

2021 CARBON FOOTPRINT CALCULATION

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1 ABBREVIATIONS

CCTF	UIAA Climate Change Taskforce
COM	UIAA Commission
EB	UIAA Executive Board
EUMA	European Mountaineering Association
GA	UIAA General Assembly
GHG	Greenhouse Gas
IFMGA	International Federation of Mountain Guides Associations
ISF	International Skyrunning Federation
MC	UIAA Management Committee
RtM	UIAA Respect the Mountains
IOC	International Olympic Committee
ISA	International Slackline Association
IUCN	International Union for Conservation of Nature
PAX	Persons/People
SLH	UIAA Safety Label Holder
SSC	Sustainable Summits Conference
UIMLA	Union of International Mountain Leader Associations
UNFCCC	United Nations Framework Convention on Climate Change
WG	Working Group

2 BACKGROUND

This report outlines the results for the calendar year 2021 of ongoing monitoring and annual reporting of the UIAA's carbon footprint, which is in response to our signed commitment in early 2019 and participation under the United Nations Framework Convention on Climate Change (UNFCCC) [Sports for Climate Action](#) initiative. As a participant and signatory to this initiative, the UIAA is also expected to follow a process that required signing a pledge to reach (net)-zero by 2040, which the UIAA fulfilled in September 2022. As part of this process, and to maintain signatory status, annual public carbon emission reports are expected to be submitted from 2021 onwards. As a participant and signatory in this initiative, the UIAA is required and expected to adhere to 5 principles (see [here](#)), these being:

Principle 1: Undertake systematic efforts to promote greater environmental responsibility;

Principle 2: Reduce overall climate impact;

Principle 3: Educate for climate action;

Principle 4: Promote sustainable and responsible consumption;

Principle 5: Advocate for climate action through communication.

Under Principle 2: Reduce overall climate impact, the UIAA is expected to "measure and understand" its carbon footprint in order to design and issue plans to reduce its emission and overall climate impact. To plan for and meet set targets requires first measuring and understanding how our travel and activities contribute to greenhouse gas (equivalent carbon dioxide, CO₂-eq) emissions, requiring a 'baseline' to compare and track progress over time. The first task is to establish and report against a baseline and continue to gather data to monitor how our emissions trend over time. In parallel to this, the UIAA can also use this data to see where and which activities generate the highest emissions and then suggest practical means to reducing them.

Many carbon emission reduction measures, such as travel policies to reduce CO₂ emissions, promote the principle of "avoid, reduce, compensate" in that order. The UIAA, through the support and participation of its Mountain Protection Commission and the recently created UIAA Climate Change Task Force, will seek to draft such as policy as a next step in its fulfilment of the 5 principles set out by the UNFCCC.

3 SCOPE

This is the fourth annual carbon footprint calculation of the UIAA, the first three being issued for the calendar years of [2018 \(UIAA baseline year\)](#), [2019](#) and [2020](#) respectively.

Direct and indirect emissions were considered within the scope of the calculation and reporting. The UNFCCC [Green House Gas \(GHG\) Protocol](#) terminology, which many organizations use as a measuring and reporting standard, differentiates between Scope 1, 2 and 3 emissions, these being:

- Scope 1: direct emission caused by fuel combustion of owned vehicles, machines, and devices.

- Scope 2: indirect emissions from purchasing energy, in particular electricity, steam, heat, or cooling.
- Scope 3: indirect emissions from upstream and downstream activities, such as travel, purchased goods and services.

Scope 1 – The UIAA does not own vehicles, machines, or devices, thus, no direct emissions are associated with the UIAA’s operations under this scope category.

Scope 2 - The information and data relating to energy use and infrastructure at the UIAA Office, was provided by the Swiss Alpine Club (SAC) with whom offices are shared.

Scope 3 - Travel information was gathered for all core activities of the UIAA relating to meetings and events directly associated with the operations of the UIAA at the organization's level (e.g. travel for UIAA Office staff and UIAA delegates at Executive Board, Committee and Commission Meetings, including those as part of UIAA General Assemblies, as well as UIAA-run events such as competition ice climbing), by recording attendances. The largest international airport in the country of origin was considered as point of departure for all delegates, while the nearest and most relevant airport for the event destination was considered as point of arrival for all meetings and events. Direct travel was assumed, unless further information was readily available. Local travel, via car and/or public transportation, was not considered for the 2021 calculation, with the intention to do so from 2023 onward. All delegates and staff will be asked to submit their travel information during meetings using a survey issued by the UIAA Office.

Not included in the 2021 carbon footprint calculation are indirect emission associated with other ancillary goods, resources, and serviced provided at UIAA events and meetings, such as origin and travel of goods and resources, electricity, heating, infrastructure, spectatorship, etc. that are associated with the venues of those events and meetings. The intention is there to start gathering this information from event organizers from 2023 onwards, following a review of the scope of the UIAA’s future emissions reporting by its Climate Change Taskforce (CCTF).

