detailed goals and relevant data collection to support their implementation. Based on the collected data, MADEONE plans to progressively enhance the sustainability of the event.

① Greenhouse Gas Management

MADEONE will measure and manage carbon emissions, establishing plans to reduce greenhouse gases. Emissions from all stages of the event will be closely monitored, and data-driven greenhouse gas reduction plans will be developed and executed.

② Water Resource Management

To protect water resources, MADEONE will minimize water usage at event sites and implement an efficient water management system. The company will also launch water conservation campaigns and collaborate with relevant organizations to actively participate in water resource protection efforts.

③ Waste Monitoring

Waste generated during the event will be meticulously sorted and recycled to minimize total waste emissions. MADEONE will establish a data-driven waste management system to develop and implement effective waste reduction plans.

④ Enhancing Event Accessibility

Accessibility to the festival will be strengthened to ensure all participants, regardless of race, religion, gender, or physical characteristics, can enjoy the event. Halal and vegan meal options, along with universal design principles, will be applied to create a safe and comfortable environment where everyone can independently participate.

⑤ Audience Safety Management

Audience safety is a top priority, and MADEONE will establish a robust safety management system. Thorough pre-event inspections will identify and eliminate potential safety risks, and an effective emergency response system will ensure a safe event environment for all.

Sustainability Declaration

⑥ Enhancing Community Value

MADEONE aims to strengthen communication with local communities and explore ways to contribute to regional economic development. Efforts will include adopting technologies to minimize noise pollution and engaging in social contribution activities, such as donating essential goods to local communities, fostering sustainable growth alongside society.

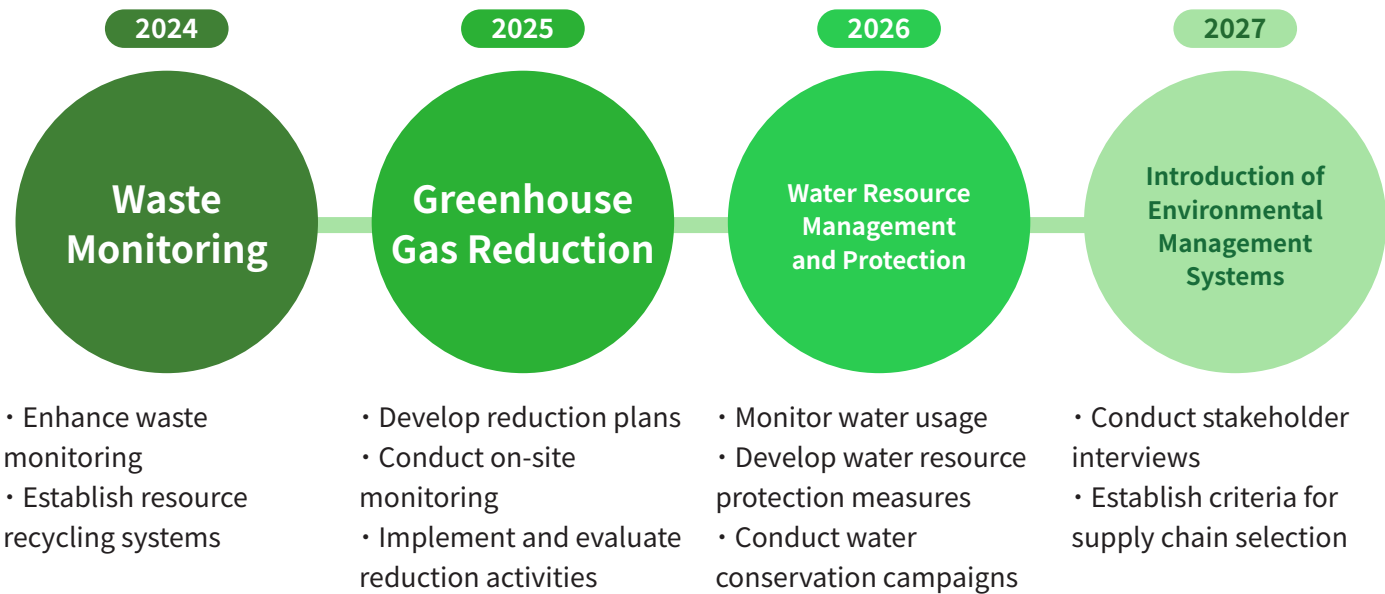
Today, we face serious environmental challenges such as extreme heat, heavy rainfall, and rising sea levels caused by the climate crisis. Climate change poses a direct threat to our daily lives and is the most critical issue confronting our generation. At the 2015 United Nations Climate Change Conference (COP21), the Paris Agreement was adopted, committing to limit the global temperature increase to well below 2°C, with efforts to limit it to 1.5°C above pre-industrial levels. Following the Paris Agreement, businesses worldwide have been analyzing the risks climate change poses to corporate management and actively responding to the climate crisis.

