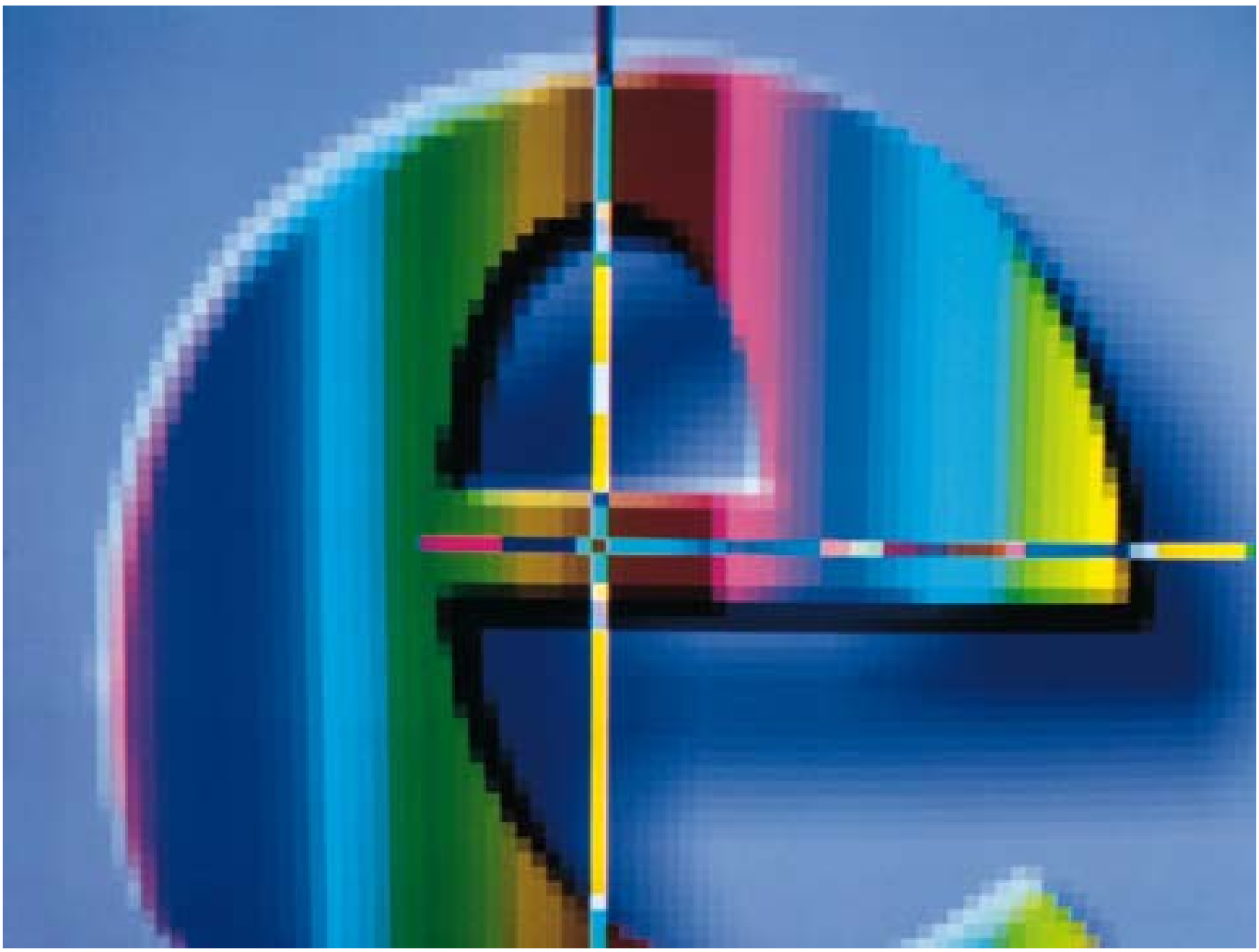
SUPPORTING INTERNATIONAL JUDO FEDERATION DURING IMPLEMENTATION OF THE SPORTS FOR CLIMATE ACTION (S4CA)



EKONERG – Energy Research and Environmental Protection Institute, Ltd.

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SUPPORTING INTERNATIONAL JUDO FEDERATION DURING IMPLEMENTATION OF THE SPORTS FOR CLIMATE ACTION (S4CA)

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CONTENT

1. Introduction

1.1. Climate Change and Sports for Climate Action

Global climate change is one of humanity's greatest challenges of today. Climate change includes global warming (Figure 1-1) driven by human-induced emissions of greenhouse gases (GHG), mostly carbon dioxide and methane. Resulting large-scale shifts in weather patterns cause heat waves and wildfires, expanding of the deserts, glacial retreat and species extinction. Climate change threatens people with food and water scarcity, increased flooding, extreme heat, more disease and economic loss.

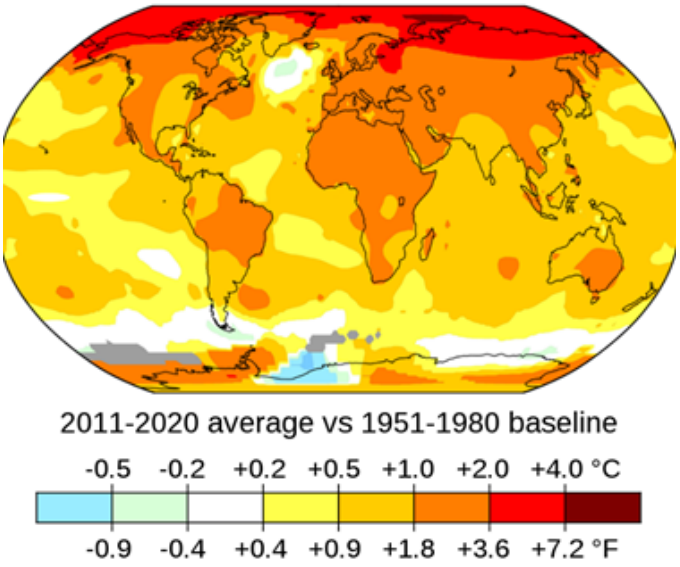


Figure 1-1: Global temperature change[1]

1.1.1. Paris Agreement and Glasgow Conference of Parties

The Paris Agreement is a legally binding international treaty on climate change. It was adopted in 2015 by 196 Parties at COP 21 (Conference of Parties) in Paris and entered into force in 2016. Its goal is to limit global warming to well below 2, preferably to 1.5 degrees Celsius, compared to pre-industrial levels. To achieve this long-term temperature goal, countries aim to achieve a climate neutral world by mid-century (green line in Figure 1-2).

At the United Nations Conference on Climate Change – COP 26, held in Glasgow and concluded on 13th of November 2021, an agreement was reached among 197 parties to the UN Framework Convention on Climate Change. A document entitled the Glasgow Climate Pact was adopted, an agreement that encourages signatories to accelerate the development and application of new technologies and the adoption of policies for the transition to low-emission energy systems.

[1] NASA's Scientific Visualization Studio, 2020

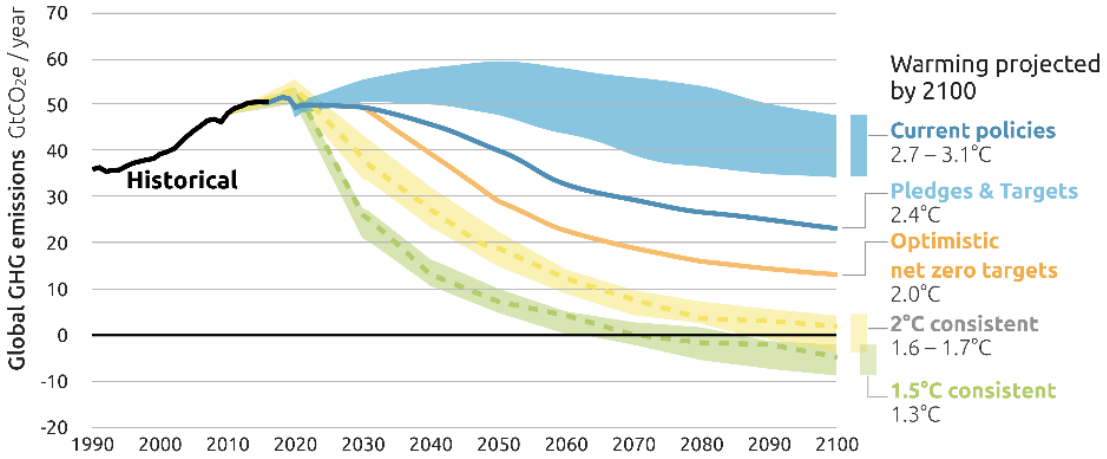


Figure 1-2: Emissions and expected warming based on pledges and current policies[2]

1.1.2. UN Intergovernmental Panel on Climate Change

Intergovernmental Panel on Climate Change (IPCC), United Nations body for assessing the science related to climate change, released latest IPCC Report in August 2021. The report is based on improved observational datasets to assess historical warming while it reflects progress in scientific understanding of the response of the climate system to human-caused greenhouse gas emissions.

The IPCC Report concludes that drastic and rapid action in climate change mitigation is necessary and published the following important findings:

- Strong and sustained reductions in emissions of carbon dioxide (CO_2) and other greenhouse gases would limit climate change.
- Unless there are immediate, rapid and large-scale reductions in greenhouse gas emissions, limiting warming to close to 1.5°C or even 2°C compared to preindustrial era will be beyond reach.

1.1.3. UN Sustainable Development Goals

The 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015 in Paragraph 37 highlights the contribution of **sport** to the achievement of 17 Sustainable Development Goals (SDGs) presented in Figure 1-3, where **Climate Action** is defined as one of the goals (No. 13).

Interpreting the Agenda, the International Olympic Committee (IOC) defines broader fields where sport contributes: health and wellbeing, quality education, gender equality, peace, justice and strong institutions and partnership for **sustainability**. These SDGs for 2030 provide a common framework so that organisations can explain their contribution to sustainable development.

[2] Climate Action Tracker, May 2021

Figure 1-3: UN Sustainable Development Goals (SDGs)

1.1.4. Sports for Climate Action

UN Climate Change Secretariat launched Sports for Climate Action (**S4CA**)[3] to rise climate change awareness and aligning its signatories with ambition set by Paris Agreement. By adopting ambitious targets, sport can help set the pace of climate action for other businesses throughout the world. It also has the power to advocate towards more sustainable lifestyles towards fans, athletes and communities at large.

S4CA consists of two principles:

1. Embedding climate and sustainability considerations at the organisational level.
2. Calls on organisations to:
    a. prepare a strategy for achieving net-zero for their organizations and events,
    b. highlights the hierarchy for action, starting with measuring and understanding environmental impact,
    c. actions to avoid, reduce, and compensate residual emissions.

It is set as an imperative that this hierarchy is followed, as going straight to offsetting does not provide a credible approach to climate action.

Sports for Climate Action includes 5 principles that are presented in the Table 1-1 together with a description of IJF's response to them.

[3] UN Sports for Climate Action Framework, https://unfccc.int/climate-action/sectoral-engagement/sports-for-climate-action

Table 1-1: Sports for Climate Action Principles

Sports for Climate Action Principle	IJF response
1. Undertake systematic efforts to promote greater environmental responsibility	Steps already taken by developing and distributing IJF Event Sustainability Checklist; measures are taken to lower the climate and environmental impact of two sport events presented in this Study
2. Reduce overall climate impact	IJF is at the beginning of this journey but keen to align with Paris Agreement goals
3. Educate for climate action	IJF is already performing education on sustainability and climate action and plans to perform such activities even more in the future
4. Promote sustainable and responsible consumption	Sustainability and care for the environment are being highlighted on websites, media, social media and during sport events
5. Advocate for climate action through communication	Climate action is actively communicated

1.2. Scope of the Study

IJF has committed to reduce its climate impact as a signature of UN S4CA pledge. To make a progress in terms of GHG emission reduction, the first necessary step was measuring the carbon footprint of the IJF activities.

A carbon footprint by definition is the total greenhouse gas (GHG) emissions caused by an individual, **event**, **organization**, service, place or product expressed as carbon dioxide equivalent. Greenhouse gases can be emitted through the burning of fossil fuels, production and consumption of food, manufactured goods, materials, wood, roads, buildings, transportation and other services.

The approach of measuring GHG emissions is very much in line with S4CA principles where it is stated that hierarchy should be followed **starting with measuring and understanding environmental impact**, as going straight to carbon offsetting[4] (more details in Chapter 5) does not provide a credible approach to climate action and should be used as the last possible measure.

In order to comply with S4CA initiative and taking into consideration rather general information provided by UN S4CA officers, the approach that IJF and EKONERG as consulting company decided on is visually presented in Figure 2-1. This approach is in line with GHG Protocol[5] and customized for a sport federation such as IJF to include in a meaningful way the activities that are under control by IJF or supported by it. Details on applied methodology are described in Chapter 2.

Chronological, the first step of carbon footprint assessment included measurement of **Zagreb Grand Prix GHG emissions** which took place in September 2021. This event served as a carbon footprint pilot project for IJF supported events. The methodology and results are presented in Chapter 3.1. Overall emissions from this event supported by IJF were categorized as IJF Scope 3 emission category: Franchise.

The following activity included the **carbon footprint** calculation of another IJF supported sport event during 2022 – the **Grand Slam Hungary** (Chapter 3.2). This assessment together with Zagreb Grand Prix carbon footprint was used to perform a rough estimation of emissions from all IJF events in 2022 presented in Chapter 3.6.

The third separate GHG emission assessment described in Chapter 3.3 is the assessment **of IJF headquarters (HQ) GHG emissions** in year 2021. These emissions are in fact yearly carbon footprint of IJF as an organization. This assessment included emissions related to three IJF office locations (Budapest, Paris and Abu Dhabi) and business travel of IJF employees and contractors. Year 2021 was selected as base year for IJF GHG emissions.

[4] Carbon offset schemes allow individuals and companies to invest in environmental projects around the world in order to balance out their own carbon footprints.

