CARBON FOOTPRINT REPORT

GSTC ANTALYA 2023 GLOBAL CONFERENCE

GSTC
Global Sustainable Tourism Council

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INTRODUCTION

This report is a comprehensive carbon footprint analysis, voluntarily prepared to present the sustainability approach of the GSTC Global Conference held in Antalya in 2023 with concrete data. The report provides a detailed analysis to determine the amount of carbon emissions resulting from our operational activities, identify areas for improvement in reducing our environmental impact, and define the actions needed to achieve these goals.

This study is structured in line with internationally recognized standards, including ISO 14064 and the GHG Protocol. Within this framework, direct (Scope 1), indirect (Scope 2), and other indirect (Scope 3) greenhouse gas emissions generated by the event have been measured in detail. The data in the report allows for a scientifically grounded assessment of our event's environmental impact and offers a foundation for developing long-term reduction strategies.

Throughout this process, a precise methodology was applied in the stages of data collection, measurement, and analysis, with accuracy and transparency as guiding principles. All data used in the report were gathered from relevant parties before and after the event and have been verified by independent third parties.

Our goal is not only to identify the necessary steps to reduce our carbon footprint but also to ensure the traceability and sustainability of this process, while serving as an example of environmental awareness across the industry.

We extend our gratitude to all contributors to the preparation of this report.

Created by:

This report was developed by the Türkiye Tourism Promotion and Development Agency (TGA) with contributions from Control Union and Bureau Veritas.

Sustainable Event

A sustainable event, according to the United Nations (UN), a sustainable event is one that aligns with environmental, social, and economic sustainability principles, organized in accordance with the UN's Sustainable Development Goals (SDGs). The UN promotes the planning of such events with a focus on minimizing environmental impact, fostering social equity, and creating long-term economic benefits

A sustainable event seeks to reduce its carbon footprint by minimizing greenhouse gas emissions from transportation, energy use, and material consumption, while also incorporating renewable energy sources. Additionally, investments in carbon offsetting projects are encouraged to balance any remaining emissions. Effective waste management practices, such as waste reduction, recycling, and reuse, are essential, along with ensuring energy and water efficiency to conserve natural resources.

From a social sustainability perspective, events should be inclusive, ensuring accessibility for all individuals regardless of gender, race, ethnicity, age, or disability. Respect for human rights is paramount, with fair and safe working conditions provided for all staff involved. Furthermore, sustainable events are expected to contribute positively to local communities by collaborating with them and supporting social well-being.

In terms of economic sustainability, events should support local economies by sourcing goods and services from local businesses and promoting the growth of small and medium-sized enterprises. Long-term economic opportunities should be created, contributing to the economic development of local populations.

In 2012, during the Rio+20 Summit, the UN developed guidelines for sustainable events, offering direction on how to balance environmental, economic, and social considerations. By applying these standards to large international meetings and events, the UN aims to set a positive example. This approach aligns with its broader mission to support sustainable development and social equity, while protecting the planet, as part of its 2030 agenda.

Carbon Footprint

The carbon footprint refers to the total amount of greenhouse gases, particularly carbon dioxide equivalents (CO_2e), that are emitted directly or indirectly by an individual, organization, product, or event over a specific period. It is a measure of the impact human activities have on the environment in terms of their contribution to climate change. The carbon footprint includes emissions from activities such as energy consumption, transportation, production, and waste generation.

In this report, calculation is based on direct emissions as scope 1 and indirect emissions as scope 2 and 3 regarding the GHG Protocol program.

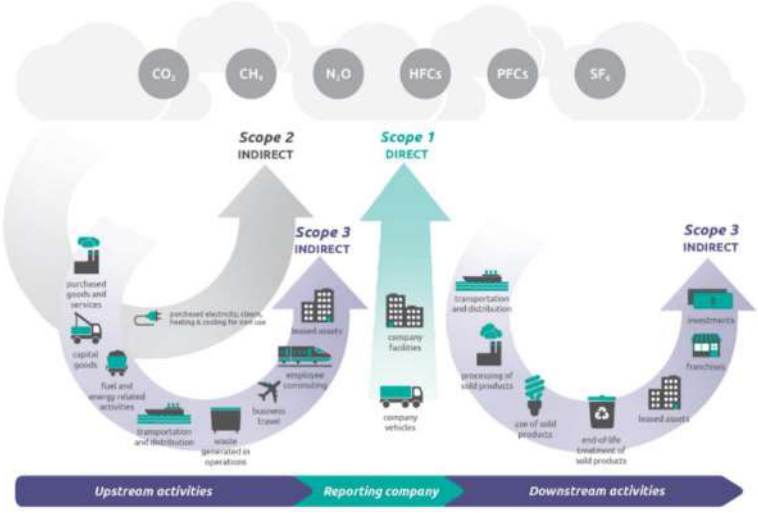

Figure 1. Scopes of the Carbon Footprint

Benefits of Carbon Footprint Calculation

Calculating the carbon footprint of an event brings a wide range of advantages, both for the event organizers and the environment. First and foremost, it demonstrates a strong commitment to environmental stewardship, signaling to stakeholders—such as attendees, sponsors, and partners—that the organizers are taking proactive steps to minimize the event's impact on the planet. This commitment can enhance the event's reputation, build trust with environmentally conscious audiences, and align the event with broader sustainability goals, including those outlined by international frameworks like the Paris Agreement or the United Nations Sustainable Development Goals (SDGs).

One of the key benefits of carbon footprint calculation is that it provides critical data that informs decision-making processes. By measuring and analyzing emissions from various sources—such as energy consumption, transportation, waste generation, and resource use—event organizers gain a detailed understanding of where the largest environmental impacts lie. This insight allows for more targeted interventions, such as choosing more energy-efficient venues, encouraging the use of public transport, or reducing single-use plastics. In this way, carbon footprint assessments not only reveal current inefficiencies but also guide the adoption of more sustainable practices that can lead to significant reductions in emissions over time.

Calculating the carbon footprint sets a measurable baseline for emissions, which is crucial for establishing clear sustainability goals. With this baseline, event organizers can set realistic and specific targets for reducing their carbon output, whether that's through energy savings, waste reduction, or carbon offset programs. This process fosters a culture of continuous improvement, where each event can aim to perform better than the last, gradually lowering its overall environmental impact. This approach to sustainability has long-term benefits for cost management. Many of the changes identified through carbon footprint analysis—such as energy conservation or waste minimization—can lead to cost savings. For example, optimizing transportation logistics to reduce fuel consumption or choosing venues with renewable energy sources can lower operational costs while also reducing emissions.