MADEONE is dedicated to minimizing the negative environmental impact of WATERBOMB and fostering a culture of sustainable festivals. Through this report, we aim to conduct a comprehensive analysis of environmental issues arising throughout the event lifecycle and present a detailed roadmap for improvement. We have identified key environmental issues related to WATERBOMB and collected and analyzed relevant data. Based on these findings, we have developed a sustainability roadmap for WATERBOMB 2025 and will continue our efforts to achieve these goals.

Environmental preservation is an essential value. MADEONE remains committed to ensuring that the festivals we love can be enjoyed for years to come, working tirelessly to create a sustainable festival culture.

2025
Sustainability
Roadmap

Based on data collected from the WATERBOMB Seoul 2024 event, we have developed a roadmap for sustainable events. This roadmap takes into account the unique characteristics and on-site conditions of each event location and will be implemented in phases. Additionally, sustainability goals will be set with the intention of expanding the roadmap to all domestic events hosted by MADEONE in the future.



Sustainability Management

MADEONE recognizes the severity of the climate crisis and has established a systematic management system from the planning stage to minimize carbon emissions. Based on this framework, greenhouse gas reduction activities were carried out throughout the event's entire lifecycle, reflecting MADEONE's commitment to sustainable event operations.

① Greenhouse Gas Reduction

① Production of Upcycled Goods

As part of efforts to reduce plastic waste, MADEONE collaborated with the eco-friendly brand Plastic Ark to launch an upcycling project using discarded water guns that could no longer be used. This initiative resulted in the creation of four types of keychains and four types of necklaces. The packaging was also designed to minimize waste, replacing plastic with drawstring pouches made of muslin fabric crafted from natural cotton thread.

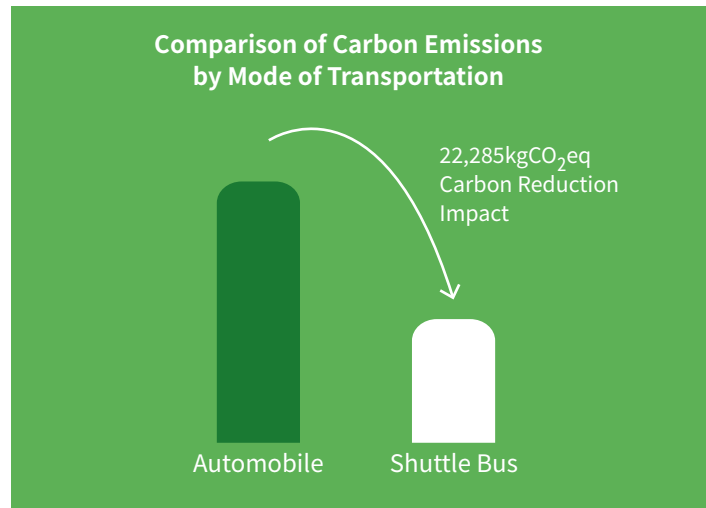
During this year's Seoul event, approximately 4 tons of water guns were collected. Among them, unusable water guns were provided to Plastic Ark for next year's upcycling projects, while functional water guns were donated to nearby apartment communities as a contribution to the local society. MADEONE remains committed to fostering a sustainable festival culture through initiatives like these.