[5] The Greenhouse Gas Protocol, A Corporate Accounting and Reporting Standard – Revised Edition, World Business Council for Sustainable Development and World Resources Institute, 2004

Although event carbon footprint assessments are an important step in understanding broader impact of IJF community, **for setting IJF reduction goals, only yearly GHG emissions from IJF activities shall be included.**

The reason behind this is that IJF should not make claim on emissions that result from tournaments that are supported by IJF but are organized by IJF member National Federations. Emissions from IJF employees and contractors' activities related to sport events are already included in yearly IJF carbon footprint assessment.

IJF will continue to perform sustainability actions to make events more Environmental and Climate friendly as it is representing the whole judo community.

Draft roadmap for emission reduction until 2030 that is in compliance to S4CA initiative is presented in Chapter 4.

An overview on the topic of carbon offseting is given in Chapter 5. Some examples of climate action from other sport organizations and sport events are presented in Chapter 6.

Finally, as the majority of this Study is focused on Climate Action, an overview was given on IJF Event Sustainability Checklist and **sustainability** activities that include broader environmental aspects, presented in Chapter 7 with final study recommendations given in Chapter 8.

2. Methodology

In order to conduct carbon footprint and environmental aspects assessment of satisfactory quality, accurate input data are necessary. Based on activity data, GHG emissions are calculated according to GHG Protocol as internationally standardized approach for carbon footprint calculation.

A carbon footprint by definition is the total greenhouse gas (GHG) emissions caused by an individual, **event**, **organization**, service, place or product expressed as **carbon dioxide equivalent (CO_2e)**. Greenhouse gases can be emitted through the burning of fossil fuels, manufacturing goods, production and consumption of food and other.

2.1. Explanation of Scopes

GHG Protocol establishes a comprehensive global standardization framework for the quantification and management of greenhouse gas emissions from business operations, value chains and emission reduction actions in private and public sectors. The Protocol was created in the late 1990s as a result of a partnership between the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD). The founders of the Protocol established cooperation around the world with governing bodies, industry associations, non-governmental organizations, business and other organizations.

GHG Protocol is the most commonly used document worldwide as a guidance for determining carbon footprint. It's concept of dividing all GHG emissions into Scope 1, Scope 2 and Scope 3 emissions is generally accepted. According to the GHG Protocol, requirements for publicly disclosing data on GHG emissions are met if a subject reports at least the emissions covered by Scope 1 and the emissions covered by Scope 2. This concept is in line with S4CA document where it is stated that signatories are requested to measure their GHG emissions assessing Scope 1 and Scope 2, and as much as possible, Scope 3.

Explanations of scopes:

- **Scope 1 emissions** refer to direct emissions from owned or controlled sources, such as emissions from own vehicles;
- **Scope 2 emissions** refer to emissions that occurred during generation of consumed electricity or heat;
- **Scope 3 emissions** is an optional reporting category that refers to all other indirect emissions that occur in the value chain, such as travelling by airplane, emissions from generated waste, etc.

Emission sources categorization by Scopes for sport organizations and events is prepared by S4CA initiative and presented in Table 2-1.

Table 2-1: Emission sources by categories for Sports Organization and Sport Events from S4CA

Category	***Sports Organization***	***Sport Events***
Scope 1 *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
Scope 2 *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)
Scope 3 *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	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 (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.	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.

2.2. Compliance with GHG Protocol and S4CA

As previously mentioned, the approach taken in this Assessment is in line with GHG Protocol with customization for a sport organization and in accordance with S4CA guidelines. Customized Scopes allocation for IJF carbon footprint assessment is presented in Figure 2-1.

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

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

Greenhouse gases covered by GHG Protocol include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF_6) and nitrogen trifluoride (NF_3). Identified emission of the following greenhouse gases caused by IJF activities include: CO_2, CH_4, N_2O and HFCs.

Global Warming Potentials (GWP) of each greenhouse gas were taken from the AR5 report[10] of the Intergovernmental Panel on Climate Change published in 2015 in order to express the overall emissions as carbon dioxide equivalent (CO_2e), in accordance with the recommendations of the GHG Protocol.

For Scope 2 emissions related to consumption of electricity, according to GHG Protocol it is necessary to determine both location-based and market-based approach emissions. None of the organizations and buildings (sport halls, hotels) included in this Study applied electricity purchase with renewable energy certificates or via special power purchase agreements. Therefore, figures presented as Scope 2 emissions related to electricity purchase are applicable for both approaches.

Scope 3 emission sources included in this Study cover the emissions that make large part of overall Scope 3 emissions. Some Scope 3 categories which were estimated not to have significant impact on the total emissions have not been included in the inventory mostly due to unavailability of activity data or due to current IJF inability to collect the data since it would require significant human and time resources. In the Table 2-2 an overview is given of all 15 Scope 3 categories according to Corporate Value Chain (Scope 3) Accounting and Reporting Standard.

[6] 2006 IPCC Guidelines for National Greenhouse Gas Inventories, 2006

[7] UK Government GHG Conversion Factors for Company Reporting, 2021

[8] EIB Project Carbon Footprint Methodologies, 2020

[9] IOC Carbon Footprint Methodology for the Olympic Games, 2018

[10] Climate Change 2014: Synthesis Report, Contribution of Working Groups I, II, III and IV to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, IPCC, 2015

Table 2-2: Overview of Scope 3 GHG Protocol categories

	Category	IJF
1	*Purchased Goods and Services*	Category not included in the inventory due to current inability to collect data. It is estimated that these emissions are not a significant emission source.
2	*Capital goods*	Category not included in the inventory – the organization had not invested in capital goods during 2021.
3	*Fuel- and energy- related activities (not included in scope 1 or scope 2)*	Energy related GHG emissions are included in Scope 1 (natural gas combustion for heating at one location) and Scope 2 (electricity consumption at three locations). Scope 3 emissions from used energy sources are not included in this assessment.
4	*Upstream transportation and distribution*	IJF as non-production organization does not purchase significant amounts of materials or products. For those products that are purchased systematized data are currently unavailable. This category is not included in the inventory.
5	*Waste generated in operations*	IJF offices are settled in three different countries, all with different regional/national waste management system. Data on waste generation are currently unavailable for each site with estimate that their yearly amount and corresponding GHG emissions do not make a significant source of Scope 3 emissions.
6	*Business travel*	This category is included in the assessment and is recognized as the most significant IJF Scope 3 category.
7	*Employee commuting*	Data are currently unavailable. Most of the employees live close to the place of work or work from home-offices. Majority of professional travel refers to travelling to other cities and countries that is included under Category 6.
8	*Upstream leased assets*	N/A
9	*Downstream transportation and distribution*	N/A
10	*Processing of sold products*	N/A
11	*Use of sold products*	N/A
12	*End-of-life treatment of sold products*	N/A
13	*Downstream leased assets*	N/A
14	*Franchises*	In this assessment sport events are labelled as Category – Franchises to adapt organizational circumstances to general GHG protocol categories. By definition, a franchise is a business operating under a licence to sell or distribute another company's goods or services. In this sense, World Judo Tour competitions can be placed under such category because they are organized by local organisers (IJF member National Federations) with the support from IJF as roof organization.
15	*Investments*	N/A

Figure 2-1: IJF emission Scopes overview

3. Carbon footprint Assessment

3.1. Grand Prix Zagreb 2021

In 2021 following the sustainable development policy of the IJF and the IOC, Croatian Judo Federation initiated Zagreb Grand Prix to become a first sustainable sport event with performing carbon footprint assessment in Croatia. Importance is given to the environmental aspect of the tournament by carefully designing activities prior to the event.

The aims of the performed assessment included:

2. Event Carbon footprint calculation
3. Evaluation of other event environmental aspects and their effect on Climate

Determining carbon footprint of a single sport event was an excellent starting point in addressing the climate change issue in judo community and was acknowledged as the basis for further IJF activities on Climate Action.

3.1.1. Event description

Zagreb Grand Prix 2021 was held from 24th to 26th of September 2021 in Arena Zagreb sport venue. Overall 243 competitors participated in the tournament from 35 different countries and 4 continents[11]. For the whole judo community, this event was of big importance as it was very first judo event after the Tokyo 2020 Olympic games in the challenging pandemic times.

Following the sustainable development policy of the IJF and the IOC, the organising committee of the Zagreb Grand Prix made an effort to host an environmentally friendly event. Croatian Judo Federation announced this event as “ecologically friendly Grand Prix”[12,13] and “a real platform to promote a more sustainable and united vision of the future”[14]. A poster shown in Figure 3-1 was presented at the event to promote the event sustainability aspect.

[11] https://www.ijf.org/competition/2253

[12] https://www.ijf.org/news/show/zagreb-grand-prix-will-be-environmentally-friendly

[13] https://www.ijf.org/news/show/it-s-possible

[14] https://www.ijf.org/news/show/it-s-our-responsibility-to-preserve-our-environment

Figure 3-1: Poster for promoting recycling prepared by Croatian Judo Federation

During the Grand Prix recycling boxes were installed (Figure 3-2) to collect paper, plastic bottles and plastic caps in the hall and at the info desks. At the end of the event a financial compensation was received from recycling facilities and the obtained money was used for purchasing the sportswear for young judoka in the Judo Club for people with disabilities. Excess food was donated to the children without adequate parental care.

Figure 3-2: Recycling boxes installed in the sport venue

3.1.2. Setting GHG inventory boundaries

Zagreb Grand Prix GHG emission sources that were identified and included in this assessment are presented in the Table 3-1. Explanation of scopes provided by S4CA in Table 2-1 is interpretated in a way that travel of athletes should be included, although

it states generally 'air travel by the organizers and fans'. Travel of athletes and their team members make a significant part of the overall event emissions.

Table 3-1: Identified GHG emission sources of Zagreb Grand Prix

Emission source	Description	Category
Transport during event	Transport of Grand Prix participants during the event using vehicles under the control of the organizer	Scope 1
Hotel energy demand	Emission from fuel combustion in the hotel	Scope 1
	Emission that occurred during generation of electricity and heat consumed by the hotel	Scope 2
Sport venue energy demand	Emission that occurred during generation of electricity consumed by the sport venue	Scope 2
Transport to and from event city	Transport of Grand Prix participants in their own arrangement to and from Zagreb	Scope 3
Food supply chain	Supply chain emissions from consumed/prepared food	Scope 3
Generated waste*	Emissions from Waste management	Scope 3

* Emissions from waste were excluded from carbon footprint assessment due to incomprehensible input data and are included in the Chapter 3.1.5 Environmental assessment – Impact of sustainable activities on Climate

Leakage of refrigerants from cooling equipment in hotel and sport venue was assessed as negligible during the few days of competition.

3.1.3. Data collection

For the purpose of calculating tournament carbon footprint, the following questionnaires were prepared and distributed to event organizer and entities of interest:

1. Information on travelling of participants to and from Zagreb
2. Information on transport during the tournament
3. Information on sport venue energy demand
4. Information on hotel energy demand
5. Information on prepared food ingredients and quantities
6. Information on separately collected waste by type

3.1.4. GHG emissions sources

<u>Transport during event – Scope 1 emission category</u>

Emissions from transport include usage of vehicles controlled by the organizer of the event for short trips through Zagreb. Vehicles used included:

- Cars powered by gasoline
- Vans powered by diesel

- Buses powered by diesel

Hotel energy demand – Scope 1 and Scope 2 emission category

All participants with only few exceptions stayed at the Westin hotel. Emissions from hotel Westin include direct GHG emissions from natural gas combustion (Scope 1) and indirect GHG emissions from imported electricity and heat (Scope 2). Since the hotel doesn't measure its carbon footprint nor carbon intensity (CO_2e/stay) no prepared data could have been applied in this assessment. Emission calculation based on activity data of hotel energy consumption had to be performed. The data received from hotel in fulfilled questionnaire related to overall consumption in September 2021 from which the consumption during the event was calculated.

Sport venue energy demand – Scope 2 emission category

Indirect emissions from sport venue Arena Zagreb refer to the consumed electricity. No fuel combustion was taking place in the hall during the event.

Transport to and from event city – Scope 3 emission category

Grand Prix foreign participants arrived in Zagreb by airplane or by car. From 461 tournament participants who stayed at the hotel:

- 130 arrived by car from different countries: data included cities/countries of departure/arrival,
- 267 arrived by airplane from different countries: available data on flights to Zagreb, data on starting point of connected flights and return trip were mainly assumed based on participant nationality and
- 64 were local participants who haven't travel significant distances to reach the hotel: data were excluded from the calculation.

Outsourced services during the organization were performed by local firms and their impact wasn't assessed due to unavailability of data and based on the assumption that their impact is not significant.

Food supply chain – Scope 3 emission category

Life Cycle Assessment (LCA) of GHG emissions from food was included in this Study as an indirect emission source. It is known that for the production of certain types of food, i.e. ingredients, much more resources are needed compared to production of the same amount of different food type. For instance, a kilogram of beef is followed by emission of approx. 40 CO_2e, while obtaining a kilogram of poultry or tofu is followed by emission of approx. 6 CO_2e and 3 CO_2e, respectively.

Emissions related to the following value chain stages of food production (Figure 3-3) were included in the assessment:

- Land use
- Farming
- Animal feed production

- Processing
- Packaging
- Transport
- Retail

Figure 3-3: Food production value chain stages included in the emission calculation

Emissions from food waste treatment were excluded from life-cycle emissions, as they are presented as a separate category together with other waste types in the following chapter.

3.1.5. Environmental assessment – Impact of sustainable activities on Climate

GHG emissions from several waste categories were assessed as a Scope 3 emission category but not added to other data in carbon footprint figures because of lack of input data on all waste types (such as generated amounts of mixed municipal waste). The amounts of separately collected waste types were available and therefore it was decided to present these avoided emissions as a separate environmental category. Overview includes the impact from different waste management options, e.g. how would emissions differ if collected paper was sent to landfill instead of recycling facility. It should be highlighted that absolute values of GHG emissions from overall generated waste during the event have a negligible impact on total event carbon footprint.

Waste categories with determined quantities and with known waste stream include:

- organic waste/food leftovers sent to composting
- organic waste/food leftovers sent to landfill
- separate collection of plastic bottles sent to recycling facilities
- separate collection of recyclable plastic bottle caps
- separate collection of paper sent to recycling facilities

Figure 3-4: Waste management/recycling

The Organization Committee of the Zagreb Grand Prix successfully combined care for the environment and humanitarian contribution.