With the significant increase in virtual meetings within the UIAA community in recent years, future carbon footprint reports should also highlight the impact of our increasingly virtual lifestyles and the emissions caused by a virtual meeting.

4 LIMITATIONS

The accuracy and completeness of the 2021 carbon calculation is somewhat limited.

First of all, direct travel by plane was assumed for most delegates and staff, unless accurate information was available. A survey collecting detailed and accurate information regarding attendance and travel to meetings was not distributed. The reason for the omission was to avoid numerous emails being sent to delegates with multiple requests, not the least due to COVID-19 and priorities being elsewhere for many UIAA member associations and its delegates. Nevertheless, this remains as relevant information to include for future calculations and thereby improve the accuracy of our reporting. Hence, the format and communications associated with data collection methods will be revised for future reporting.

Second, no local travel via car and/or public transport was considered for the 2021 calculation. The focus remained on travel by airplane, as it is proven to spike CO₂ emissions

significantly more than any other transportation type and to also give us a comparison to the 2018, 2019 and 2020 calculations, which used a similar method and assumption.

Furthermore, and mainly due to limited financial resources, this calculation was done internally by the UIAA Office. In the future, the aim is to standardize the carbon footprint calculation, against international standards, and to have it audited by an external and accredited organization.

As explained within the IOC's Sustainability Essentials Guide: "Carbon footprinting is an internationally recognised practice and various standards exist for estimation of the footprint of products or organisations. These include the GHG Protocol, ISO 14064 and the European Commission's Organisation Environmental Footprint (OEF) However, as these standards were not developed with sports events in mind, they are not necessarily well adapted for this purpose and a certain amount of flexibility and adaptation is required. "

Since carbon dioxide (CO₂) is by far the main contributor to global warming – about 75 per cent – the global warming potential of GHGs are measured relative to the mass of CO₂ and are thus expressed as CO₂ equivalent (CO₂-eq). The tool used to determine this year's footprint calculates CO₂ equivalent emissions.

Lastly, the 2021 carbon footprint calculation only partially reports on the many ways in which additional CO₂ emission has been avoided, limited, or already minimized by the UIAA, its delegates and staff up until this point. Particularly, details about meeting frequency and attendance, due to the virtual setting for most meetings during COVID-19 times in 2021, are highlighted in this report.

5 METHODOLOGY

In a first step, attendance sheets of all UIAA meetings and events in 2021 were gathered. Some of these registration lists displayed the flight numbers of delegates, which helped to accurately calculate the distances travelled from location of origin to destination.

In all other cases, the largest "home" airport of each delegate, staff member or else was determined, considering their country of origin.

The closest and most relevant airport to the meeting or event locations was determined.

CO₂ emission calculations of all relevant travel were done for return trips.

The following online carbon footprint calculator was used for all calculations: <https://www.carbonfootprint.com/calculator.aspx> with "radiative forcing" not included. Carbon emissions from planes at high altitude have an increased effect on global warming. The tool recommends multiplying aviation emissions by a radiative forcing factor of 1.891, as per recommendation of the UK's Department of Environment, Food & Rural Affairs. As the factor might change over the years, and to avoid fluctuating results, it was decided to omit radiative forcing within the calculation.

The beforementioned calculator is recommended by the International Olympic Committee (IOC) in its [Sustainability Essentials Guide](#), issue 2, as an adequate tool to use for smaller organisations with limited resources.

Lastly, information such as energy use (derived from energy bills) by the UIAA Office was requested from the Swiss Alpine Club (SAC) and energy use evaluation was done via the same calculator as highlighted above.

6 RESULTS & DISCUSSION

The sum of UIAA CO₂ emissions generated in 2021, totaled 12.08 tonnes, compared to 146.5 tonnes in 2020, 353.33 tonnes in 2019, and 365.56 tonnes in 2018. The two main sources of CO₂ included in this calculation are the office infrastructure and airplane travel of UIAA delegates and athletes to scheduled events. A detailed breakdown of these calculations is provided below.

TOTAL	2018	2019	2020	2021
Tonnes of CO ₂ emissions generated through: Office Infrastructure	2.17	2.99	2.22* (corrected figure)	1.17
Tonnes of CO ₂ emissions generated through: Airplane Travel	363.39	350.34	144.28	10.91
Total: Tonnes of CO ₂ emissions generated	365.56	353.33	146.5* (corrected figure)	12.08

Table 1 – ALL CO₂ Emissions generated through the UIAA

*Corrected figure: The published [2020 UIAA Carbon Footprint Report](#) did not show all data and footprint associated with the office infrastructure, as numbers were not received at the time of publication. In the meantime, these values were received and the final footprint of 2020 is now highlighted in this table.