Reference: Lee Seon-jeong, Lim Jong-su, Kang Jin-taek, Standard Carbon Absorption of Major Forest Tree Species. Forest Policy Issues, National Institute of Forest Science, Issue 129, 2019, p. 15.

② Operation of Shuttle Buses

To provide an eco-friendly transportation option for attendees, MADEONE operated shuttle buses connecting 12 major public transportation hubs in Seoul to the event venue. Over the three-day event, a total of **8,961** attendees used the shuttle buses, reducing carbon emissions by an estimated **22,285 kgCO₂eq.** **This reduction is equivalent to the amount of greenhouse gases absorbed annually by 2,448 30-year-old pine trees.**



Calculated based on the distance between Seoul Station and KINTEX.

③ Provision of Vegan Menus

To promote both audience health and environmental sustainability, MADEONE collaborated with the vegan restaurant byTofu to offer plant-based menu options. These included vegan burritos made with various vegetables and tofu instead of meat, as well as vegan cookies prepared without animal-derived ingredients. By providing these healthy and eco-friendly meal choices, **MADEONE aimed to support reduced meat consumption and contribute to environmental protection.**



② Water Resource Protection

① Installation of Water-Saving Faucets

To minimize water consumption, button-operated water-saving faucets were installed at all sinks within the event venue. These faucets dispense water only when the button is pressed, reducing unnecessary water usage and promoting efficient water management. MADEONE will continue to actively explore effective methods for water resource conservation in the future.



③ Waste Management

① Waste Separation Campaign

MADEONE collaborated with "Operation: ECO," a low-carbon event one-stop service, to monitor waste generated during the event and conduct a waste separation campaign for attendees. Seventeen waste separation stations were installed throughout the venue, each staffed by Operation: ECO agents who provided **tailored education on proper waste sorting and encouraged thorough waste separation among attendees.** This campaign not only raised environmental awareness among participants but also helped reduce waste emissions, contributing to the spread of a sustainable festival culture. Through this effort, an estimated **6,679 kgCO2eq** of carbon emissions were reduced.



② Smart Gate System

Since 2019, MADEONE has been operating a QR code-based entry system, known as the **Smart Gate**, to reduce waste associated with paper tickets. By adopting the Smart Gate system, MADEONE not only minimized paper waste but also simplified the admission process, enhancing convenience for attendees.



③ Application of Sustainable Design

To reduce construction waste generated by the event, MADEONE implemented reusable structures at the venue, creating a more sustainable festival environment. These structures were designed with **reusability in mind from the planning stage and were constructed using materials such as steel and stainless steel, which are suitable for reuse.**

A total of 5 structures—including the Lifeguard Photo Zone, Waterdrop Photo Zone, and Air Bounce Photo Zone—were reused across 9 cities. Materials suitable for further use will be recycled for next year's event, reinforcing MADEONE's commitment to sustainable festival practices.



② Improving Event Accessibility

① Installation of Accessible Seating

To uphold the values of diversity and inclusion, **wheelchair-accessible adjustable seating was installed at the WATERBOMB Seoul venue, accompanied by dedicated staff to assist attendees with disabilities.** These accessibility measures ensured that all audience members could enjoy the event without discrimination. During this year's WATERBOMB Seoul, one attendee utilized the accessible seating.



② Provision of Halal Food Options

In the food zone, **halal food options were made available for Muslim attendees, respecting cultural diversity** and ensuring that everyone could comfortably enjoy the festival. By fostering an inclusive environment for audiences from various cultural backgrounds, MADEONE continues to position WATERBOMB as a global festival that brings people together.