There is a special attention given to the issue of food loss and food waste by the World Resources Institute. In 2016 the Food Loss and Waste Accounting and Reporting Standard was published. It states that minimizing food loss and waste can provide economic benefits, enhance food security, improve natural resource use efficiency, and reduce environmental impacts. Initiative taken at Grand Prix Zagreb for donating excess of food is in line with relevant global initiatives of avoiding food waste with reducing different negative environmental impacts. The impact of this action on avoidance of GHG emissions is here assessed.

Donation of food

Total amount of 385 kg of food was donated. Lunch boxes that remained after each day of the tournament were sent to the Home for Children Zagreb association. Beside its humanitarian character, this action also benefits the environment. If this amount of food had been sent to landfill it would generate around 240 kg of CO_2e. With this initiative, more food was consumed fulfilling its primary purpose while avoiding GHG emission since its waste phase emissions were eliminated from life cycle.

Plastic bottle caps donation and recycling

Total of 1900 plastic bottle caps were separately collected and donated to the Association of Leukemia and Lymphoma Patients of Croatia as a contribution to the humanitarian action "Plastic caps for expensive medicines". By further selecting and selling the caps, the Association aims to raise money for treatment, family stays near treatment sites and financing the necessary medicines by separating waste while protecting the environment at the same time.

Plastic bottles and paper waste

Total of 1200 plastic bottles used for distributing the water for participants was separately collected. Around 40 kg of paper waste was collected. Refund received for

bringing the plastic bottles and paper to recycling system was donated for purchasing the sportswear for young judoka of Centre for Education Velika Gorica within which the Judo Club for People with Disabilities "Fuji" operates.

GHG emissions that occur during recycling of the paper to produce the same product, i.e. recycled paper are significantly lower compared to emissions that take place on landfill during degradation of paper. Generated emissions from recycling process make only around 2% of potential landfill emissions which clearly indicates the benefits of so called closed-loop[15] paper recycling.

As for GHG emissions from plastic waste management, the situation is somewhat different. Since plastic is inert material with low degradation rate, its landfill life is long with relatively low associated GHG emissions. Per tonne of plastic waste, recycling process emits around 12 kg of CO_2e more compared to disposal on a landfill. However, production process of one tonne of PET[16] product from virgin stock emits around 900 kg of CO_2e more compared to production from recycled material, which strongly gives preference to recycling as a more suitable plastic waste management option compared to landfill disposal.

Biowaste

Food waste related to event activities was partly recycled. 150 kg of waste from food preparation for event participants was separately collected as biowaste and has been sent to composting process. Estimation suggests that it will emit only around 1 kg of CO_2e. Compared to GHG emissions that would occur if the same amount of waste was sent to landfill, it results in significant emission avoidance of around 98%. Around 120 kg of kitchen waste was sent to landfill with expected GHG emissions of around 75 kg of CO_2e.

3.1.6. Public presentation of results

The Conference on sustainable development of sports organized by Croatian Judo Federation was held in March 2022 in Zagreb. Main topic of the event was sustainable development in sports.

Study on measuring carbon footprint performed for the IJF World Tour Zagreb Grand Prix 2021 was presented during the conference.

Challenges and issues of sustainable development achieved through sports were discussed at the conference involving representatives of other sports organizations and representatives of institutions and corporations. The discussion showed that this topic is extremely interesting for the entire sports environment and that there is a need for similar events advocating sustainability and fighting climate change in sports.

[15] Closed-loop recycling is the process of recycling material back into the same product.

[16] Polyethylene terephthalate

The event welcomed high-ranking guests from the sports and the government and it was covered by the media[17,18,19,20,21,22].

[17] https://sport.hrt.hr/ostali-sportovi/judo-vise-od-sporta-6140754

[18] https://www.jutarnji.hr/vijesti/hrvatska/judo-nije-samo-sport-to-je-pokret-za-bolje-drustvo-15171406

[19] https://www.hoo.hr/hr/hrvatski-olimpijski-odbor/nacionalni-sportski-savezi/105-savezi-olimpijskih-sportova/hrvatski-judo-savez/7133-sanda-corak-bez-odrzivog-razvoja-sporta-nema-niti-buducnosti-drustva

[20] https://judo.hr/new/2313

[21] https://www.ijf.org/news/show/sustainability-sport-and-society

[22] https://www.eju.net/sanda-corak-without-the-sustainable-development-of-sports-there-is-no-sustainable-future-for-society/

3.2. Grand Slam Hungary 2022

Followed by the carbon footprint assessment of the event in Zagreb, IJF decided to perform another assessment for one event in year 2022. Grand Slam Hungary held in Budapest from 08th to 10th of July 2022 was selected as the second case-study.

3.2.1. Event description

Overall 405 competitors participated in the tournament from 61 different countries. Compared to Grand Prix Zagreb, this event was larger and its participants stayed in overall 6 hotels.

IJF developed Sustainability Checklist (details in Chapter 5) that serves as a guideline for every judo event organizer. In line with the checklist, organizer performed activities to increase the sustainability level of the event such as providing reusable drinking cups for the visitors and purchasing reusable large billboard for the sport venue.

Prior to the event, recommendations for decreasing carbon footprint were given to the contractors to raise awareness about their own impact on the event greenhouse gas (GHG) emissions. Tips included:

- for catering services and hotels: preference should be given to plant-based meals as they have lower climate impact
- for the organized transport service: transport around the city should be optimized to the highest possible level and, if applicable, preference should be given to the use of electric and hybrid vehicles

3.2.1. Setting GHG inventory boundaries

Grand Slam Hungary GHG emission sources that were identified and included in this assessment are presented in Table 3-2.

Table 3-2: Identified GHG emission sources of Grand Slam Hungary

Emission source	Description	Category
Transport during event	Transport of Grand Slam participants during the event using vehicles under the control of the organizer	Scope 1
Hotel energy demand	Emission from fuel combustion in the hotels	Scope 1
	Emission that occurred during generation of electricity consumed by hotels	Scope 2
Sport venue energy demand	Emission that occurred during generation of electricity consumed by the sport venue	Scope 2
Transport to and from event city	Transport of Grand Slam participants in their own arrangement to and from Budapest	Scope 3
Food supply chain	Supply chain emissions from consumed/prepared food	Scope 3

Leakage of refrigerants from cooling equipment in hotel and sport venue was assessed as negligible during few days of tournament.

Emissions from waste were not included since no data on amount of waste produced and the waste management were available.

Fans travel was not included due to unavailability of data. Visitors were mainly local and this impact venue was assessed as negligible.

3.2.2. Data collection

For the purpose of calculating tournament carbon footprint, the following questionnaires were prepared and distributed to entities of interest or fulfilled by the event organizer:

1. Information on travelling of participants to and from Budapest
2. Information on transport during the tournament
3. Information on sport venue energy demand
4. Information on hotels energy demand
5. Information on prepared food ingredients and quantities

3.2.3. GHG emissions sources

Transport during event – Scope 1 emission category

Emissions from transport include usage of vehicles controlled by the organizer of the event for short trips through Budapest. Vehicles used included:

- Shuttle buses powered by diesel
- Rented cars powered by diesel
- Rented cars powered by gasoline

Hotel energy demand – Scope 1 and Scope 2 emission category

Participants stayed in six hotels presented in Table 3-3.

Table 3-3: Hotels that accommodated Grand Slam Hungary participants

Hotel name	Category*	Number of participants
Danubius Hotel Arena	Luxury hotel (4 stars)	370
Hotel Hungaria City Center	Luxury hotel (4 stars)	346
Lion's Garden Hotel	Luxury hotel (4 stars)	59
InterContinental Budapest	Luxury hotel (4 stars)	52
Ibis Styles	Medium hotel (3 stars)	50
Ensana Thermal Margitsziget	Luxury hotel (4 stars)	12

* Important for default emission factors

Emission calculation based on activity data of hotel energy consumption had to be performed since none of the hotels measure its carbon footprint or carbon intensity (CO_2e/stay). Two hotels provided information on exact electricity and natural gas consumption during the days of event and these data were used for the carbon footprint calculation. For the other four hotels, default electricity and natural gas consumptions per stay depending on hotel category[23] were used.

Sport venue energy demand – Scope 2 emission category

Indirect emissions from sport venue Sport Arena refer to the consumed electricity. No fuel combustion was taking place in the hall during the event. The data on electricity consumption during the days of event were received from the venue management.

Transport to and from event city – Scope 3 emission category

Transport to and from Budapest of participants from abroad was conducted by airplane, cars, buses, vans, and train.

Data from local participants and local partners/contractors were not collected and it is assumed that their impact on event carbon footprint is insignificant.

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 in accordance to previously described life cycle stages of food in Chapter 3.1.4. Detailed data were collected from sport venue catering and for hotels, default emission factors per meal were used.

[23] Source: IOC Carbon Footprint Methodology for Olympic Games, 2018

3.3. IJF Headquarters 2021

3.3.1. Description of organization

With joining the S4CA initiative, IJF selected 2021 as the first year for GHG emission reporting and therefore a base year to which all of the future emissions will be compared to.

Also, 2021 was selected because the organizational situation changed a lot compared to 2020. Since January the 1st 2020 IJF moved its legal seat and main headquarters to Budapest while the IJF headquarters in lausanne, Switzerland were closed and sold. Beside this organizational change, year 2020 was marked by pandemic conditions with significantly reduced office time use and very few events and travels.

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

1) **Budapest**:
    a) Presidential office
    b) Headquarter offices
    c) Flat
2) **Paris**: General Secretariat
3) **Abu Dhabi**: General Treasury

3.3.2. Setting GHG inventory boundaries

All the IJF activities in the context of GHG emissions were scanned and discussed for each separate location and for the organization as a whole. Identified and included emission sources are presented in Table 3-4. Scope 1 and Scope 2 emissions were identified and included in the inventory as mandatory categories according to GHG Protocol. Scope 3 emissions were recognized and discussed (Chapter 2.2., Table 2-2). It was decided to include emissions from business travel by IJF employees and contractors. This emission source makes a significant share in overall emissions and was therefore included in this assessment according to S4CA requirements.

Table 3-4: Identified GHG emission sources of IJF

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

Electricity consumption – location Paris	Emission that occurred during generation of electricity or heat consumed by the office	Scope 2
Electricity consumption – location Abu Dhabi	Emission that occurred during generation of electricity or heat consumed by the office	Scope 2
Airplane flights	Emissions from airplane flights by IJF employees and contractors in 2021	Scope 3
Van rented by IJF	Emissions from operating rented van by IJF in Budapest	Scope 3

Emissions from airplane flights include flights from IJF employees and contractors and those tickets were paid by IJF – financial control approach according to GHG Protocol.

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

3.3.3. Data collection

Activity data were provided by the IJF. Electricity consumption was exported from the monthly invoices for each location as was natural gas consumption from flats in Budapest. Each location delivered detailed information about cooling equipment they use. Yearly GHG emissions from HFC leakage were estimated based on cooling equipment type and refrigerants used according to IPCC Guidelines. Emissions from diesel combustion in van rented by IJF were calculated based on activity data on yearly diesel consumption and according to IPCC methodology.

Data for airplane flights were obtained from flight tickets for each passenger. From the flight routes (all flights: direct and transfer) distance in kilometres was determined and emissions were calculated based on emission per passenger-kilometre which differentiate for Economy, Business and First class tickets.

3.3.4. GHG emissions sources

Premises energy demand – Scope 1 and Scope 2 emission category

Indirect emissions (Scope 2) refer to the consumed electricity on all locations. Scope 1 emission is related to combustion of natural gas in boilers of the Presidential office, headquarters and one flat in Budapest.

HCF leakage from cooling equipment – Scope 1 emission category

All locations provided information on cooling equipment and refrigerant gases used. 13 air conditioners and 1 refrigerator use refrigerant gases with global warming potential (R-32 and R-134a). Annual leakage estimate in amount of 0.5%w is used for emission assessment, according to equipment size category. 7 refrigerators already contain newer generation of refrigerant gases with zero climate impact (R-600a).

Business travel – Scope 3 emission category

Majority of IJF yearly GHG emissions comes from airplane flights. Overall 3024 one-way flights connected to 14 events in 2021 data were analysed and the corresponding GHG emissions were assessed. Used emission factors differ by ticket class (Economy/Business/First). Processed data included all IJF employees as well as its contractors whose tickets were paid by IJF. The results per event are presented in Figure 3-5. Additionally, the emissions from one rented van were included in this category.

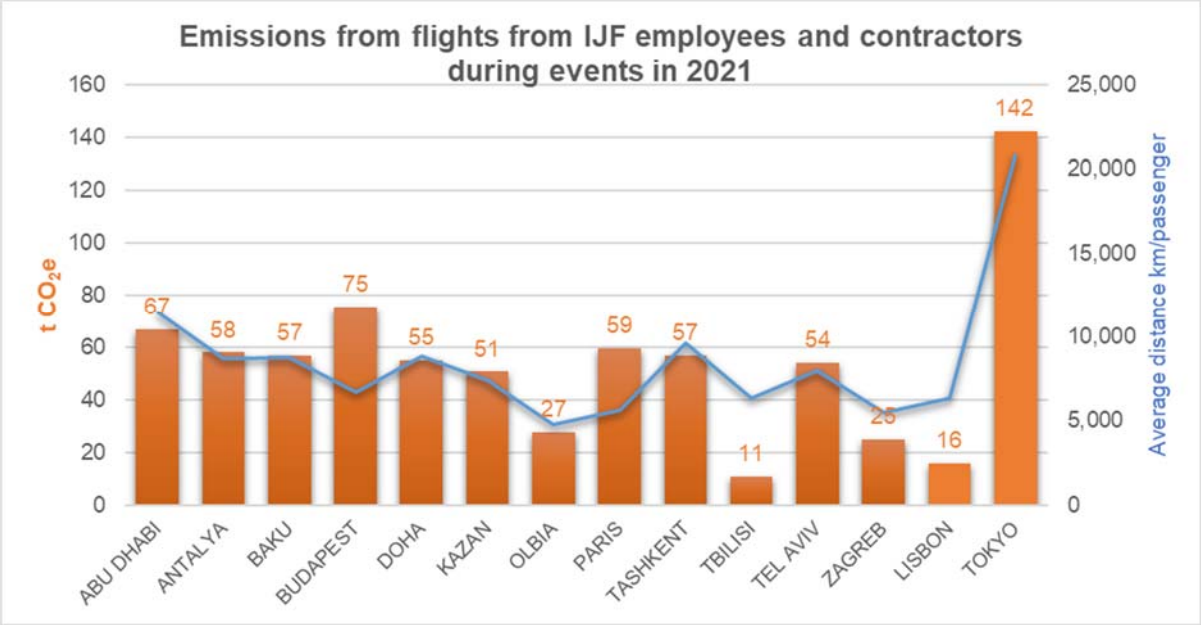


Figure 3-5: GHG emissions from IJF employees and contractors' flights during events in 2021

3.4. Results

The results of GHG emission calculation performed within this Study included carbon footprint assessment of two sport events and yearly GHG inventory for IJF as an organization. Results from carbon footprint assessment of Grand Prix Zagreb 2021, Grand Slam Hungary 2022 and IJF as Sport organization are presented in Table 3-5, Table 3-6 and Table 3-7, respectively.

