



One Carbon World Carbon Footprint Verification

Presented to:

International Biathlon Union (IBU)

2022

April 2023



One Carbon World

International Biathlon Union 2022 - Carbon Footprint Verification April 2023

Disclaimer:

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

Copyright & Non-Disclosure Notice:

The content and layout of this report are subject to copyright owned by One Carbon World Ltd, save to the extent that copyright has been legally assigned to us by another party or is used by One Carbon World Ltd under license. This report may not be copied or used without our prior written agreement for any purpose other than the purpose indicated.

Third Parties:

Any disclosure of this report to a third party is subject to this disclaimer. The report was prepared by One Carbon World Ltd for use by the grant recipient named within the report. This report does not in any way constitute advice to any third party who is able to access it by any means and excludes, fully lawfully permitted, all liability whatsoever for any loss arising from reliance on the content of this report.

Contents

Page

CONTENTS	2
INTRODUCTION	3
IBU 2022 CARBON FOOTPRINT VERIFICATION	4
WORKFLOW	5
RESULTS	6
OBSERVATIONS, UNCERTAINTIES AND RECOMMENDATIONS	7
VERIFICATION ASSURANCE	14
REFERENCES	15



One Carbon World

International Biathlon Union 2022 - Carbon Footprint Verification April 2023

Introduction

One Carbon World (OCW) is a recognized resource partner in the Climate Neutral Now initiative launched by UN Climate Change in 2015. The UN-OCW certification seal was created with a three-fold purpose: *i*) to help organisations around the globe demonstrate their commitment in implementing concrete actions to address their climate-change contribution (i.e. carbon footprint), *ii*) to incentivize organisations to make their own internal business operation carbon neutral implementing both conventional and innovative conservation measures, and *iii*) to accelerate the transition to a climate-neutral society by compensating the GHG emissions which cannot be currently avoided by certified emissions reductions (carbon credits).

As a global resource partner of the United Nations Climate Neutral Now initiative, OCW is committed to emission reduction strategies and forestry projects that meet the highest standards, reduce carbon emissions and contribute to sustainable development. Our goal is to help over 25,000 organisations to achieve carbon neutrality over the next 4 years. This will equate to a 5% increase in the number of carbon credits retired worldwide.

The third-party verification process of OCW embraces the highest international standards of quality assurance and quality control procedures in the industry. These in particular are based on national and international voluntary measuring and reporting schemes such as GHG Protocol Corporate Standard, ISO 14064-3⁽¹⁾, ISO 14064-1⁽²⁾ and 14040⁽³⁾ and PAS 2050⁽⁴⁾. Where organisations seek validation and verification of their domestic GHG reduction projects, OCW chooses to refer to the GHG Protocol Corporate Standard [BS ISO 14064– Part 3](#).





One Carbon World

International Biathlon Union 2022 - Carbon Footprint Verification April 2023

IBU 2022 Carbon Footprint Verification

Objectives and Benefits

The verification was undertaken in line with the International Standard ISO 14064-3⁽¹⁾: ‘Greenhouse gases- Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions’ to a limited assurance level.

The objectives of the OCW verification are:

- To provide assurance to IBU, to ISO 14064-3 standard, that the GHG assertion is reliable and of sufficient quality for external voluntary carbon reporting purposes;
- To provide a verification statement that meets the requirements of OCW standards;
- To assist IBU internal purposes – e.g., for CSR reporting and other disclosures, or annual reports and tracking towards internal carbon footprint targets.

The benefits for IBU of verifying its carbon footprint through OCW are:

- **Carbon neutrality** – provides IBU with an internationally recognized carbon footprint standard, allowing IBU to focus on the most efficient and cost-effective climate mitigation programs and carbon offset credits required;
- **Consolidate corporate green credentials** - provides transparency to IBU giving confidence to stakeholders that its business emissions are internationally validated, verified and offset through OCW.
- **Perception management** - demonstrates that the climate performance of IBU is reliable and robust enough to withstand media scrutiny, and the climate-change mitigation commitment of IBU is also reinforced through reality based actions leading to more sustainable business activities;
- **Compliance** - demonstrates to external stakeholders that the environmental performance of IBU is transparent, accurate, and consistent over time for internal management reporting;



One Carbon World

International Biathlon Union 2022 - Carbon Footprint Verification April 2023

Workflow

Verification is an objective assessment of the accuracy and completeness of reported GHG information and the conformity of this information to pre-established GHG accounting and reporting principles.