There is a large emissions number associated with office activities in 2020, comparable to pre-Covid year 2018, this is despite the fact that most and strict lockdowns took place in 2020. The reasons, as Table 2 shows, are due to the acquisition of additional IT hardware equipment to ease the adaptation to home offices in 2020. The calculator used for data entry asks for any purchased IT hardware in a given year and accounts for emissions of the product.

Additionally, the CO₂-eq factor provided by Energie Wasser Bern (EWB) for district heating changes over the years. In 2018, the CO₂-eq factor was not yet provided by EWB and therefore not factored into the calculation. District heating was assumed to cause zero emissions, which doesn't realistically reflect energy use and associated emissions caused that year.

The large decrease in emissions associated with airplane travel from 2020 to 2021 is especially attributed to less travel to UIAA Ice Climbing World Tour events.

In 2020, there were four events (2 in Asia, 1 in central Europe and 1 in Russia) and overall, 317 athletes partook in at least one event.

In 2021, there were only two events (both held in Russia), one of which was a Youth Championship, and only 66 athletes partook in one of the two.

As presented among the limitations, the calculation only covers airplane travel of people. When for instance an athlete is French and an event takes place in France, his/her travel is not calculated as part of the UIAA footprint.

That being said, meeting frequency and attendance increased significantly for most UIAA delegates as virtual discussions were held on a more regular basis.

6.1 Office Infrastructure

Office infrastructure generated 1.17 tonnes of CO₂ emissions in 2021, as Table 1 shows. This typically includes emissions generated through electricity, heating, printing, and acquiring new IT hardware. For 2021, as was the case in 2020, the electricity sourced was 100% green and thus its carbon emission impact is negligible. Heating of the office space and water is generated through district heating, and thus emissions generated are minimal. Airconditioning is not used. A significant amount of office work has shifted to online only, where printing is avoided where possible. The calculator used for data evaluation asks for any purchased IT hardware in a given year and accounts for emission of the product.

In 2021, the amount of IT hardware purchased was much less than in 2020, generating less emissions.

The emissions factor for district heating is determined as per the official information sheet issued by Elektrizität-Wasser-Bern (EWB): Under

<https://www.ewb.ch/wissen/wissen/wissen-fernwaerme-oekobilanzdaten>

and then «Ökobilanzdaten 2021 ewb.Natur.FERNWÄRME»

<https://www.ewb.ch/media/docs/pdf/diverses/oekobilanzdaten-natur-fernwaerme-2021.pdf>

	2018	Tonnes of CO2	2019	Tonnes of CO2	2020	Tonnes of CO2	2021	Tonnes of CO2
Area of office infrastructure space, in square meters	35.7	-	35.7 from Jan-Sept, 27.73 from Oct-Dec	-	27.73	-	27.73	-
Nbr of staff members	6 (working as 4.2 pax incl. 1 pax remote)	-	6 (working as 4.2 pax incl. 1 pax remote)	-	6 (working as 4.2 pax incl. 1 pax remote)	-	6 (working as 4.2 pax incl. 1 pax remote)	-
Electricity	3'023 in kWh at a factor of 0.0140 kgCO2e/kWh	0.04	3,135.8 kWh at a factor of 0.014 kgCO2e/kWh	0.04	later on available: 1,119 kWh at a factor of 0 kgCO2e/kWh because 100% Ökostrom	0	1,053.9 kWh at a factor of 0 kgCO2e/kWh, because 100% Ökostrom	0
Other heating systems:	141,200 kg or L District Heating (Ground Source Heat Pump)	0.00	23,120.13 kWh at a factor of 59 (kg CO2-eq per MWh district heating) (Ground Source Heat Pump)	1.36	2,040 kWh at a factor of 43 (kg CO2-eq per MWh district heating) (Ground Source Heat Pump)	0.88	2,176 kWh at a factor of 46 kg CO2-eq per MWh district heating (Ground Source Heat Pump)	1.00
Printing	263 pages b/w – CHF 0.10 pp 8 colour – CHF 0.20 pp (Adding up to a total cost of EUR 26)	0.01	23 pages b/w - CHF 0.10 pp 174 colour - CHF 0.20 pp (adding up to total cost of EUR 29)	0.01	5 pages b/w - CHF 0.10 pp 30 colour pages - CHF 0.20 pp (adding up to total cost of EUR 6.00)	Negligeable	5 pages b/w - CHF 0.10 pp 30 colour pages - CHF 0.20 pp (adding up to total cost of EUR 6.00)	Negligeable
Cost computers and IT equipment	CHF 4,250.00	2.12	CHF 1,737.00	1.58	CHF 1,500.80	1.34	CHF 436.00	0.17
Total Office Infrastructure Footprint		2.17		2.99		2.22		1.17

Table 2 - CO₂ Emission generated through the UIAA Office Infrastructure

6.2 Travel by Airplane

An individual or groups of people travelling for UIAA official duties and core activities are highlighted in the first row of Table 3, while the first column lists the potential events, conferences, or meetings the individual or group of people attended. The numbers indicate the CO₂ emissions in tonnes, which the individuals/groups of people caused traveling to the given events/meetings.

