

**REPORT ON GREENHOUSE GAS  
EMISSIONS OF THE  
INTERNATIONAL JUDO FEDERATION  
FOR THE YEAR 2024**



**EKONERG – Energy Research and Environmental Protection Institute, Ltd.**

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**EKONERG – Energy Research and Environmental Protection Institute Ltd.**

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## **REPORT ON GREENHOUSE GAS EMISSIONS OF THE INTERNATIONAL JUDO FEDERATION FOR THE YEAR 2024**

Project coordinator: Morana Česnik Katulić, Ph. D., MBA,  
mag.ing.oecoing.

Authors: Ines Trbojević, mag. geol.  
Morana Česnik Katulić, Ph. D., MBA  
Renata Kos, M.Eng.Min.  
Vladimir Jelavić, Ph.D., M.Eng.Mech.Eng.

Atmospheric Protection and  
Climate Change Department Manager:

Valentina Delija-Ružić, M.Eng.M.E.

General Manager:

Elvis Cukon, M.Eng.Mech.Eng., MBA

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## 1. Introduction

This report is prepared as support to the International Judo Federation (IJF) and its commitments within the United Nation's Sports for Climate Action (S4CA) Framework. It covers:

1. The International Judo Federation's carbon footprint assessment (emissions inventory) for the calendar year 2024,
2. The carbon footprint assessment of two World Judo Tour events in 2025, and
3. The completed S4CA reporting questionnaire for 2024 to be submitted by the International Judo Federation.

By joining the S4CA initiative, IJF has committed to preparing yearly reports on greenhouse gas emissions. The first report was prepared for 2021, and that year was declared as the base year against which future emissions will be compared. The IJF's greenhouse gas emissions inventory for 2024 is the fourth such inventory.

The carbon footprint assessment covers the quantification of greenhouse gas emissions, expressed as carbon dioxide equivalent (CO<sub>2</sub>e).

The greenhouse gas emissions calculations include all identified Scope 1, Scope 2 and Scope 3 emissions from IJF as a sport organization, as well as emissions from two selected World Judo Tour events:

- [Grand Slam Paris](#), France and
- [World Senior Championships Hungary](#) held in Budapest.

The Scope 3 emission categories considered for the IJF in previous years have been applied consistently in 2024. For the selected sports events, Scope 3 categories have been assessed based on available data and event-specific characteristics.

## 2. International Judo Federation and UN's S4CA Framework

The International Judo Federation (IJF) is the international governing body for judo, founded in July 1951. Initially, the IJF consisted of judo federations from Europe and Argentina, but today it has grown to include 205 members, National Judo Federations across all continents. According to the IJF, there are more than 20 million people worldwide practicing judo.

Sport, in all its forms, is increasingly vulnerable to the effects of climate change. The growing unpredictability of weather patterns, including temperature rise, reduced snowfall during winter, frequent heatwaves, and rising sea levels, presents significant challenges for athletes, event organizers, and spectators alike. Severe weather conditions can also negatively affect sport infrastructure.

In December 2018, the United Nations Framework Convention on Climate Change (UNFCCC) and the International Olympic Committee (IOC) jointly launched the Sports for Climate Action (S4CA) Framework, outlining the role of sport in addressing global climate change. The S4CA Framework aims to support sport organizations in reducing emissions resulting from their operations. The initiative encourages sports bodies to recognize their contribution to climate change and take responsibility for advancing climate neutrality, thus ensuring a safer planet for future generations.

Recognizing the urgency of this issue and the need for collective action within the sports community, the IJF is proud to be one of many sports organizations that have committed to the S4CA initiative. By joining the initiative, the IJF has pledged to adhere to the five core principles outlined in Table 1-1.

As a signatory to the S4CA Framework, the IJF has accepted its role in contributing to the global goal of achieving climate neutrality by mid-century, as outlined in the 2015 Paris Agreement. In line with this commitment, the IJF selected 2021 as the base year for greenhouse gas (GHG) emission reporting, against which all future emissions will be measured.

The IJF's responses to the five core principles of the S4CA Framework, along with its alignment with the objectives of the Paris Agreement, are summarized in Table 1-1.

Table 1-1: IJF's responses to the five core Sports for Climate Action Principles

S4CA Principle	IJF's response
1. <b>Undertake systematic efforts to promote greater environmental responsibility</b>	Steps already taken by developing and distributing IJF Event Sustainability Checklist; measures are taken to lower the climate and environmental impact of all IJF-organized events, two of them are also presented in this Study
2. <b>Reduce overall climate impact</b>	IJF is at the beginning of this journey but keen to align with Paris Agreement goals
3. <b>Education for climate action</b>	IJF uses IJF platforms to educate on sustainability and climate action and plans to perform such activities even more in the future; in 2023 a series of in-person IJF Sustainability Workshops for Youth was initiated at the IJF Youth Camp in Switzerland. More destinations to be added in next years.
4. <b>Promote sustainable and responsible consumption</b>	Sustainability and care for the environment are being highlighted on websites, media, social media and during sport events
5. <b>Advocate for climate action through communication</b>	Climate action is actively communicated, and IJF Climate Ambassadors are engaged in inspiring projects that raise awareness in the Judo Community and beyond

### Updated S4CA Framework Principles

S4CA Framework recently presented to the signatories the updated Framework Principles shown in Figure 8-1.

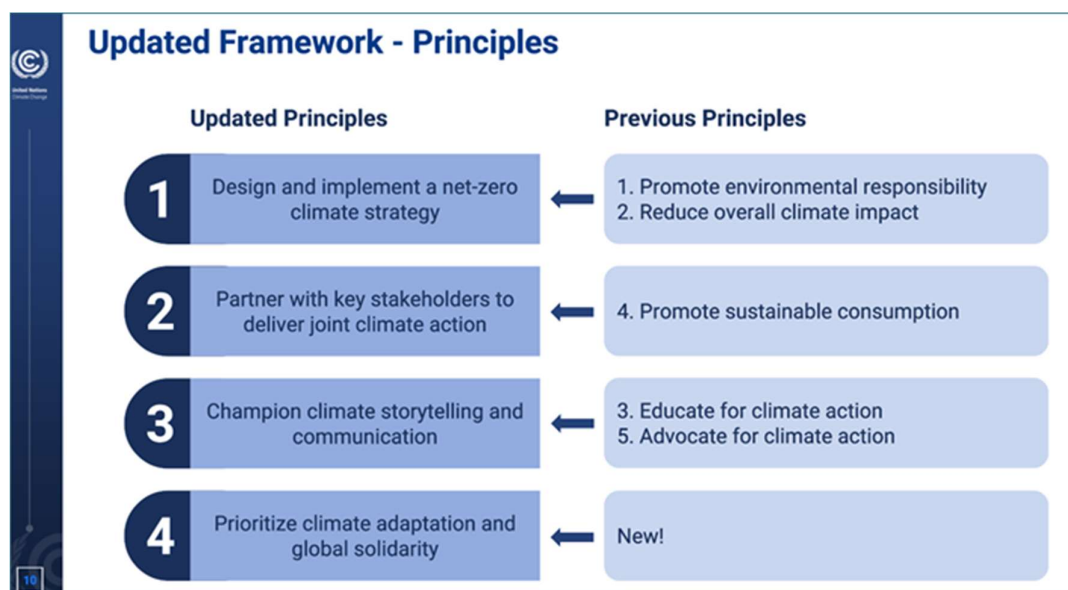


Figure 2-1: Updated S4CA Framework Principles

### 3. Methodology

The methodology for evaluating the carbon footprint of the IJF and its events aligns with the Greenhouse Gas Protocol (GHG Protocol), with adaptations for a sports organization and in line with the UN S4CA Framework guidelines.

The carbon footprint assessment calculates greenhouse gas emissions, expressed as CO<sub>2</sub>e, following the GHG Protocol. This global standard helps quantify and manage emissions from operations, supply chains, and emission reduction activities across both private and public sectors. The GHG Protocol was developed through global collaboration with governing bodies, industry associations, NGOs, and businesses.

The GHG Protocol includes globally accepted standardization documents used as guides for determining the carbon footprint and calculating GHG emissions:

- “*The Greenhouse Gas Protocol, A Corporate Accounting and Reporting Standard*” [Ref 1];
- “*GHG Protocol Scope 2 Guidance*”, *An amendment to the GHG Protocol Accounting and Reporting Standard* [Ref 2];
- “*Corporate Value Chain (Scope 3) Accounting and Reporting Standard*”, *Supplement to the GHG Protocol Accounting and Reporting Standard* [Ref 3];
- “*Technical Guidance for Calculating Scope 3 Emissions*”, *Supplement to the Corporate Value Chain (Scope 3) Accounting and Reporting Standard* [Ref 4].

