

# One Carbon World



## Report

Presented to:

World Taekwondo  
2022

Issued March 2024



# One Carbon World

World Taekwondo CO<sub>2</sub>e Report March 2024

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All reasonable measures have been taken to ensure the accuracy of this report and any errors in data used for footprint calculations are the responsibility of the grant recipient named in this report.

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Please consider the environment before printing this report.



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## **Introduction**

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World Taekwondo have been awarded the One Carbon World Carbon Neutral International Standard grant.

This report details the carbon footprint of World Taekwondo and provides recommendations to reduce and off-set its footprint.

The activities included in the carbon footprint measurement were agreed in consultation between One Carbon World and World Taekwondo. The calculation of the footprint was undertaken by One Carbon World after a desk-top review of data provided by World Taekwondo.

This report meets the reporting requirements of the Green House Gas (GHG) Protocol Corporate Standard and is compatible with international standards ISO 14064 and PAS 2060.

One Carbon World have taken all reasonable measures to ensure the accuracy of this report. Any omissions or errors in data are the responsibility of the grant recipient named in this report.



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## Carbon Footprint Report

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### **Name: World Taekwondo**

Address: 10th Floor, Booyoung Taepyung Building, 55, Sejong-daero, Jung-gu, Seoul, Republic of Korea 04513

Description: International federation governing the sport of taekwondo

Footprint boundary: All activities under operational control, covered under Scopes 1, 2 and 3 of the Green House Gas (GHG) Protocol Corporate Standard as detailed within this report. This carbon footprint represents World Taekwondo at an organizational level only, it does not include emissions associated with events.

Footprint Period: 01/01/2022 to 31/12/2022

### **Activities/Emissions included in footprint:**

Business Travel, Commuting, Hotel Stay, Materials, Purchased Goods & Services, Waste, Water, Fuel & Energy.

### **Emissions Summary:**

Total carbon footprint of activities measured = 732.11 tonnes CO<sub>2</sub>e

Scope 1 emissions = 3.02 tonnes CO<sub>2</sub>e

Scope 2 emissions = 12.05 tonnes CO<sub>2</sub>e

Scope 3 emissions = 717.04 tonnes CO<sub>2</sub>e



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The GHG Protocol Corporate Standard requires reporting a minimum of scope 1 and scope 2 emissions.

## **Scope 1 - Direct Green House Gas (GHG) Emissions:**

Scope 1 (direct emissions) emissions are those from activities owned or controlled by an organisation. Direct emissions are principally the result of the following types of activities:

- Generation of electricity, heat, or steam. These emissions result from combustion of fuels in stationary sources, e.g. boilers, furnaces, turbines
- Transportation of materials, products, waste, and employees. These emissions result from the combustion of fuels in company owned/controlled mobile combustion sources (e.g. trucks, trains, ships, airplanes, buses and cars)
- Fugitive emissions. These emissions result from intentional or unintentional releases, e.g., equipment leaks from joints, seals, packing, and gaskets; methane emissions from coal mines and venting; hydrofluorocarbon (HFC) emissions during the use of refrigeration and air conditioning equipment; and methane leakages from gas transport
- Physical or chemical processing. Most of these emissions result from manufacture or processing of chemicals and materials, e.g. cement, aluminium, and waste processing

## **Scope 1 Emissions data supplied and included in footprint:**

- Total Passenger vehicles : Cars (by size) : Average car km : Petrol



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## Scope 2 - Indirect GHG Emissions:

Scope 2 (indirect) emissions are those released into the atmosphere that are associated with the consumption of purchased electricity, heat, steam and cooling. These indirect emissions are a consequence of an organisation's energy use, but occur at sources not owned or controlled.

### Scope 2 Emissions data supplied and included in footprint:

- Total Overseas electricity : Electricity generated : Electricity: South Korea kWh :

## Scope 3 - Other Indirect GHG Emissions:

Scope 3 (other indirect) emissions are a consequence of actions that occur at sources not owned or controlled and not classed as Scope 2 emissions. Examples of Scope 3 emissions are business travel by means not owned or controlled by an organisation, waste disposal, or materials or fuels an organisation purchases. Deciding if emissions from a vehicle, office or factory are Scope 1 or Scope 3 may depend on how operational boundaries are defined.

### Scope 3 Emissions data supplied and included in footprint:

- Total WTT- UK & overseas elec : WTT- overseas electricity (T&D) : Electricity: South Korea kWh :
- Total WTT- UK & overseas elec : WTT- overseas electricity (generation) : Electricity: South Korea kWh :
- Total WTT- pass vehs- land : WTT- cars (by size) : Average car km : Petrol
- Total WTT- commuting travel (land) : WTT- rail : International rail passenger.km :
- Total WTT- commuting travel (land) : WTT- cars (by size) : Average car km : Petrol
- Total WTT- business travel (air) : WTT- flights : International, to/from non-UK passenger.km : First classWith RF
- Total WTT- business travel (air) : WTT- flights : International, to/from non-UK passenger.km : Economy classWith RF
- Total WTT- business travel (air) : WTT- flights : International, to/from non-UK passenger.km : Business classWith RF