Travel by Air Plane	Office staff	EB members	MC members	GA delegates/MF rep	Honorary Members	Unit Members	UIAA Court	COM full members	COM corresponding member	Officials	Athletes	Production Crew	Accredited Lab	Manufacturer	Goods	Guests (incl. Observers)	CO ₂ , tonnes
to GA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
to MC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
to EB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
to COMWVG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
to Sports Events	0.49	0	0	0	0	0	0	0	0	1.22	5.28	2	0	0	1.92	0	10.91
to Trade Shows	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
to Office	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
to SSC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
to Sponsorship Meetings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
to SportAccord	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
to IF Forum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
to Rock Climbing Festivals to other meetings (member anniversaries:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0.49	0	0	0	0	0	0	0	0	1.22	5.28	2	0	0	1.92	0	10.91

Table 3 - CO₂ Emissions generated through UIAA delegates' Travel by Plane.

The total CO₂ equivalent emissions generated through airplane travel in 2021 are 10.91 tonnes.

The number “0” indicates that none of the group’s members attended a respective event or participated online thus not generating any emissions associated with travel.

The symbol “-“ indicates that (a) member(s) of the group attended the respective event in person, but did not fly there (thus using a car, bus or rail) or the emissions generated are already accounted for elsewhere. This is the case, for example, if a UIAA Executive Board (EB) member attends a sports event and uses the opportunity and presence to attend a sponsorship meeting in the same country.

In terms of differences to the 2020 report, the following events were no longer attended and recorded for the 2021 report: IUCN meeting, strategy meetings, RtM events, and film festivals.

Many extra meetings between newly created working groups and/or taskforces took place in 2021. These will not be listed separately in this report, due to the sheer volume and their online nature. These included, but aren’t limited to:

- UIAA Covid Consultation Committee
- UIAA Climate Change Taskforce meetings
- UIAA Continental Representatives meetings
- UIAA Executive Board working group meetings (Finance & Audit, Internal Relations, External Relations, Commissions, Communication)
- UIAA Mountain Workers Initiative meetings
- UIAA Commission Internal Working Group meetings
- Weekly UIAA Office meetings
- Meetings between UIAA Office / EB and UIAA Member Federations
- UNFCCC Sports for Climate Action Signatories and WG meetings
- Meetings with external service providers (database, website, video production, etc.)
- Sponsorship meetings
- General Assemblies of related International Federations

The following events were not attended by any UIAA delegate and/or didn’t take place:

- Rock climbing festivals
- Sustainable Summits Conference (didn’t take place as an in-person event in 2021)
- Trade Shows

And the following events took place online:

- UIAA General Assembly
- UIAA Management Committee meetings (all)
- UIAA Executive Board meetings
- UIAA Commission meetings (all)
- IF Forum / SportAccord
- Sport Positive Summit

In the following section, explanations regarding each group of people and the results are highlighted, as well as compared to previous years.

6.2.1 Office Staff Travel

In 2021 “Office staff” counts 6 people, working at 4.2 full time equivalent, with 1 of them working remotely on a permanent basis. In 2021, all Office staff shifted to a nearly permanent online mode due to COVID-19.

Of the listed meetings/events in Table 2, Office staff only traveled to two events, these being the two sports events held in Russia.

Of the listed meetings/events in Table 2, the following events were attended online by Office staff:

- UIAA General Assembly
- UIAA Management Committee meetings
- UIAA EB meetings
- UIAA Commission meetings
- UIAA EB/ Commission Internal Working Group meetings
- UIAA Office meetings
- Sponsorship meetings
- IF Forum / SportAccord
- Other meetings (UNFCCC signatories and WG meetings, Sport Positive Summit)

OFFICE	2018	2019	2020	2021
Number of people in this group	6	6	6	6
Number of meetings held by this group itself	No data collected	No data collected	Weekly online meetings	Weekly online meetings
Tonnes of CO ₂ emissions generated through airplane travel of this group	19.59	6.93	1.99	0.49

The significant decrease in CO₂ emissions is due to the online nature of most meetings in 2021 as well as limited number of events as part of the UIAA Ice Climbing World Tour.