③ Enhancing Community Value

① Contributions to the Local Community

As part of efforts to build strong relationships with the local community and promote mutual growth, **MADEONE collected and cleaned 101 unsold water guns and 72 reusable water guns discarded at the venue.** These were donated to a nearby apartment complex, where the residents' association organized a water gun event for the community. **This initiative not only reinforced MADEONE's connection with the local community but also minimized waste from the festival by repurposing resources.** Such activities exemplify the festival's commitment to sustainability and social responsibility.



Carbon Emissions

To comprehensively assess the environmental impact of WATERBOMB, carbon emissions were quantitatively measured across all aspects of the event. This analysis encompassed a wide range of factors, including participant transportation, energy usage, and waste generation, to ensure high data accuracy.

Data Sources for Carbon Emissions Measurement

❶ Participant Transportation and Logistics

Information was collected on the modes of transportation, fuel consumption, and distances involved in participant travel and logistics operations.

❷ Energy and Water Usage

Data was gathered on electricity consumption for lighting, sound systems, and heating or cooling facilities at the event site, as well as water usage during the event.

❸ Waste Emissions

Details were recorded on the types and quantities of waste generated at the event and how it was processed (e.g., recycling, incineration, or landfill).

Transportation and Logistics

Energy and Water Usage

Waste Emissions

Carbon Emissions Monitoring

Total Carbon Emissions

1,232tCO₂eq

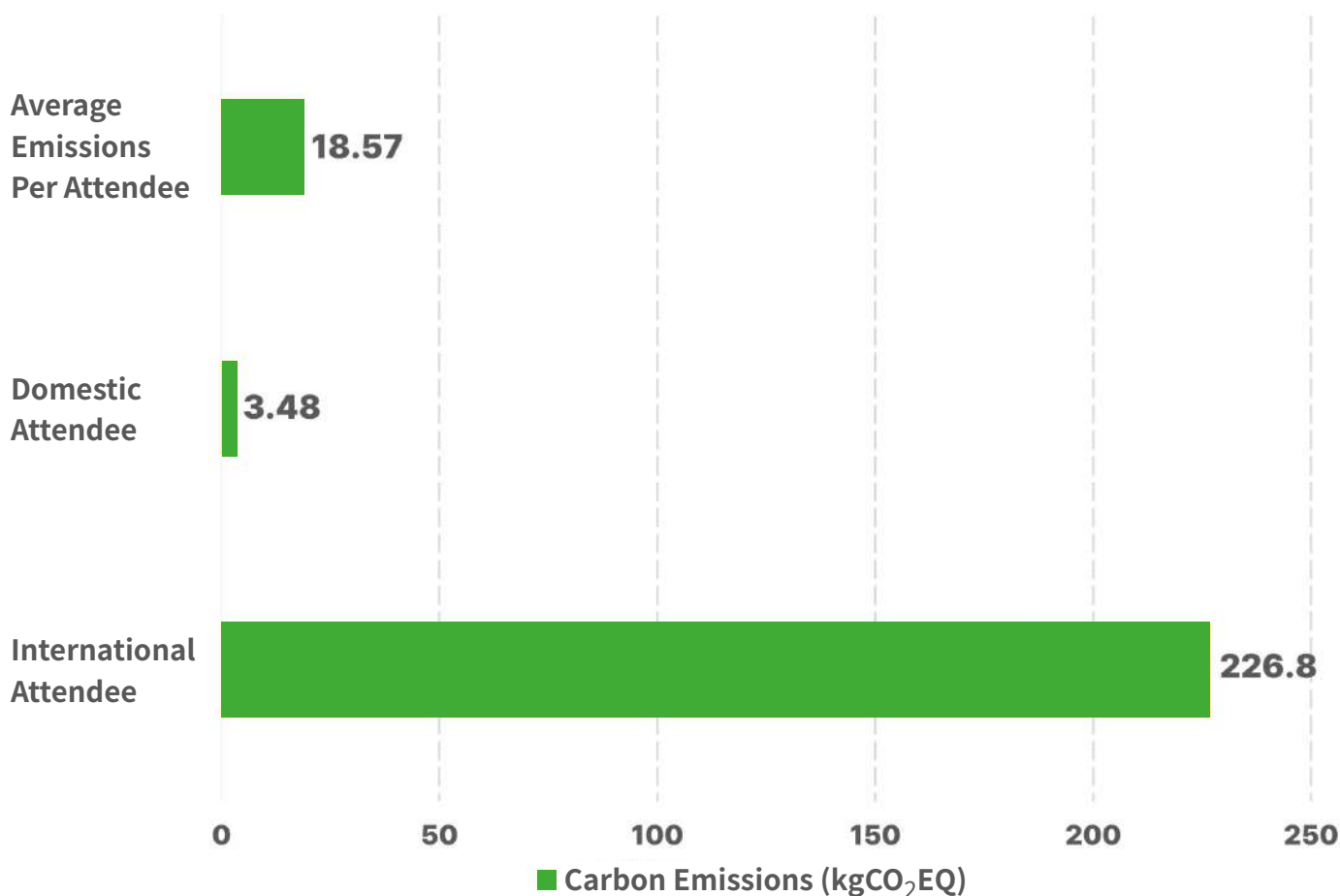
Category	Carbon Emissions	Proportion
Participant Transportation	1,178,131	95.58
Waste	36,640	2.97
Energy Usage	9,538	0.77
Equipment and Facility Transportation	8,047	0.65
Water	276	0.02