Transparent reporting of an event's carbon footprint enhances credibility and accountability. Stakeholders today expect organizations to be transparent about their environmental impact, and publicly sharing carbon footprint data can help build stronger relationships with attendees,

sponsors, and the local community. It shows that the event organizer is committed to measurable and verifiable action, which can attract like-minded partners and sponsors, increase attendee loyalty, and set a positive example within the industry. Calculating the carbon footprint of an event not only helps reduce environmental harm but also drives informed, data-based decision-making, supports long-term cost savings, and strengthens the event's reputation through transparency and accountability. It is a foundational step in fostering sustainable practices that benefit both the planet and the bottom line.

GHG PROTOCOL

The Greenhouse Gas Protocol (GHG Protocol) is a globally recognized standard developed by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD) to assist organizations in accounting for and managing their greenhouse gas (GHG) emissions.

Comprising the Corporate Standard and the supplementary Scope 3 Standard, the GHG Protocol offers a comprehensive framework for businesses to measure emissions from direct and indirect sources across three scopes. Scope 1 covers direct emissions from owned or controlled sources, Scope 2 addresses indirect emissions from purchased energy, and Scope 3 delves into indirect emissions from the broader value chain. Widely utilized by companies, governments, and entities, the GHG Protocol ensures consistency and comparability in GHG reporting, empowering organizations to set emission reduction targets, monitor progress, and make informed decisions to address climate change on a global scale.

Overall, the GHG Protocol sets out a number of stages in the calculation process, starting with the identification of the most important GHG sources, determining the scope of the study and selecting the methodology. Once the two parameters have been defined, the activity data shall be collected and the relevant emission factors selected for each of these activities, from which the emissions are calculated.

DESCRIPTION OF EVENT

The Global Sustainable Tourism Conference (GSTC2023) took place in Antalya from May 9th to 12th, hosted by the Türkiye Tourism Promotion and Development Agency (TGA). This prestigious event gathered 350 delegates from 51 countries, reflecting a broad international interest in advancing sustainable tourism practices. In addition to the in-person attendees, the conference attracted hundreds of virtual participants who followed the live stream, further extending the reach and impact of the discussions held.

The conference was hosted at the Nirvana Cosmopolitan Hotel, a venue that aligns with the principles of sustainable tourism. Certified by the Türkiye Sustainable Tourism Program, which is recognized by the Global Sustainable Tourism Council (GSTC), Nirvana Cosmopolitan provided an environmentally responsible setting for the event, emphasizing the conference's commitment to sustainability both in content and execution.

In keeping with this theme, the opening cocktail event took place in the historic ancient city of Perge, offering attendees an immersive cultural experience in a location of significant historical and environmental importance. This choice not only showcased Türkiye’s rich heritage but also underlined the importance of integrating cultural preservation with sustainable tourism development.

The first day's dinner was held at the Lara Barut Hotel, another sustainable accommodation facility certified by the Türkiye Sustainable Tourism Program. Both Lara Barut Hotel and Nirvana Cosmopolitan Hotel exemplify best practices in sustainable hospitality, from energy efficiency and water conservation to waste management and local community engagement. Their certification by the Türkiye Sustainable Tourism Program, a standard acknowledged by GSTC, underscores their commitment to meeting international sustainability benchmarks.

When choosing DMC company for the GSTC Global Conference, its awareness and work on sustainability were taken into consideration The DMC company that organizes the event is ODS Turkey. ODS Turkey is a DMC company that prioritizes sustainability in its activities. ODS Turkey, is the first Biosphere-certified DMC in Türkiye. This certification is a globally recognized standard in sustainable, signifying compliance with environmental, social, and economic sustainability criteria.

Participants included international and regional tourism stakeholders involved in developing and promoting sustainable tourism, including the public sector, hotels, tour operators, academia, development agencies, NGOs, consultants, and more. International participants came from Europe, North America, Latin America, Africa, Asia, and Oceania.

The conference's topics this year were sustainable tours, experiences, and attractions, sustainable hotels, and sustainable MICE.

Figure 2. GSTC Banner

ACTIVITY DATA

Scope of the Study

To understand and interpret the emissions based on emission source, it must be categorized. In this event, it is categorized according to hotels, and DMC company. These are Lara Barut Hotel, Nirvana Cosmopolitan Hotel and ODS Turkey. It allows us to focus our attention on actions that have the highest impact, and which can be improved through implementation measures.

Calculation of Greenhouse Gas Emissions

The results obtained in the calculations are verified according to Excel data. Excel software generally performs calculations;

Total CO_2 eq. = Activity Data x Emission Factor

Emission factors, such as, $kgCO_2$, tCO_2.
Activity Data, such as, litres, kWh, km.
formula was used. The values obtained as a result of the calculations are converted into tons of CO_2 equivalent according to the IPCC latest GWP values. For GWPs, IPCC AR6 100-year impact is taken as reference. In cases where national resources are not sufficient in emission factor selection, international factors (Tier 1) are used.

Emission Sources

The following is a list of activities and sources of emissions that have been taken into account for calculating the carbon footprint from the Global Conference on Sustainable Tourism held in Antalya.

DIRECT EMISSONS

- Stationary Combustion
  - Diesel generator
  - Natural gas
  - Chafing fuel
- Mobile Combustion
- Refrigerant Leakage

INDIRECT EMISSONS

- Imported Electricity
- Transportation
  - Transportation of Goods
  - Transportation of Waste
  - Employee Commuting
  - Transportation of Participants
  - Hotel Stay
- Products and Services Used in the Event
  - Purchase of Food and Water Supply
  - Waste and Water Disposal
  - Services
  - Well to Tank of Fuels

DIRECT EMISSONS

Stationary Combustion

Stationary combustion refers to the burning of fossil fuels in fixed locations, in this case it is consumption of diesel for generator, natural gas and chafing fuel. The Intergovernmental Panel on Climate Change (IPCC) provides guidelines for estimating greenhouse gas (GHG) emissions from various sources, including stationary combustion.

