



FIS Events Emission Estimation Executive Summary

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Total carbon EMISSIONS

57,965
tCO₂e total emissions

Total emissions equivalent to
51,848 return flights from London to New York

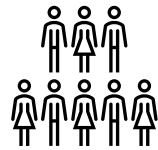
7.3
tCO₂e per event



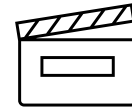
Resort
7,605 tCO₂e



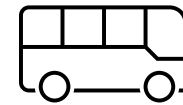
Course
621 tCO₂e



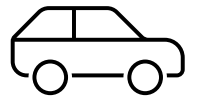
Tribune
59 tCO₂e



TV Production
90 tCO₂e



Participant travel
26,994 tCO₂e

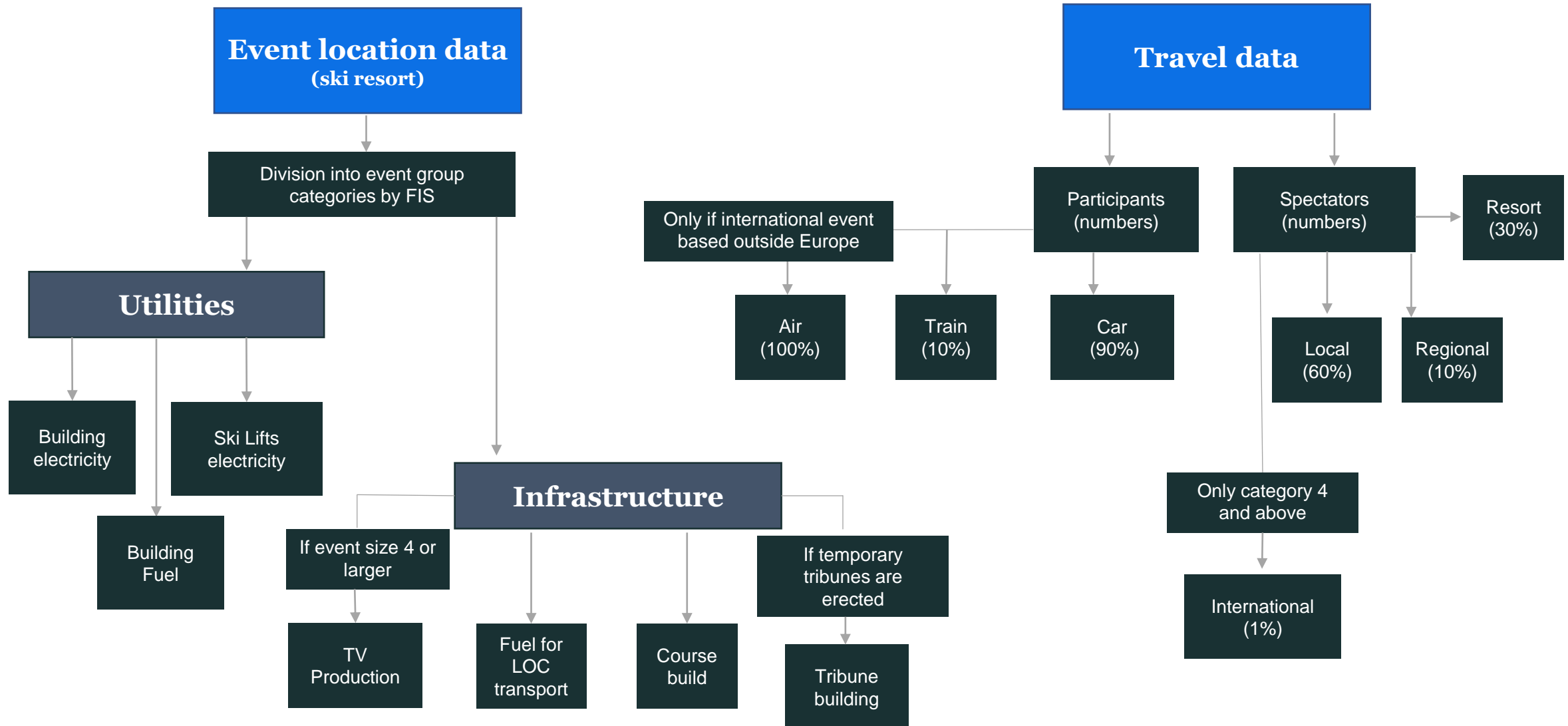


Spectator travel
22,596 tCO₂e

Methodology



Methodology



Major Assumptions

General

- Breakdown of events, based on FSI expertise on size, type and nature of the event, into group categories (from 1 to 6).
- To have a figure that better represent a 'normal season' the difference between standard season and the one impacted by covid was extrapolated using following methodology. Since the majority of FSI events that were cancelled during the Covid season were Level 1, the difference in that event category was extrapolated by adding extra 2,000 events under category 1 events, as that season, FIS staged 7,805 events at that category.

Utilities

- Event group emissions: Different values have been applied to different group sizes. This has been based on the data provided for a group 4 event. Groups 5 has a 25% increase and Group 6 has a 50% increase. Group 3 has a 25% decrease in emissions from the group 4 event and Group 2 has a 50% decrease in comparison. Group 1 events due to the fact they are very small had been assumed it is only 5% of the total emissions of the group 4 event.
- This has then been calculated to represent the number of days the event is held for.

Infrastructure

- TV production emissions assumed to be negligible for Group 1, 2 and 3 events as they are unlikely to be televised.
- Tribune emissions only assumed where temporary tribunes need to be put in place for the event.
- Course build emissions have been calculated with uplifts and down lifts applied: S (-75%), M (-25%), L (dataset), XL (+50%).
- LOC (Local organising committee) this is transport around the course and is calculated on a per participant basis.

Transport

- Local travel assumed to be carried out by car, regional and international travel was assumed to be carried out by air travel (international) with no class uplift.
- 60% of spectators are assumed to travel locally, 10% regionally and 30% to be staying in the resort where the event is taking place (for events smaller than group 4). For events group 4 and above, 29% are assumed to be staying in the resort and 1% to be travelling internationally.
- Participant's European regional travel distances were calculated from one assumed central location (Zurich).
- Participant's travel was assumed to be 90% by car and 10% by rail for events in Europe. For events international all travel was assumed to be by air travel (international).