6.2.2 EB Members' Travel

“EB members” refers to the UIAA Executive Board which in 2021 from January until December counted 7 people.

Of the listed meetings/events in Table 2, EB members didn't travel to any events in person.

The EB held 14 meetings in 2021, all online.

Of the listed meetings/events in Table 2, the following events were attended online by EB members:

- UIAA General Assembly
- UIAA Management Committee meetings
- UIAA EB meetings
- UIAA Commission meetings
- UIAA EB/ Commission Internal Working Group meetings
- UIAA Office meetings

EB	2018	2019	2020	2021
Number of people in this group	7 from Jan-Oct 5 from Oct-Dec	5 from Jan-Oct 7 from Oct-Dec	7	7
Number of meetings held by this group itself	6 total 1 x Kathmandu, 1 x Lisboa, 1 x Budapest, 2x Bern, 1 x Ulaanbaatar	8 total 4 x online, 2 x Bern, 1 x Malta, 1 x Larnaca	10 total 9 x online, 1 x hybrid Bern	14 total all online
Tonnes of CO ₂ emissions generated through airplane travel of this group	26.45	15.34	0.29	0.00

The significant decrease in CO₂ emissions is due to the online nature of most meetings in 2021, while meeting frequency increased over the past years.

6.2.3 MC Members' Travel

“MC members” refers to the UIAA Management Committee which in 2021 counted 20 people from January to October, and 21 people from October to December. 7 of these MC members are simultaneously EB members.

Of the listed meetings/events in Table 2, MC members didn't travel to any events in person.

The MC held 5 meetings in 2021, all online.

Of the listed meetings/events in Table 2, the following events were attended online by MC members:

- UIAA General Assembly
- UIAA Management Committee meetings

MC	2018	2019	2020	2021
Number of people in this group	21 including EB members	18 including EB members	20 including EB members	20 from Jan-Oct 21 from Oct-Dec including EB members
Number of meetings held by this group itself	2 total 1 x Kathmandu, 1 x Ulaanbaatar	2 total 1 x Malta, 1 x Larnaca	4 total all online	5 total all online
Tonnes of CO ₂ emissions generated through airplane travel of this group	34.11	12.26	0.00	0.00

The significant decrease in CO₂ emissions is due to the online nature of most meetings in 2021, while meeting frequency increased over the past years.

6.2.4 GA Delegates' Travel

“GA delegates” refers to all official delegates of the UIAA General Assembly and representatives of UIAA member associations, who aren't simultaneously part of the EB, MC or COM delegates.

The GA delegates mainly attended 1 meeting in 2021, notably the General Assembly. Separate e-meetings between GA delegates, members of the EB and the Office were held prior to the GA to discuss membership issues.

Therefore, of the listed meetings/events in Table 2, only the following event was attended online by GA members:

- UIAA General Assembly

In 2021, the General Assembly was held online over two days. It was attended by:

- 110 GA delegates representing member federations (MFs), including Observer members;
- 7 EB members;
- 10 MC members, 7 of which also represent MFs;

- 11 Representatives of UIAA Commissions, 2 of which also represent MFs;
- 2 Unit member representative;
- 2 Court members;
- 3 Guests;
- plus office staff.

In total this accounts for 136 people attending the GA, not counting office staff. The livestream of the event was available to watch on YouTube, and therefore even more people got the chance to attend.

GA	2018	2019	2020	2021
Number of people in this group	52 attendees including full, associate and observer members, excluding EB, MC, commission, court and honorary members, guests, office	67 attendees including full, associate and observer members, excluding EB, MC, commission, court and honorary members, guests, office	85 attendees including full, associate and observer members, excluding EB, MC, commission, court and honorary members, guests, office	110 attendees including full, associate and observer members, excluding EB, MC, commission, court and honorary members, guests, office
Number of meetings held by this group itself	1 total Ulaanbaatar	1 total Larnaca	1 total online	1 total online
Tonnes of CO ₂ emissions generated through airplane travel of this group	35.67	53.96	0.00	0.00

Travel of GA delegates didn't account for any CO₂ emissions in 2021, due to the online nature of the General Assembly. As with other groups and bodies of the UIAA, attendance of the General Assembly was higher due to the virtual format, inviting member federations who previously never attended the GA in person to now join.

6.2.5 Honorary members' travel

"Honorary members" refers to a reserved group of official UIAA delegates, being nominated by the GA. They are invited to all MC meetings and the General Assembly. In 2021, no honorary member attended these meetings.

HONORARY MEMBERS	2018	2019	2020	2021

Tonnes of CO ₂ emissions generated through airplane travel of this group	2.08	0.75	0.00	0.00
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6.2.6 Unit Members' Travel

“Unit members” refers to representatives of the current UIAA Unit Members. Representatives of UIAA Unit Member federations are invited to attend the MC meetings and the GA. In 2021, as in previous years, the UIAA counted only 1 Unit Member, notably the International Skyrunning Federation (ISF). In 2021, 1 delegate represented the ISF at MC meetings, while 2 delegates representing the ISF attended the GA.