Table 1. Data of Stationary Combustion in Hotels

Source	**Hotel**	**Amount**	**Unit**	**Emissions (tCO_2e)**
Natural Gas	Lara Barut Hotel	132,90	m^3	0,17
	Nirvana Cosmopolitan Hotel	2.377,78	m^3	3,10
Total				**3,27**

Table 2. Data of Stationary Combustion in ODS

Source	**Operator**	**Amount**	**Unit**	**Emissions (tCO_2e)**
Diesel	ODS Turkey	810	lt	2,14
Gasoline	ODS Turkey	15	lt	0,03
Total				**2,17**

In total, 5.44 tons of CO_2e have been emitted by stationary combustion. 3.27 tons of it from the natural gas consumption in hotels, 2,14 tons from the diesel usage in generators and 0.03 tons from the gasoline as chafing fuel in ODS Turkey DMC company.

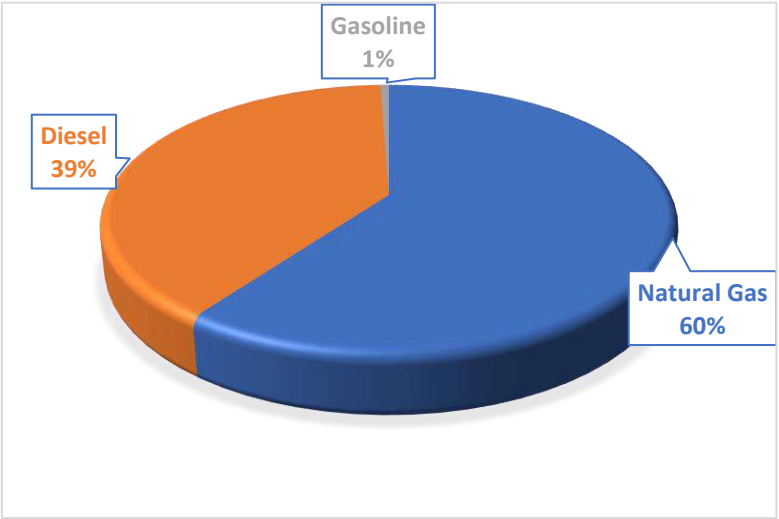

Figure 3. Graph of Stationary Combustion by Fuels

As can be seen from the figure 3., the most emission comes from the natural gas with a 60% of the stationary combustion. Diesel consumption comes second with 39%, and lastly, 1% of gasoline usage.

Mobile Combustion

Mobile combustion typically refers to the burning of fossil fuels in mobile sources such as vehicles, airplanes, ships, and other transportation modes. In this case, there was only consumption of diesel in vehicles by ODS Turkey.

Table 3. Data of Mobile Combustion in ODS

Source	Operator	Amount	Unit	Emissions (tCO_2e)
Diesel	ODS	246,80	lt	0,66

In total, there was 246.80 liters diesel usage by ODS with 0.66 CO_2e tons of CO_2e by ODS.

Refrigerant Leakage

The IPCC (Intergovernmental Panel on Climate Change) does address the issue of refrigerant gas leakage in its guidelines, particularly in the context of greenhouse gas emissions from the use of fluorinated gases (F-gases) in the refrigeration, air conditioning, and heat pump systems. F-gases, such as hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF6), have high global warming potentials (GWPs), making them potent contributors to climate change when released into the atmosphere.

The guidelines provide methodologies for estimating the amount of refrigerant gas leakage from various types of equipment, such as refrigeration and air conditioning systems. The emission is calculated according to the device type, leak rate, stored gas amount, gas type, and their Global Warming Potential (GWP). The GWP is a measure of the relative impact of a greenhouse gas over a specific time period compared to carbon dioxide (CO_2).

In this case, emissions of air conditioners and refrigerators used in the Nirvana Cosmopolitan Hotel was calculated.

Table 4. Data of Refrigerant Leakage in Nirvana Cosmopolitan Hotel

Device Type	Gas Type	Gas Amount (g)	GWP-100	Leak Rate	Emission (tCO2e)
Air Conditioner	R134A	2,19	1760	10	0,001
Refrigerant	R404A	10,52	3920	7	0,003
Total					**0,004**

The gas used in these air conditioners and refrigerators can be seen from the table 4. In total, 0.004 tons of CO_2e have been generated.

INDIRECT EMISSIONS

Imported Electricity

Table 5. Data of Imported Electricity in Hotels

Source	Hotel	Amount	Unit	Emission (tCO2e)
Electricity	Lara Barut Hotel	2.704,70	kWh	1,31
	Nirvana Cosmopolitan Hotel	6.224,35	kWh	3,01
Total				**4,32**

The electricity was used in hotels. In total, 4.32 tons of CO_2e has been generated. 1.31 tons of it from Lara Barut Hotel, and 3.01 tons of it from Nirvana Cosmopolitan Hotel. As shown in the graph, the most emission which is 70% comes from the usage of electricity in Nirvana Cosmopolitan Hotel which is the host hotel.

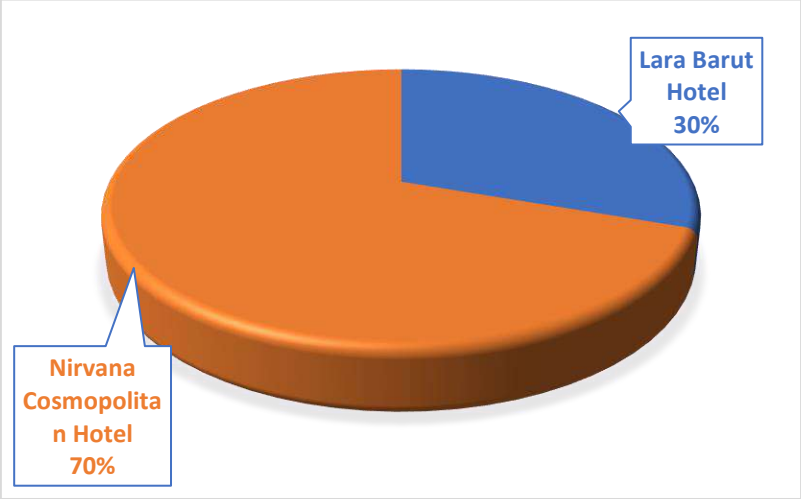

Figure 4. Graph of Refrigerant Leakage by Hotels

Transportation

Transportation emissions in Scope 3 include all greenhouse gas emissions related to the movement of goods and people that are not directly owned or controlled by the reporting organization. These emissions are a part of the broader supply chain and include various aspects related to the movement of goods and people. In that case, transportation emissions come from transportation of goods, transportation of waste, transportation of staff, transportation of participants and hotel stay.