These documents enable a similar set of methodologies for all entities seeking to establish a system for accounting and reporting on greenhouse gas emissions.

The GHG Protocol defines three “scopes” (Scope 1, Scope 2, and Scope 3) for GHG emissions accounting and reporting purpose as shown in Figure 3-1.

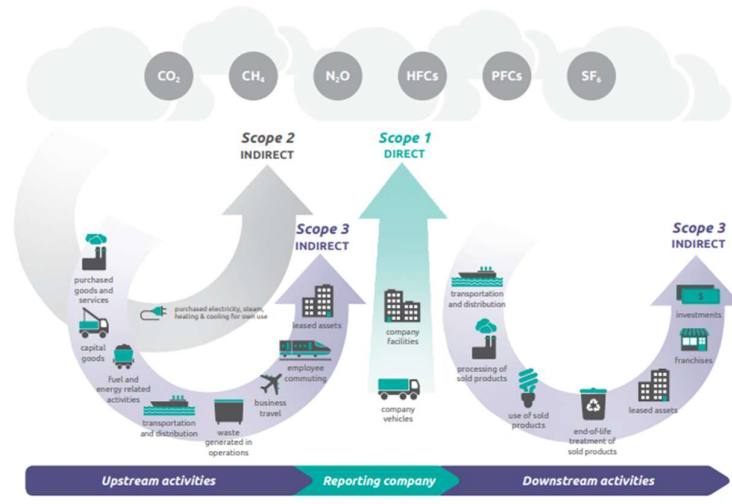


Figure 3-1: Overview of GHG Protocol scopes and emissions across the value chain

Carbon emissions are categorized into Scopes 1, 2, and 3 to describe different emission sources within an organization's operations and value chain:

- **Scope 1** - direct emissions from fuel combustion in sources owned or directly controlled by the organization (e.g. emissions from own vehicles, machines, devices).
- **Scope 2** - indirect emissions from the production of purchased energy, including electricity, steam, heating, and cooling.
- **Scope 3** - indirect emissions from upstream and downstream activities outside the organization's control, such as travel, waste generation, and purchased goods and services.

The general emission sources by scope for sports organizations and events are presented in the section defining system boundaries (subchapter 3.1), while an overview of all identified IJF emission sources is provided in subchapter 3.2 of this report.

The greenhouse gases covered by the GHG Protocol include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF<sub>6</sub>), and nitrogen trifluoride (NF<sub>3</sub>).

The radiative forcing impact of each greenhouse gas on global warming is measured using Global Warming Potential (GWP). Since GHGs have different GWP values, total emissions are expressed as carbon dioxide equivalent (CO<sub>2</sub>e), measured in tons (t CO<sub>2</sub>e).

Table 3-1 lists the GWP values of greenhouse gases reported under the GHG Protocol, specifically for those identified in IJF-owned or controlled sources. For HFC gases, the values reflect those used in air conditioning and refrigeration devices at IJF facilities. GWP values are sourced from the GHG Protocol, adapted from the Intergovernmental Panel on Climate Change's Fifth Assessment Report (AR5) [Ref 5].

*Table 3-1: Global warming potential (GWP) values of greenhouse gases relevant for the IJF's activities*

GREENHOUSE GAS		POTENTIAL (GWP)
CO <sub>2</sub>		1
CH <sub>4</sub>		28
N <sub>2</sub> O		265
HFCs	HFC-32	677
	HFC-134a	1300

Since GHG Protocol doesn't cover sport activities as a separate category or sector, general GHG emission calculation guidelines were used in this Report. Established approach for cross-sectoral GHGs emission calculation was applied.

Emission factors used for the calculation include the IPCC 2006 guidelines [Ref 6] and other relevant sources [Ref 7, 8, 9, 10].



### 3.1. Setting inventory system boundaries

Typical boundaries for GHG emission inventories of sports organizations and events are presented in Table 3-2, with boundaries for organizations marked in green and for events marked in blue. Since no strict rules exist for defining these boundaries, the common carbon footprint guidelines from the S4CA initiative were applied.

Table 3-2: Emission sources by categories for sport organizations and sport events from S4CA

Category	Sports Organization	Sport Events
<b>Scope 1</b> Direct emissions from owned or controlled sources	Fuel combustion, driving own vehicles, refrigeration	Fuel combustion for the event (for generation of electricity or heat), driving own vehicles by event organizers, refrigerants escaping from refrigeration systems for the event
<b>Scope 2</b> Emissions from the generation of purchased energy	Purchased electricity, heat or steam	Purchased electricity, heat or steam for the event (not generated directly by the organizers of the event)
<b>Scope 3</b> Indirect emissions (not included in scope 1 and 2) that occur in the value chain, including both upstream and downstream	Any air travel paid for by the organization; ground transportation of staff and materials in vehicles not owned or controlled by the organization; extraction and production of purchased materials and fuels (paper, furniture, office supplies, vehicles, water, food, etc.); electricity transmission losses; emissions from outsourced activities like production of any materials and delivery of services; waste disposal; supply chain-related emissions, etc.	Air travel by organizers of the event and fans; ground transportation in vehicles not owned or controlled by organizers of the event and fans; extraction and production of purchased materials and fuels (signs, stages, office supplies, electronics, souvenirs, clothing, food etc.); electricity transmission losses; outsourced activities (like event planning by a third party); waste disposal, etc.

### 3.2. Identification of the emission sources

Sources of greenhouse gas emissions identified within the inventory system boundaries are categorized into Scope 1, Scope 2, and Scope 3, as presented below.

All Scope 1, 2, and 3 emissions from the IJF, which were calculated for the period from 2021 to 2023, have now been calculated for 2024 as well. All identified Scope 1 and 2 emissions from events assessed in previous years are also evaluated for the relevant events (Grand Slam Paris and World Senior Championships Hungary) in 2025. Meanwhile, Scope 3 emissions are calculated based on available data, with categories included or excluded depending on the data collected by the event organizers. The scope allocation overview for the events and IJF is presented in Figure 3-2.

<b>IJF HEADQUARTER LOCATIONS:</b>  1) BUDAPEST (Presidential office, General Secretariat, headquarters and one flat) 2) ABU DHABI (General Treasury)	<u>Scope 1:</u> • Natural gas combustion • HFC <u>Scope 2:</u> • Electricity <u>Scope 3:</u> • Business travel
<b>GP PARIS 2025</b>	<div> <div> <u>Scope 1:</u>            • Transport of participants during the event            • Fuel combustion in the hotels  <u>Scope 2:</u>            • Electricity (hotels and sport venue)  <u>Scope 3:</u>            • Transport of participants to and from Paris            • Emissions from food supply chain            • Emissions from generated waste         </div> <div> <u>Scope 3 for IJF as category Franchises</u> </div> </div>
<b>WSC HUNGARY 2025</b>	<div> <div> <u>Scope 1:</u>            • Transport of participants during the event            • Fuel combustion in the hotels  <u>Scope 2:</u>            • Electricity (hotels and sport venue)  <u>Scope 3:</u>            • Transport of participants to and from Budapest            • Emissions from food supply chain            • Emissions from generated waste         </div> <div> <u>Scope 3 for IJF as category Franchises</u> </div> </div>

*Figure 3-2: IJF emission scopes overview*

All Scope 3 categories defined by the GHG Protocol are reviewed for inclusion in the calculation of IJF's carbon footprint. These categories are listed in Table 3-3, indicating their relevance to both IJF's organizational and event footprints.