UNIT MEMBERS	2018	2019	2020	2021
Tonnes of CO ₂ emissions generated through airplane travel of this group	1.88	0.53	0.00	0.00

In 2021, Unit members didn't create a carbon footprint through airplane travel. This again can be explained due to the online nature of all meetings.

6.2.7 UIAA Court Travel

The “UIAA court” attends the GA and MC meetings and counts 4 people in 2021, 1 of which attended most MC meetings, while 2 representatives attended the GA.

UIAA COURT	2018	2019	2020	2021
Tonnes of CO ₂ emissions generated through airplane travel of this group	3.49	0.43	0.00	0.00

The representatives' travel by airplane in 2021, as in 2020, accounts for 0.00 tonnes of CO₂, due to the online nature of events.

6.2.8 Commission Members' Travel

“COM members” refers to all full and corresponding members of UIAA Commissions. Full members are expected to attend one annual commission meeting in person, while corresponding members are encouraged not expected to attend these. Commission presidents

additionally attend all MC meetings as well as the GA. In 2021, the UIAA counts 7 commissions, which are:

- Antidoping Commission
- Ice Climbing Commission
- Medical Commission
- Mountain Protection Commission
- Mountaineering Commission
- Safety Commission
- Youth Commission

Many of these commissions have internal working groups who meet more frequently, mostly online. These meetings and attendance won't be listed separately.

The number of members to each commission varies throughout the year, as nominations and revocations of memberships are accepted in May and October of each year. For reference and to allow a comparison between calendar years the below list highlights the average number of members per commission as well as details on meeting frequency and format/location for the given year.

COMMISSION MEMBERS	2018	2019	2020	2021
Access: Number of people in this group	4 full members, 12 corresponding members	Commission was integrated into the Mountaineering Commission in May	n/a	n/a
Access: Number of meetings held by this group itself	1 total Canmore	1 total Malta*	n/a	n/a
Antidoping: Number of people in this group	3 full members, 2 corresponding members	3 full members, 1 corresponding member	3 full members, 0 corresponding member	3 full members, 0 corresponding member
Antidoping: Number of meetings held by this group itself	1 total Lausanne	1 total Malta*	0 extra meetings total, as they meet during Sports Events*	0 extra meetings total, as they meet during Sports Events*

Ice Climbing: Number of people in this group	8 full members, 8 corresponding members, 3 athletes	9 full members, 9 corresponding members, 3 athletes	8 full members, 8 corresponding members, 3 athletes	9 full members, 14 corresponding members, 5 athletes
Ice Climbing: Number of meetings held by this group itself	1 total Busteni	1 total, Malta*	1 total, online	6 total, all online
Medical: Number of people in this group	23 full members, 19 corresponding members	23 full members, 21 corresponding members	23 full members, 22 corresponding members	23 full members, 21 corresponding members
Medical: Number of meetings held by this group itself	1 total Kathmandu	1 total Bolzano	0 total	1 total online
Mountain Protection: Number of people in this group	9 full members, 8 corresponding members	8 full members, 6 corresponding members	7 full members, 7 corresponding members	7 full members, 8 corresponding members
Mountain Protection: Number of meetings held by this group itself	1 total Lake District	1 total Baku	2 total all online	5 total all online
Mountaineering: Number of people in this group	24 full members, 7 corresponding members (Expeditions, Training and Legal Experts had its own members)	26 full members, 9 corresponding members (Access, Expeditions, Training and Legal Experts had its own members)	35 full members, 21 corresponding members (Access, Expeditions, Training and Legal Experts had its own members)	43 full members, 21 corresponding (including Access, Expeditions, Training and Legal Experts)
Mountaineering: Number of meetings held by this group itself	2 total 1 x Lisbon, 1 x Budapest	2 total 1 x Novi Sad, 1 x Hong Kong	2 total all online	2 total all online

Safety: Number of people in this group	9 full members, 7 corresponding members	9 full members, 9 corresponding members	7 full members, 10 corresponding members	8 full members, 10 corresponding members
Safety: Number of meetings held by this group itself	1 Lisbon	2 total 1 x online, 1 x Malta*	8 total 7 internal, online 1 plenary, online	6 total 4 internal, online 2 plenary, online
Youth: Number of people in this group	18 full members, 5 corresponding members	17 full members, 5 corresponding members	16 full members, 4 corresponding members	17 full members, 5 corresponding members
Youth: Number of meetings held by this group itself	1 total Cadiz	0 total	0 total	5 total all online
Tonnes of CO ₂ emissions generated through airplane travel of this group	53.37	37.9	0.00	0.00

*joint with another UIAA meeting/event.