Table 3-5, Table 3-6 and Table 3-7 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 2-1) according to GHG protocol categorization,
- scope within overall IJF CF assessment also according to GHG protocol but adjusted for sport organization where sport event CF is classified as a Scope 3 category 14 – Franchises,
- GHG emission of each emission source (t CO_2e),
- total GHG emission per assessment segment (events / IJF sport organization).

The share of emissions from each activity is graphically presented in Figure 3-6.

It can be seen from the presented data that carbon footprint from Grand Prix Zagreb was lower compared to carbon footprint from Grand Slam Hungary. It wasn't unexpected because the first event was smaller by size. 243 athletes competed in Zagreb and 405 athletes in Budapest. As the number of athletes on the event increases there is also an increase of:

- the number of other team members that arrive to the event (higher transport emissions for arrival and departure from event city),
- the number of stays in hotels (higher emissions caused by hotel energy demand assigned to event participants),
- frequency of transport during event.

Estimation of GHG emissions from all IJF events is presented in the Chapter 3.6.

Table 3-5: Carbon footprint assessment of Grand Prix Zagreb 2021

CARBON FOOTPRINT ASSESSMENT SEGMENT	*Time period covered by the GHG inventory*	*Activities that result in GHG emissions*	*Identified emissions sources*	*Activity data*	*Activity data uncertainty*	*Scope per each CF assessment segment*	*Scope within overall IJF CF assessment*	*t CO_2e*	***t CO_2e TOTAL***
Sport event CF: Grand Prix Zagreb	24 - 26 of September 2021	Organized transport during event	Gasoline combustion in cars	fullfiled via questionnaire by event organizers	low	Scope 1	Scope 3	1.27	**199**
			Diesel combustion in vans and buses		low	Scope 1	Scope 3		
		Hotel energy consumption	Natural gas combustion	consumption fullfiled via questionnaire by hotel management	low	Scope 1	Scope 3	7.66	
			Imported electricity and heat		low	Scope 2	Scope 3	8.23	
		Sport venue energy consumption	Imported electricity	consumption fullfiled via questionnaire by venue management	low	Scope 2	Scope 3	7.89	
		Transport of participants and staff to and from event city	Gasoline combustion in cars	data provided by event organizers	medium	Scope 3	Scope 3	22.25	
			Fuel combustion in airplanes	data partly provided by event organizers, data gaps on routes were assumed based on participants home-countries	high	Scope 3	Scope 3	126.64	
		Meals served in hotel and by catering service in the sport venue	Food supply chain emissions	fullfiled via questionnaire by hotel management and catering service	low	Scope 3	Scope 3	25.11	

Table 3-6: Carbon footprint assessment of Grand Slam Hungary 2022

CARBON FOOTPRINT ASSESSMENT SEGMENT	*Time period covered by the GHG inventory*	*Activities that result in GHG emissions*	*Identified emissions sources*	*Activity data*	*Activity data uncertainty*	*Scope per each CF assessment segment*	*Scope within overall IJF CF assessment*	*t CO_2e*	***t CO_2e TOTAL***
Sport event CF: Grand Slam Hungary	08 - 10 of July 2022	Organized transport during event	Diesel combustion in shuttle buses	fullfiled via questionnaire by event organizers	low	Scope 1	Scope 3	4.56	**375**
			Gasoline combustion in rented cars		low				
			Diesel combustion in rented cars		low				
		Hotels energy consumption	Imported electricity and heat	2 out of 6 hotels delivered detailed data on energy consumption, default emission factors were used for other 4 hotels	medium	Scope 2	Scope 3	15.42	
			Natural gas combustion			Scope 1		4.9	
		Sport venue energy consumption	Imported electricity	consumption fullfiled via questionnaire by venue management	low	Scope 2	Scope 3	23.64	
		Transport of participants and staff to and from event city	Fuel combustion in cars	mostly fullfiled via questionnaire by event participants and event organizer, partly assumed routes based on participants home-countries	medium	Scope 3	Scope 3	1.53	
			Fuel combustion in bus			Scope 3		1.35	
			Fuel combustion in minibus			Scope 3		0.45	
			Fuel combustion in airplanes			Scope 3		292.92	
			Train			Scope 3		0.002	
		Meals served in hotel and by catering service in the sport venue	Food supply chain emissions - hotels	emission calculated by default emission factors per meal per person	medium	Scope 3	Scope 3	18.59	
			Food supply chain emissions - sport venue	fullfiled via questionnaire by catering service	low	Scope 3		11.66	

Table 3-7: Carbon footprint assessment of Sport organization International Judo Federation for the year 2021

CARBON FOOTPRINT ASSESSMENT SEGMENT	*Time period covered by the GHG inventory*	*Activities that result in GHG emissions*	*Identified emissions sources*	*Activity data*	*Activity data uncertainty*	*Scope per each CF assessment segment*	*Scope within overall IJF CF assessment*	*t CO_2e*	***t CO_2e TOTAL***
Sport organization CF: International Judo Federation	Calendar year 2021	Offices energy consumption	Natural gas combustion	fullfiled via questionnaire by IJF (total cost divided by unit price)	low	Scope 1	Scope 1	9.1	**793**
			Imported electricity	fullfiled via questionnaire by IJF (total cost divided by unit price)	low	Scope 2	Scope 2	30.33	
		Offices air conditioning	Estimate of yearly HCF leakage	data on equipment and refrigerant gas fullfiled via questionnaire by IJF	low	Scope 1	Scope 1	0.04	
		IJF employees and contractors business flights*	Fuel combustion in airplanes	flight tickets were provided by IJF	low	Scope 3	Scope 3	753.09	
		Transportation by rented van	Diesel combustion in van	fullfiled via questionnaire by IJF	low	Scope 3	Scope 3	0.78	
		** Emissions include flights of IJF employees and contractors and those tickets were paid by IJF – financial control approach according to GHG Protocol*							

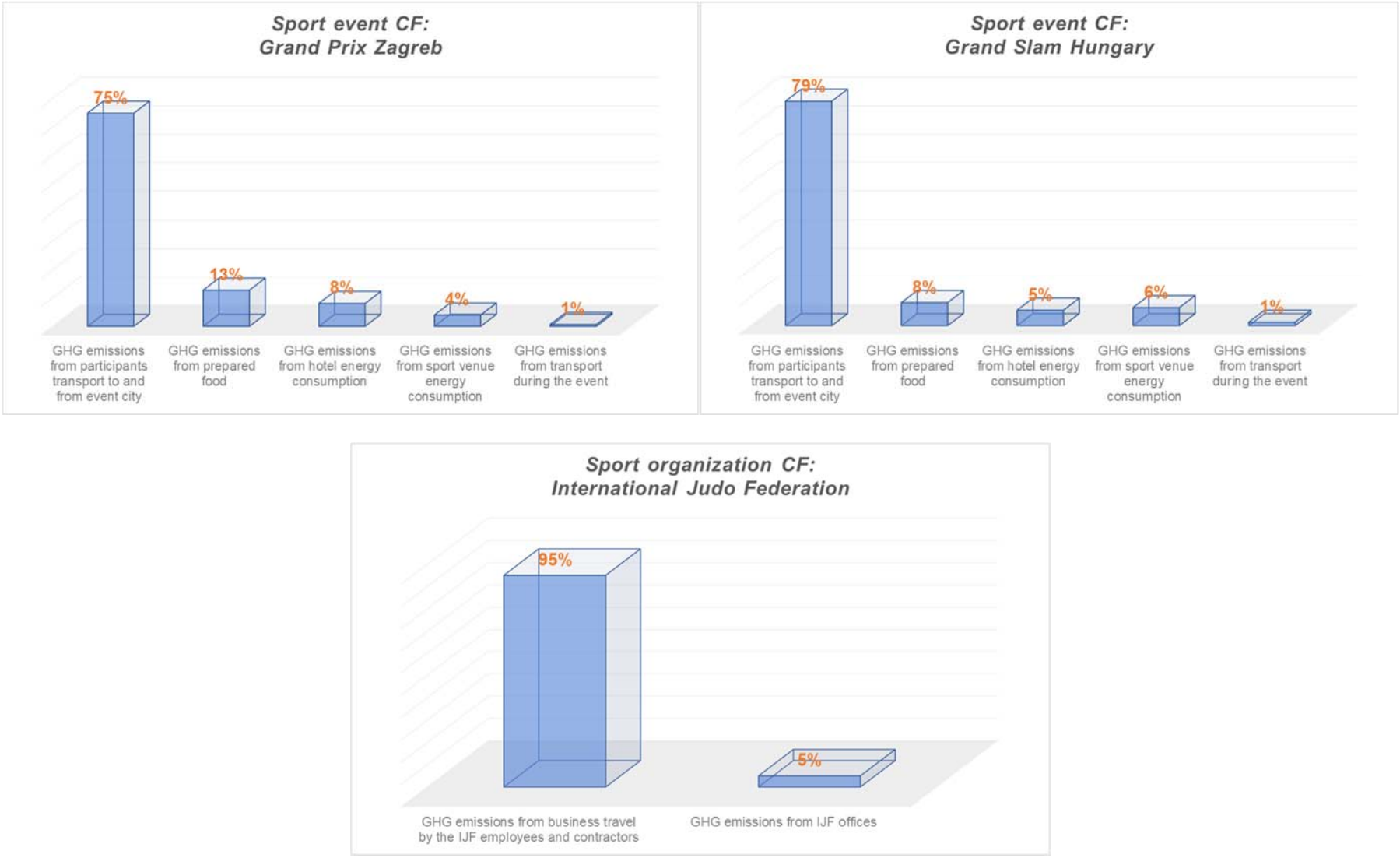


Figure 3-6: The share of GHG emissions from each activity per CF assessment segment

3.5. Avoided GHG emissions due to sustainability efforts

Avoided emissions should not be mistaken for emission reduction; avoided emissions are GHG emissions that did not take place due to extra sustainability efforts/activities compared to regular practices.

3.5.1. Avoided emissions during Grand Prix Zagreb 2021

Avoided emissions during Grand Prix Zagreb are already presented in the event environmental assessment in Chapter 3.1.5. Avoided emissions are linked to the following activities:

- Directing plastic bottles and bottle caps to recycling process
- Directing waste paper to recycling process
- Food donation
- Directing biowaste to composting process

3.5.2. Avoided emissions during Grand Slam Hungary 2022

Reusable drinking cup scheme in the sport venue

Purchasing drinks in the sport hall by spectators is organized with reusable drinking cups made from hard plastic. Visitors would purchase the cup, use/reuse it during the day and at the end return it with getting reimbursement for the cost of the cup. Thus, the use and disposal of single-used PET[24] bottles were avoided.

Based on ticket records, the overall number of spectators during the event was known. The conservative assumption was made that with the provided cup scheme, the use of 1 single-use plastic bottle per 1 visitor is avoided. Avoided emission estimation included avoided emissions from the production of PET bottles from recycled bottles and avoided emissions from plastic waste disposal. An estimated 300 kg CO_2e were avoided by this sustainable practice.

Reusable large billboard in the sport venue

The organizers decided to reuse the largest billboard in the sport venue (dimensions 30x16 m – Figure 3-7) for four consecutive years – contracted Grand Slam period. They managed to do that by not printing the date and year of the event on the billboard. The estimated avoided emission amounts to around 2.3 t CO_2e.

[24] Polyethylene terephthalate

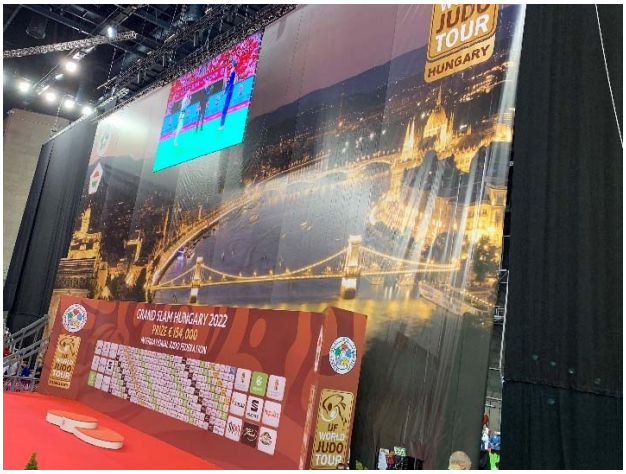


Figure 3-7: Photo of billboards in the sport hall

3.5.3. Avoided emissions due to organizing consecutive events

In 2022 IJF recognized the practical and environmental benefits of scheduling Grand Slam Hungary and Zagreb Grand Prix 2022 as nearby events one after the other. The first event took place from July 8-10 and the second from July 15-17. Number of athletes in Budapest and Zagreb were 405 and 477, respectively. By analysing the travel data needed for the Grand Slam Hungary CF assessment, it was visible that a significant number of participants continued to Zagreb after the event had finished, instead of returning to their home country or some other distant destination.