*Table 3-3: Overview of 15 Scope 3 GHG Protocol categories, with an indication of their applicability to IJF and events*

	Scope 3 category	IJF	GS Paris, WSC Hungary
1	<b>Purchased Goods and Services</b>	As a non-production organization, IJF does not purchase significant quantities of materials or products. For the few products that are purchased, systematic data is currently unavailable, and therefore, this category is not included in the inventory.	This category is included in the events inventory based on available data on food preparation during events, served at hotels and sports venues.
2	<b>Capital goods</b>	Category not included in the inventory: The IJF organization did not invest in capital goods during 2024.	N/A
3	<b>Fuel- and energy-related activities (not included in Scope 1 or Scope 2)</b>	Energy-related GHG emissions are included in Scope 1 (natural gas combustion for heating) and Scope 2 (imported heat and electricity consumption). Scope 3 emissions from energy sources are not included in this assessment.	
4	<b>Upstream transportation and distribution</b>	This category is not included in the inventory as there are no significant amounts of purchased products requiring transportation from suppliers (related to Category 1).	N/A
5	<b>Waste generated in operations</b>	N/A	This category is included in the inventory based on available data and estimations on waste generation during the events at hotels and sports venues.
6	<b>Business travel</b>	This category is included in the assessment and is identified as the most significant Scope 3 category in IJF's emissions inventory.	
7	<b>Employee commuting</b>	Data is currently unavailable. Most employees live close to their workplace or work from home offices. Most of the professional travel involves trips to other cities and countries, which are included under Category 6.	
8	<b>Upstream leased assets</b>	This category is included in the inventory based on available data on fuel combustion from transportation using a rented van by IJF. However, these emissions are estimated to be insignificant.	N/A

	Scope 3 category	IJF	GS Paris, WSC Hungary
9	<b><i>Downstream transportation and distribution</i></b>	N/A	
10	<b><i>Processing of sold products</i></b>	N/A	
11	<b><i>Use of sold products</i></b>	N/A	
12	<b><i>End-of-life treatment of sold products</i></b>	N/A	
13	<b><i>Downstream leased assets</i></b>	N/A	
14	<b><i>Franchises</i></b>	In this assessment, sport events are classified as Category 14 – Franchises to align organizational circumstances with general GHG Protocol categories. A franchise, by definition, is a business operating under a license to sell or distribute another company's goods or services. In this context, World Judo Tour / World Championship competitions fall into this category as they are organized by local organizers (IJF member National Federations) with support from the IJF as the roof organization.	
15	<b><i>Investments</i></b>	N/A	

## 4. Carbon footprint assessment

The carbon footprint assessment covers the IJF Headquarters for the calendar year 2024 and two selected events in 2025: the Grand Slam Paris 2025 and the World Senior Championships Hungary 2025.

### 4.1. Grand Slam Paris 2025, France

The Zagreb Slam Paris 2025 took place in Paris, France, from February 01 to 02. A total of 298 competitors from 50 countries across five continents participated in the event.

Before the event, recommendations for reducing the carbon footprint were provided to the organizer to raise awareness of the environmental impact of judo competitions, with a focus on greenhouse gas emissions. Implementing these recommendations aims to enhance the event's sustainability, lower its greenhouse gas emissions, and promote efforts toward a "greener" event with a reduced climate impact.

Recommendations include the following measures to minimize greenhouse gas emissions and contribute to the event's carbon footprint reduction:

- **Optimize participant transportation** – Ensure efficient transport between hotels, the airport, and the sports venue. Prioritize electric or hybrid vehicles where possible or prefer gasoline-powered vehicles over diesel ones.
- **Organize sustainable transport for visitors** – Provide free public transport with ticket purchase or incentivize fans (e.g., drink coupons) to arrive by bike or public transport instead of by car.
- **Implement a reusable cup system** – Use hard plastic reusable cups for drinks in the sports hall, allowing spectators to return them at the end of the event for a refund. Encourage the use of reusable packaging for food and drinks among event participants or provide biodegradable alternatives.
- **Use reusable event materials** – Avoid single-use plastics for banners, signs, and accreditations. Large billboards should exclude date/year to allow reuse across multiple events.
- **Encourage plant-based food options** – Work with food suppliers to increase plant-based offerings, as plant-based diets have a lower environmental impact than certain animal-based foods.
- **Source local food** – Reduce transport emissions by prioritizing locally grown ingredients, with recorded quantities allowing for the calculation of avoided emissions.
- **Donate excess food** – Partner with charities to donate leftover food, reducing both waste and greenhouse gas emissions from landfill disposal.
- **Engage sustainable suppliers and sponsors** – Collaborate with businesses that implement sustainable practices, highlighting potential environmental benefits.
- **Improve waste management** – Partner with hotels and sports venues that implement separate waste collection and recycling, reducing greenhouse gas emissions from waste disposal.

## **Setting GHG inventory boundaries**

The sources of greenhouse gas (GHG) emissions for the Grand Slam Paris, identified and included in this assessment, are presented in Table 4-1.

For the purpose of this assessment, the scope definitions provided by S4CA in Table 4-1 have been interpreted to include athlete travel, despite the general reference to "air travel by organizers and fans." Athlete and team member travel has been included due to its significant contribution to the event's overall emissions.

*Table 4-1: Identified GHG emission sources of Grand Slam Paris 2025*

<b>Emission source</b>	<b>Description</b>	<b>Category</b>
<b>Transport during event</b>	Transport of event participants during the event using vehicles under the control of the organizer	Scope 1
<b>Hotel energy consumption</b>	Emissions from fuel combustion (natural gas) in the hotels	Scope 1
	Emissions that occurred during generation of electricity and heat consumed by the hotel	Scope 2
<b>Sports venue energy demand</b>	Emissions that occurred during generation of electricity consumed by the sports venue	Scope 2
<b>Transport to and from event city</b>	Self-organized transport of event participants and staff to and from event	Scope 3
<b>Food preparation</b>	Supply chain emissions from consumed/prepared food	Scope 3
<b>Waste</b>	Emissions resulting from waste disposal	Scope 3

The leakage of refrigerants from cooling equipment in hotels and the sports venue was considered negligible during the event.

Fan travel was not included in the assessment due to a lack of available data. Since most visitors were local, the impact of their travel was deemed negligible.

## **Data collection**

For the purpose of calculating GHG emissions from the event, necessary data needed to be collected. The following questionnaires were prepared and distributed to the event organizer, hotels, the sports venue, catering services, transportation services and participants:

- Information on travelling of participants to and from Paris – An online questionnaire was distributed to team leaders.
- Information on local transport during the event – A questionnaire was prepared to collect information on the type and frequency of local transport used by participants.
- Information on energy consumption and waste management at the sports venue – The questionnaire aimed to gather information on energy consumption at the sports hall during the tournament, as well as on the amount of waste separately

collected at the venue. Additionally, questions were included regarding the sustainability policies implemented by the sports hall.

- Information on hotel energy consumption, waste collection and food preparation – This questionnaire covered energy consumption in hotels accommodating participants, food quantities per ingredient or total number of meals per category as well as the amount of waste separately collected during the event. Similar to the sports hall questionnaire, it also included questions on sustainability policies.

From the responses received, approximately minority of the travel data was obtained through the online survey, while the large portion of data had to be estimated based on participants' home countries. The questionnaire on local transport was successfully completed and submitted. Four out of six questionnaires related to hotels were completed so the estimations were performed for the missing data. Data from the sports venue was successfully filled out.

### **GHG emissions sources**

#### **Transport during the event – Scope 1 emission category**

Emissions from transportation encompass the use of vehicles controlled by the event organizer for short trips within Paris. The vehicles used included:

- Vans powered by diesel,
- Buses powered by diesel.

#### **Hotel energy demand – Scope 1 and Scope 2 emission category**

Participants and staff stayed in six hotels. Two of them are categorized as luxury hotels<sup>1</sup>, and four as medium<sup>2</sup> hotels. Emissions from hotels include direct GHG emissions from natural gas combustion (Scope 1) and indirect GHG emissions from purchased electricity and imported heat (Scope 2). For four hotels data on fuel and energy consumption was collected, so for the rest of the two the emission calculations were estimated as average data from other hotels according to the same hotel category. Country-specific electricity emission factors were applied to calculate Scope 2 emissions.

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<sup>1</sup> categorization according to *IOC Carbon Footprint Methodology for the Olympic Games, December 2018*

<sup>2</sup> categorization according to *IOC Carbon Footprint Methodology for the Olympic Games, December 2018*

### Sports venue energy demand – Scope 2 emission category

Indirect emissions from the sports venue include electricity consumption during the event as an emission source. These emissions were calculated according to received data on electricity consumption.

### Transport to and from event city – Scope 3 emission category

The emissions resulting from airplane flights of event participants including IJF staff were calculated based on received data and made estimations of travelling routes for the missing data.

Data from local participants and local partners/contractors were not collected, and it is assumed that their impact on the event's carbon footprint is negligible.

### Food supply chain – Scope 3 emission category

Life Cycle Assessment (LCA) of GHG emissions from food was assessed as an indirect Scope 3 emission source.

Data on the amount of food prepared by hotel catering service was collected and the emissions were calculated. Specific emission factors were applied for each meal, based on hotel categories (luxury hotels – 4- and 5-star, medium hotels – 3-star)<sup>3</sup>. For lunch and dinner, emission factors were determined based on an assumed meal distribution of 20% vegetarian, 40% chicken-based, and 40% beef-based dishes.

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<sup>3</sup> categorization according to *IOC Carbon Footprint Methodology for the Olympic Games, December 2018*



## 4.2. World Senior Championship Hungary 2025

The World Senior Championship 2025 took place in Budapest, Hungary, from June 13 to 20. A total of 556 competitors from 93 countries across six continents participated in the event.