Results and Key Findings

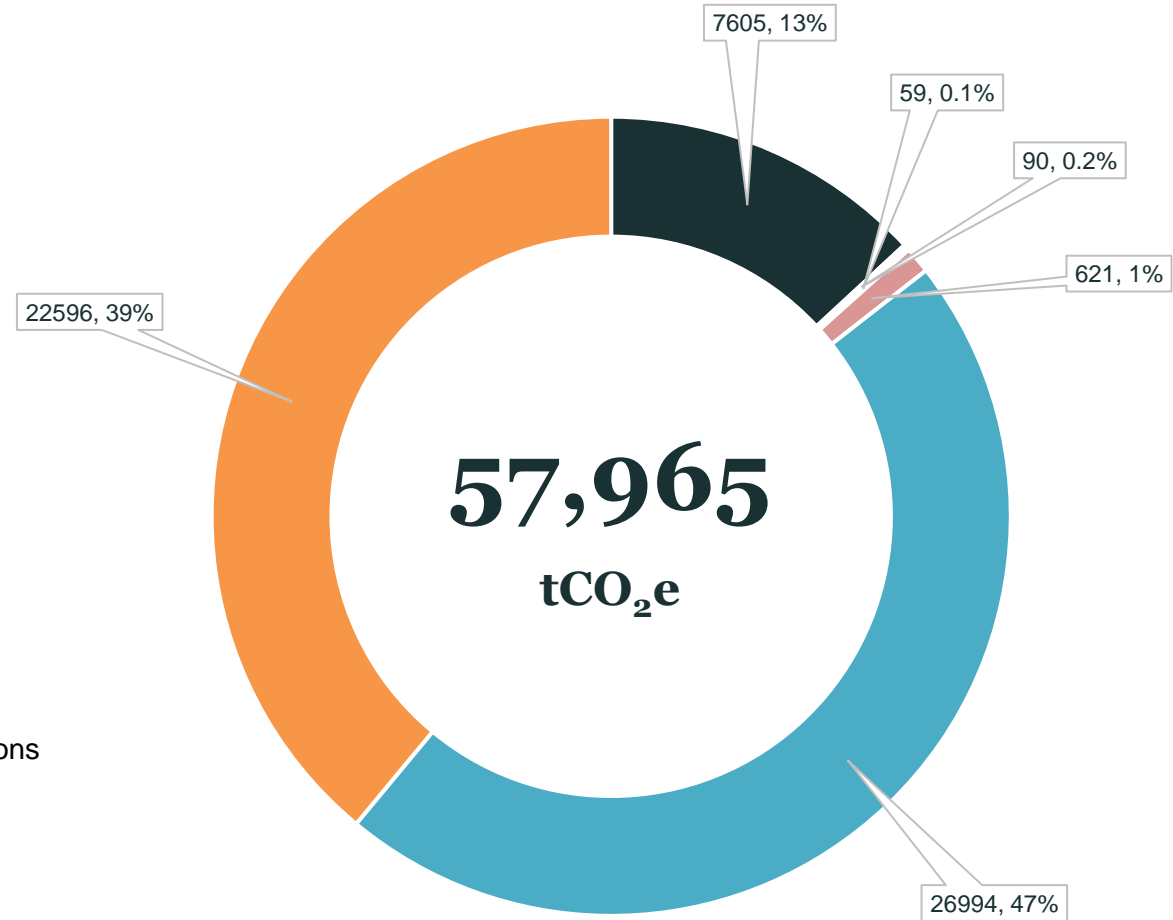


Key Findings

- Total estimated emissions: 57,965 tCO₂e
- Assumptions around spectator and participant travel have the biggest impact on total estimated emissions of an event when compared to on-site emissions.
- The greatest source of estimated emissions were participant travelling by car (of an unknown type) which accounted for 25% of total emissions. Regional air travel is 16%.
- The estimated average of 7.3 tCO₂e per event for total 7,920 events; (small (category 1) events average at 1.7 tCO₂e per event and the larger categories on average at 445 tCO₂e per event).
- The biggest contributor to the total estimated emissions is Local events (23%) next in line – Alpine (22%).

Emission breakdown by source

- Resort Emissions
- TV Production Emissions
- Tribune Emissions
- Course Build Emissions
- Participant Travel Emissions
- Spectator Travel Emissions