The GHG emissions verified by OCW corresponded to IBU for the period 1st October 2021 to 31st September 2022. The verification was conducted in accordance with ISO 14064-3⁽¹⁾: Greenhouse gases- part 3: '*Specification with guidance for the validation and verification of greenhouse gas assertions*'.

During the desktop review of the information, the OCW verification team also engaged by email with the team at IBU. This engagement aimed to confirm the activities, concepts and approaches relevant to the GHG calculation. Data, methodologies and references were also provided to OCW.

In tandem, the OCW verification team undertook a qualitative and quantitative evaluation of any errors, limitations or misrepresentations in the GHG calculations, source data and emissions factors applied and using professional judgment determined whether any qualitative discrepancies could affect the overall GHG assessment.



One Carbon World

International Biathlon Union 2022 - Carbon Footprint Verification April 2023

Results

The GHG emissions included in the excel file '2021_2022 – Internal Survey_Position_Green' are reported in terms of carbon dioxide equivalent (CO_{2e}). This verification covers all data included in the excel file 'IBU CO2 emissions 2021_2022_IBU as an organisation'.

The OCW verification process included the following sources of GHG emissions:

Scope 1 (38.39 tCO_{2e}): Direct emissions from boilers, furnaces, vehicles, chemical production in owned or controlled process equipment. For IBU this includes:

- Natural Gas

Scope 2 (1.49 tCO_{2e} - LB): Indirect emissions consumption of purchased electricity, heat, steam and cooling. For IBU this includes:

- Electricity

Scope 3 (1,674.85 tCO_{2e}): Other indirect upstream and downstream emissions in the company's supply chain from production and transportation of the goods and services purchased to the end-user's use of the company's products or services:

- Business travel
- Commuting
- Hotel stay
- Shipping
- Material use
- Waste
- Water
- Catering

Total Emissions Scope 1 - 3 (Location Based) 2022: 1,714.73 tonnes CO_{2e}



One Carbon World

International Biathlon Union 2022 - Carbon Footprint Verification April 2023

Observations, Uncertainties and Recommendations

Emissions Factors (EFs) Applied:

To achieve an accurate and uniform approach to emissions calculations the most recent version (2022) of the BEIS Carbon Emissions Factors have been applied unless otherwise stated, specifically for Scope 3 supply chain emissions. T&D emissions have also been included within the carbon footprint. EFs have been referenced and all factors have been checked with source to verify reliability.

Scope 3 Emissions Methodology:

It is acknowledged that due to data availability, assumptions required, sampling methodologies and varying data that is not under the IBU direct control, it may be difficult to determine if values reported for Scope 3 sources are materially accurate. Therefore, for those emissions sources, IBU should be able to satisfy that:

- The data available is as accurate as reasonably possible;
- Assumptions made in calculating emissions are suitably documented.

One Carbon World

International Biathlon Union 2022 - Carbon Footprint Verification April 2023

Calculation Verification:

Calculations within the Excel workbooks have been manually checked and verified. A number of variances were identified as detailed below, however, they had no material impact and were below the threshold (within 5%) of the total reported carbon footprint. The data was provided in a auditable, and professional manner and queries were dealt with in a clear and efficient way to facilitate this verification process.

Activity	IBU Calculation	OCW Calculation	OCW Data Source
IBU Office (OCW total using DEFRA 2012 emission factor for Supplier partner equipment)	390.82	400.83 (717.49)	IEA (2022) for electricity, DEFRA (2012, and adjusted for inflation) for spend based activities, BEIS (2022) for all other activities.
Business travel	453.90	366.09	BEIS (2022) – Business travel
Hotel stays	204.20	200.31	BEIS (2022) – Hotel stay
Staff Commuting	19.70	63.89	BEIS (2022) – Business travel
Travel Siwidata and Plaras	39.48	39.31	BEIS (2022) – Business travel
Internal events	606.60	606.60	IBU
Total	1,714.71	1,677.04 (1,993.70)	n/a

**Please note totals may vary due to rounding.*

General – calculation methodology – IBU have used online calculation tools to estimate their carbon emissions. These emissions have been verified by OCW using the Greenhouse gas reporting: conversion factors 2022 provided by BEIS. The difference in calculation methodology has resulted in variations among most activities, most notably for supplier partner equipment, business travel and commuting. However, these variations do not have a material impact (<2.5%) on the total recorded emissions and are therefore within acceptable limits.