Prior to the event, an initial questionnaire was sent to the organizer to gather information and provide recommendations for reducing the event's carbon footprint. The focus was on raising awareness about the environmental impact of the event, specifically greenhouse gas emissions. The organizer was provided with a brief description of the following areas: food organization during the event, waste management at hotels and sport venue, avoiding single use plastic, replacing plastic packaging with paper or cardboard, reusing event materials, etc.

### Setting GHG inventory boundaries

World Senior Championship GHG emission sources that were identified and included in this assessment are presented in Table 4-2.

Table 4-2: Identified GHG emission sources of World Senior Championship Hungary 2025

Emission source	Description	Category
Transport during event	Transport of World Senior Championship participants during the event using vehicles under the control of the organizer	Scope 1
Hotel energy demand	Emissions from fuel combustion in the hotels	Scope 1
	Emissions that occurred during generation of electricity consumed by hotels	Scope 2
Sports venue energy demand	Emissions that occurred during generation of electricity consumed by the sports venue	Scope 2
Transport to and from event city	Self-organized transport of event participants and staff to and from Budapest	Scope 3
Food preparation	Supply chain emissions from consumed/prepared food	Scope 3
Waste	Emissions resulting from waste disposal	Scope 3

The leakage of refrigerants from cooling equipment in hotels and the sports venue was considered negligible during the event.

Fan travel was not included in the assessment due to a lack of available data. Since most visitors were local, the impact of their travel was deemed negligible.

### Data collection

For the purpose of calculating GHG emissions from the event, necessary data needed to be collected. The following questionnaires were prepared and distributed to the

event organizer, hotels, the sports venue, catering services, and transportation services:

- Information on travelling of participants to and from Budapest – An online survey was distributed to collect travel data with great success rate.
- Information on local transport during the event – A questionnaire was designed to gather information on the type and frequency of local transfers used by participants.
- Information on energy consumption and waste management at the sports venue – The questionnaire aimed to collect data on energy consumption at the sports hall during the tournament, as well as on the amount of waste separately collected at the venue. Additionally, several questions were included regarding the sustainability policies implemented by the sports hall.
- Information on hotel energy consumption, waste collection, and food services – The questionnaire covered energy consumption in the four hotels accommodating participants, as well as the amount of waste separately collected during the event. Similar to the sports hall questionnaire, it also included questions on sustainability policies. Additionally, the questionnaire gathered information on food ingredients and meal quantities prepared in these hotels.
- Catering – A separate document was dedicated for the catering service that was in charge of serving meals in the sport venue.

Great amount of travel data was obtained through the online questionnaire. Data on local transfers was successfully collected. The questionnaire for the sports venue was completed, and the necessary data was obtained. All four hotels and sport venue submitted the needed data via questionnaires.

Overall, the data collection process for this event was very successful.

## **GHG emissions sources**

### **Transport during event – Scope 1 emission category**

Emissions from transportation encompass the use of vehicles controlled by the event organizer for transport through Budapest. The vehicles used included:

- Buses powered by diesel,
- Rented cars powered by gasoline and diesel.

### **Hotel energy demand – Scope 1 and Scope 2 emission category**

Participants and staff stayed in four hotels. All four of them are categorized as luxury hotels (luxury hotels – 4- and 5-star, medium hotels – 3-star)<sup>4</sup>. Emissions from hotels include direct GHG emissions from natural gas combustion (Scope 1) and indirect GHG emissions from purchased electricity and imported heat (Scope 2). Data on fuel

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<sup>4</sup> categorization according to *IOC Carbon Footprint Methodology for the Olympic Games, December 2018*

and energy consumption were successfully collected. Country specific emission factors for electricity were applied to calculate Scope 2 emissions.

#### Sports venue energy demand – Scope 2 emission category

Indirect emissions from the sports venue include electricity consumption during the event. Emissions were calculated based on the provided data on electricity consumption in kWh. Since no data on natural gas consumption or heat energy use was provided, it was assumed that there was no energy consumption from district heating.

#### Transport to and from event city – Scope 3 emission category

Participants of the World Championship including IJF staff traveled to Budapest mostly by plane. A part of them used cars, train and minibuses.

Data from local participants and local partners/contractors were not collected, and it is assumed that their impact on the event's carbon footprint is negligible.

#### Food supply chain – Scope 3 emission category

Life Cycle Assessment (LCA) of GHG emissions from food was assessed as an indirect Scope 3 emission source.

Data on the amount of food per ingredient consumed during the event (both in hotels and at the sports venue) was successfully collected and accompanying emissions were calculated. Data on separately collected waste in hotels and sport venue was gathered and these emissions were calculated and included in the event carbon footprint.

### 4.3. IJF Headquarters 2024

This chapter presents an analysis of the carbon footprint of IJF's operations across its locations, based on data from 2024. The carbon footprint has been calculated on a yearly basis starting from the base year 2021.

Current IJF facilities include the following two locations that were included in the inventory:

- Budapest, Hungary: (Presidential office, Headquarter offices, General Secretariat and Flat)
- Abu Dhabi, United Arab Emirates: General Treasury.

By moving of the General Secretariat to Budapest, the office in Paris was closed during 2024 and is no longer included in the inventory.

#### **Setting GHG inventory boundaries**

The emission sources identified and included in the base year 2021 inventory remained the same for 2024 and are outlined in Table 4-3.

Scope 1 and 2 emissions were identified and incorporated into the inventory as mandatory categories, in accordance with the GHG Protocol.

The identification of sources in the Scope 3 emission categories was covered in previous chapters (Chapter 3.2, Table 3-3). It was decided to include emissions from business travel by IJF employees and contractors, as this source constitutes a significant portion of overall emissions and was therefore included in this assessment in line with S4CA requirements.

*Table 4-3: Identified GHG emission sources of IJF in 2024*

<b>Emission source</b>	<b>Description</b>	<b>Category</b>
<b>Natural gas for heating – location Budapest</b>	Emission that occurred during combustion of natural gas in boilers of the Presidential office, headquarters and one flat	Scope 1
<b>Cooling equipment – location Budapest</b>	Estimate of yearly HCF leakage from air conditioner units	Scope 1
<b>Cooling equipment – location Abu Dhabi</b>	Estimate of yearly HCF leakage from refrigerator unit	Scope 1
<b>Electricity consumption – location Budapest</b>	Emission that occurred during generation of electricity or heat consumed by Presidential office, headquarters and one flat	Scope 2
<b>Electricity consumption – location Abu Dhabi</b>	Emission that occurred during generation of electricity or heat consumed by the office	Scope 2
<b>Airplane flights</b>	Emissions from airplane flights by IJF employees and contractors	Scope 3

Emission source	Description	Category
Travel by cars	Emissions from travelling by cars by IJF employees and contractors	Scope 3
Travel by bus	Emissions from travelling by bus by IJF employees and contractors	Scope 3
Van rented by IJF	Emissions from the operation of the rented van by IJF in Budapest	Scope 3

IJF doesn't own vehicles as an organization's property. Therefore, no Scope 1 emissions from fuel combustion in vehicles are assessed.

### **Data collection**

The activity data for both locations were provided by the IJF representatives through the completion of the questionnaires.

Data collected for location in Budapest are:

- Overall fuel consumption (diesel) of a van rented by IJF in liters in 2024,
- Total electricity consumption in 2024 for Presidential Office, General Secretariat, headquarters and flat expressed in kWh, calculated as Total Paid Cost / Unit price.
- Total consumption of natural gas expressed in kWh in 2024 for Presidential Office, General Secretariat, headquarters and flat, calculated as Total Paid Cost / Unit price.
- The confirmation that no changes occurred regarding the number and the type of air-conditioning and cooling devices compared to 2023 (in 2023: 13 air-conditioning devices, 5 refrigerators and 1 wine cooler).

Data collected for location in Abu Dhabi are:

- Estimation of the yearly cost of electricity for IJF office with information on unit price to determine electricity consumption.
- The confirmation that there is no change on the refrigerants and on the usage of centralized cooling system with the gas type R-22 and one kitchen refrigerant with the gas type R-134a.

Data for all types of business travel were prepared and delivered by IJF representatives.

## GHG emissions sources

### Energy demand of the premises – Scope 1 and Scope 2 emission category

Scope 1 direct emissions are associated with the combustion of natural gas in the boilers at the Presidential office, General Secretariat, headquarters, and a flat in Budapest. Indirect Scope 2 emissions relate to electricity consumption in both locations.

### HCF leakage from cooling equipment – Scope 1 fugitive emission category

Information on cooling equipment and refrigerant gases used was provided for all locations. One refrigerator and 13 air conditioners utilize refrigerant gases with a global warming potential (1 refrigerator uses R-134a, and 13 air conditioners use R-32). An annual leakage estimate of 0.5% of the refrigerant quantity is applied for emission assessment, based on the equipment size category. Seven refrigerators already contain newer-generation refrigerant gases with zero climate impact (R-600a).