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- Total Water treatment : Water treatment : Water treatment cubic metres :
- Total Water supply : Water supply : Water supply cubic metres :
- Total Waste disposal : Refuse : Commercial and industrial waste tonnes :  
Landfill
- Total Transmission and distribution : T&D- overseas electricity : Electricity:  
South Korea kWh :
- Total Money Value to CO<sub>2</sub>e : Wearing apparel : Wearing apparel costs :
- Total Money Value to CO<sub>2</sub>e : Services of head offices; management consulting  
services : Consulting service costs :
- Total Money Value to CO<sub>2</sub>e : Printing and recording services : Printing and  
recording service costs :
- Total Money Value to CO<sub>2</sub>e : Other manufactured goods : Other manufactured  
goods costs :
- Total Money Value to CO<sub>2</sub>e : Legal services : Legal service costs :
- Total Money Value to CO<sub>2</sub>e : Advertising and market research services :  
Advertising and market research service costs :
- Total Money Value to CO<sub>2</sub>e : Accounting, bookkeeping and auditing services;  
tax consulting services : Financial consulting service costs :
- Total Material use : Plastic : Plastics: PET (incl. forming) tonnes : Closed-loop  
source
- Total Hotel stay : Hotel stay : Argentina Room per night :
- Total Commuting travel- land : Rail : International rail passenger.km :
- Total Commuting travel- land : Cars (by size) : Average car km : Petrol
- Total Business travel- air : Flights : International, to/from non-UK passenger.km  
: First classWith RF
- Total Business travel- air : Flights : International, to/from non-UK passenger.km  
: Economy classWith RF
- Total Business travel- air : Flights : International, to/from non-UK passenger.km  
: Business classWith RF

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## Footprint Calculation Method:

The most common approach for calculating GHG emissions is through the application of documented and approved GHG emissions conversion factors. These factors are calculated ratios that relate GHG emissions to a proxy measure of activity at an emissions source.

Further detail on emissions factors and the methodology behind them can be found at <https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting>

The activity data or amount of 'resources' used are multiplied by the relevant emissions factors to calculate total Greenhouse Gas equivalent (CO<sub>2</sub>e) emissions.

$$\text{GHG emissions} = \text{activity data} \times \text{emission conversion factor}$$

There are seven main GHGs that contribute to climate change, as covered by the Kyoto Protocol: carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF<sub>6</sub>) and nitrogen trifluoride (NF<sub>3</sub>). Different activities emit different gases and an organisation should report on the Kyoto Protocol GHG gases produced by its activities.

CO<sub>2</sub>e is the universal unit of measurement to indicate the global warming potential (GWP) of GHGs, expressed in terms of the GWP of one unit of CO<sub>2</sub>. The GWPs used in the calculation of CO<sub>2</sub>e are based on the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report (AR4) over a 100-year period (this is a requirement for inventory/national reporting purposes).

All conversion factors used in this report are in units of kilograms of carbon dioxide equivalent (kg CO<sub>2</sub>e).



## Assumptions and/or Omissions:

- Electricity use: due to absent emission factors for well-to-tank generation and well-to-tank transmission and distribution, these have been estimated at 15% of generation and transmission and distribution respectively.
- Refrigerants: no reported refrigerant leakages during the measurement period.
- Materials: plastic (average rigid) excluded from emissions calculations due to being from a re-used source (impact de minimis).
- Business travel - Air: allocated as international air travel, including radioactive forcings (RF).
- Hotel stay allocated as average hotel.
- Waste: estimated based on 11 kg of waste per employee per week<sup>1</sup>.
- Waste: although some building waste is recycled, the quantity or percentage of this is unknown and therefore all waste has been allocated as landfilled.
- Purchased goods and services: spend on paper and paper products (magazines and reports) has been allocated to printing and recording services.
- Well to Tank Scope 3 emissions associated with extraction, refining and transportation of raw fuels and Transmission and distribution (T&D) Scope 3 emissions associated with grid losses (the energy loss that occurs in getting the electricity from the power plant to the organisations that purchase it), are included in the footprint calculations.
- Outside of scopes emissions are not included in the footprint calculations. Outside of scopes emissions account for the direct carbon dioxide (CO<sub>2</sub>) impact of burning biomass and biofuels. The emissions are labelled 'outside of scopes' because the Scope 1 impact of these fuels has been determined to be a net '0' (since the fuel source itself absorbs an equivalent amount of CO<sub>2</sub> during the growth phase as the amount of CO<sub>2</sub> released through combustion). However, no outside of scopes emissions factor could be sourced for electricity generation in South Korea.

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<sup>1</sup> BS 5906:2005 Waste Management in Buildings – Code of Practice

## Carbon Footprint:

### Location Based

The Total Carbon Footprint of the activities measured = **732.11 tonnes CO<sub>2</sub>e**.