One Carbon World

International Biathlon Union 2022 - Carbon Footprint Verification April 2023

IBU HQ: Supplier partner equipment – OCW calculated emissions from this activity using an inflation adjusted emission factor for Manufacture of wearing apparel (0.759079 kgCO_{2e} per £) sourced from DEFRA (2012). The result of this was a discrepancy of 107% compared to the IBU calculated emissions which used a bespoke factor (0.312 kgCO_{2e} per €) for this activity. Variations of this nature for Scope 3 emissions are common due to data availability, assumptions, and the choice of emission factor sources. It is therefore advisable for IBU to document any assumptions made when calculating emissions for all activity types. However, based on the above information, it is considered that the emissions for supplier partner equipment calculated by IBU are reasonably possible and are not deemed to have a material impact.

IBU HQ: FFT – This category includes spend on rent, office equipment, computer equipment and vehicle fleet. Therefore, to avoid the possibility of double counting emissions with other activities (e.g., electricity consumption) it is advisable to separate out spend for each activity, exclude spend on activities that have already been captured, and apply more specific emission factors to any remaining activities (e.g., computer equipment).



One Carbon World

International Biathlon Union 2022 - Carbon Footprint Verification April 2023

Additional Opportunities and Recommendations

It is recommended that spend on freight is split out by type of transport (e.g., sea, air, road, rail). This will allow for better allocation of emission factors and more accurate results.

If reasonable and possible, it is also advisable to ensure that the naming of activity types is consistent among data sources.

While not required for reporting purposes, it is recommended that Well-to-Tank (WTT) conversion factors are used to account for the upstream Scope 3 emissions associated with the extraction, refining and transportation of raw fuels prior to their final use (e.g., combustion in vehicles and for electricity generation). It is also advised that IBU account for the transmission and distribution (T&D) losses of the electricity they purchase, which occur between the power stations and their sites.

It is advisable to report market based Scope 2 emissions, in addition to location based emissions in line with the GHG Protocol. This will provide a more complete assessment of the IBU GHG impacts, risks and opportunities associated with the procurement of electricity.

IBU should continue to ensure that applied emissions factors are reviewed periodically and that these are updated to the most recently available versions where appropriate.

The IBU carbon footprint is robust in terms of methodologies and data applied. To build on this further IBU could discuss with other core suppliers if carbon footprint data specific to their service delivery/products is available. This could be expanded on through collaboration with transportation providers.



One Carbon World

International Biathlon Union 2022 - Carbon Footprint Verification April 2023

Carbon Reduction Opportunities

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, consider introducing a web based tailored staff awareness training solution.
- If not completed to date, commission an energy audit to identify further opportunities to improve the efficiency of energy consuming equipment.
- 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.

One Carbon World

International Biathlon Union 2022 - Carbon Footprint Verification April 2023

Transport

- As more electric vehicles are available in the marketplace, a continued transition to low/no carbon vehicles should be planned and will mean that IBU 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 that 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).

One Carbon World

International Biathlon Union 2022 - Carbon Footprint Verification April 2023

Purchasing of Goods and Services

Procurement of products used in the operation is an important support mechanism in delivering the IBU 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 IBU 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 IBU.

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.



One Carbon World

International Biathlon Union 2022 - Carbon Footprint Verification April 2023

Verification Assurance

As outlined within the GHG Protocol, companies wishing to report their emissions shall ensure that GHG accounting is based on the principle of Relevance, Completeness, Consistency, Transparency and Accuracy.

Based on the information provided and reviewed during the verification process, the data provided in '2021_2022 – Internal Survey_Position_Green' is accurate and conforms to the relevant standards GHG Protocol Corporate Standard and ISO 14064-3: Greenhouse gases- part 3: '*Specification with guidance for the validation and verification of greenhouse gas assertions.*'

It is One Carbon World view that the information included in '2021_2022 – Internal Survey_Position_Green' is both materially correct and a fair representation of the GHG emissions concurring with the activity information of IBU provided in the excel file 'IBU CO2 emissions 2021_2022_IBU as an organisation' for the period of 1st October 2021 to 31st September 2022.

Therefore, the carbon neutrality commitments of IBU as well as initiatives taken to reduce their carbon footprint are relevant and effective and demonstrate leadership and continual improvement towards more sustainable business operations that help mitigate climate change.



One Carbon World

International Biathlon Union 2022 - Carbon Footprint Verification April 2023

References

- 1 ISO 14064-Part 3: Specification with guidance for the verification and validation of greenhouse gas statements.
- 2 ISO 14064-Part 1: Specification with guidance at the organisation level for quantification and reporting of greenhouse gas emissions and removals
- 3 ISO 14040 – Environmental management. Life cycle assessment. Principles and framework
- 4 PAS 2050 – Specification for the assessment of the life cycle greenhouse gas emissions of goods and services.
- 5 GHG Protocol. <https://ghgprotocol.org/>