Transportation of Goods

The emissions associated with the transportation of goods, often referred to as "goods transportation emissions," are a significant component of greenhouse gas emissions within the broader context of supply chain and logistics. These emissions occur at various stages of the transportation process, from the movement of raw materials to manufacturing plants to the distribution of finished products to end-users. In that case, purchased goods are mainly food for the catering.

Table 6. Data of Transportation of Goods in Hotels

Source	Hotel	Amount	Unit	Emission (tCO2e)
Diesel	Lara Barut Hotel	7,12	tonne*km	0,0007
	Nirvana Cosmopolitan Hotel	189,49	tonne*km	0,0184
Total				**0,0191**

In total, 0.0191 tons of CO_2e has been emitted due to transportation of goods. 0.007 tons of it due to the transportation of goods purchased to the Lara Barut Hotel which is 4% as can be seen from the graph, and 0.0184 tons of it due to the transportation of goods purchased to the Nirvana Cosmopolitan Hotel with 96%.

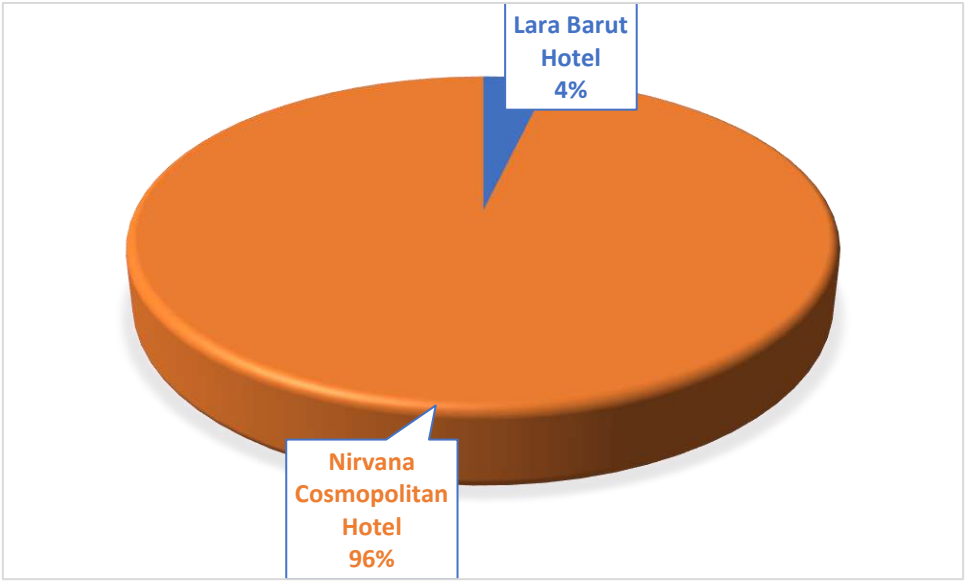

Figure 5. Graph of Transportation of Goods in Hotels

Transportation of Waste

In the event, waste is generated and collected separately in waste bins. In this section, emissions of transportation of waste to the disposal facility was calculated. The composition of waste and their emissions can be seen in the waste and water disposal section.

Table 7. Data of Transportation of Waste in Hotels

Source	Hotel	Amount	Unit	Emission (tCO2e)
Diesel	Lara Barut Hotel	7,12	tonne*km	0,0007
	Nirvana Cosmopolitan Hotel	14,12	tonne*km	0,0014
Total				**0,0021**

2.1 kilograms of CO_2e has been generated for the transportation of waste coming from hotels. 0.7 kilograms of it from the Lara Barut Hotel, and 1.4 kilograms of it from the Nirvana Cosmopolitan Hotel.

Moreover, as can be shown in the table 8, there were emissions of transportation of waste coming from ODS with 2.7 kilograms of CO_2e.

Table 8. Data of Transportation of Waste in ODS

Source	Operator	Amount	Unit	Emission (tCO2e)
Diesel	ODS (Perge Welcoming Cocktail)	28,57	tonne*km	0,0027

In total, whole emissions of waste transportation is 0.0048 tons of CO_2e. Their percentages can be seen in the graph below.

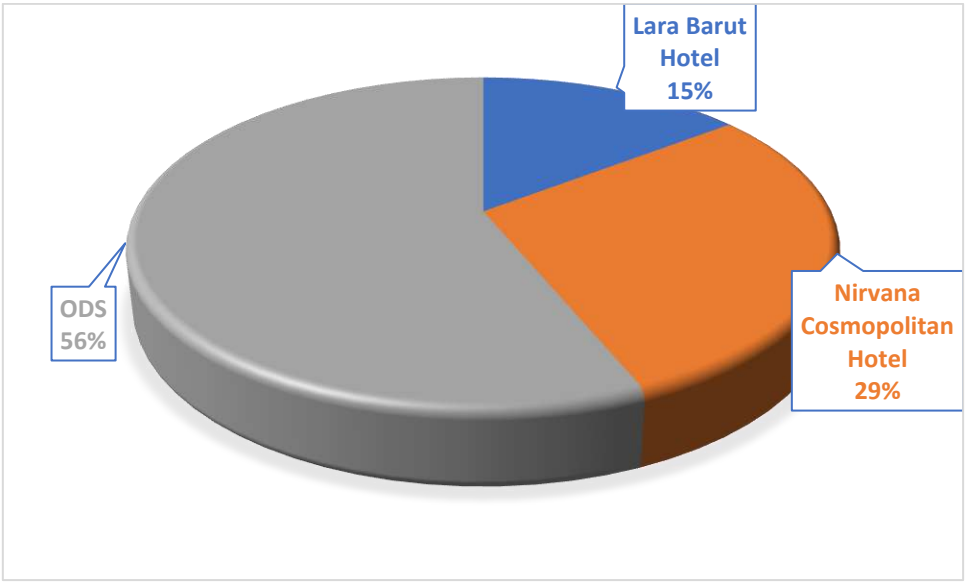

Figure 6. Graph of Transportation of Waste

Employee Commuting

Emissions from employee commuting refer to the greenhouse gas (GHG) emissions associated with the transportation modes employees use to travel to and from their workplaces. In this case, emissions from employee commuting have been considered according to public and private means of transportation. It includes various modes of transportation, such as personal vehicles, public transportation as using car and minibus by various types of fuels such as, diesel, gasoline and LPG. It is the carbon emission resulting from the mobility of hotel employees providing services within the scope of the event.