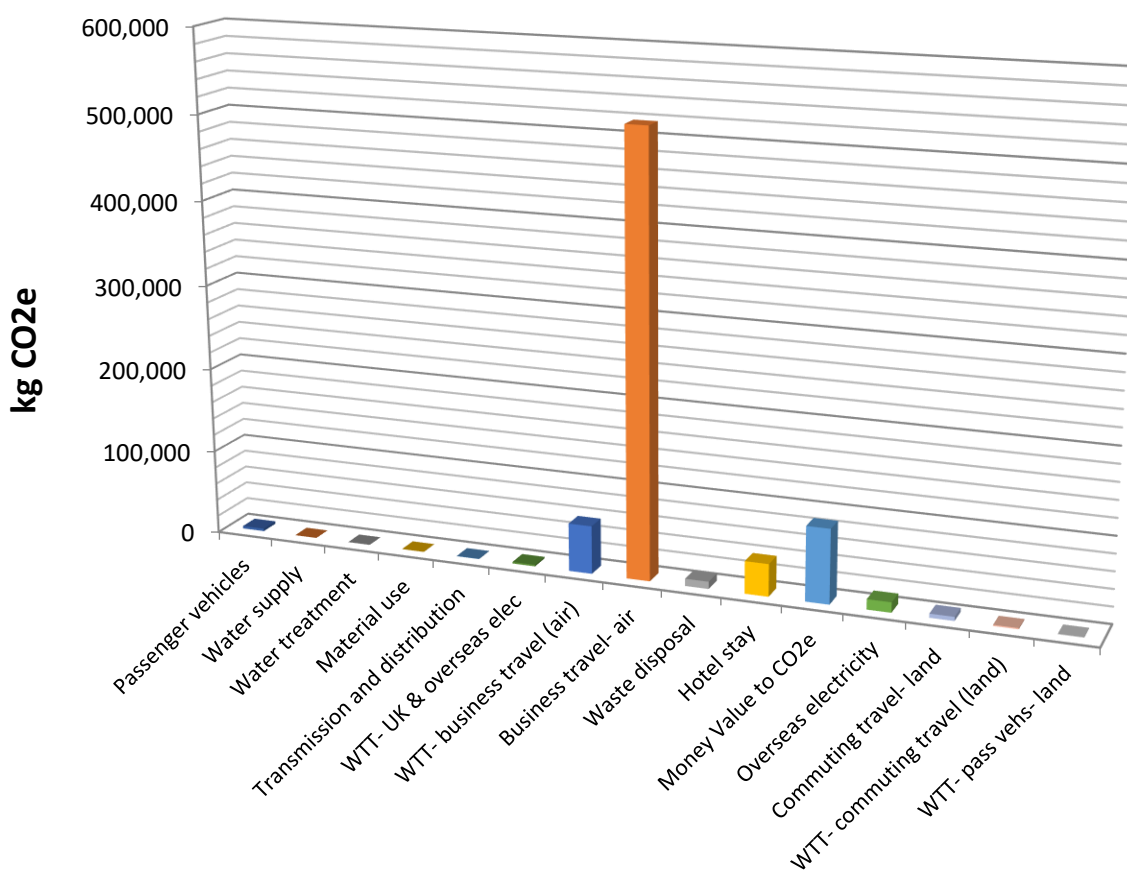
*This method reflects the average emissions intensity of grids on which energy consumption occurs.*

### Market Based

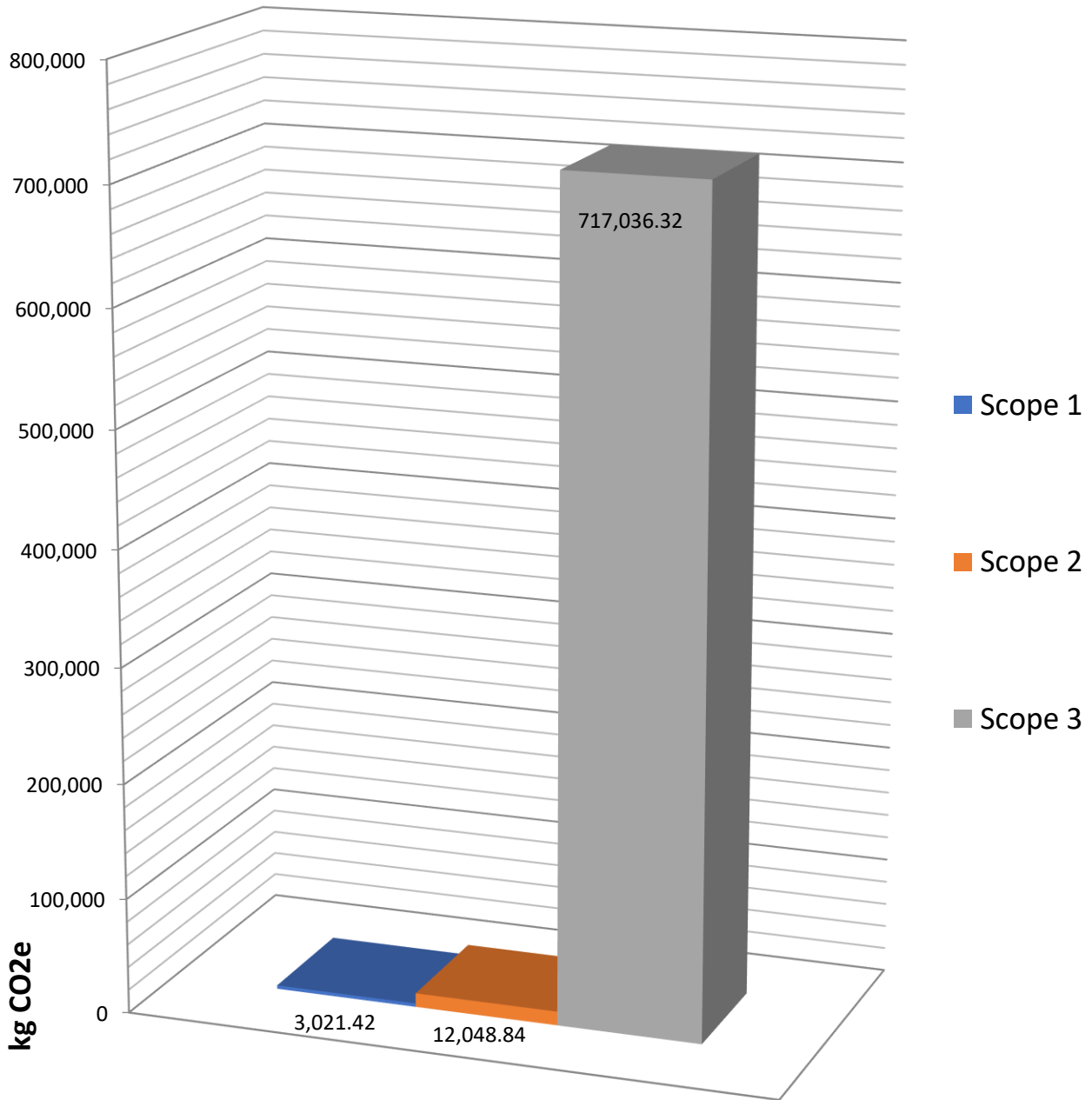
The Total Carbon Footprint of the activities measured = **732.11 tonnes CO<sub>2</sub>e**.