### Business travel – Scope 3 emission category

The largest portion of IJF's annual GHG emissions originates from airplane flights. The total number of flights associated with 16 events in 2024 was analyzed, and the corresponding GHG emissions were estimated. The distance in kilometers for each flight route (including both direct and transfer flights) was determined, and emissions were calculated based on emissions per passenger-kilometer, which vary for Economy, Business, and First-class tickets. The data processed included all IJF employees as well as contractors whose tickets were paid for by IJF. The results for each event are shown in Figure 4-3.

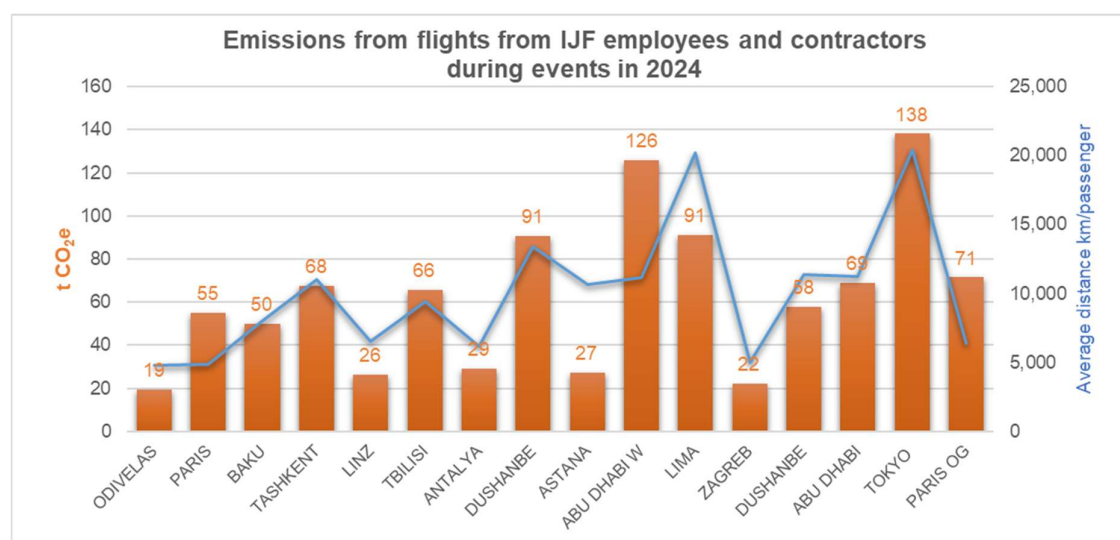


Figure 4-1: GHG emissions from IJF employees and contractors' flights during events in 2024

### Upstream leased assets – Scope 3 emission category

Emissions from one rented van are included in this category, as it falls under the scope of upstream leased assets.

## 5. Results

The results of GHG emission calculation performed within this Report include carbon footprint assessment of two sport events and yearly GHG inventory for IJF as an organization.

Results from carbon footprint assessment of Grand Prix Paris 2025, World Senior Championships Hungary 2025 and IJF are presented in Table 5-1, Table 5-2 and Table 5-3, respectively.

Table 5-1, Table 5-2 and Table 5-3 contain the information on:

- identified activities that result in GHG emissions,
- identified GHG emission sources,
- short description of activity data collection process,
- assessment of activity data uncertainty (low uncertainty – good quality of received data; high uncertainty – low quality of received data),
- scope per each CF assessment segment (as presented in Figure 3-2) according to GHG Protocol categorization,
- scope within overall IJF CF assessment also according to GHG Protocol but taking into account that sport event CF is classified as a Scope 3 category 14 – Franchises, within the context of this assessment (as explained in Table 3-3), applicable primarily to events,
- GHG emission of each emission source (t CO<sub>2</sub>e),
- total GHG emission per assessment segment (events / IJF sport organization).

The share of emissions from each activity by Grand Prix Paris 2025, World Senior Championships Hungary 2025 and IJF are presented in Figure 5-1, Figure 5-2 and Figure 5-3, respectively.



Table 5-1: Carbon footprint assessment of Grand Prix Paris 2025

Carbon footprint assessment segment	Time period covered by the GHG inventory	Activities that result in GHG emissions	Identified emission sources	Activity data	Activity data uncertainty	Scope per each CF assessment segment	Scope within overall IJF CF assessment	t CO <sub>2</sub> e	t CO <sub>2</sub> e TOTAL
Sport event CF: Grand Prix Paris	1 <sup>st</sup> February - 2 <sup>nd</sup> February 2025	Organized transport during event	Diesel and petrol combustion in cars, buses and vans	fulfilled via questionnaire by event organizers	low	Scope 1	Scope 3	2.87	122
		Hotel energy consumption	Natural gas consumption	fulfilled via questionnaire by hotel management	low	Scope 1	Scope 3	17.43	
			Purchased electricity and imported heat energy		medium	Scope 2	Scope 3	3.76	
		Sport venue energy consumption	Purchased electricity	fulfilled via questionnaire by venue management	low	Scope 2	Scope 3	7.79	
		Transport of participants and staff to and from Paris	Fuel combustion in airplanes	data partly provided by event organizers, data gaps on routes where assumed based on participants home-countries	high	Scope 3	Scope 3	62.89	
		Waste generated in hotel	Waste management	fulfilled via questionnaire by hotel management	medium	Scope 3	Scope 3	2.88	
		Meals served in hotel	Food preparation	fulfilled via questionnaire by hotel management and catering service	medium	Scope 3	Scope 3	24.17	

Table 5-2: Carbon footprint assessment of World Senior Championships Hungary 2025

Carbon footprint assessment segment	Time period covered by the GHG inventory	Activities that result in GHG emissions	Identified emission sources	Activity data	Activity data uncertainty	Scope per each CF assessment segment	Scope within overall IJF CF assessment	t CO <sub>2</sub> e	t CO <sub>2</sub> e TOTAL
Sport event CF: World Senior Championship Hungary 2025	13 <sup>th</sup> June - 20 <sup>th</sup> June 2025	Organized transport during event	Diesel combustion in cars, buses and vans	fulfilled via questionnaire by event organizers	low	Scope 1	Scope 3	44.15	427
		Hotel energy consumption	Natural gas consumption	fulfilled via questionnaire by hotel management	low	Scope 1	Scope 3	69.87	
			Purchased electricity and imported heat energy		low	Scope 2	Scope 3	20.97	
		Sport venue energy consumption	Purchased electricity	fulfilled via questionnaire by venue management	low	Scope 2	Scope 3	35.09	
		Transport of participants and staff to and from Budapest	Fuel combustion in airplanes	data partly provided by event organizers, data gaps on routes where assumed based on participants home-countries	low	Scope 3	Scope 3	207.78	
		Waste generated in hotel	Waste management	fulfilled via questionnaire by hotel management	low	Scope 3	Scope 3	5.37	
		Meals served in hotel	Food preparation	fulfilled via questionnaire by hotel management	low	Scope 3	Scope 3	25.33	
		Arena catering	Food preparation	fulfilled via questionnaire by catering service	low	Scope 3	Scope 3	18.61	

Table 5-3: Carbon footprint assessment of sport organization International Judo Federation for the year 2024

Carbon footprint assessment segment	Time period covered by the GHG inventory	Activities that result in GHG emissions	Identified emission sources	Activity data	Activity data uncertainty	Scope per each CF assessment segment	Scope within overall IJF CF assessment	t CO <sub>2</sub> e	t CO <sub>2</sub> e TOTAL
Sport organization CF: International Judo Federation	Calendar year 2024	Offices energy consumption	Natural gas combustion	fulfilled via questionnaire by IJF (total cost divided by unit price)	low	Scope 1	Scope 1	5.20	1040
			Purchased energy	fulfilled via questionnaire by IJF (total cost divided by unit price)	low	Scope 2	Scope 2	24.86	
		Offices air conditioning	HFC leakage	data on equipment and refrigerant gas fulfilled via questionnaire by IJF	low	Scope 1	Scope 1	0.05	
		IJF employees and contractors business flights	Fuel combustion in airplanes	flight tickets provided by IJF	low	Scope 3	Scope 3	1009.17	
		Transportation by rented van	Diesel combustion in van	fulfilled via questionnaire by IJF	low	Scope 3	Scope 3	0.54	