Statistics

During the WATERBOMB Seoul 2024 event, the carbon emissions per domestic attendee were recorded at **3.48 kgCO₂eq**, while emissions per international attendee reached **226 kgCO₂eq**. This disparity stems from differences in travel distances, as most domestic attendees traveled from Seoul, whereas international attendees primarily traveled from Beijing, China. Accordingly, carbon emissions were calculated based on travel from Seoul's Jung-gu district for domestic attendees and Beijing, China, for international attendees.

* Carbon emissions from travel within the attendees' home countries and emissions from event setup (e.g., construction waste and equipment transportation) were excluded from the calculation scope.

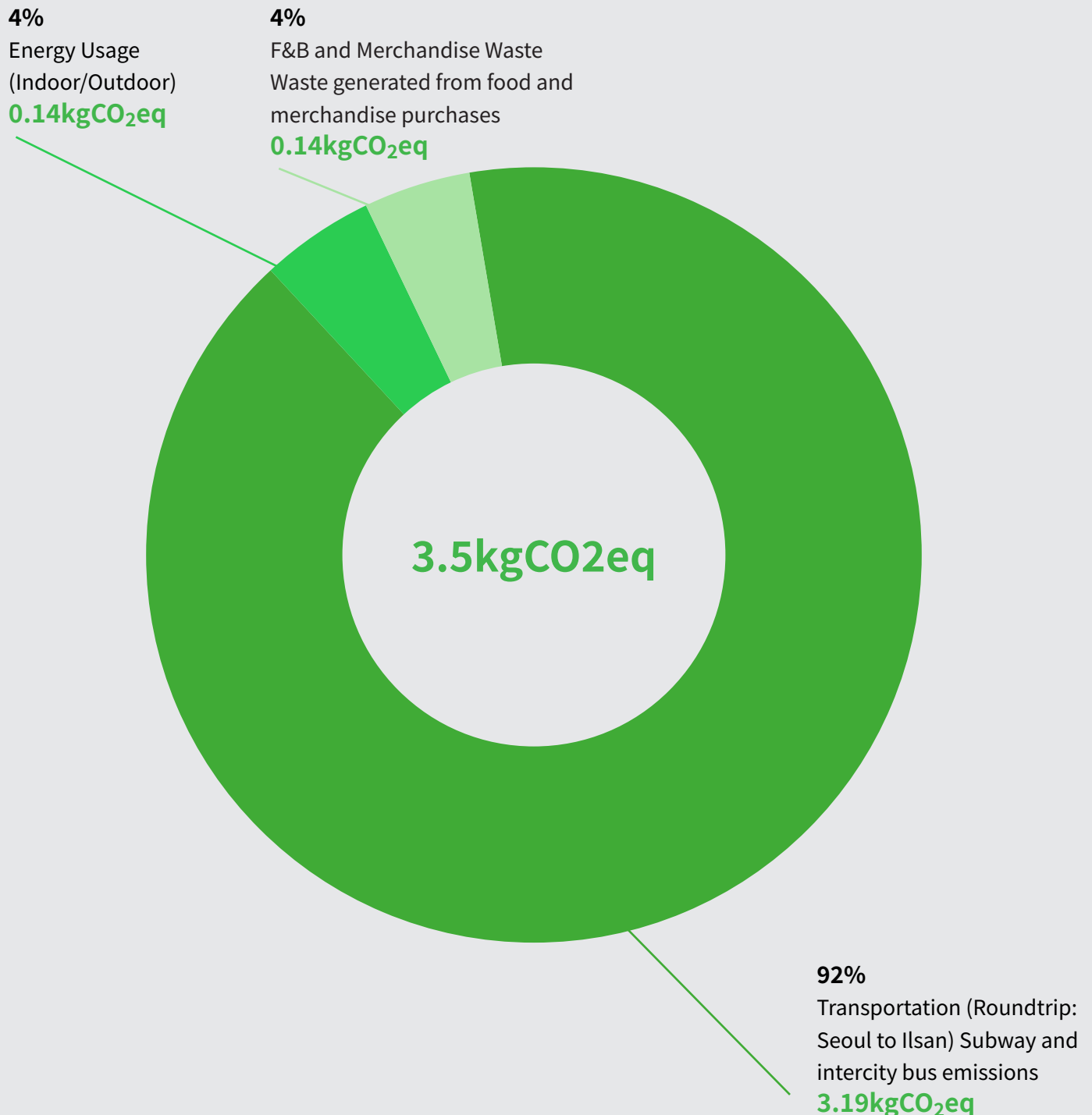
Carbon Emissions Per Attendee for WATERBOMB Seoul 2024



M's Carbon Footprint

M, who lives in Jung-gu, Seoul, attended the WATERBOMB Festival at KINTEX in Ilsan, traveling via two public transportation modes. M enjoyed the vibrant performances by star artists, indulged in a variety of foods, and soaked in the excitement of the festival for a day. M also purchased merchandise at the souvenir booth to commemorate the event. The total carbon emissions generated by M at the festival amounted to **3.5 kgCO₂eq** for the day.

* Carbon emissions from event setup (e.g., construction waste and equipment/facility transportation) were excluded from the calculation scope.



Transportation

Participant Travel

The total attendance for WATERBOMB Seoul 2024, held over three days, was 64,891 participants. Carbon emissions generated by attendee travel to and from the event amounted to **1,178,131 kgCO₂eq**, accounting for **95.58%** of the event's total carbon emissions.

Seoul had the highest number of attendees, with **41.6% of participants using cars** as their primary mode of transportation. The attendee who traveled the furthest distance journeyed approximately **11,137 km** from Baltimore, Maryland, USA, to the event venue in Goyang, Gyeonggi Province.

* Carpooling, electric vehicles, walking, and cycling were excluded from emission calculations due to their zero-emission status.