*This method reflects emissions from electricity that companies have purposefully chosen (or their lack of choice). For World Taekwondo, this has been calculated using the standard grid emissions factor for South Korea.*

## Sources of CO<sub>2</sub>e by emission activity

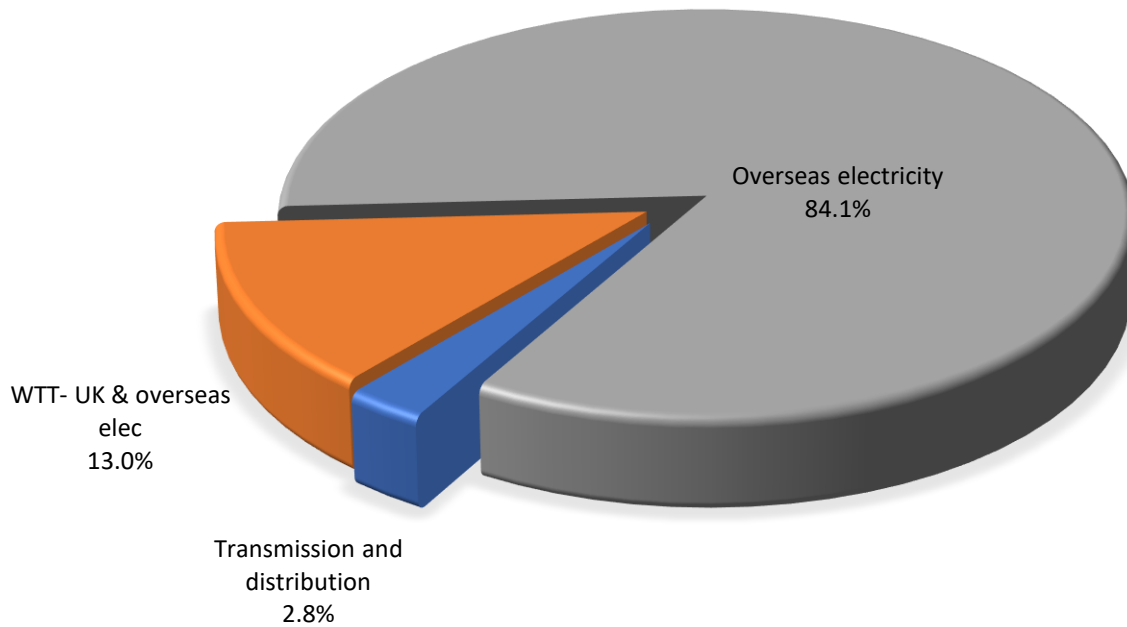