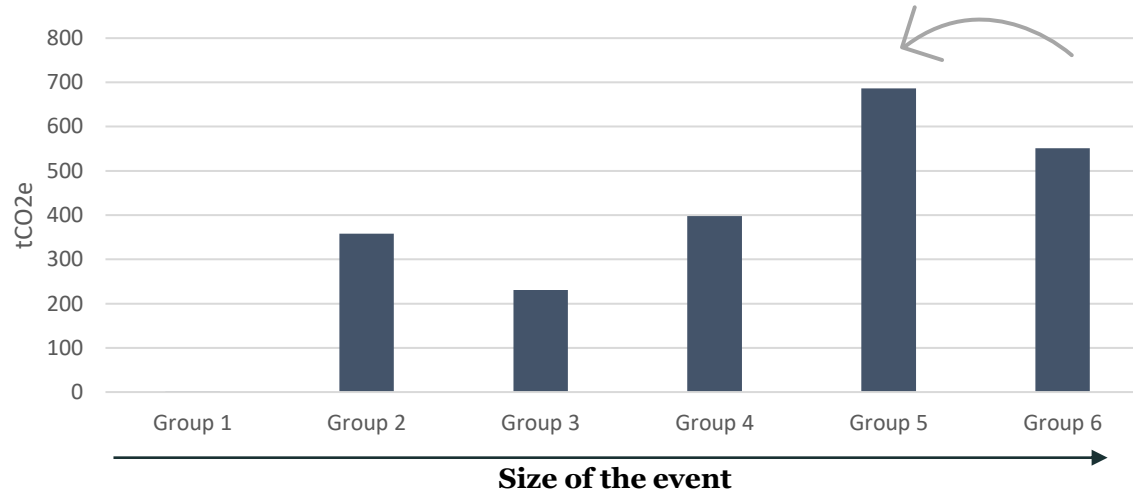




Comparisons by event size and type

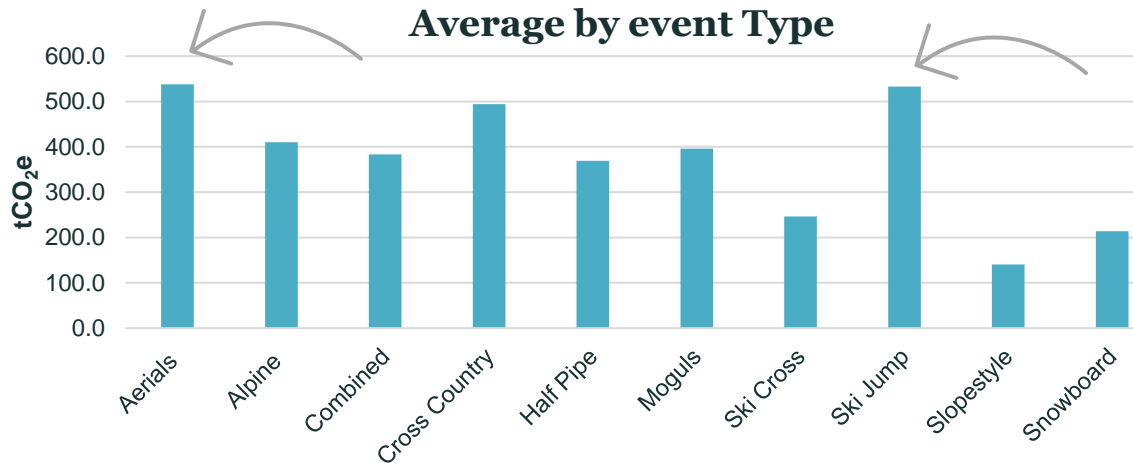
- This is the average emissions associated with each event group/type.
- **The emissions relating to group 1 events are lowest due to the nature of group 1 events.** These are 1-day events with local travel and require no tribunes or course to be built.
- **The emissions relating to group 5 average per event are highest due to has the highest average number of spectators.**
- **Group 3 and 4 – medium size events but largest % of total.** Linked to group 3 and 4 having the one of highest numbers of events.
- **Aerials, closely followed by Ski Jump events, have the highest average estimated emission per event,** primarily due to spectator numbers. Local events contribute the most (23%) to the total number of emissions.

Average by event Group



By Group	Of total estimated footprint
Group 1	23%
Group 2	8%
Group 3	18%
Group 4	18%
Group 5	17%
Group 6	16%

Average by event Type



	Of total estimated footprint
Snowboard	6%
Ski Jump	17%
Alpine	22%
Combined	7%
Slopestyle	2%
Aerials	6%
Ski Cross	3%
Moguls	5%
Cross Country	8%
Half Pipe	1%
Local events	23%

Calculator tool

- The calculator tool can be used to estimate the emissions of an event from a series of easily obtainable datapoints about the event.
- The orange boxes indicate where the user needs to manually enter information about the event.
- One limitation of the calculator: if the user wants to select an event location which is not in the data set provided by FIS an average will be taken from all other locations to calculate the participant and spectator travel emissions, which is less accurate.
- PLEASE NOTE: calculator provides estimated not actual numbers, please use the results with caution.

Type	Possible Answers	Enter Answers here	Emission tCO ₂ e	Description
Event Group	1, 2, 3, 4, 5, 6	5	47.2	Resort and TV Production
Country	Country code	CRO		Host country
Event Location		Europe		Region - Automatically selected
Event Duration	Number of days	3		Total days of the events
Tribunes	None, Permanent, Temporary	Temporary	2.0	Tribunes - were they temporarily constructed?
Course Build	None, Small, Medium, Large, Extra Large	L	5.5	What size course was needed for the event?
Accredited Participants	Number of participants	205	1.54	LOC people transport - Participant travel around the event
			38.25	Participant travel by car (automatically calculated)
			0.92	Participant travel by train (automatically calculated)
			0.00	Participant travel by air (automatically calculated)
Accredited Spectators	Number of Spectators	1000	0.00	Spectators watching the event who were already in the resort
			6.17	Spectators travelling locally for the event
			18.44	Regional travel
			13.14	Spectators who have travelled to the event internationally

Total Emissions = 133.20