* Carbon emissions for buses, cars, trains, and airplanes were calculated based on metrics from the International Energy Agency (IEA). (Source: IEA Carbon Metrics)



Category	Carbon Emissions(kgCO ₂ eq)	Emission Proportion(%)	Usage Proportion
Airplane	990,027	84.03	3.7
Car (including taxi)	121,134	10.28	41.56
Bus (excluding shuttles)	42,847	3.64	25.04
Shuttle Bus	12,425	1.05	8.80
Subway	7,072	0.60	17.09
Train	4,591	0.39	1.85
Others (motorcycles, scooters, etc.)	33.68	0.002	1.96

Waste

Carbon emissions from waste generated during the event were calculated based on waste segregation by type. Total emissions from waste amounted to **36,640 kgCO₂eq**, with construction waste from stage and facility dismantling accounting for the largest proportion at 54.18%.

* Carbon emissions from waste were calculated using the Environmental Product Declaration (EPD) evaluation coefficients provided by the Korea Environmental Industry & Technology Institute (KEITI).

* Emissions were estimated based on waste treatment methods, including incineration (municipal waste incineration) and recycling (mixed plastic waste, scrap metal, glass waste, food waste, and cardboard).



Category	Emission(kg)	Carbon Emissions Proportion(kgCO ₂ eq)	Proportion(%)
Construction Waste	16,800	19,852	54.18
General Waste	13,990	16,531	45.12
Food Waste	1,980	22	0.67
Polyethylene Terephthalate (PET)	1,660	30	0.11
Paper	1,890	197	0.08
Glass	600	5	0.02
Cans	50	0.19	0.001

Energy

Carbon emissions from energy use during the event totaled **9,538 kgCO₂eq**. Emissions were calculated across three categories of electricity consumption: indoor, stage, and outdoor generator vehicles. Among these, energy used for the **stage accounted for the highest proportion at 49.52%.**

Category	Usage(kWh)	Carbon Emissions Proportion(kgCO ₂ eq)	Proportion(%)
Outdoor Venue (Stage)	9,541	4,723	49.52
Generator Vehicles	8,775	4,344	45.55
Indoor Building	950	470	4.93

Water

To accurately measure water usage during the event, outdoor water meters were installed and monitored. Over the three-day event, a total of 1,168,000 kg of water was used. The carbon emissions resulting from water usage amounted to **276.82 kgCO₂eq**, accounting for 0.02% of the total carbon emissions from WATERBOMB.

Category	Usage(kg)	Carbon Emissions(kgCO ₂ eq)
Outdoor Water Supply	1,168,000	276

Water Consumption

Water Usage Monitoring

Water Usage

WATERBOMB is committed to addressing concerns about water usage and implementing improvements. To establish effective water management strategies, dedicated water meters were installed at the venue to accurately measure consumption. The collected data will be transparently disclosed through annual reports.

Water usage at the WATERBOMB venue primarily stems from stage special effects and water gun refilling by attendees. To reduce water consumption, special effects were limited to specific areas, and water-saving button-operated faucets were installed at refill stations. WATERBOMB is preparing detailed plans to minimize the environmental impact of water usage, with implementation starting from WATERBOMB Seoul 2025.

Stage Special Effects	495t
Attendee Water Refill Facilities	537t
Other Event Operations	136t



Total: 1,168 t (over 3 days)

Water Usage Per Attendee: 17.9 L

(Comparison with National Average)

During the three days of the event, a total of 1,168,000 kg (1,168t) of water was used, with an average daily consumption of 390t. When converted based on the number of participants, approximately 17.9 liters of water were used per WATERBOMB attendee. According to the 2022 tap water statistics released by the Ministry of Environment, the average daily water consumption per person in Korea is 305.6 liters. Considering this, the average water usage per WATERBOMB attendee accounts for about 5.8% of the national average daily water consumption per person. The water used at WATERBOMB serves to cool down attendees and relieve stress, and no additional disposal process is required.