## Sources of CO<sub>2</sub>e emissions by GHG Protocol Scope

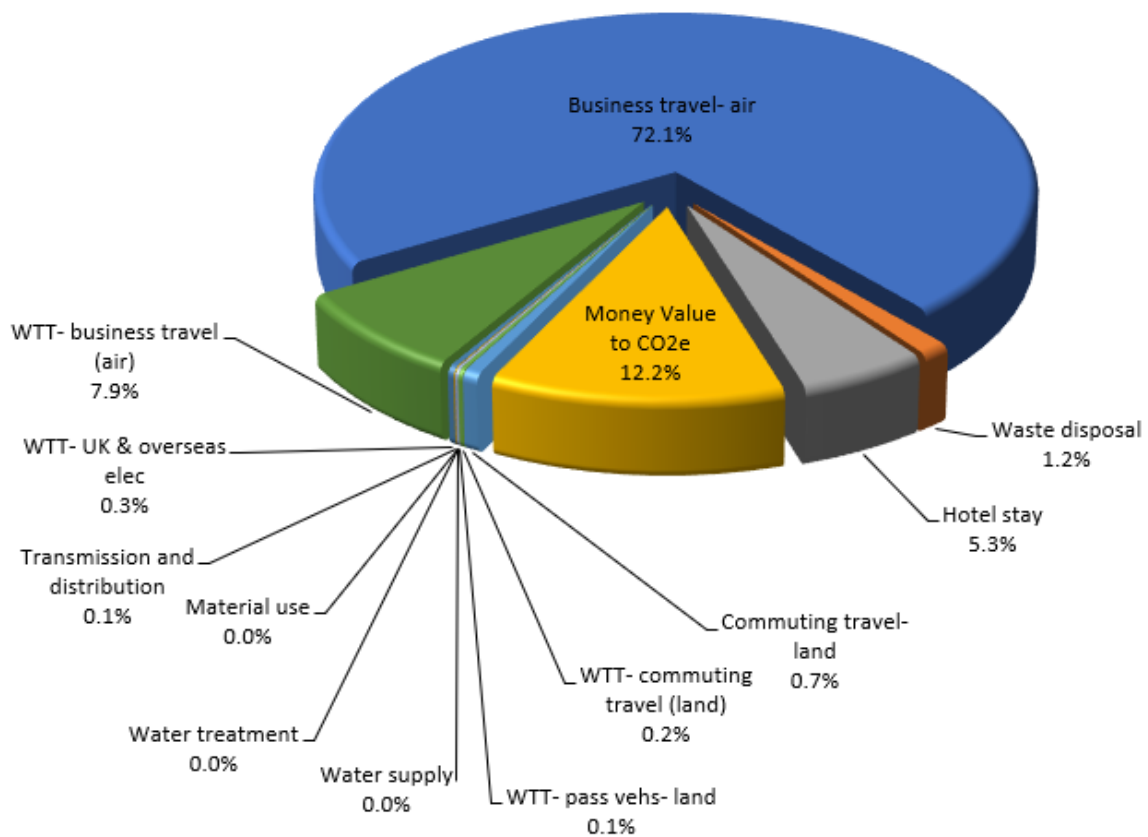


## Sources of CO<sub>2</sub>e emissions by Energy & Fuel Use

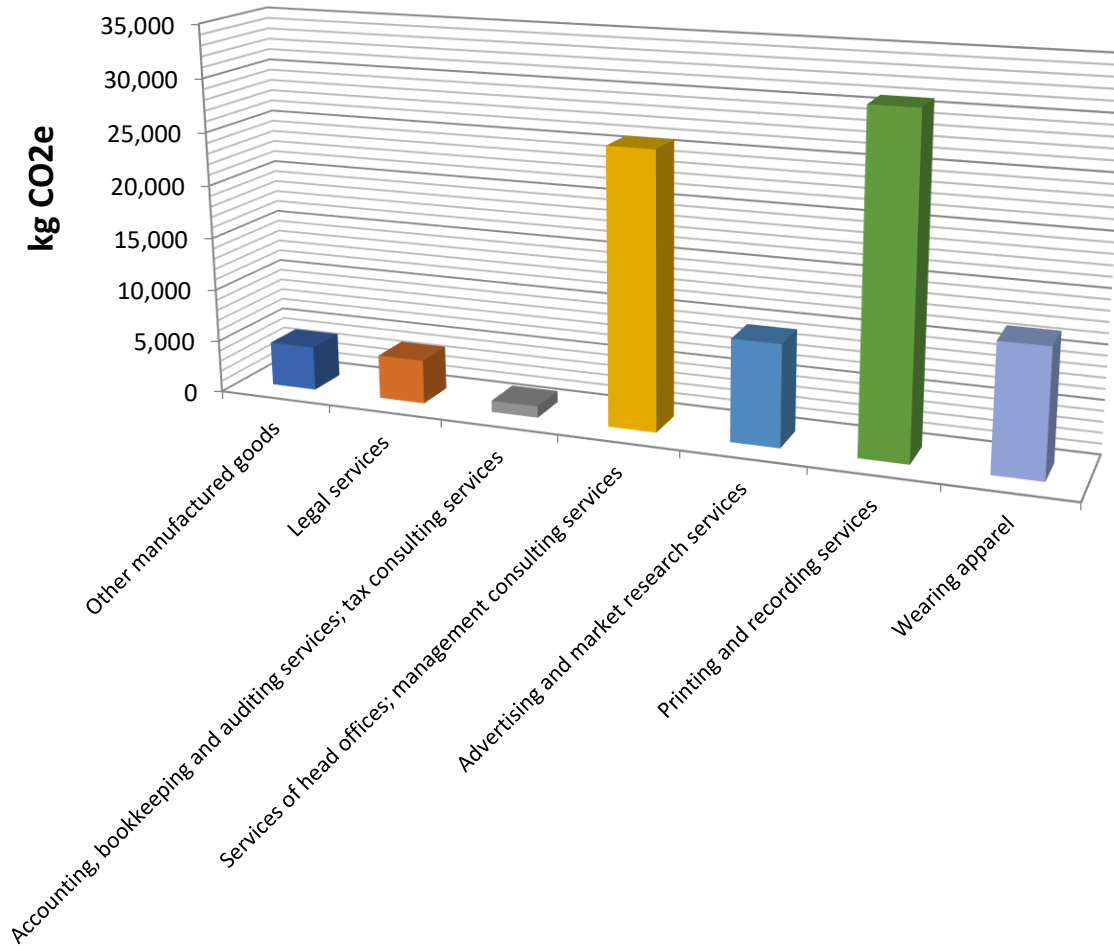
■ Transmission and distribution   ■ WTT- UK & overseas elec   ■ Overseas electricity