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 amount to 153 t CO_2e. Emissions from travelling to Zagreb by car, bus and minibus (actual emissions) which amount to 2.3 t CO_2e were subtracted from that number. The difference of 151 t CO_2e represents the estimated net avoided emissions. The map presented in Figure 3-8 graphically shows which teams participated in both events and thus avoided shown airplane routes.

Figure 3-8: Avoided air travel due to consecutive IJF events

3.6. Approximate estimate of all IJF events emissions

Determining carbon footprint of an international sport event is time and resource consuming. So far, it was feasible to perform the assessment for two events. In the future, it is planned to perform CF calculation for other events to get a deeper insight into events' footprint.

Based on available data from two performed assessments, rough estimation of carbon footprint from all events during 2021 is calculated. The following assumption was made:

> On the basis of performed CF assessments for two judo competitions (Zagreb 2021 and Budapest 2022), overall event CF is divided by the number of athlete participants to get an average value (factor). Although it is clear not only the athletes contribute to event's GHG emissions, given the fact that the number of all other participants per each event is unknown, the assumption was made that in average the number of accompanied team members and tournament staff are in correspondence with the number of participating athletes. Carbon footprint of every WJT event in 2021 is then calculated by multiplying this factor with total number of athletes per competition.

Estimation of carbon footprint from all IJF World Judo Tour events in year 2021 (main + special WJT) is presented in Figure 3-9.

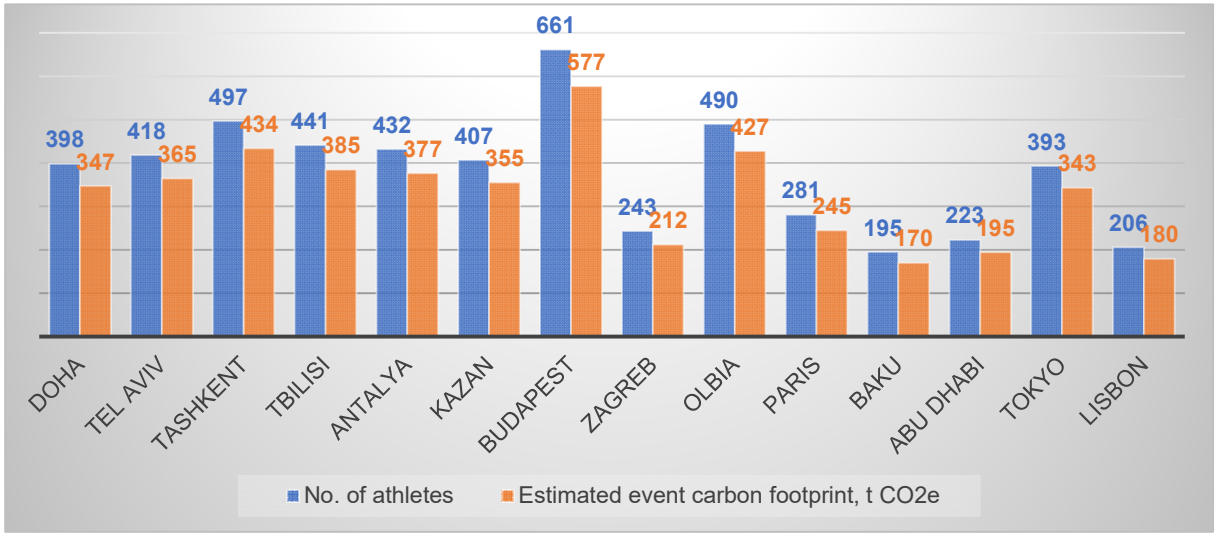


Figure 3-9: Estimation of carbon footprint from all IJF World Tour events in 2021

The focus is put on year 2021 for two reasons:

- IJF headquarters carbon footprint is calculated for calendar year 2021
- Data on all WJT events from 2021 are available (at the time of performing this Study, number of participants for announced WJT events until the end of 2022 is unknown)

Detailed approach taken for determining GHG emissions of the two selected events is significantly more accurate compared to the presented estimation in Figure 3-8. However, looking ahead on the Climate Action activities in the upcoming years, such rough estimation can be a guideline to implement effective emission reduction measures. Also, it is unlikely that carbon footprint assessments for all WJT events in one year will be performed. This approach will be updated with new available data or additional studies to increase the accuracy of this estimate.

It can be concluded that to the best of our current knowledge, available data and based on performed assessments so far, overall GHG emissions for year 2021 that include all main and special WJT events and IJF organization carbon footprint[25] account to approximately **4650 t CO_2e** as presented in Table 3-8.

Table 3-8: Rough estimate on GHG emissions from IJF & all WJT events in year 2021

2021	t CO_2e
IJF supported events	3858
IJF as an organization	793
TOTAL	**4651**

[25] IJF staff and contractor air travel during 2021 are included in organization emissions and are deducted from all events emission estimate to avoid double counting (graphically presented in Figure 4-1 in the next Chapter).

4. Draft roadmap for future IJF Climate Action activities

UN Climate Change initiative S4CA aims at supporting and guiding sports actors in achieving global climate change goals. As part of this commitment signatories are requested to commit to achieving specific climate goals of halving emissions by 2030 and aiming to achieve net-zero by 2040.

To establish the foundations for developing a **GHG emission reduction roadmap**, these emission categories will be included in the base year 2021 as those **emissions that IJF takes claim for**:

- Scope 1 emissions: fuel combustion for heating of IJF premises, HFCs
- Scope 2 emissions: electricity consumption in IJF premises
- Scope 3 emissions: business travel of IJF employees and contractors

GHG emissions covered by the IJF commitment to 2030 with a view to 2040 are contained in the blue circle in Figure 4-1. Base year IJF GHG emissions are presented in Table 4-1.

Case-study events were supported by IJF but are organized by other organizations (national committees). The findings of Zagreb case study assessment are already well known to event organizers – Croatian Judo Federation and are a basis for their involvement in Climate action and further progress. The findings of Budapest case study shall be shared with the organizers (Hungarian Judo federation) for the same purpose.

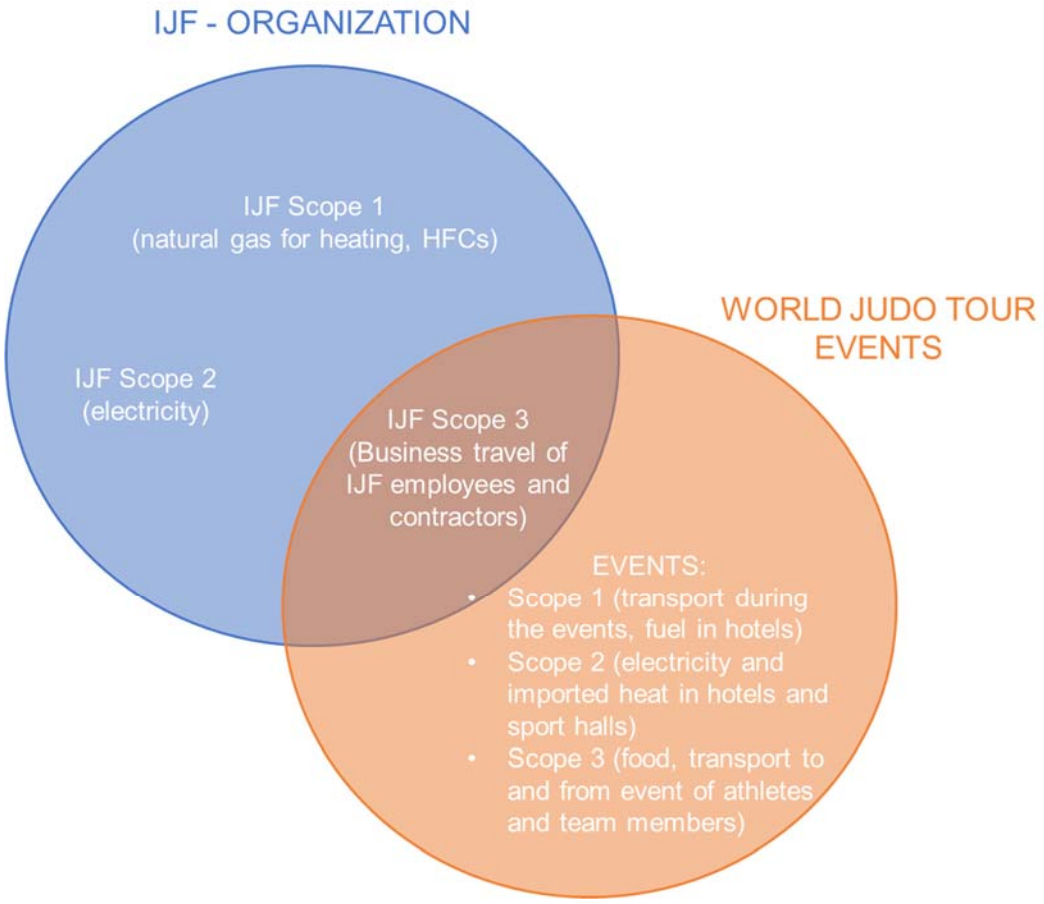


Figure 4-1: Graphical representation of emissions that are part of IJF's obligations (blue) and emissions related to sport competitions (orange)

Table 4-1: Base year IJF GHG emissions

IJF GHG emission in 2021	**t CO_2e**
Scope 1	9
Scope 2	30
Scope 3	754
TOTAL	**793**

By performing this study, IJF has a better insight into climate impact of all of its activities. For an immediate action, IJF should consider all or some of the **proposed measures to reduce its climate impact** presented in Table 4-2.

Table 4-2: Measures for reduction of IJF GHG emissions to comply with S4CA commitments

	Measure	Potential climate impact	Current status	Comments
1.	Avoiding overall travel when possible	Depending on the decrease in travel, this measure can have **significant impact** on emission reduction	**partly implemented**	As presented in the Study, consecutive events are being scheduled in IJF calendar that result in decreased travelling of IJF employees and contractors and event participants. IJF should continue the practice of scheduling consecutive nearby events.
2.	Preference on Economy class ticket over Business and First class	If the level of air travel stays the same as in 2021 (overall kilometres), and all passengers purchase Economy class ticket, **potential for emission reduction is significant** – up to 31% for flight emissions and up to 29% for overall IJF emissions.	**to be implemented**	IJF should encourage their employees and contractors that their choice of ticket class has a climate impact. Air travel factors are calculated on the basis of the area of the plane each passenger takes up. Passenger with higher ticket class therefore takes a larger share of the flight emissions. In 2021 share of number of flights taken by Economy, Business and First Class was 81%, 18% and 1%, respectively. Kilometres travelled by Economy, Business and First Class made 76%, 23% and 1%, respectively.
3.	Preferring other means of transport over airplanes when applicable	Avoiding air travelling can make a **moderate impact** on emission reduction (the measure itself has high potential bit it is not feasible in many cases for the organization such as IJF). It is difficult to estimate how much air travel can be practically replaced by other means of transport because most routes are too long to consider such replacement.	**to be implemented**	The greatest possibility for improvement is probably to replace flights within EU by other means of transport, preferably train ("train first" policy), for trips where EU flights are not actually transit flights to destinations on other continents.
4.	Purchasing electricity with renewable source certificate	If all consumed electricity on all three IJF locations is covered by renewable energy certificate, the reduction **potential is moderate**, around 4% of overall organization's emissions. Premises in Abu Dhabi make the largest share of IJF emissions related to electricity consumption.	**to be implemented**	These are four most common ways organizations can get renewable energy certificates (RECs): 1. Purchasing RECs 2. Power Purchase Agreements 3. Energy Supplier Options: Green Power Programs, Green Tariffs 4. Self-generation It is assumed that premises owned by IJF are currently **not suitable for installation of roof solar panels** (point 4.) that can produce zero emission electricity because IJF doesn't own whole buildings. If in the future there will be an opportunity for such projects, IJF should strongly consider them because beside its climate and environmental benefits there is a clear economic value

				of production of own electricity while with up-to-date solar panel technologies return on investment time gets shorter. To decrease Scope 2 emissions there is an option to **purchase electricity from renewable sources**, either directly from your power supplier, from an independent clean power generator, or via renewable energy certificates. This means that for all or part of the consumed electricity there is a documented covering the particular amount of electricity produced from renewable sources. In practice it means that the organization will pay extra "green" fee per kWh of spent electricity additional to regular electricity price. In this way, part or all of the Scope 2 emissions related to electricity use can be reduced. By market-based approach according to GHG Protocol, emissions from renewable energy are accounted as zero. The best start would be to contact your electricity provider for further information on renewable electricity prices and available modalities in each country. Useful links for: A) Hungary: https://ceelegalmatters.com/cms/20158-green-energy-in-hungary-new-developments-on-renewable-energy-guarantees-of-origin ; https://bbj.hu/business/real-estate/sustainability/cpi-hungary-announces-switch%C2%A0to-green-energy-from-2022 ; B) France: https://www.eex.com/en/services/registry-services/french-guarantees-of-origin-registry ; C) UAE: https://www.doe.gov.ae/Clean-Energy-Certification/About-Clean-Energy-Certification
5.	Replacement of HFCs with refrigerant gases of newer generation	This measure has **insignificant impact** on overall emission reduction since estimated HFC yearly leakage contributes very little to the overall IJF emissions. Nevertheless, when purchasing new cooling equipment, it is advisable to take into account product specification and avoid products that use HFCs as refrigerant gases and prefer the ones that use e.g. R-290, R-600, R-600a or R-1270 that have no global warming potential.	**partly implemented**	7 refrigerators already contain newer generation of refrigerant gases with zero climate impact (R-600a).

By combining proposed feasible measures to reduce greenhouse gas emissions presented in Table 4-2 to reach climate commitment without the need for carbon credit compensation, a draft emission reduction roadmap until 2030 is developed and shown in Figure 4-2.