Logistics Equipment and Facility Transportation

Carbon emissions from the transportation of equipment and facilities required for the event were measured. Data was collected on the modes of transportation and travel distances used by participants involved in the logistics process. The total carbon emissions generated from transportation amounted to **8,514 kgCO₂eq**, with **56.55% attributed to the transport of items such as tents, tables, photo zones, and portable restrooms for setting up event facilities.**

* The emissions were calculated using the UK Government's Department for Energy Security and Net Zero report, "Greenhouse Gas Reporting: Conversion Factors 2023".

Category	Company	Carbon Emissions(Before) (kgCO ₂ eq)	Carbon Emissions(After) (kgCO ₂ eq)	Proportion(%)
Organizer	Madeone	121	165	3.38
Stage	Audio Team	11	11	13.38
	Lighting Team	29	29	
	Video Team	58	58	
	Special Effects	110	110	
	Structures	359	359	
Facilities	Rentals	473	473	56.55
	Item Shop	47	47	
	Photo Zones	254	254	
	Storage Booths	305	305	
	Portable Toilets	1,325	1,325	
Beverages	Beer Bar	9	4	0.33
	Cocktail Bar	9	4	
Sponsors	Sponsors (7)	1,090	1,030	24.95
Sanitation	Sanitation Team	29	91	1.41

Sustainable Action Plan

Future Initiatives

Based on the data collected in this report, we propose specific improvement measures to enhance the sustainability of WATERBOMB. We hope this report contributes to the sustainable development of WATERBOMB and inspires the festival industry to take proactive steps toward environmental protection, setting a new standard in festival culture.

Sustainable Initiatives

Establishing a Long-Term Roadmap and Carbon-Neutral Certification

Set specific greenhouse gas reduction targets and develop a **long-term roadmap** to achieve them. Over the next 3–5 years, continue collecting and analyzing environmental impact data to explore and implement actionable strategies for transitioning to eco-friendly events. These efforts will support MADEONE in pursuing **international certifications** for environmental protection and sustainability, gaining global recognition and building trust among the public.

Promoting Water Resource Protection Activities

Implement water-saving systems using efficient water conservation devices and **establish annual goals and metrics for water resource protection to drive meaningful change**. Additionally, **consider providing ongoing support and engaging in collaborative projects with non-profit organizations** focused on water conservation. Initiatives such as staff education on water resource protection and participation in related volunteer activities will demonstrate MADEONE's genuine commitment to water conservation and environmental protection to the public.

Organizing Greenhouse Gas Reduction Campaigns

Launch campaigns aimed at encouraging attendees to participate in **greenhouse gas reduction activities**. Utilize various online and offline channels, including social media events, quizzes, promotional banners, and on-site video screenings on large screens, to share **actionable guidelines** for achieving carbon neutrality. Engage attendees with interactive experiences, such as **giveaways and promotional videos**, to raise environmental awareness and inspire practical actions in daily life

Establishing a Water Gun Rental System

To minimize waste generated by water guns, a **rental system will be implemented using water guns made from eco-friendly, recyclable materials**. Rented water guns will undergo thorough cleaning and processing after the event to be reused in future events. **Water guns that have reached the end of their lifespan will be repurposed into recycled plastic panels**, which can be used to create event structures or merchandise. This initiative aims to improve recycling rates and establish a sustainable resource circulation system.

Expanding Shuttle Bus Operations

Shuttle bus routes will be dynamically expanded according to the scale of the event to accommodate more attendees conveniently. Operating hours will be extended to encourage public transportation use, thereby reducing the reliance on private vehicles and contributing to lower carbon emissions. Pre-event promotion on social media channels can **provide information on shuttle bus connections to public transportation, and incentives such as discounts for shuttle bus users** can further encourage the use of eco-friendly transportation options.

Minimizing Single-Use Products

To reduce waste generated at the event, single-use products will be minimized, and the use of **reusable items** will be actively encouraged. Essential items such as dishes, cups, and raincoats will be **replaced with eco-friendly alternatives** to reduce the environmental burden. Additionally, expanding the use of reusable containers will contribute to resource circulation and support the festival's sustainability goals.