## Sources of CO<sub>2</sub>e by Indirect Emissions (Scope 3)



## **Sources of CO<sub>2</sub>e from expenditure data provided (Scope 3)**





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## Part 1 – Carbon Footprint Reduction Recommendations

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The most significant sources of CO<sub>2</sub>e emissions identified are:

- Emissions arising from air travel, including well-to-tank emissions (78%)
- Emissions arising from hotel stay (5%)
- Emissions arising from printing and recording services (4%)

To effectively monitor the Carbon Footprint of World Taekwondo over time, total emissions are measured relatively against employee headcount (e.g. tonnes CO<sub>2</sub>e per employee).

### Footprint Period: 2022 Assessment

732.11 tonnes CO<sub>2</sub>e / 32 employees = 22.88 tonnes of CO<sub>2</sub>e per employee per year.

The World Taekwondo carbon footprint is very robust in terms of methodologies and data applied. To build on this, World Taekwondo could discuss with their core suppliers if carbon footprint data specific to their products is available. This is generally available from transportation providers but could start with suppliers of products with the highest carbon footprint/revenue, such requirements could be built into contract specifications. Through further engagement with these suppliers World Taekwondo can articulate their sustainability and efficiency objectives that their providers are expected to support through contract specifications and contract management.

With air travel being the largest source of emissions, World Taekwondo should prioritise data improvements for this activity. This could include capturing data for each journey, such as departure and arrival location, one-way distance, number of passengers, and travel class. World Taekwondo could also look to capture activity data for categories that are currently estimated, such as waste and commuting.

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**To reduce these emissions, it is recommended that:**

## **Energy and Fuels**

- Improve consumption visibility by setting up a central platform for monitoring and targeting of building energy use.
- Ensure out of hours energy consumption is minimised where possible.
- Develop and implement a staff energy and environmental awareness programme.
- If not completed to date, commission an energy audit to identify further opportunities to improve efficiency of energy consuming equipment. Assess and roll out recommendations where appropriate.
- Opportunities may include improvements to building fabric, higher efficiency heating systems, use of alternative/renewable energy sources for heating for example Air Source Heat Pumps (ASHPs) Ground Source Heat Pumps (GSHPs), solar thermal, solar PV or biomass capacity.
- Ensure roll out of high efficiency LED lighting with integrated lighting sensors and controls where appropriate.
- Ensure all PCs and ancillary equipment is switched off out of hours, consider introducing a site wide script to isolate all equipment outside of business hours.

Please note, due to World Taekwondo renting office space, some of the above recommendations may not be feasible. However, engagement with the building landlord is encouraged.



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## Transport

- Improvements to fuel and mileage monitoring and management and development of a transport policy and objectives.
- As more electric vehicles are available in the marketplace, a transition to low/no carbon vehicles should be planned and will mean that World Taekwondo will be able to further reduce the carbon footprint of its operations as well as costs.
- It is understood that staff are required to travel during day-to-day activities however a travel hierarchy could be implemented which applies the following principles:
  - Is the travel necessary - can the meeting be undertaken virtually (zero emissions)?
  - If the travel is necessary - can 'active travel' be used (zero or very low emissions)?
  - If the travel is necessary and not local - can public transport be used (low emissions)?
  - If the above are not practical consider pool cars/hire cars, making sure they are low emission and hire cars used for +100-mile trips only (prioritise low emission vehicles).
  - If the above are not practical, grey fleet expenses policies could reward use of low emission vehicles where relevant (encourage low emission vehicles).
  - Only use air travel where this is necessary (high emissions).



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## **Purchasing of Goods and Services**

Procurement of products used in the operation is an important support mechanism in delivering the World Taekwondo decarbonisation objectives. This can be achieved through further engagement with key stakeholders as early as possible to identify the outcome required and determining, in conjunction with the market, the best way of delivering this. This may involve challenging the norm and capturing and embracing innovative solutions. Agreed sustainability objectives and requirements can then be embedded through the procurement processes (specification, tender, evaluation criteria & contract management).

If World Taekwondo have an extensive supply chain a prioritisation exercise could highlight services providers which represent the highest balance of, empirically assessed, categories according to spend or carbon impact as relevant to World Taekwondo.

The outcome of this exercise can then ensure effort is focused where needed and prioritises market engagement requirements as well as who internally needs to be engaged and aware of key issues. This then helps the prioritisation of expenditure on sustainability resource, which in turn informs the focus on priority suppliers and categories and internal stakeholders.

The most important stage within the procurement process is always to undertake a review of the need for procurement in the first instance and to question if alternative procurement routes should be considered.

These recommendations are non-exhaustive and are designed to provide guidance only.



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## Part 2 – Carbon Neutrality Achievement

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We are pleased to confirm that World Taekwondo has been awarded the One Carbon World Carbon Neutral International Standard grant which includes the retirement of up to 100 tonnes equivalent of carbon credits.