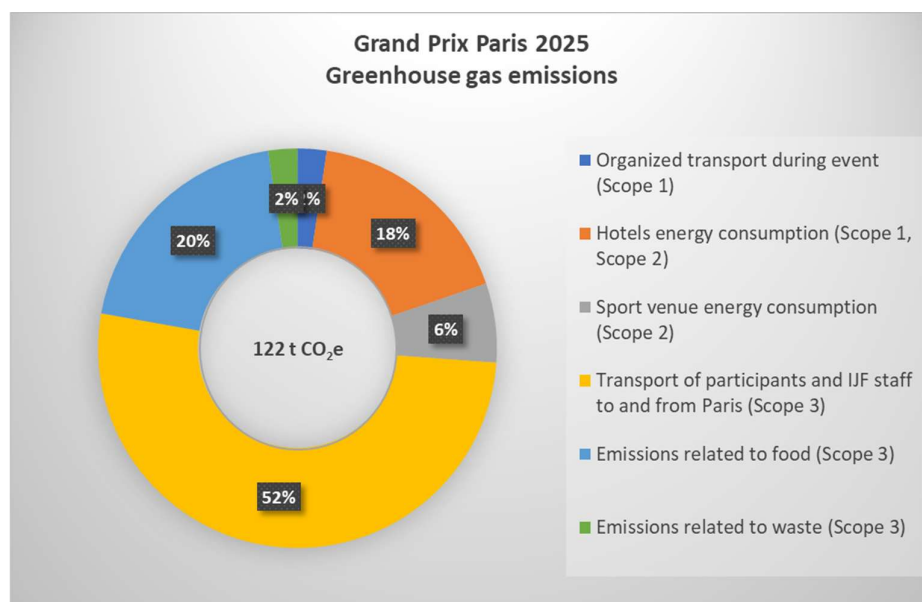


Figure 5-1: The share of GHG emissions from each activity for Grand Prix Paris 2025

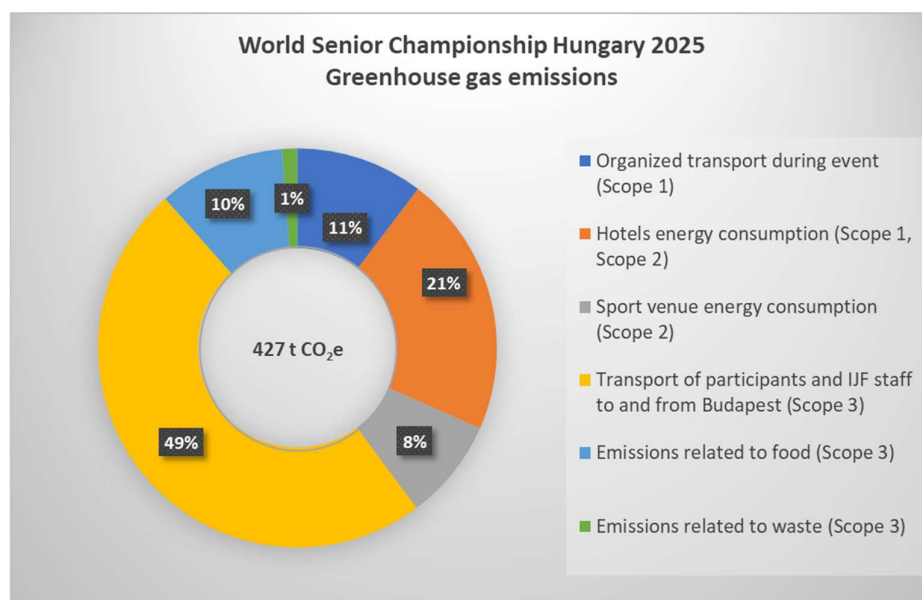


Figure 5-2: The share of GHG emissions from each activity for World Senior Championships Hungary 2025

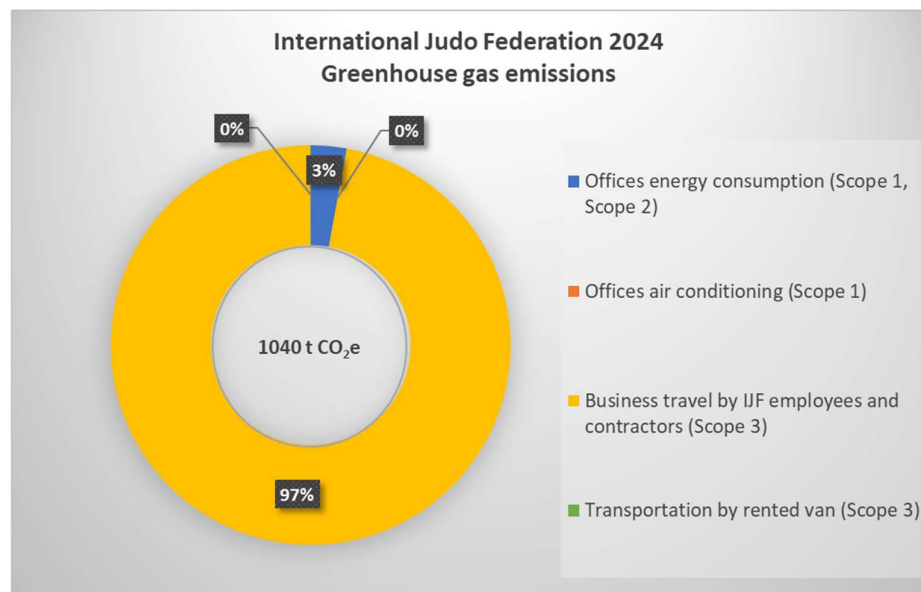


Figure 5-3: The share of GHG emissions from each activity for IJF as a sport organization

## 6. Comparison of all assessed events (2021 – 2025)

Carbon footprint assessments were performed for eight overall events during the period from 2021 to 2025. Carbon footprint values per event are presented in Figure 6-1.

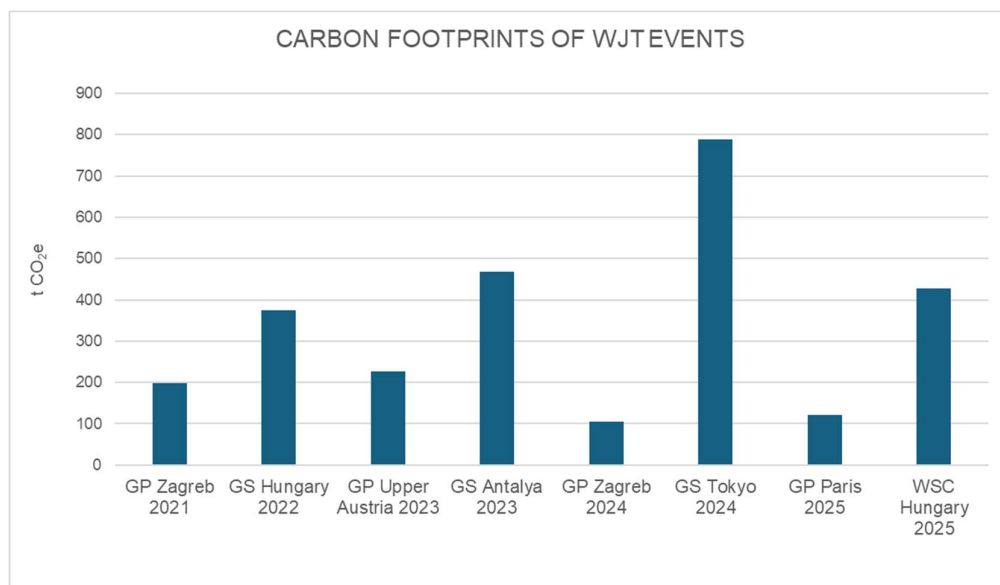


Figure 6-1: Carbon footprints of WTJ events

Total event GHG emissions depend largely on the emissions that result from transport of all participants to and from the tournament. Grand Slam in Japan has the highest assessed carbon footprint as can be seen in Figure 6-1. Analysis of the flight routes showed that Tokyo covered the longest distances for arrival and departure of tournament participants (Figure 6-2).

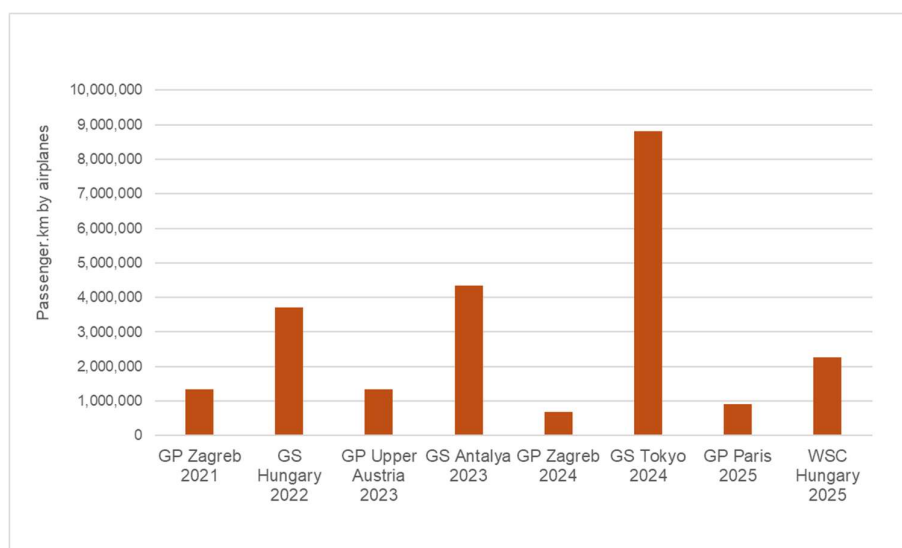


Figure 6-2: Total kilometers travelled by participants to arrive to and depart from WTJ events

Table 6-1 provides a quick overview of participants' origin continents. Although athletes and their team members are sometimes located somewhere else than their home countries in the time of visiting WJT event, in many cases the start and end point refer to their countries. Therefore, the data in the table below indicate lower or greater GHG emissions from travel, corresponding to the assessed event carbon footprint.