There was no airplane travel in 2021 as all commission meetings were held online.

In general, Corresponding Members were much more likely to attend Commission meetings due to their online format. As most representatives would have to pay for their travel themselves, they usually do not attend these meetings.

6.2.9 Officials' Travel

“Officials” of the UIAA refer to stakeholders at the UIAA Sports Events working in an official capacity for the UIAA. These include: international results manager, international route setters and international judges. Excluded are: national/local judges and route setters, guests, the production crew and the livestream commentator.

Among the UIAA Sports Events are: UIAA Ice Climbing World Cups, the UIAA Ice Climbing World Championships, the UIAA Ice Climbing Youth World Championships and the UIAA Ice Climbing Combined World Championships.

In 2021, the season only comprised two events, namely:

- UIAA Ice Climbing World Youth Championships, Tyumen, RUS (27-28 February 2021)
- UIAA Ice Climbing World Cup, Kirov, RUS (5-7 March 2021)

OFFICIALS	2018	2019	2020	2021
Number of events within calendar year	6 total 1 Saas Fee 1 Rabenstein 1 Hohhot 1 Cheongsong 1 Kirov 1 Malbun	8 total 1 Cheongsong, 1 Beijing, 1 Saas Fee, 1 Rabenstein 1 Champagny-en-Vanoise 1 Denver 1 Oulu 1 Kirov	4 total 1 Chang chun, 1 Cheongsong, 1 Saas-Fee, 1 Kirov	2 total 1 Tyumen, 1 Kirov
Tonnes of CO ₂ emissions generated through airplane travel of this group	No data collected	18.68	10.42	1.22

6.2.10 Athletes' Travel

“Athletes” of the UIAA are all those competing in international UIAA Sports Events, notably the UIAA Ice Climbing World Cups, the UIAA Ice Climbing World Championships, the UIAA Ice Climbing Youth World Championships and the UIAA Ice Climbing Combined World Championships.

For athletes participating in consecutive legs of the World Tour, continuous travel was assumed, as athletes tend to stay on the continent to train locally before the next competition.

ATHLETES	2018	2019	2020	2021
Number of people participating in at least one event	232	249	197	64
Number of events within calendar year	6 total 1 Saas Fee 1 Rabenstein 1 Hohhot 1 Cheongsong 1 Kirov 1 Malbun	8 total 1 Cheongsong, 1 Beijing, 1 Saas Fee, 1 Rabenstein 1 Champagny 1 Denver 1 Oulu 1 Kirov	4 total 1 Chang chun, 1 Cheongsong, 1 Saas-Fee, 1 Kirov	2 total 1 Tyumen, 1 Kirov

Tonnes of CO ₂ emissions generated through airplane travel of this group	153.95	180.68	122.56	5.28
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Apart from competing in UIAA supported events, nominated athletes attend Ice Climbing Commission meeting.

Arguably, the travel of athletes is an indirect environmental impact caused by UIAA supported (or hosted) events. The main reason why their footprint is included in the overall UIAA carbon footprint calculation, is because these events count towards core UIAA activities and are branded accordingly, which is highly visible on athletes' bibs, banners around the venue, etc.

6.2.11 Production Crew

The "Production Crew" refers to those individuals travelling to international UIAA Ice Climbing Events to assure a livestream is available.

In 2021 these were 5 people, including the commentator. All five are UK citizens. They travelled to the World Cup, but not the Youth World Championships.

PRODUCTION CREW	2018	2019	2020	2021
Number of people in this group	No data collected	No data collected	5	5
Number of events within calendar year	5 total 1 Saas Fee 1 Rabenstein 1 Hohhot 1 Cheongsong 1 Kirov (excluding World Youth Championships)	7 total 1 Cheongsong, 1 Beijing, 1 Saas Fee, 1 Rabenstein 1 Champagny 1 Denver 1 Oulu (excluding WYC)	3 total 1 Chang chun, 1 Cheongsong, 1 Saas-Fee, (excluding WYC)	1 total 1 Kirov (excluding World Youth Championships)
Tonnes of CO ₂ emissions generated through airplane travel of this group	No data collected	No data collected	7.1	2.0

Their airplane travel accounts for 2.0 tonnes of CO₂ emissions in 2021.

6.2.12 Accredited Laboratory Representatives

The “Accredited Laboratory Representatives” refers to those individuals representing accredited testing laboratories for UIAA Safety Label Standards, who attend the plenary assemblies of the UIAA Safety Commission.