The 100 carbon credits that will be retired in the name of World Taekwondo come from both verified international afforestation projects and from United Nations clean development mechanism projects. With the retirement of these credits from 2022 - 2022 the Carbon Footprint from World Taekwondo will be offset to a total of **633 tonnes**.

**Congratulations!** By offsetting the balance of its 01/01/2022-31/12/2022 Carbon Footprint, World Taekwondo have achieved carbon neutrality status and can communicate to all stakeholders that they have measured and off-set all emissions arising from their Scope 1 and Scope 2 activities. OCW will also issue you a Statement of Carbon Neutrality in support of your achievement covering the period 01/01/2022-31/12/2022.

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## Scope kg CO<sub>2</sub>e Summary Table

Activity	Total kg CO <sub>2</sub> e	Total Tons CO <sub>2</sub> e
Scope 1	3,021.42	3.02
Scope 2	12,048.84	12.05
Scope 3	717,036.32	717.04
<b>Total</b>	<b>732,106.58</b>	<b>732.11</b>

## Activity Type kg CO<sub>2</sub>e Summary Table

Activity Type	Total kg CO <sub>2</sub> e	Total Tons CO <sub>2</sub> e
Passenger vehicles	3,021.42	3.02
Water supply	7.45	0.01
Water treatment	13.60	0.01
Material use	93.76	0.09
Transmission and distribution	402.40	0.40
WTT- UK & overseas elec	1,867.69	1.87
WTT- business travel (air)	56,596.62	56.60
Business travel- air	516,820.14	516.82
Waste disposal	8,548.12	8.55
Hotel stay	38,161.54	38.16
Money Value to CO <sub>2</sub> e	87,578.82	87.58
Overseas electricity	12,048.84	12.05
Commuting travel- land	4,726.20	4.73
WTT- commuting travel (land)	1,354.21	1.35
WTT- pass vehs- land	865.77	0.87
<b>Total</b>	<b>732,106.58</b>	<b>732.11</b>

## Type kg CO<sub>2</sub>e Summary Table

Type	Total kg CO <sub>2</sub> e	Total Tons CO <sub>2</sub> e
Cars (by size)	3,021.42	3.02
Electricity generated	12,048.84	12.05
Water supply	7.45	0.01
Water treatment	13.60	0.01
Plastic	93.76	0.09
Other manufactured goods - Money Value	4,200.77	4.20
Legal services - Money Value	4,159.93	4.16
Accounting, bookkeeping and auditing services; tax consulting services - Money Value	1,078.20	1.08
Services of head offices; management consulting services - Money Value	25,809.74	25.81
Advertising and market research services - Money Value	9,551.45	9.55
Printing and recording services - Money Value	30,917.35	30.92
Wearing apparel - Money Value	11,861.39	11.86
T&D- overseas electricity	402.40	0.40
Cars (by size)	4,724.07	4.72
WTT- overseas electricity (generation)	1,807.33	1.81
WTT- overseas electricity (T&D)	60.36	0.06
WTT- flights	56,596.62	56.60
WTT- cars (by size)	2,219.42	2.22
WTT- rail	0.55	0.00
Flights	516,820.14	516.82
Rail	2.13	0.00
Refuse	8,548.12	8.55
Hotel stay	38,161.54	38.16
<b>Total</b>	<b>732,106.58</b>	<b>732.11</b>

## Class & UOM kg CO<sub>2</sub>e Summary Table

Class & UOM	Total kg CO <sub>2</sub> e	Total Tons CO <sub>2</sub> e
Average car km	3,021.42	3.02
Electricity: South Korea kWh	12,048.84	12.05
Water supply cubic metres	7.45	0.01
Water treatment cubic metres	13.60	0.01
Plastics: PET (incl. forming) tonnes	93.76	0.09
Other manufactured goods costs - Money Value	4,200.77	4.20
Legal service costs - Money Value	4,159.93	4.16
Financial consulting service costs - Money Value	1,078.20	1.08
Consulting service costs - Money Value	25,809.74	25.81
Advertising and market research service costs - Money Value	9,551.45	9.55
Printing and recording service costs - Money Value	30,917.35	30.92
Wearing apparel costs - Money Value	11,861.39	11.86
Average car km	6,943.49	6.94
Electricity: South Korea kWh	2,270.09	2.27
International, to/from non-UK passenger.km	573,416.76	573.42
International rail passenger.km	2.69	0.00
Commercial and industrial waste tonnes	8,548.12	8.55
Hotel Room per night	38,161.54	38.16
<b>Total</b>	<b>732,106.58</b>	<b>732.11</b>



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## Client Reference kg CO<sub>2</sub>e Summary Table

Scope	Reference	Total kg CO <sub>2</sub> e	Total Tons CO <sub>2</sub> e
Scope 1	Company Vehicles	3,021.42	3.02
Scope 2	Electricity use	12,048.84	12.05
Scope 3	Business travel - Air	573,416.76	573.42
Scope 3	Commuting - Car	6,077.72	6.08
Scope 3	Commuting - Rail	2.69	0.00
Scope 3	Company Vehicles	865.77	0.87
Scope 3	Electricity use	2,270.09	2.27
Scope 3	Hotel stay	38,161.54	38.16
Scope 3	Materials - Plastics (PET)	93.76	0.09
Scope 3	Purchased goods and services	87,578.82	87.58
Scope 3	Waste	8,548.12	8.55
Scope 3	Water Supply	7.45	0.01
Scope 3	Water Treatment	13.60	0.01
<b>Total</b>		<b>732,106.58</b>	<b>732.11</b>