*Table 6-1: Overview of event participants by continents*

	GP Zagreb 2021	GS Hungary 2022	GP Upper Austria 2023	GS Antalya 2023	GP Zagreb 2024	GS Tokyo 2024	GP Paris 2025	WSC Hungary 2025
Total number of athletes	243	406	455	600	319	274	298	556
Nations	35	61	72	83	40	44	50	93
Continents	4	5	6	5	4	6	5	6
African Judo Union	5	7	23	31	1	1	18	34
Judo Union of Asia	0	108	38	124	16	161	80	153
European Judo Union	221	219	329	357	265	56	163	271
Oceania Judo Union	1	4	6	8	0	1	0	5
Panamerican Judo Confederation	16	68	54	80	37	35	28	73
Other	0	0	5	0	0	20	9	20

The data presented in Figure 6-3 show the used possibility of participants to arrive and depart the event by means of transport other than airplane. This potential of this emission reduction measure lies in the distance to the event location (Table 6-1). The competitions held in Linz, Zagreb and Budapest where many European participants have relatively small distance to cross, show positive examples by using the road and trail ways for coming to event. Trains are considered the most environmentally friendly travel option that result in lower emissions compared to crossing the same distances by airplanes and road.

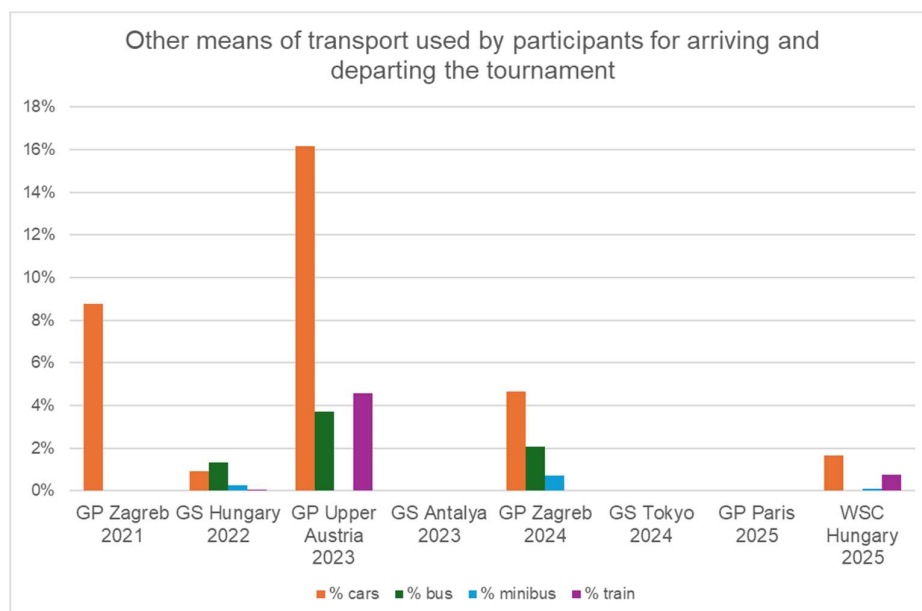


Figure 6-3: The share of means of transport other than airplanes for arrival and departure the event

It should be mentioned that IJF improves avoiding flight emissions by carefully planning the WJT event calendar so that consecutive events are close, when possible. The assessment of GS Hungary performed in 2022 estimated avoided GHG emissions due to the fact that the following tournament took place in Zagreb. By analysing the travel data during GS Hungary carbon footprint assessment, it was visible that a significant number of participants continued their sport journey by attending GP Zagreb instead of returning to their home country or other distant destinations. To make an estimate on the avoided GHG emissions from airplane flights, it was assumed that these participants would travel home after the GS Hungary and at some other time during the year they would travel again to attend the GP Zagreb. Avoided emissions from airplane flights amounted to 153 t CO<sub>2</sub>e. Emissions from travelling to Zagreb by car, bus and minibus (actual emissions) amounted to 2.3 t CO<sub>2</sub>e. The difference of approx. 150 t CO<sub>2</sub>e represents the roughly estimated net avoided emissions and demonstrate the benefit of organizing consecutive events nearby.

Emissions from participants' travel to and from the tournament city significantly impact on the event's carbon footprint and are also the most difficult emission category to reduce. Therefore, to compare carbon footprints from different events fairly, emissions from participants' travel to and from the tournament city were excluded and the remaining amount of emissions was divided by the number of competing athletes (indicator of the tournament size). The emission sources included in the emission intensity calculated in this way are as follows:

- Emissions related to energy consumption of hotels and sport venue
- Emissions caused by transport during the event
- Emissions related to food



Results are presented in Figure 6-4. It can be seen that tournaments are solidly comparable in their emissions per athlete. In the future, by implementing various sustainable practices, event organizers can lower their own emission intensity and contribute to IJF's Climate Action goals.

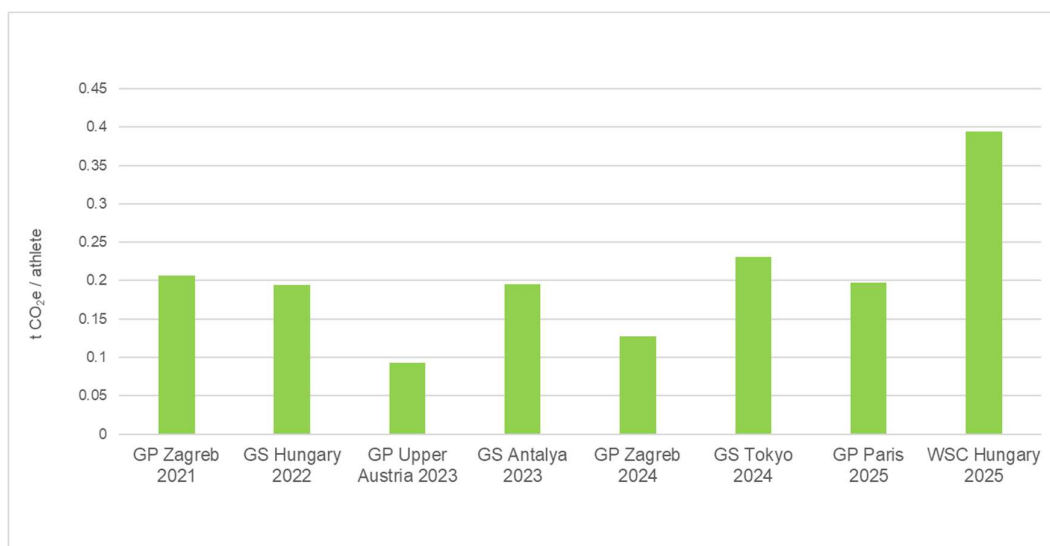


Figure 6-4: Event carbon footprint per athlete with travelling emissions excluded

It can be highlighted that the results from GP Upper Austria assessment showed their advantage in terms of 'cleaner' country-specific electric energy. The GS Hungary and GP Zagreb stand out with good performances in optimization of transport during the event (venue-hotels-airports). The relatively high figure for World Championship held in Budapest in 2025 is due to the longer period of event compared to WJT competitions. Extra days are linked mainly to considerably larger overall energy consumption and resulting emissions.

#### Challenge:

GS Paris 2025 organizers were unable to fully motivate team members to fulfil the survey about travel routes. Therefore, many assumptions were made to cover data gaps which resulted in high GHG inventory uncertainty.

#### Excellent example:

During WSC Hungary 2025 an improvement is made in gathering the comprehensive data on travelling routes of all participants which significantly increased the accuracy of events' carbon footprints. Also, partnering hotels and sport venue delivered data of excellent quality.