The proposed reduction measures include:

Until 2025

- number of flights/kilometres stays on 2021 level but half of the distances flew under Business Class tickets will be covered by Economy Class ticket instead of Business

Until 2030

1) reducing 25% of overall air travel compared to 2021 by organizing consecutive events and avoiding unnecessary travel or replacing air travel by more climate friendly means of transport
2) all purchased tickets will be Economy Class
3) purchasing renewable energy certificates for consumed electricity at all three IJF locations

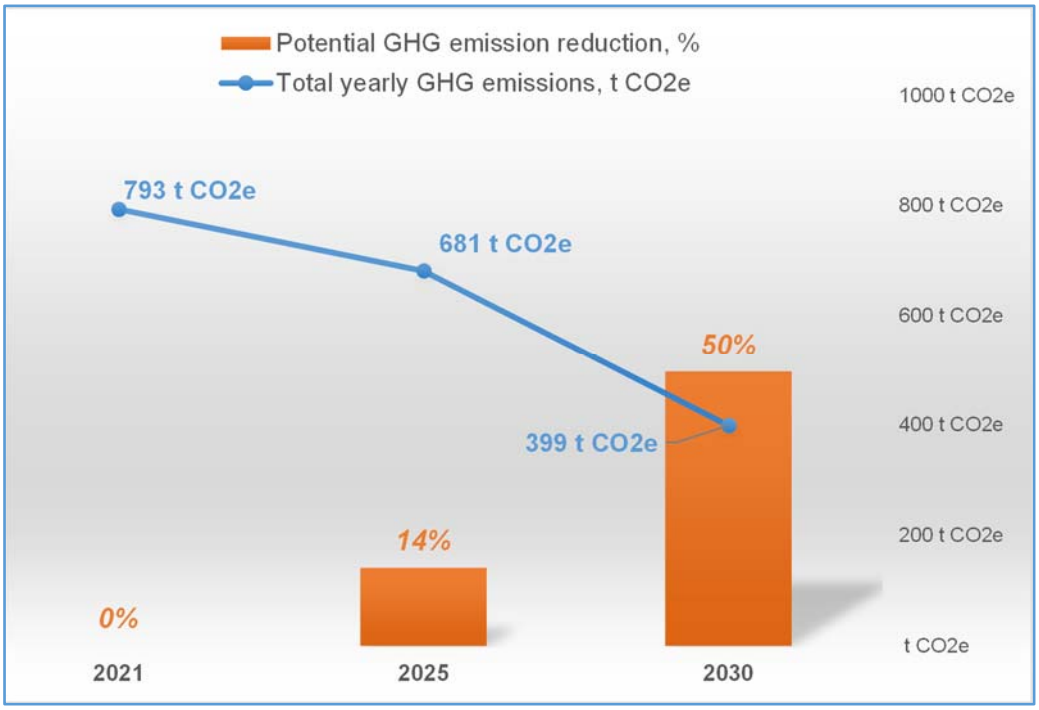


Figure 4-2: Potential IJF GHG emission reduction roadmap until 2030

By implementing proposed measures until 2030, emissions would be reduced by 50% compared to base GHG inventory year 2021.

Additional clarification for not taking claim for the emissions from transportation of the athletes – comparison to arriving guests in tourism sector

To draw a parallel with tourist sector, the Hotel Carbon Measurement Initiative (HCMI), a commonly agreed methodology to measure carbon emissions per guest night, regarding the travel of guests includes:

- Transportation of guests arranged by the hotel to/from the destination
- Transportation of guests arranged by the hotel within the destination,

while it doesn't include travelling of guest in their own arrangement from home or other point to the location of the hotel and vice versa. It is agreed that tourist organizations don't take claim for the latter activity and are not responsible for accompanied GHG emissions.

When compared to IJF events carbon footprint, both previously shown activities included by the HCMI methodology are analogous to transport managed by the event organizer, which is included in proposed IJF roadmap for emission reduction. Transport of guest to the city of the hotel not included by the HCMI can be labelled as analogous to athlete and team members travelling to tournament.

Finally, when the focus is put on assessing event carbon footprint, it is clear that this category should be included, but when it comes to IJF emission reduction commitment, IJF shall take no responsibility for these emissions. Nevertheless, IJF will act as an umbrella organization to promote and support Sustainability action and Climate Change fight within the whole judo community.

5. Carbon Offseting

Carbon offseting schemes allow individuals and companies to invest in environmental projects around the world in order to balance out their own carbon footprints. The projects are most commonly designed to reduce future emissions. Carbon markets incentivize climate action by enabling parties to trade carbon credits generated by the reduction or removal of GHGs from the atmosphere, such as by switching from fossil fuels to renewable energy or enhancing or conserving carbon stocks in ecosystems such as a forest.

This is an opportunity for IJF to reach set climate goals by purchasing offsetting credits to cover the residual actual emissions, that is, emissions that are present after reduction measures had been introduced. However, the following two very important points need to be taken into account when considering carbon offsetting:

1) Currently there is no active international offsetting program that is officially acknowledged by the UNFCCC – Article 6 implementation rules are being negotiated.

2) Available commercial offsetting programs are of different quality and some can be accused of greenwashing, as it already happened in some cases.

Article 6 of the Paris Agreement establishes a mechanism for trading GHG emission reductions between countries under the supervision of the Conference of Parties (COP) – the decision-making body of the UN Framework Convention on Climate Change. Article 6 pertains to the establishment of international compliance carbon markets governed by the rules of the Paris Agreement where countries can trade carbon credits. One of the key outcomes of the COP26 climate summit in Glasgow in 2021 was the approval of Article 6.

Article 6.4 of the Paris Agreement enables underdeveloped countries to be supported by the developing countries. Negotiations on the operational setup of this article are still ongoing and represent one of the main disputes between developed and developing countries. This is a mechanism that should be a continuation of the Clean Development Mechanism (CDM) of the Kyoto Protocol that completed in 2020. The realized 'A6.4ER' carbon units would be able to be sold on the international market as carbon credits. IJF and other sport organizations will surely be notified from UN in a timely manner when this official offsetting program enters to force.

Voluntary carbon markets enable businesses, governments, non-profit organizations, universities, municipalities, and individuals to offset their emissions outside a regulatory regime. These entities can purchase offsets that were created either through the voluntary or compliance markets.

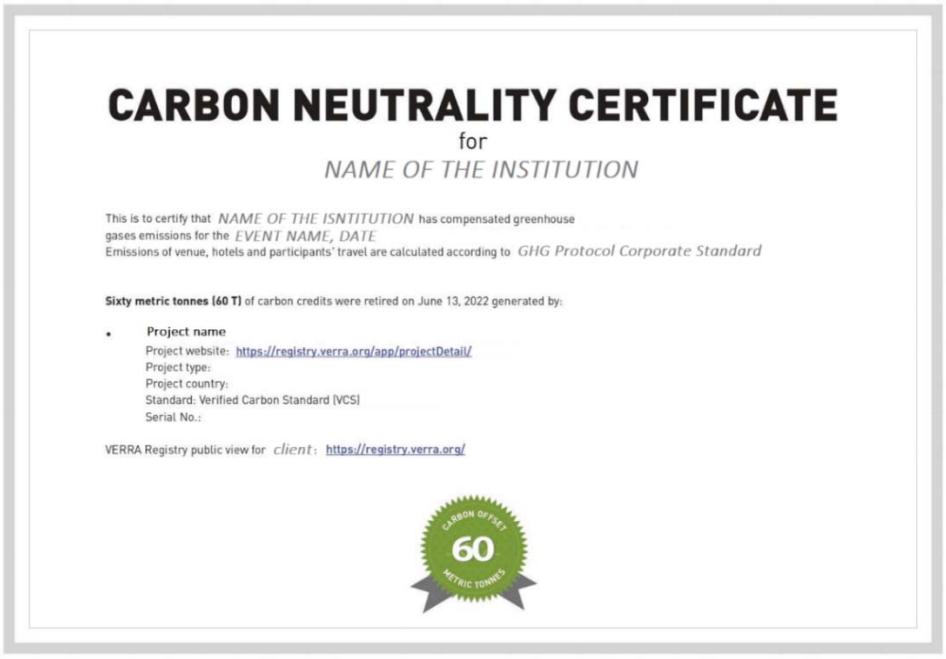
For example, the European Investment Bank (EIB)[26] states in its Carbon Footprint Report for year 2020 that it has decided to purchase carbon offsetting credits from

[26] https://www.eib.org/en/publications/carbon-footprint-report-2020

projects under the Verified Carbon Standard – VERRA (VCS)[27]. Another world recognized carbon offset certification program is Gold Standard[28]. S4CA report contains a question for signatories about offsetting where multiple choice selection for standards offers CDM, VCS, Gold Standard and 'other'.

There are platforms such as Carbon Trade Exchange where voluntary carbon credits (offsets) can be traded. Prices on the exchange platform are driven by market supply and demand and project specificities. Generally, carbon prices in the voluntary market have not changed much during the Covid-19 pandemic, but they are expected to rise in the future, especially with increasing demand. Most of the projects posted on the Gold Standard Marketplace are between $10 and $30 per tonne but some can cost as much as $47 per tonne[29]. At the website and carbon credit purchase platform Climatetrade[30] there is a list of projects that generate units for carbon offseting. The price per unit (t CO_2e) ranges from 4 euros upwards.

As discussed during the meeting with UN officers on the topic of implementing S4CA initiative in IJF, held in May 2022, and according to the explanation given in this Chapter, there is currently no UN officially supported carbon offsetting scheme. Purchasing carbon credits on the voluntary market[31] can be of use for publicly advocating sustainability and fight against climate change while supporting the projects with positive environmental impact.


CARBON NEUTRALITY CERTIFICATE

for

NAME OF THE INSTITUTION

This is to certify that NAME OF THE ISNTITUTION has compensated greenhouse gases emissions for the EVENT NAME, DATE
Emissions of venue, hotels and participants' travel are calculated according to GHG Protocol Corporate Standard

Sixty metric tonnes (60 T) of carbon credits were retired on June 13, 2022 generated by:

- Project name
  Project website: https://registry.verra.org/app/projectDetail/
  Project type:
  Project country:
  Standard: Verified Carbon Standard (VCS)
  Serial No.:

VERRA Registry public view for client: https://registry.verra.org/

CARBON OFFSET 60 METRIC TONNES

Figure 5-2: Example of display of purchased Verra certificate for covering event's GHG emissions

[27] https://verra.org/project/vcs-program/

[28] https://www.goldstandard.org/

[29] https://carboncreditcapital.com/value-of-carbon-market-update-2021-2/

[30] https://climatetrade.com/

[31] https://www.eex.com/en/markets/environmental-markets/voluntary-carbon-markets

6. Climate action from other sport organizations and sport events

Many sport organizations and events after they make an effort in minimizing their carbon footprint, purchase some kind of carbon offsetting credits to cover residual emissions and make this information public. Examples include:

a) Tokyo 2020 Olympic games – reported as carbon-negative event

b) FIFA 2022 World Cup in Qatar – carbon neutral announcement

c) Paris 2024 Olympic games – carbon neutral announcement

The IOC has published a sustainability report for Tokyo 2020[32], revealing that a combination of carbon reduction measures, a ban on domestic spectators and offsetting through local schemes resulted in a carbon-negative event. IOC mandates that all Olympic Games from 2030 will need to be certified as carbon-neutral or carbon-negative, after confirming that Tokyo 2020 was carbon-negative. Tokyo Olympics carbon footprint report received criticism[33,34] on the credibility of their offsetting credits. Namely, credits refer to cap-and-trade markets run by the regional governments of Tokyo and Saitama that were set up in 2010 and in the last few years have become saturated with excess credits while their real impact on reducing emissions is questionable.

The 2022 FIFA World Cup in Qatar[35] has advertised itself as a carbon-neutral tournament. However, a thorough Carbon Market Watch analysis[36] reveals that this claim lacks credibility due to the apparent large-scale underestimation of the event's emissions and the low quality of the carbon credits currently purchased to offset the climate impact.

Paris 2024[37] along with efforts to reduce CO_2 emissions across all operations plans to offset by projects designed to bring both environmental and social benefits on all five continents. Also, the organization committee plans to offset more emissions than the event creates by supporting the projects with a positive climate contribution in France.

Among sport organizations that have signed the S4CA initiative, highlighted examples presented at European Olympic movement and climate action Webinar in May 2022 include the National Olympic Committee and Sports Confederation of Denmark (DIF) that included broad range of Scope 3 emission sources in its GHG inventory and

[32] https://olympics.com/ioc/news/tokyo-2020-goes-beyond-carbon-neutrality-and-helps-create-a-more-sustainable-society

[33] https://qz.com/2037375/what-is-the-carbon-footprint-of-the-olympics/

[34] https://www.archpaper.com/2021/08/how-sustainable-really-were-the-2020-tokyo-olympics/

[35] https://www.qatar2022.qa/en/news/how-qatar-will-be-the-first-carbon-neutral-fifa-world-cup-in-history

[36] https://carbonmarketwatch.org/2022/06/07/fifa-2022-world-cups-carbon-neutral-claim-is-far-fetched-and-spurious/

[37] https://www.paris2024.org/en/delivering-carbon-neutral-games/

International Biathlon Union that separately assessed organization carbon footprint and in the second phase events footprint, the approach similar to IJF's approach presented in this Study but with broader range of activities included under organization Scope 3 emissions (such as waste management, uniforms purchase and emissions related to packages shipping).

7. Impact assessment of IJF sustainable practices

Judo Policy on Sustainability

International Judo Federation (IJF) developed Judo Policy on Sustainability. Addressing how sustainability is about meeting our needs without compromising the ability of future generations to meeting their own needs, IJF is concerned for social, cultural, environmental, and economic responsibility to ensure a legacy for future generations. The IJF endorses and supports the IOC's sustainability strategy and policies. The IJF is committed to meeting ethical and environmental responsibilities and to promoting sustainability within the sport of judo.

IJF contributes to the following Sustainability Development Goals:

- Health and wellbeing
- Quality education
- Inclusion and equality
- Environmental and sustainable economic growth
- Peace and justice; partnership for sustainability

Numerous IJF web posts with sustainability message can be found under answer to question 32 in the Attachment A of this document – Answers to S4CA report. Among other projects, working on development of new equipment made from (more) sustainable materials and advocating for climate action through IJF Climate Ambassadors stand out.