Table 9. Data of Transportation of Employee Commuting

Transportation	Emissions (tCO_2e)
Car	0,34
Bus	23,71
Minibus	0,85
Total	**24,90**

In employee committing, in total 24.90 tons of CO_2e has been generated. The most emission source was using bus with 23,71 tons of CO_2e with 95%. The emissions of car and minibus are quite low compared to bus as can be seen from the figure 7.

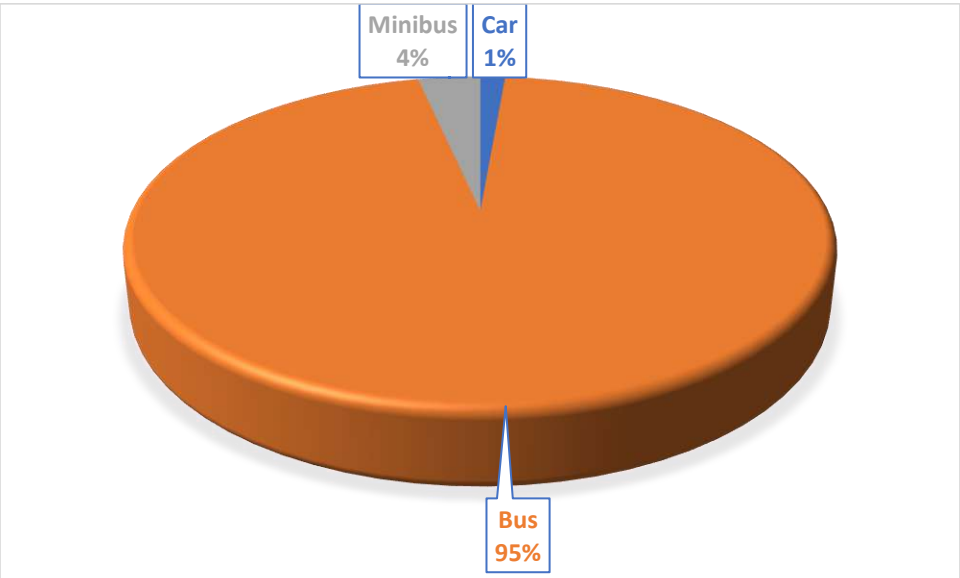

Figure 7. Graph of Transportation of Employee Commuting

Transportation of Participants

The hundreds of people have come from all over the world to attend this event. The longest distance traveled was approximately 12.000 km with those coming from Australia. Also, there were attendants from Antalya. Therefore, transportation of participants was due to use of airplane and taxi.

Table 10. Data of Transportation of Participants

Transportation	Passenger*km	Emissions (tCO_2e)
Airplane	6.386.532,50	910,89
Taxi	1.257,00	0,19
Total		**911,07**

In total, 911.07 tons CO_2e of has been generated from the transportation of participants by using airplane and taxi. Emissions of transportation by airplane accounts for 99.98% of total participant transportation.

Hotel Stay

A list of the number of persons, nights spent, and hotel has been provided in order to assess emissions from participants' accommodation. Totally, it is predicted that 214 people have stayed in hotels for 3 days which is made up 642 room/night in total. 20.61 tons of CO_2e has been emitted due to hotel stays of the participants for the event.

Table 11. Data of Hotel Stay

Number of people	Number of night average	Emissions (tCO_2e)
214	3	20,61

Products and Services Used in the Event

In this section, greenhouse gas emissions are indirect emissions from products and services used by organizations.

Purchase of Food and Water Supply

The emissions resulting from the purchase of goods that are associated with their manufacture. In view of the potential scope for this to include a broad range of products, it is possible that additional subcategorization may be established by the user. For example, the classification can be broken down into products by material type: steel, plastic, glass, electronic etc. and function on a value chain; or production related product versus nonproduction linked product. Their emission factors were examined based on type of the material and their quantity in diverse official sources such as Ecoinvent and EPA. Their emissions were calculated based on these data and emission factors. In this event, purchased goods are mainly food and water used for catering.

Table 12. Data of Purchased Goods in Hotels

Goods	Hotel	Emissions (tCO_2e)
Purchased goods	Lara Barut Hotel	0,44
Purchased goods	Nirvana Cosmopolitan Hotel	3,85
Total		**4,29**

In total, 4.29 tons of CO_2e has been generated for the purchased goods by hotels. Also, there were emissions coming from purchased goods by ODS as can be seen from the table 13.

Table 13. Data of Purchased Goods in ODS

Goods	Operator	Emissions (tCO_2e)
Purchased goods	ODS DMC Company	3,46

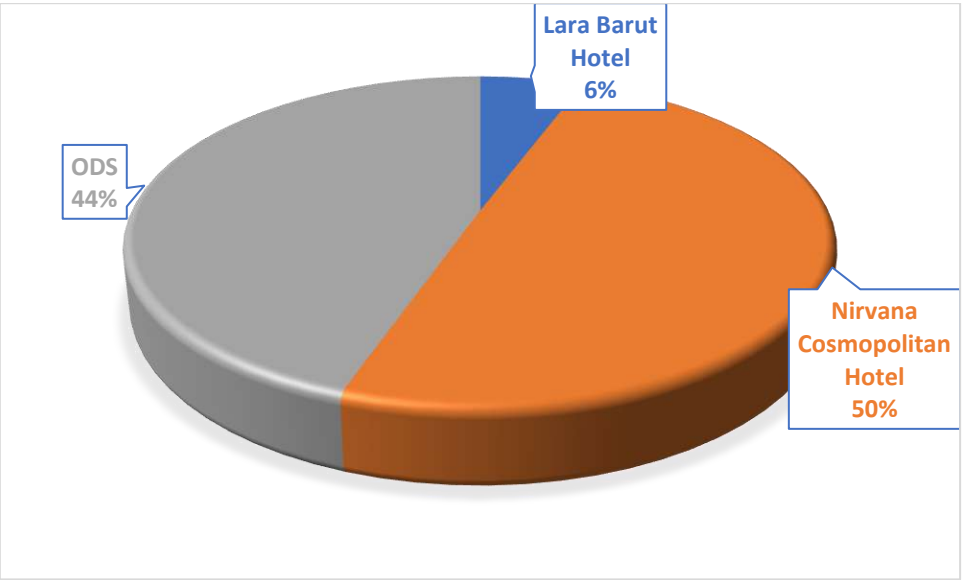

Figure 8. Graph of Purchased Goods

Souvenir products were also distributed to the guests at the conference. These souvenir products were provided by ODS Turkey and are included in the purchased goods. These souvenirs are small bags made from waste fabrics, created by a social enterprise that provides a permanent and flexible working environment for women who have never worked for a living before and who define themselves primarily as housewives. In addition to loth bags made of cotton are also offered as gifts.