ACCREDITED LAB REPS	2018	2019	2020	2021
Average number of attendees of this group	No data collected	No data collected	11	8
Number of plenary meetings attended by this group	1 Lisbon	1 total 1 x Malta*	1 total online	2 total all online
Tonnes of CO ₂ emissions generated through airplane travel of this group	No data collected	No data collected	0.00	0.00

6.2.13 Manufacturer Representatives

This category name of people has been changed from 2019. It now says “Manufacturer Representatives” rather than the previous “Safety Label Holder”. The “Manufacturer Representatives” refers to those individuals representing manufacturers of climbing and mountaineering equipment, interested and often holding UIAA Safety Labels, who attend the plenary assemblies of the UIAA Safety Commission.

MANUFACTURER REPS	2018	2019	2020	2021
Average number of attendees of this group	No data collected	No data collected	30	24
Number of plenary meetings attended by this group	1 Lisbon	1 total 1 x Malta*	1 total online	2 total all online

Tonnes of CO ₂ emissions generated through airplane travel of this group	No data collected	No data collected	0.00	0.00
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6.2.14 Goods' travel

A certain amount of "Goods" get transported for and by the UIAA, such as branding material, sponsors' in kind gifts, UIAA trophies, medals, etc.

In most cases, and whenever possible, these travel with UIAA delegates to the various locations. The times, that these are traveling by airplane themselves though, account for 1.92 tonnes of CO₂ emissions in 2021, as was the case in 2020 and 2019.

6.2.15 Guests' Travel

"Guests" of the UIAA refer to official invitees to UIAA meetings and observer federations of the UIAA. In 2021, guests were invited to the UIAA General Assembly, the Management Committee meetings, Executive Board meetings and at times Commission meetings.

In 2021, the GA was attended by 5 guests.

The Management Committee meetings were attended by maximally 2 guests across all meetings.

The Executive Board meetings were attended by no guests across all meetings.

And 22 guests attended the various Commission meetings.

In 2021 as was the case in 2020, due to the online nature of most UIAA meetings, the travel of official UIAA guests accounted for no emissions, compared to 6.79 tonnes of CO₂ emissions in 2019.

7 FINAL REMARKS

The sum of UIAA CO₂ emissions generated in 2021 is 12.08 tonnes, compared to 146.5 tonnes in 2020, 353.33 tonnes in 2019 and 365.56 tonnes in 2018. However, a direct comparison of these figures does not provide for an accurate representation to compare one year to another, since the underlying conditions and factors that lead to the respective CO₂ emissions generated in any given year, differ.

Mainly it depends on the format, and the location of annual meetings/events and the place of travel origin of meeting delegates. Far-off meeting locations generate more CO₂ emissions, yet at the same time, it is centrally located meeting destinations that are attended by more representatives, thus also spiking the amount of emissions generated. Nevertheless, the resulting figures give much opportunity to further reflect on those activities that generate the most emissions, compared to all others that are part of the core operations of the UIAA as an organization.

2021, as was the case for 2020, was a special year, as the COVID-19 pandemic resulted in most meetings being held virtually.

Many travel policies to reduce CO₂ impact promote the principle of "avoid, reduce, compensate" in that order. The UIAA, through the support and participation of its Mountain Protection Commission and the UIAA Climate Change Task Force, will seek to draft such a policy by September 2023 in its fulfilment of the 5 principles set out by the UNFCCC.

8 ANNEX I

Table 3 - CO₂ Emissions generated through UIAA delegates' Travel by Plane

Travel by Air Plane	Office staff	EB members	MC members	GA delegates/ MF rep	Honorary Members	Unit Members	UIAA Court members	COM full members	COM corresponding member	Officials	Athletes	Production Crew	Accredited Lab	Manufacturer	Goods	Guests (incl. Observers)	CO ₂ tonnes
to GA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
to MC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
to EB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
to COM/WG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
to Sports Events	0.49	0	0	0	0	0	0	0	-	1.22	5.28	2	2	0	1.92	0	10.91
to Trade Shows	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
to Office	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
to SSC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
to Sponsorship Meetings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
to Sport/accord	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
to IF Forum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
to Rock Climbing Festivals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
to other meetings (member anniversaries)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0.49	0	0	0	0	0	0	0	0	1.22	5.28	2	2	0	1.92	0	10.91

9 KEY RESOURCES

1

IOC Sustainability Essentials Guide

<https://stillmed.olympics.com/media/Document%20Library/OlympicOrg/IOC/What-We-Do/celebrate-olympic-games/Sustainability/sustainability-essentials/SUSTAINABILITY-ESSENTIALS-ISSUE-2.pdf>

2

UNFCCC The Path to Climate Neutrality – Measure the Basics

https://unfccc.int/sites/default/files/resource/ThePathtoClimateNeutrality-Measure-TheBasics_May26.pdf