In accordance with Sustainability Policy, IJF developed Event Sustainability Checklist, a document that is being delivered to all event organizers for fulfilment, and later is evaluated.

IJF Event Sustainability Checklist in terms of GHG emissions

In the Table 7-1 a review on IJF Event Sustainability Checklist is given. The table contains assessed impact of each listed activity on Climate and Environment. Those activities marked green have the potential to significantly improve carbon footprint of the event. Some activities influence the GHG emissions or environment indirectly such as for instance activities for raising awareness. Several activities from the checklist don't impact the climate but have positive impact on the environment. Such activity is e.g. purchasing organic food/beverages that decreases the use of pesticides.

Suggestions for expanding the list are presented in Table 7-2.

Table 7-1: IJF Event Sustainability Checklist activities' impact on Climate and Environment

FIELD	ACTIVITY	IMPACT ON CLIMATE	IMPACT ON ENVIRONMENT
ATHLETES	Provide IJF sustainability posters throughout the athlete areas	indirect impact by raising awareness	
	Provide selective waste disposal opportunities	direct positive impact	direct positive impact
	IJF to give short sustainability workshops to educate and motivate athletes, coaches and delegations once per event	indirect impact by raising awareness	
	Include call for sustainability in competition information session during the draw	indirect impact by raising awareness	
ACCOMMODATION	Within walking distance of venues	direct positive impact	
	Hotels with sustainable policy	direct positive impact	direct positive impact
ARRIVALS AND DEPARTURES	Use less or non-polluting forms of transport i.e. electric or hybrid vehicles	direct positive impact	
	Group people with similar arrival times together	direct positive impact	
COMMUNICATION	Communicate plan to everyone	indirect impact by raising awareness	
	Training for everyone	indirect impact by raising awareness	
	Engage with local community	indirect impact by raising awareness	
	Raise and promote awareness	indirect impact by raising awareness	
	Educate all participants	indirect impact by raising awareness	
FOOD AND BEVERAGE	Purchase fair-trade and/or organic beverages		direct positive impact
	Source local seasonal food from local sustainable suppliers	direct positive impact	
	Donate sealed unused food	direct positive impact	
	Minimise food waste, only take what you will eat	direct positive impact	
	Minimise food packaging	direct positive impact	direct positive impact
	Compost waste food	direct positive impact	
	Use recyclable cups	direct positive impact	direct positive impact
	Avoid sachets (salt, sugar, coffee etc.)	direct positive impact	direct positive impact
	Use bulk water not individual bottles	direct positive impact	direct positive impact
GENERAL	Calculate the impact the event is having on the environment	basis for tracking carbon footprint reduction	basis for tracking sustainability progress
	Have an event sustainability plan		indirect positive impact

	Offset carbon emissions	dislocated positive impact on the climate	
	Print only what is necessary	direct positive impact	
	Minimise the use of paper and other office consumables, including paper, computer supplies and redundant equipment	direct positive impact	
	Use electronic forms of communication	direct positive impact	
	Use electronic documents	direct positive impact	
	Donate any unneeded surplus office consumables	direct positive impact	
	Rent/borrow office equipment	direct positive impact	
	Multi-use banners and signs (avoid date marking)	direct positive impact	
	Gifts - consider not giving and if this is not possible, they should be local and sustainable	direct positive impact	
	Reusable lanyards	direct positive impact	
	Recycle accreditations where possible	direct positive impact	
	Use local suppliers and sponsors who have sustainable strategies	direct positive impact	
INSPECTION VISITS	Efficiently timed to avoid unnecessary trips	direct positive impact	
	Avoid physically travelling when alternatives are available and practical, such as using conference calling etc.	direct positive impact	
SPECTATORS	Use public transport	direct positive impact	
	Use electronic communication	direct positive impact	
	Offer sustainable incentives with ticket purchase i.e. free public transport	direct positive impact	
	Offer free tickets for sustainable incentives i.e. car-sharing, walking or biking to venue	direct positive impact	
TRANSPORT	Use less or non-polluting forms of transport i.e. electric or hybrid vehicles	direct positive impact	
	Minimise number of shuttles	direct positive impact	
	Minimise distances from accommodation	direct positive impact	
	Bicycle hire option	direct positive impact	
VENUE	Use existing venues	direct positive impact	
	Venue has energy, waste and water management strategy	direct positive impact	
	Venue has green energy-efficient systems	direct positive impact	
	Venue uses chemical-free products for cleaning		direct positive impact

	Use a venue that is close to public transport	direct positive impact	
	Bicycle parking	indirect positive impact	
	Charging for green vehicles	direct positive impact	
	Rent/borrow equipment	direct positive impact	
	Switch off lights and equipment when not in use	direct positive impact	
	Ensure at the end of the events to remove all rubbish inside and out of venue		direct positive impact
WORKFORCE	Local staff and volunteers	direct positive impact	
	Local sustainable contractors	direct positive impact	
	Sustainable uniforms	direct positive impact	

8. Final recommendations

Judo as a sport is founded on sustainable philosophy which nowadays, by adapting its core values to the new situation, includes the care for the environment. Based on presented material, it is clear that International Judo Federation and its partnering national committees have already started acting toward achieving carbon neutrality. As a distinguished sport organization that is advocating sustainability, the message is being send to judo community and broader society.

The foundations for active contribution in global Climate Change fight have been set and already many environmental and climate impact reduction measures had been considered or already practiced. Besides, the organization is strongly advocating the Sustainability and plans to continue in highlighting the importance of Environmental protection and Climate Action.

Other than activities with positive impact on Climate from IJF Event Sustainability Checklist presented in Table 7-1, here are suggested further tips for improvement that relate to event carbon footprint assessment.

Tips for improvement in the future work:

1. Improve data management and data collection process – the experience is gained through performing this Study and now there is a better insight into data collection process and what is important to prepare in a timely manner, all with goal to reduce inventory uncertainty

2. Expand the data collection categories – in the future it is recommended to include other categories in the GHG inventory such as overall waste management, employee commuting to work or procurement data (e.g. purchase of office materials/consumables)

3. When applicable, choose partner organizations that have implemented sustainability policies and work on GHG emission reduction – in this way, partners with the same goal as IJF are supported and the benefit of such cooperation is emphasized and also visible in IJF sustainability results

4. Scheduling consequent sport events to avoid emissions from travelling

5. Promote by event partners increase of share of a diet high in fruit, nuts and vegetables – besides its health benefits, plant-based meals offer an environmentally and ethically preferable option while reducing the event carbon footprint (additionally, if local food is being purchased, overall benefits increase since long distance transport with significant fuel demand is avoided by this practice)

6. At sport events, besides achieving a high recycling rate for the waste that is generated, the ultimate aim should be avoiding the waste generation as much as possible – in accordance with points from IJF Sustainability Checklist

7. Organized transport during sport events should make a transition toward more sustainable vehicles that include switching from diesel to gasoline in the first step and from gasoline to hybrid and electric in the second phase.

One should have in mind that sport community has constrains in GHG emission reduction compared to e.g. industrial facilities that have the ability to invest in renewable energy source or changing the technology which can significantly reduce their carbon footprint. Sport federations are non-profit organizations with one mail goal: to provide supporting environment for athletes and development of sport. Care for Environment and Climate can be successfully incorporated in their activities but it seems that while maintaining the same level of competition and training infrastructure it will be challengeable to reach reduction goals set by S4CA only by applying GHG emission reduction measures. However, IJF shall act towards that goal with the aspiration for its realization. Carbon offseting, as the last reduction measure can be of use to fulfil obligations that come along with joining S4CA initiative and global Climate Change fight.

9. List of Figures

10. List of Tables

11. List of Abbreviations

CDM	Clean Development Mechanism
CF	Carbon footprint
CH_4	methane
CO_2	carbon dioxide
CO_2e	Carbon dioxide equivalent
COP	Conference of Parties
EIB	European Investment Bank
GHG	Greenhouse Gas
GWP	Global warming potential
HCMI	Hotel Carbon Measurement Initiative
HFCs	hydrofluorocarbons
HQ	Headquarters
IJF	International Judo Federation
IOC	International Olympic Committee
IPCC	Intergovernmental Panel on Climate Change
LCA	Life Cycle Assessment
N_2O	nitrous oxide
NF_3	nitrogen trifluoride
PFCs	perfluorocarbons
RECs	renewable energy certificates
S4CA	Sports for Climate Action
SDG	Sustainable Development Goals
SF_6	sulphur hexafluoride
VCS	Verified Carbon Standard – VERRA
WBCSD	World Business Council for Sustainable Development
WJT	World Judo Tour – a category in the official IJF event calendar available at https://www.ijf.org/calendar?year=2022&age=world_tour
WRI	World Resources Institute

12. ATTACHMENT: S4CA report answers for year 2021, submitted in 2022

INTERNATIONAL JUDO FEDERATION
ANSWERS TO S4CA REPORT
DATA FOR YEAR 2021, UPLOADED IN 2022

Prepared by IJF and EKONERG
2nd of June 2022

Sports for Climate Action Reporting Template

Available at https://www.surveymonkey.com/r/BTVP5BR

1. Name of the reporting organization
   International Judo Federation
2. Please select the type of sport organisation you represent
   - o Governing body
   - o Sports club
   - o Sports team
   - o Sport event organiser
   - o Sport Media
   - o Other
   - o Other (please specify) **International Sport Federation**

3. What is the reporting period? (Please state the start and end date of the year for which you are reporting data.)
   - o **FROM 01/01/2021**
   - o **TO 31/12/2021**

4. Please select the approach you have chosen for consolidating your GHG emissions inventory.
   A useful interpretation of organisational boundaries can be found here.
   - o Financial control
   - o Operational Control
   - o Equity Share
   - o Other (please specify) **Financial control approach was applied for IJF headquarters emissions (significant for Scope 3 emissions from airplanes: flights from IJF employees & contractors whose tickets were paid by IJF were included). Operational control approach was applied for sport event GHG inventory assessment.**

5. Is there executive (board) oversight of sustainability / climate-related issues within your organization?

Senior management buy-in and commitment particularly at the board/CEO level is a prerequisite for a successful GHG reduction program. Implementing a reduction target is likely to necessitate changes in behaviour and decision-making throughout the organization. In some cases it also requires establishing an internal accountability and incentive system and providing adequate resources to achieve the target. This will be difficult, if not impossible, without senior management commitment.

- o **YES**
- o NO

6. Please indicate the highest management-level position(s) or committee(s) with responsibility for climate-related issues in your organisation.

IJF Executive Committee

7. Have you identified climate-related risks in your organization's strategy and/or financial planning?

If yes, please provide further information on the risk type you have identified, e.g., transition risks (such as emerging climate regulation) or physical risks (such as extreme weather, extreme heat, no snow etc.); The time horizon of the risk (e.g., short-term, long-term, or unknown); The likelihood of the risk occurring; The impact of the risk materializing (how would this risk impact your business?); How the risk is being (or is planned to be) managed?

- o YES
- o **NO**

Please explain what your major risks are and how do manage them

_____

8. Please explain in practical terms how has your organisation responded Principles 1 of Sports for Climate Action framework

Please provide the link to the any public information, website or latest report on initiatives you have taken to respond to your S4CA commitment

- o **Set sustainability targets and strategy**
- o **Sustainability is embedded in key business operations (e.g. executive, finance, communications etc)**
- o Employee incentives for sustainability
- o Operational efficiency targets
- o Introduced/implemented sustainability code of conduct for suppliers
- o **Introduced policies to effectively manage significant environmental impacts**
- o **Introduced recycling programmes**
- o **Waste policies**
- o **Single plastic use policies**
- o **Telecommuting and carpooling**
- o **Working with supply chain partners on climate efforts**
- o Others

Please explain applicable actions here

IJF POLICY ON SUSTAINABILITY publicly available at: https://78884ca60822a34fb0e6-082b8fd5551e97bc65e327988b444396.ssl.cf3.rackcdn.com/up/2022/05/IJF_Policy_on_Sustainability_--1651752114.pdf

IJF EVENT SUSTAINABILITY CHECKLIST (currently not available on website) is delivered to all event organizers for fulfilment, and later it is evaluated. The document is enclosed in this report as Attachment 1 in Question 24.

CARPOOLING: Although IJF does not have a carpooling proposal/initiative for its employees, it does have a carpooling concept when it comes to events (please see also Sustainability Checklist). During IJF events, for locations where hotels are not within walking distance from the venue, each department is assigned to one minivan/car (depending on the number of people); delegations are transported by buses in a shuttle system; airport transfers are grouped according to time of arrival and departure, also trying to transport as many people as possible in one vehicle (usually buses).
WORKING WITH SUPPLY CHAIN PARTNERS ON CLIMATE EFFORTS: IJF is cooperating with important sportswear and equipment supplier. The goal of the research is the development of products that are made from (more) sustainable materials.

9. The following few questions will be focusing on Principle 2 of Sports for Climate Action framework (measure, plan, reduce etc.)

Did you measure your GHG emissions in the reporting period?

- o **YES**
- o NO

If not, please explain what prevents you from doing so.

_____

10. Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

GHG Protocol – Corporate Reporting & Accounting Standard

(*choice: GHG Protocol – Corporate Reporting & Accounting Standard; GHG protocol – Product Life cycle Accounting and Reporting Standard; ISO 14064; PAS 2050; Defra 'Guidance on how to measure and report your GHG emissions'; Bilan Carbone; Other (please specify)*)

11. Please provide information on categories of emissions included in your GHG emissions inventory for Scope 1 and 2

Scope 1: Direct GHG emissions that are emitted from sources owned and controlled by an organization. A fuller description on scopes and organizational boundaries can be found in the GHG Protocol Corporate Standard. Scope 2: GHG emissions from the generation of purchased electricity consumed by the organization. Purchased electricity is defined as electricity that is purchased or otherwise brought into the organizational boundary of the organization. For guidance on what to include in scope 2, please refer to the GHG Protocol Corporate Standard.