Nirvana Cosmopolitan Hotel recyclable metal waste was transformed into a sculpture bust work by a local artist, aiming to reflect the awareness of transforming waste into art.

Figure 9. Souvenirs and Local Artist's Work

When we compare the results, greenhouse gas emissions coming from purchased goods by Nirvana Cosmopolitan Hotel made up 50% and ODS Turkey with 44%. Emission in this category by Lara Barut Hotel was low compared to others.

The water supply has been evaluated separately as in the table 14 and 15.

Table 14. Data of Water Supply in Hotels

Goods	Hotel	Amount	Unit	Emissions (tCO_2e)
Water Supply	Lara Barut Hotel	2,6	m^3	0,00046
Water Supply	Nirvana Cosmopolitan Hotel	1576,5	m^3	0,27855
Total		**1579,1**	m^3	**0,27901**

Table 15. Data of Water Supply in ODS

Goods	Operator	Amount	Unit	Emissions (tCO_2e)
Water Supply	ODS Turkey	0,2	m^3	0,00003

In total, 279.04 kilograms of CO_2e has been generated for the usage of 1579,3 m^3 water. The most emissions come from Nirvana Cosmopolitan Hotel with 99.7% because it includes the accommodation of participants.

Waste and Water Disposal

The characteristics of the waste and its treatment determine the emissions from the disposal of solid and liquid waste. Landfill, incineration, biological treatment, and recycling are the most common types of treatment. The main emissions are CO_2 and CH_4 and the associated emissions are N_2O, which is produced by incineration or biological treatment.

The waste generated during GSTC events are various and collected separately as shown in figures. These are paper and cardboard, glass, metal, plastic waste and food leftover which is organic waste.

Figure 10. Waste Bins for Separate Collection

Table 16. Data of Waste Disposal

Type of waste	Consumption Amount (kg)	Emissions (tCO_2e)
Organic	236,90	0,1444
Wet	17,24	0,0121
Glass	464,95	0,0099
Plastic	57,19	0,0021
Oil	44,00	0,0009
Paper	12,99	0,0003
Metal	5,77	0,0001
Total	**839,04**	**0,1698**

In total, approximately 840 kilograms of waste was produced during the event with a total emission of about 170 kilograms of CO_2e. The largest emission comes from the organic waste. The treatment of organic waste constitutes 85% of the total waste. As can be interpreted from the graph, other waste types are less than 10% or even 1%.

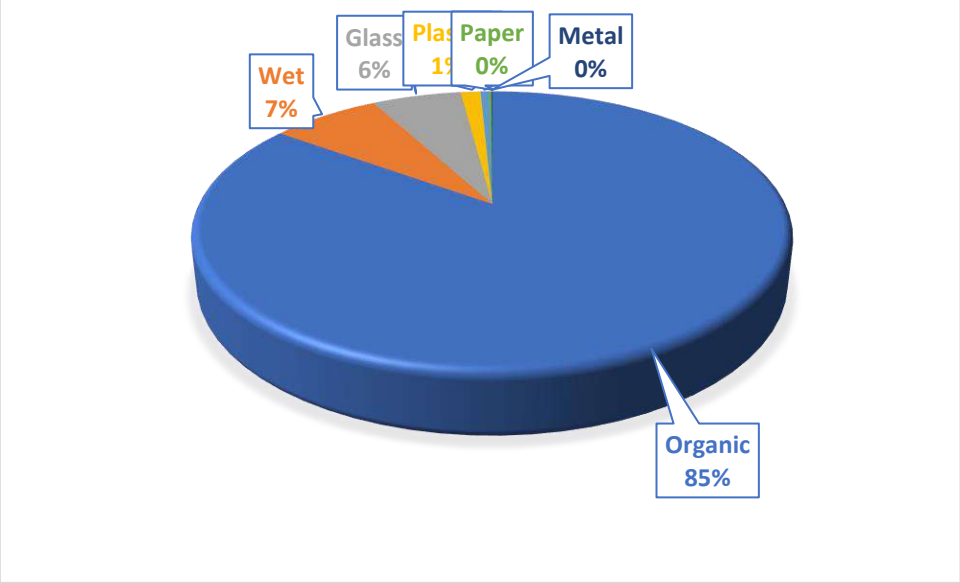

Figure 11. Graph of Waste Disposal

In addition, water disposal was considered separately as shown in the table 17. Totally, approximately 0,73 tons of CO_2e has been emitted due to water disposal. The most emissions come from water disposal by Nirvana Cosmopolitan Hotel with 99.97% due to usage of water for accommodation.

Table 17. Data of Water Disposal

Disposal	Hotel	Amount	Unit	Emissions (tCO_2e)
Water	Lara Barut Hotel	1,3	m^3	0,0003
Water	Nirvana Cosmopolitan Hotel	3.624,52	m^3	0,7297
Total		**3.625,82**	**m^3**	**0,73**

Services

In general, indirect greenhouse gas emissions are generated from sources outside the organization's operational boundaries with respect to services provided by it. A very wide range of services and related processes could be covered by such emissions. In this event, these services were mainly catering as can be seen from the photographs below, part-time staff, orchestra, and camera operator by ODS Turkey. Their total emissions were 6 tons of CO_2e as can be seen in the table 18. The menu is prepared based on ingredients such as vegan, gluten-free, and dairy-free products.

Figure 12. Vegan-gluten-free and local products served during coffee breaks

Table 18. Data of Services

Services	Operator	Emissions (tCO_2e)
Services	ODS	5,99

Figure 13. Catering Photographs

Well to Tank of Fuels

"WTT" stands for "Well-to-Tank," and it refers to the entire life cycle emissions associated with the production, processing, and transportation of a fuel from the point of extraction or cultivation to the point where it is used in a vehicle or other application. It's worth noting that the GHG emissions associated with different fuels can vary widely depending on the type of fuel (e.g., gasoline, diesel, natural gas) and the specific production methods employed.