## Emissions factors used in footprint calculation:

Activity Type	Emissions Factor	Source
WTT- UK & overseas elec	Total WTT- UK & overseas elec : WTT-overseas electricity (generation) : Electricity: South Korea kWh :	IEA (2022) / OCW
WTT- UK & overseas elec	Total WTT- UK & overseas elec : WTT-overseas electricity (T&D) : Electricity: South Korea kWh :	IEA (2022) / OCW
WTT- pass vehs- land	Total WTT- pass vehs- land : WTT- cars (by size) : Average car km : Petrol	DEFRA Conversion Factors Full Set for Advanced Users 2022
WTT- commuting travel (land)	Total WTT- commuting travel (land) : WTT- cars (by size) : Average car km : Petrol	DEFRA Conversion Factors Full Set for Advanced Users 2022
WTT- commuting travel (land)	Total WTT- commuting travel (land) : WTT- rail : International rail passenger.km :	DEFRA Conversion Factors Full Set for Advanced Users 2022
WTT- business travel (air)	Total WTT- business travel (air) : WTT- flights : International, to/from non-UK passenger.km : Economy classWith RF	DEFRA Conversion Factors Full Set for Advanced Users 2022
WTT- business travel (air)	Total WTT- business travel (air) : WTT- flights : International, to/from non-UK passenger.km : Business classWith RF	DEFRA Conversion Factors Full Set for Advanced Users 2022
WTT- business travel (air)	Total WTT- business travel (air) : WTT- flights : International, to/from non-UK passenger.km : First classWith RF	DEFRA Conversion Factors Full Set for Advanced Users 2022
Water treatment	Total Water treatment : Water treatment : Water treatment cubic metres :	DEFRA Conversion Factors Full Set for Advanced Users 2022
Water supply	Total Water supply : Water supply : Water supply cubic metres :	DEFRA Conversion Factors Full Set for Advanced Users 2022
Waste disposal	Total Waste disposal : Refuse : Commercial and industrial waste tonnes : Landfill	DEFRA Conversion Factors Full Set for Advanced Users 2022
Transmission and distribution	Total Transmission and distribution : T&D-overseas electricity : Electricity: South Korea kWh :	IEA (2022)
Passenger vehicles	Total Passenger vehicles : Cars (by size) : Average car km : Petrol	DEFRA Conversion Factors Full Set for Advanced Users 2022
Overseas electricity	Total Overseas electricity : Electricity generated : Electricity: South Korea kWh :	IEA (2022)
Money Value to CO <sub>2</sub> e	Total Money Value to CO <sub>2</sub> e : Wearing apparel : Wearing apparel costs :	Defra / OCW
Money Value to CO <sub>2</sub> e	Total Money Value to CO <sub>2</sub> e : Printing and recording services : Printing and recording service costs :	Defra / OCW
Money Value to CO <sub>2</sub> e	Total Money Value to CO <sub>2</sub> e : Other manufactured goods : Other manufactured goods costs :	Defra / OCW
Money Value to CO <sub>2</sub> e	Total Money Value to CO <sub>2</sub> e : Legal services : Legal service costs :	Defra / OCW

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## World Taekwondo CO<sub>2</sub>e Report March 2024

Money Value to CO <sub>2</sub> e	Total Money Value to CO <sub>2</sub> e : Accounting, bookkeeping and auditing services; tax consulting services : Financial consulting service costs :	Defra / OCW
Money Value to CO <sub>2</sub> e	Total Money Value to CO <sub>2</sub> e : Services of head offices; management consulting services : Consulting service costs :	Defra / OCW
Money Value to CO <sub>2</sub> e	Total Money Value to CO <sub>2</sub> e : Advertising and market research services : Advertising and market research service costs :	Defra / OCW
Material use	Total Material use : Plastic : Plastics: PET (incl. forming) tonnes : Closed-loop source	DEFRA Conversion Factors Full Set for Advanced Users 2022
Hotel stay	Total Hotel stay : Hotel stay : Room per night :	DEFRA Conversion Factors Full Set for Advanced Users 2022
Commuting travel- land	Total Commuting travel- land : Cars (by size) : Average car km : Petrol	DEFRA Conversion Factors Full Set for Advanced Users 2022
Commuting travel- land	Total Commuting travel- land : Rail : International rail passenger.km :	DEFRA Conversion Factors Full Set for Advanced Users 2022
Business travel- air	Total Business travel- air : Flights : International, to/from non-UK passenger.km : Economy classWith RF	DEFRA Conversion Factors Full Set for Advanced Users 2022
Business travel- air	Total Business travel- air : Flights : International, to/from non-UK passenger.km : Business classWith RF	DEFRA Conversion Factors Full Set for Advanced Users 2022
Business travel- air	Total Business travel- air : Flights : International, to/from non-UK passenger.km : First classWith RF	DEFRA Conversion Factors Full Set for Advanced Users 2022