Organisations should ensure that there are mechanisms in place to confirm that the emissions data provided is sufficiently accurate. Please provide information on calculation methodology and if possible a breakdown of Scope 1 and Scope 2 emissions in the comment box.

- o **Scope 1** (e.g Gas, oil and biomass; HFC & CFC; Company-owned fleet)
- o **Scope 2** (e.g Electricity (location-based); Electricity (market-based); Heating (if any); Cooling (if any)

Please add your comments here **Description of included Scope 1 and Scope 2 emissions is presented in the answer to Question 12.**

12. Please provide information on applicable categories of Scope 3 emissions included in your GHG emissions inventory (boundaries)

Scope 3: "Indirect" emissions from organization's supply chain activities. For more information on what is included under each category and relevant data collection guidance please visit GHG protocol scope 3 guidance.

- Category 1 - Purchased goods and services
- Category 2 - Capital goods
- Category 3 - Fuel- and energy-related activities
- Category 4 - Upstream transportation and distribution
- Category 5 - Waste generated in operations
- **Category 6 - Business travel**
- Category 7 - Employee commuting
- Category 8 - Upstream leased assets
- Category 9 - Downstream transportation and distribution
- Category 10 - Processing of sold products
- Category 11 - Use of sold products
- Category 12 - End-of-life treatment of sold products
- Category 13 - Downstream leased assets
- **Category 14 – Franchises**
- Category 15 – Investments

Please add further information on categories included in your emissions boundary, if applicable

IJF and consulting company EKONERG agreed on approach to perform a carbon footprint assessment of IJF Headquarters – IJF as an organization (Scope 1, Scope 2 and Scope 3) for year 2021 and a separate carbon footprint assessment of IJF supported sport event presented in this report as Scope 3 Category 14 - Franchises.
IJF Headquarters Scope 1 emissions include (a) natural gas combustion for heating taking place in boiler and (b) estimate on refrigerant leakage. IJF Headquarters Scope 2 emissions include indirect emissions related to electricity consumption. IJF Headquarters Scope 3 emissions include Business travel (airplane flights from IJF employees and contractors and emissions from rented van used on Headquarters location).
Emissions included in Category 14 - Franchises present carbon footprint from tournament Judo Zagreb Grand Prix 2021, where organizers were under contract/in partnership with IJF. Grand Prix carbon footprint assessment includes event Scope 1 emissions: (a) transport of participants during the event using vehicles under the control of the organizer, (b) emissions from fuel combustion within the hotel where all participants stayed; Scope 2 emissions: (c) emissions related to electricity and imported heat consumed by the hotel and sport venue, Scope 3 emissions: (d) transport of event participants in their own arrangement to and from Zagreb (cars and airplanes), (e) supply chain emissions from consumed/prepared food during the event. Notes: Leakage of refrigerants from cooling equipment was assessed as negligible during few days of tournament and excluded from the inventory; also a brief review is made on GHG emissions from waste management during the event but it was excluded from event carbon footprint due to incomprehensible input data.

13. Are there any relevant emissions that are excluded from your GHG inventory?

Please disclose any relevant sources of emissions excluded and provide the magnitude of significance and reasons for their exclusion in the comment box

_____

In the current inventory, IJF decided to use the same year - 2021 as base year and reporting year. The reason behind this decision is mainly because our situation changed a lot from 2020: from January 1 2020 IJF moved its legal seat and main headquarters to Budapest and we closed and sold the IJF headquarters in lausanne, Switzerland. This leaves us with 3 locations: Budapest for Presidential office, headquarters and one flat, Paris for general Secretariat and Abu Dhabi for General Treasury. All three locations are included in the inventory. In 2020 we had very reduced office time use and very few events and travels because of Covid, therefore we decided not to set 2020 as a base year. We decided to put our efforts in determining the carbon footprint in year 2021.

Although our intention is to include all IJF events in the reporting and GHG inventory (approach regarding our emission categories concept is explained in Question 12), we could only do this at this point for one event, which is the Zagreb Grand Prix 2021. In order to be able to calculate emissions for all of IJF supported events, we need the involvement of the local organizing committees and it is necessary to inform them well in advance about our intentions. However, in these very difficult economic times, we do not have many organizers who can undertake this task. From 2022 onwards the plan is to perform more event assessments to improve the comprehensiveness of the GHG inventory.

14. Is your GHG data third party verified?
    - o **YES**
    - o NO

If yes, please provide further information or a web link if possible

IJF hired EKONERG as consultancy for establishing GHG inventory and performing carbon footprint assessment, Company website: http://www.ekonerg.hr/ekonerg/index.html

15. Please let us know if you have a GHG emissions reduction plan?
    - o **Targets adopted and reduction plan is being developed**
    - o Targets and reduction plan adopted
    - o Reduction plan is being implemented
    - o I have no GHG emissions reduction plan

If the plan is publicly available, please provide the link. _____

16. Do you have long term climate target (e.g. by 2040)?
    - o **YES**
    - o NO

    Please specify (e.g. Net-Zero by 2040) **aiming to achieve net-zero by 2040 according to S4CA**

17. Do you have an interim GHG emissions reduction target?

    E.g. 50% absolute emission reduction by 2030
    - o **YES**
    - o NO
    - o In process of setting interim targets

18. Please provide your base year and base year emissions (metric tons CO2e)?

    Eg. Base year 2019 / 1234 metric tons CO2e

The base year is the year for which the emissions baseline is developed. This should be the most recent year for which a full set of data is available – no earlier than 2019 is recommended, and it should be consistent across all targets set by the same organisation (e.g. calendar or financial year). If information for a single recent representative year is not available, then average emissions data over consecutive years can be used (e.g. 2018-2020). The base year should promote action that hasn't already been accomplished, in order to promote forward looking ambition. If you have not measured your emissions, that will need to be your first step before setting the base year.

Scope 1 and 2: **Base year 2021 / 39 metric tons CO_2e**

Scope 3: **Base year 2021 / 956 metric tons CO_2e**

19. Please provide further details on targets set under each scope if applicable

Example: The (absolute) target x% by 2030 has been set in 2021. Our target covers facilities and vehicles in our scope 1 and 2 footprint.

Scope 1 and 2: **N/A**

Scope 3: **N/A**

20. What were your organization's GHG emissions in the reporting year (metric tons of CO2e)?

A fuller description on scopes and organizational boundaries can be found in the GHG Protocol Corporate Standard.

Scope 1 and 2: **39 metric tons CO_2e**

Scope 3: **956 metric tons CO_2e**

21. How do your emissions (Scope 1 and 2 combined) for the reporting year compare to those of the base year?

- o Increased
- o Decreased
- o **Remained the same**

Please provide further information here to explain your choice, if not covered above

2021 is the first reporting year and set as a base year

22. How do your Scope 3 emissions for the reporting year compare to those of the base year?

- o Increased
- o Decreased
- o **Remained the same**
- o N/A

Please provide further information here to explain your choice, if not covered above

2021 is the first reporting year and set as a base year

23. What were your overall emission reductions achieved in the reporting year (metric tons of CO2e)?

e.g. 5% reduction in 2021 (target year) compared to 2019 (base year)

N/A

24. If available, please attach relevant assurance/verification you have undertaken for your GHG emissions reductions

Choose File / No file chosen **Attachment 1; Attachment 2**

25. Do you engage with your value chain stakeholders on climate-related issues?

Please provide more information on your engagement strategy in relevant boxes

- o **Yes, our athletes.**

- **Yes, our fans.**
- **Yes, our customers.**
- **Yes, our suppliers.**
- **Yes, the media.**
- **Yes, other partners in the value chain.**
- **Yes, with our sponsors**
- No, we do not engage.

Please explain your choice here (What worked, what hasn't, where are opportunities and challenges)

IJF is keen to include all its stakeholders in its climate-related activities, to raise awareness in the entire judo community. With dedicated activities or activities around climate change themes, we would like to motivate all judoka, judo fans and judo professionals in the fight against climate change. The linked document details some of our initiatives which brought a lot of engagement within our community: https://78884ca60822a34fb0e6-082b8fd5551e97bc65e327988b444396.ssl.cf3.rackcdn.com/up/2021/12/Judo-Sustainability-V2021-1639-1639659645.pdf

IJF engages the following suppliers and sponsors on climate-related issues: Impuls Fitness Equipment, Taishan Sports, Socar, OTP, Atena, Judo Travel, Ultima, Herend.

Attachment 2 uploaded under Question 24 – cooperation with Adidas on first sustainable judogi on market

Note: IJF considers its 'customers' are actually athletes in the first place.

26. Is your climate/sustainability strategy publicly available?
    - **YES**
    - NO

If yes, please provide a link below. If not, please explain why

IJF POLICY ON SUSTAINABILITY publicly available at: https://78884ca60822a34fb0e6-082b8fd5551e97bc65e327988b444396.ssl.cf3.rackcdn.com/up/2022/05/IJF_Policy_on_Sustainability_--1651752114.pdf

27. Are you using offsets to compensate for unavoided emissions – additional to reduction efforts?

Offsets used to compensate unavoidable emissions must generate real, measurable and verified emissions reductions; Nature-based solutions must meet challenges of additionality, leakage, permanence and be locally-owned; Offsets should provide socially just outcomes (support SDGs).

- YES
- **NO**

28. Please specify the standard of offsets being used. Please select those that apply.
    - CH_{4wbc}
    - VCS
    - Gold Standard
    - Other (please specify) **N/A**

29. How many tons of CO2 equivalent have you offset for the reporting period?

Amount of CO2 (tons of CO2eq) equivalent **N/A**

Please explain which category of emissions (beyond reduction efforts) are you compensating with offsets **N/A**

30. Please state any sustainability/environmental certifications obtained by your organisation

Please specify and provide the link if applicable

N/A

31. Please explain what initiatives/actions has your organisation undertaken in response to Principles 3, 4 and 5 of the Framework. Note that this can include those in the planning and/or implementation phases.

Please provide the link to the any public information, website or latest report on those actions and if possible please explain what results have you seen in response to your actions

Educate for climate action: **'Climate Champion' challenge for kids**

Promote sustainable and responsible consumption **During the Zagreb Grand Prix recycling boxes to collect paper, plastic bottles and plastic caps were installed in the hall and at the info desks – it successfully managed to attract the attention of participants to think about their waste generation, waste management practices and responsible consumption**

Advocate for climate action through communication: **IJF Climate Ambassadors**

32. Please provide information on the tools you have used to communicate and advocate on climate, including potential outcomes.

Please specify in the textboxes.

- **Athlete ambassadors appointed**
- **Website pages with sustainability message**
- **Media sports or articles with sustainability message**
- **Social media posts with sustainability message**
- TV spots with sustainability message
- **Activation events and campaigns**
- **Stakeholder engagement activations**
- External-facing sustainability education sessions or programs (could include youth programs)
- Internal-facing sustainability training and education sessions or programs (e.g. for staff, suppliers, partners)
- **Sustainability advocacy campaigns launched**
- Others, please specify.

Please explain your selection here

Athlete ambassadors appointed – available at: https://www.ijf.org/news/show/sabrina-filzmoser-and-flavio-canto-appointed-ijf-climate-ambassadors

Activation events and campaigns, Sustainability advocacy campaigns launched – available at: https://fit.ijf.org/

Internal-facing sustainability training and education sessions or programs - planned

Website pages with sustainability message:

https://www.ijf.org/news/show/judo-celebrates-earth-day

https://www.ijf.org/news/show/be-a-climate-champion-relaunch

https://www.ijf.org/news/show/judofit-kids-turns-green

https://www.ijf.org/news/show/be-a-climate-champion

https://www.ijf.org/news/show/it-s-possible

https://www.ijf.org/news/show/sabrina-filzmoser-let-s-push-ourselves-towards-greater-challenges

https://www.ijf.org/news/show/where-there-is-no-doubt-there-is-no-life
https://www.ijf.org/news/show/ijf-climate-champions
https://www.ijf.org/news/show/plant-a-tree-our-second-challenge-action-is-now-available
https://www.ijf.org/news/show/ijf-joins-the-sports-for-climate-action-initiative
https://www.ijf.org/news/show/it-s-our-responsibility-to-preserve-our-environment
https://www.ijf.org/news/show/zagreb-grand-prix-will-be-environmentally-friendly
https://www.ijf.org/news/show/phase-one-the-important-thing-is-the-way

Social media posts with sustainability message:

https://www.facebook.com/watch/?v=191660046451310
https://www.instagram.com/p/CInIrsFhMtZ/
https://www.instagram.com/p/CPAygj_hyHK/
https://www.instagram.com/p/CSlY2kcgIqz/
https://www.instagram.com/tv/CYWdhEQNA6v/
https://www.instagram.com/p/CbcO8mhN-_5/
https://www.facebook.com/watch/?v=1311507062618623

33. Influencing fan travel

Fan travel results in a substantial GHG emissions footprint. Whilst your organisation may not be able to control this impact, this is an area where sport organisations can excert influence. Does your organisation have a strategy to influence these emissions (via fan engagement or campaigns) or compensate for those emissions. Please explain below your efforts if any, and lessons learned.

It is not typical for IJF events that fans travel from abroad or from distant regions to see the event. This can happen mainly in World Championships (mainly families of athletes) and possibly Paris Grand Slam (mainly French nationals coming in from different regions). However as it can be seen in the (attached) Sustainability Checklist, we are trying to create various programs with our local organisers (IJF member National Federations) in order to offer incentives to local public for traveling to the competition with public transport or by cycling; hopefully we will be able to implement them in at least some of the locations of the World Judo Tour from next year.

34. Is your organisation reporting publicly on sustainability and climate performance through a third party platform or your website?

Please provide the link to the platform, website or latest report.

Not at the moment, from next year it is planned to make GHG emission report public on IJF website.

35. Anything you would like to report about sustainability efforts of your organisation which have not been covered in the questions above?

_____

36. Anything you would like to say in relation to the answers you have provided or any message for UN Climate Change?

_____

37. Provide details for the person that has signed off (approved) your reporting response to UNFCCC

Name/ Job Title/Organisation **Mrs Sanda Čorak, Education Director and a Member of IJF Executive Committee**