Table 19. Data of WTT of Fuels in Hotels

Source	Hotel	Amount	Unit	Emissions (tCO_2e)
Natural Gas	Lara Barut Hotel	132,90	m^3	0,04
	Nirvana Cosmopolitan Hotel	2.377,78	m^3	0,80
Total				**0,84**

Table 20. Data of WTT of Fuels in ODS

Source	Operator	Amount	Unit	Emissions (tCO_2e)
Diesel	ODS	1.159,1	lt	0,71
Gasoline	ODS	15	lt	0,01
Total				**0,72**

In total, 1.56 tons of CO_2e have been emitted by stationary combustion. 0.85 tons of it from the natural gas used in hotels, 0,71 tons from the diesel usage in generators and 0.01 tons from the gasoline as chafing fuel in ODS Turkey DMC company.

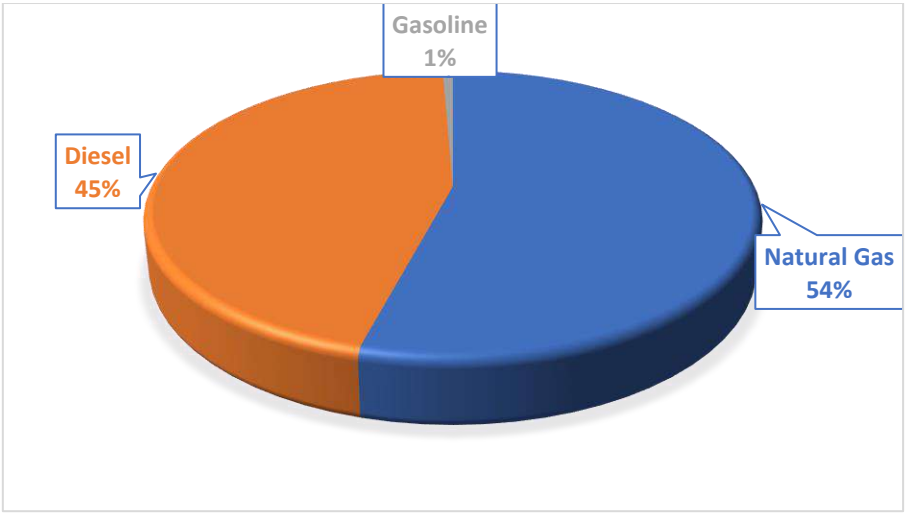

Figure 14. Graph of WTT of Fuels

As can be seen from the figure 11, the most emission comes from the natural gas with a 54% of the stationary combustion. Diesel consumption comes second with 45%, and lastly, 1% of gasoline usage.

VERIFICATION

TÜRKİYE TURİZM TANITIM VE GELİŞTİRME AJANSI commissioned Bureau Veritas to perform a verification of its period of GSTC Conference Türkiye on 9 May 2023 to 12 May 2023 GHG Inventory. The verification was performed on October 2023. The verification performed by Bureau Veritas applied according to ISO 14064-3 International Standard for GHG verifications.

BUREAU VERITAS

TÜRKİYE TURİZM TANITIM VE GELİŞTİRME AJANSI
Esentepe Mah. Büyükdere Cad.No :127 Astoria AVM B Blok Kat :4
34394 Şişli - İSTANBUL

To whom it may concern,

This letter is presented to TÜRKİYE TURİZM TANITIM VE GELİŞTİRME AJANSI to present opinion of the Bureau Veritas Certification Turkey on the Greenhouse Gases Verification for the monitoring period of GSTC Conference Turkiye on 9 May 2023 to 12 May 2023.

Bureau Veritas Turkiye does not accept or assume any responsibility or liability on any other party who may access to this letter or assurance report.

TÜRKİYE TURİZM TANITIM VE GELİŞTİRME AJANSI commissioned Bureau Veritas to perform a verification of its period of GSTC Conference Turkiye on 9 May 2023 to 12 May 2023 GHG Inventory. The verification was performed on October 2023.

The verification performed by Bureau Veritas applied according to ISO 14064-3 International Standard for GHG verifications.

Total; **983.51 tCO_2e** is classified as;

6.11 tCO_2e direct emissions (Category 1), **4.32 tCO_2e** indirect emissions from imported energy (Category 2), **956.60 tCO_2e** indirect emissions from transportation (Category 3) and **16,47 tCO_2e** indirect emissions from purchased materials and services (Category 4).

View Declaration

As a result of the verification audit conducted on the basis of international standards, the greenhouse gas emissions of GSTC Conference Turkiye (9st of May – 12th of May) data disclosed verified for with reasonable assurance.

Tarih: 15/11/2023

S.Özge GÖKMEN ŞAHİNKAYA
Lead Verifier

İbrahim TAGAY
Certification Manager

Figure 15. Verification Document

RESULTS

The emissions based on classifications as explained above is shown in the table 21. Further classifications can be seen from the Annex I.

Table 21. Emission Values based on Classification

Classification	**Values in Tons CO2e**
Direct Activities	6,11
Energy Indirect Activities	4,32
Transportation Indirect Activities	956,60
Upstream Indirect Activities	16,47
Grand total	**983,50**

As can be seen from the calculations and figure 12, the highest emission value came from the upstream indirect greenhouse gas emissions section. This part constitutes 97% of all emissions due to transportation of participants. The emissions of participant transportation made up 93% of all emissions.