## **Overview of implemented sustainable initiatives**

While performing the assessment of judo tournaments in the period from 2021 to 2025 a significant amount of information was gathered on the sustainability initiatives of events. Some initiatives don't impact the carbon footprint directly or are a part of categories that were excluded from the assessment. However, they all show the organizers' dedication to implementing as many activities as possible that are sustainable and help our planet. The table below presents some of these activities.

*Table 7-1: Overview of sustainable initiatives*

EVENT	SUSTAINABLE INITIATIVES
Grand Prix Zagreb 2021	<ul style="list-style-type: none"> <li>○ separate waste collection (plastic, paper, biowaste) sent to recycling</li> <li>○ donation of excess food</li> <li>○ display of poster promoting waste recycling</li> <li>○ the money collected from waste recycling (Croatian waste management system offers financial refund for plastic bottles) was used for purchasing the sportswear for young judoka with disabilities</li> <li>○ public presentation of results at the Conference on sustainable development of sports organized by Croatian Judo Federation covered by media representatives</li> </ul>
Grand Slam Hungary 2022	<ul style="list-style-type: none"> <li>○ separate waste collection (plastic, paper, biowaste) sent to recycling</li> <li>○ implementation of reusable drinking cup scheme in the sport venue</li> <li>○ reusing large billboard in the sport venue to avoid plastic waste</li> <li>○ carbon offsetting of event emissions</li> </ul>
Grand Prix Upper Austria 2023	<ul style="list-style-type: none"> <li>○ travelling by train by event participants</li> <li>○ apart from diesel cars, vans and buses, rented hybrid cars, and hybrid vans also were used for transportation of participants during the event</li> <li>○ separate waste collection (plastic, paper, biowaste) sent to recycling</li> <li>○ carbon offsetting of event emissions</li> </ul>
Grand Slam Antalya 2023	<ul style="list-style-type: none"> <li>○ separate waste collection (plastic, paper, biowaste) sent to recycling</li> <li>○ carbon offsetting of event emissions</li> </ul>
Grand Prix Zagreb 2024	<ul style="list-style-type: none"> <li>○ increase of plant-based options by the catering in the sport venue</li> <li>○ separate waste collection (plastic, paper, biowaste) sent to recycling</li> </ul>
Grand Slam Tokyo 2024	<ul style="list-style-type: none"> <li>○ implemented sustainability policy by the sport venue: "Zero Emission Tokyo Strategy"</li> <li>○ implemented sustainability measures by the partnering hotels: waste reduction measures, improvement of waste separation, reusing food ingredients, hosting banquet events using the "CO<sub>2</sub> Zero" concept, using a Green Card System for eco-cleaning to reduce laundry, reduction of single-use plastics in restaurants by complying with the 2022 Plastic Resource Recycling Act, usage of straws made of 30% biomass material, water served in aluminium cans or paper bottles</li> <li>○ separate waste collection (plastic, paper, biowaste) sent to recycling</li> </ul>
Grand Slam Paris 2025	<ul style="list-style-type: none"> <li>○ display of sustainability poster featuring the mascot Kodomo encouraging everyone to do eco-friendly actions</li> <li>○ video broadcast in the sport arena with French team athletes as ambassadors raising awareness on the importance of protecting the planet</li> <li>○ fan engagement - sending an email to ticket holders to inform them about the Corporate Social Responsibility initiatives in place for the Grand Slam along with a guide to be an eco-supporter</li> <li>○ donation of excess food</li> <li>○ collaborating with NGO engaged over water pollution</li> <li>○ judogi pyramid donation initiative - spectators donating their old judogis to judokas from other countries in need (Guatemala, Senegal and Mayotte)</li> </ul>

	<ul style="list-style-type: none"><li>○ partnership with Eau Neuve, a company producing water bottles made from recyclable Tetra Pak</li><li>○ recycling accreditation lanyards</li><li>○ separate waste collection (glass, paper, biowaste) sent to recycling</li><li>○ carbon offsetting of event emissions</li></ul>
World Senior Championships Hungary 2025	<ul style="list-style-type: none"><li>○ increased share of local food</li><li>○ separate waste collection (plastic, paper, biowaste) sent to recycling</li></ul>

## 7. IJF Sustainability activities in 2025

The International Judo Federation has a strong capacity in raising awareness about environmental protection and climate change combat worldwide. Sustainability efforts made by the International Judo Federation over the last years take place on multiple levels:

- Design and implementation of its own sustainability projects and campaigns
- Encouragement of its members to implement concrete measures that positively impact the environment
- Reaching a wider sport audience to make personal progress by educating and supporting sustainable practices

Judo competition organizers worldwide are actively involved in sustainable efforts to minimize the negative impact of event activities on environment and climate. Not all events are currently at the same sustainability level as it highly depends on the possibilities and circumstances of each event. IJF performs activities that highlight the importance of sustainable practices with. As umbrella judo organization, the Federation has a wide reach and each year new opportunities and ideas arise.

### **Activities during 2025:**

ACTIVITY A: [Performing yearly organizational carbon footprint](#) assessment for 2024

ACTIVITY B: [Performing carbon footprint assessment of two competitions in 2025](#) which makes an overall of eight competitions (six locations) covered so far

ACTIVITY C: [Communicating the findings of all competition carbon footprint case studies to National Federations – event organizers](#). The feedback aimed to highlight event climate hotspots, the impact of organizational specifics on emissions, and as a motivation to further explore opportunities for implementing sustainable actions.

ACTIVITY D: [Sustainability messages on the central screen](#) at Zagreb Grand Prix 2025

ACTIVITY E: [Green Dojo certification programme](#) that reward dojos for implementing everyday sustainable practices, on three levels:

1. Gold: Green Dojo Kiai
2. Silver: Green Dojo Zanshin
3. Bronze: Gold Green Seiza

ACTIVITY F: [Organizing COP30 related Mutirao Judo activity](#) in Rio with the Brazilian Judo Confederation and IJF Climate Ambassador Flavio Canto. The program features an open-air judo class, followed by a collective beach clean-up and selective waste collection, in collaboration with Comlurb, Rio's urban cleaning company.

Sport for Climate Action Framework recently presented the updated scopes and impact spheres to the signatories as in Figure 8-1.



Figure 8-1: Proposal for Sustainability & Climate Action Plan for the upcoming period

Activities performed during 2025 within this study relate to the following Scopes/Spheres, summarized in Figure 8-2.



Figure 8-2: Activities performed during 2025 within this study relate to the following Scopes/Spheres

## 8. References

- Ref 1: The Greenhouse Gas Protocol, A Corporate Accounting and Reporting Standard – Revised Edition, World Business Council for Sustainable Development and World Resources Institute, 2004
- Ref 2: GHG Protocol Scope 2 Guidance – An Amendment to the GHG Protocol Corporate Standard, A Corporate Accounting and Reporting Standard, World Resources Institute, 2015
- Ref 3: Corporate Value Chain (Scope 3) Accounting and Reporting Standard – Supplement to the GHG Protocol Corporate Accounting and Reporting Standard, World Business Council for Sustainable Development and World Resources Institute, 2011
- Ref 4: Technical Guidance for Calculating Scope 3 Emissions (version 1.0) – Supplement to the Corporate Value Chain (Scope 3) Accounting & Reporting Standard, World Resources Institute, 2013
- Ref 5: Global Warming Potential Values, Greenhouse Gas Protocol, 2016
- Ref 6: 2006 IPCC Guidelines for National Greenhouse Gas Inventories, 2006
- Ref 7: UK Government GHG Conversion Factors for Company Reporting, 2023
- Ref 8: UK Government GHG Conversion Factors for Company Reporting, 2024
- Ref 9: EIB Project Carbon Footprint Methodologies, 2023
- Ref 10: IOC Carbon Footprint Methodology for the Olympic Games, 2018

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AJJF	All Judo Federation
CF	Carbon Footprint
CH <sub>4</sub>	methane
CO <sub>2</sub>	carbon dioxide
CO <sub>2</sub> e	carbon dioxide equivalent
EIB	European Investment Bank
GHG	Greenhouse Gas
GWP	Global Warming Potential
HFCs	hydrofluorocarbons
IJF	International Judo Federation
IOC	International Olympic Committee
IPCC	Intergovernmental Panel on Climate Change
LCA	Life Cycle Assessment
N <sub>2</sub> O	nitrous oxide
NF <sub>3</sub>	nitrogen trifluoride
NGOs	Nongovernmental Organizations
PFCs	perfluorocarbons
S4CA	Sports for Climate Action
SDG	Sustainable Development Goals
SF <sub>6</sub>	sulphur hexafluoride
WJT	World Judo Tour – a category in the official IJF event calendar available at <a href="https://www.ijf.org/calendar?year=2022&amp;age=world_tour">https://www.ijf.org/calendar?year=2022&amp;age=world_tour</a>