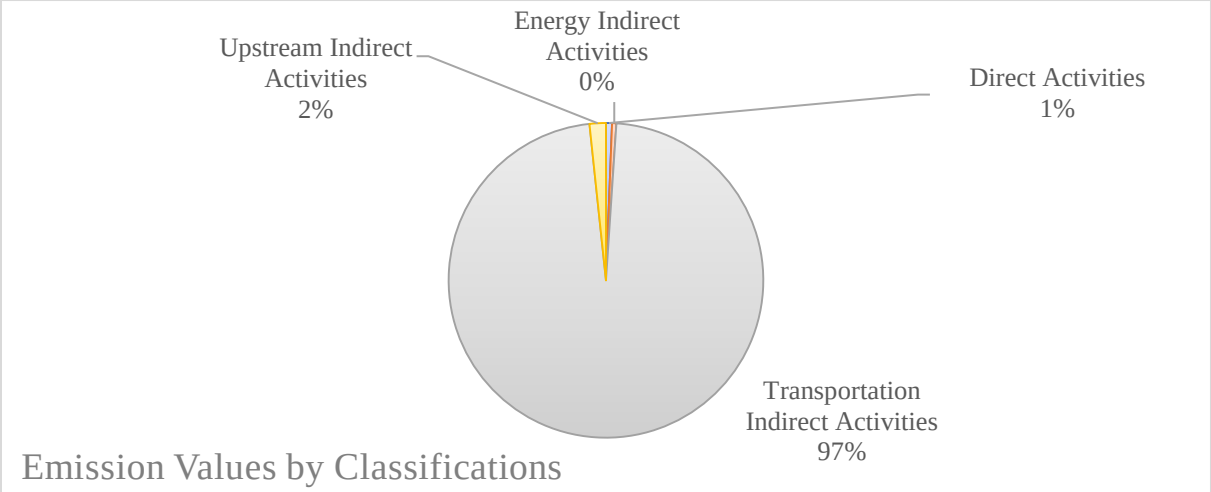

Figure 16. Graph of Emission Values by Classifications

As a result of calculating greenhouse gas emissions occurring in the supply chain, it is observed that factors such as energy consumption, material resources, waste management and transportation have a great impact. The distribution of emissions will contribute to the event's determination of current status and future environmental goals.

The effects are measures taken in planning the event are evaluated below:

Logistics and Transportation Optimization: Increasing fuel efficiency during product transportation and distribution processes can be effective in reducing carbon emissions. In the event, the tour company can optimize routes, use technologies to increase the efficiency of transport vehicles and evaluate alternative transport methods.

As part of the event, the logistics and transportation activities were carried out using the most suitable vehicles for fuel efficiency and optimization. Additionally, drivers were provided with training on efficient vehicle usage.

Energy Efficiency: Increasing energy efficiency is an important step in reducing carbon footprint. The company can use energy-efficient machines, such as generators used in the event.

The event prioritized the use of energy-efficient products. Additionally, the carbon footprint resulting from energy consumption was minimized due to the fact that the hotels hosting the event were I-REC Certified (Lara Barut), ISO 50001 Energy Management System (EnMS) (Nirvana Cosmopolitan) and Turkiye Sustainable Tourism Program Certified (Nirvana Cosmopolitan, Lara Barut)

Waste Management and Recycling: Reducing the amount of waste and encouraging recycling is important for environmental sustainability. The company can take measures to minimize the amount of waste in production processes and cooperate with recycling systems.

Waste generation was minimized in accordance with the event planning. Waste was separated at the source to reduce its production, and recycling processes were managed in compliance with the relevant legal regulations.

Green Suppliers and Collaboration: The company can collaborate with green events that have similar goals regarding sustainability of growth. This retail may provide environmentally friendly prices or offers or adopt sustainable productions. Collaboration with green processes can play an important role in reducing the carbon footprint.

As part of the Türkiye Sustainable Tourism Program, working with environmentally conscious suppliers to ensure eco-friendly procurement is an evaluated criterion for accommodation facilities. This process was carefully managed both at the hotels hosting the event and throughout the event itself.

Employee Awareness and Training: The company can organize training and awareness programs to increase employees' activities regarding sustainability. Raising awareness of employees about energy saving, waste management and sustainable practices ensures their active participation in the company's efforts to eliminate its carbon footprint.

As part of the Türkiye Sustainable Tourism Program, all staff at the event hotels received the necessary training. Additionally, the DMC company ODS Turkey, which holds a Biosphere sustainability certification, conducted refresher training sessions for its employees during the event to enhance awareness efforts.

Continuous Improvement and Monitoring: The company must constantly review its strategies, evaluate opportunities, and monitor progress to leverage its carbon footprint. Regular organization of data is important for tracking carbon emissions and performance rating. Based on this, the company can take effective actions, develop new strategies to minimize its carbon

footprint, and make progress towards its sustainability. The ongoing process of continuity and monitoring is an important tool to increase the company's sustainability quantification and create a more sustainable business model in the future.

Throughout the entire lifecycle of the event, strategies were developed and monitoring efforts were implemented to minimize the carbon footprint at every stage. In this context, the post-event carbon footprint calculation was carried out by Control Union, and the ISO 14064-3 International Standard for GHG verifications was conducted by Bureau Veritas.

COMPENSATION

Following the implementation of the best practices mentioned in the previous section and the subsequent reduction of associated greenhouse gas emissions, carbon credits were purchased to offset unavoidable greenhouse gas emissions.

For this compensation, the Koyulhisar Hydro Electric Power Plant, located in Türkiye, which is verified by Verra and designed for renewable energy production, was assessed.

Figure 17. Koyulhisar Hydro Electric Power Plant

The benefits of this project related to sustainable development are as follows:

- **SDG 7** (Sustainable Development Goal 7) aims to "ensure access to affordable, reliable, sustainable, and modern energy for all." This project contributes to this goal through access to clean energy, reduction of carbon emissions, energy security, economic development and employment, energy efficiency, and access to energy in rural areas.
- **SDG 8** (Sustainable Development Goal 8) aims to "sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all." This project contributes to job creation, inclusive economic growth, technological innovation and efficiency, and the development of sustainable infrastructure.
- **SDG 13** (Sustainable Development Goal 13) aims to "urgent action to combat climate change and its impacts." This project contributes to this goal through the reduction of carbon emissions, sustainable energy production, increased energy efficiency, climate adaptation resilience, and zero-emission transportation.

ANNEX I. Emission Values based on Classifications

Classification Definitions	tCO_2	tCH_4	tN_2O	tCO_2 eq.
Direct Emissions from Stationary Combustion	5,42	0,02	0,01	5,44
Direct Emissions from Mobile Combustion	0,65	0,00	0,01	0,66
Direct Emissions from Refrigerant Leakage	0,00*	-	-	0,00*
Indirect Emissions from Imported Electricity	4,32	-	-	4,32
Indirect Emissions from Transportation of Goods and Waste	0,02	-	-	0,02
Indirect Emissions from Employee commuting	24,70	0,00	0,20	24,90
Indirect Emissions from Transportation of Participants	903,39	0,07	7,61	911,07
Indirect Emissions from Hotel Stay	20,61	-	-	20,61
Indirect Emissions from Purchased Goods	8,02	-	-	8,02
Indirect Emissions from Solid and Liquid Waste Disposal	0,90	-	-	0,90
Indirect Emissions from the Use of the Services	5,99	-	-	5,99
Indirect Emissions from WTT of Fuels	1,56	-	-	1,56
Grand total	**975,58**	**0,09**	**7,83**	**983,50**

*The emission is too low as 0,004 tCO_2 eq.

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