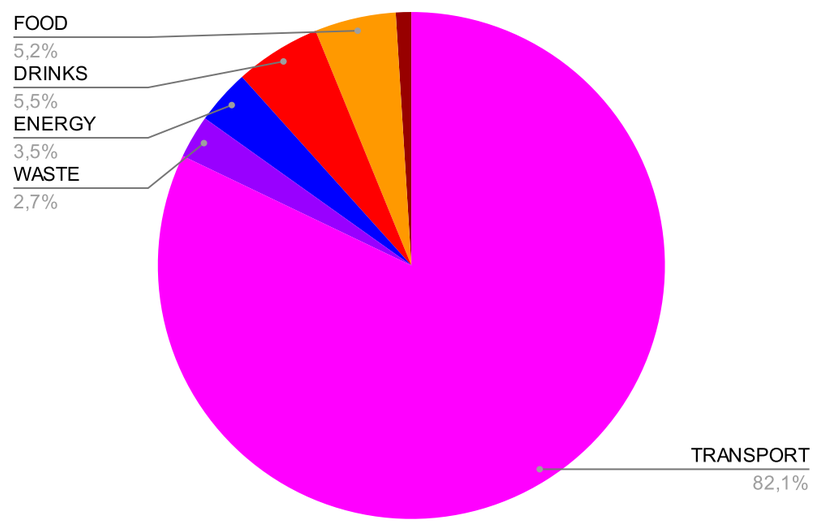
D.A.S.T. ≈ Trencadís
June 23rd-26th, 2023

EMISSIONS REPORT

TOTALS	
Catergory	CO2 emissions (t)
TRANSPORT	8,409
WASTE	0,281
ENERGY	0,358
DRINKS	0,561
FOOD	0,531
OTHERS	0,101
Total	10,241



I emitted the equivalent of 10,2 tonnes of CO2 to make Trencadís happen, mainly due to transportation for reaching the location.
For reference, the average annual amount of CO2 generated by a single person in the EU is 8,4 tonnes.

To compensate for this emission, I decided to purchase the equivalent 'carbon credits', for the amount of 292 €, using the budget included in your participation fee.
This means that the emission I generated will be offsetted by directly supporting a project that absorbs or prevents the emission of the same quantity of CO2.

Specifically, I decided to support this project:

https://www.myclimate.org/en/get-active/climate-protection-projects/detail-climate-protection-projects/kenya-efficient-cook-stoves-7138/

It is verified by 'Gold Standard' (The most trusted and strict institution offering carbon credits) and affects 8 more 'SDGs' (Sustainable Development Goals defined by the United Nations), other than 'Climate Action'.

TRANSPORT					
Reason	Mean	Traveled distance (Km)	CO2 emission (Kg)	Calculation method	Source
Participants to Barcelona	Airplane	63200	7268	115 g of CO2/km per passenger (On economy class flight, by a Boeing 747-400)	(1)
	Train	2870	140,63	49 g of CO2/km per passenger (Average intercity trains)	(2)
	Coach	3000	75	25 g of CO2/km per passenger (Average of 28 passengers per coach)	(3)
	Car	1600	133,6	167 g of CO2/km per vehicle (Average medium petrol car, divided by 2 passengers)	(3)
Barcelona to Trencadis site	1 coach, return trip	420	294	700 g of CO2/km per vehicle (Average 50 seats coach)	(3)
	2 vans, return trip	840	184,8	220 g of CO2/km per vehicle (Average petrol big car / seater)	(3)
	1 car, double return trip	840	102,48	122 g of CO2/km per vehicle (Ford Puma base version)	(4)
Prior visits to Trencadis site	1 car, triple return trip	1260	210,42	167 g of CO2/km per vehicle (Average medium petrol car)	(3)
		Total	8408,93		

WASTE					
Type	Preparation for the event (Kg)	During the event (Kg)	CO2 emission (Kg)	Calculation method	Source
Compost	8,67	37	1,141	0,025 Kg of CO2 per kg of food compost, locally managed	(5)
Paper	0,2	12	9,15	0,75 Kg of CO2 per kg of newly produced paper (Avoided emissions from recycling are ignored)	(6)
Plastic	0,84	3,25	24,54	6 Kg of CO2 per kg of plastic (Newly produced PET) (Avoided emissions from recycling are ignored)	(7)
Aluminium	0	6	96	16 Kg of CO2 per kg of newly produced aluminium (Avoided emissions from recycling are ignored)	(8)
Glass	0	8	10	1,25 Kg of CO2 per kg of newly produced glass (Avoided emissions from recycling are ignored)	(9)
Mixed	0	4	140	35 Kg of CO2 per kg of landfill waste (In the U.S.)	(10)
		Total	280,831		

ENERGY					
Type	Fuel type	Fuel consumed (L)	CO2 emission (Kg)	Calculation method	Source
Electric inverter generator 2,8 kw	gasoline E5	48	115,2	2,4 kg CO2 per L of fuel	(11)
Electric generator 4 kw		22	52,8		
Electric inverter generator 4,8 kw		79	189,6		
		Total	357,6		

DRINKS				
Type	Quantity consumed (L)	CO2 emission (Kg)	Calculation method	Source
Beer	360	511,2	1,42 kg of CO2 per L of locally produced lager beer	(12)
Wine	27	32,4	1,2 kg of CO2 per L of wine	(13)
Fruit Juice	20	17,8	0,89 kg of CO2 per L of "Tropicana" orange juice	(14)
	Total	561,4		

FOOD				
Type	Quantity consumed (Kg)	CO2 emission (Kg)	Calculation method	Source
Vegetables	140,91	210,487	For each ingredient, average emission of a traditionally farmed product in the UK have been calculated. This is an overestimation, as in Trencadis we used mostly organically and regionally grown ingredients.	(15)
Fruits	83,11	109,943		
Bread	30	3,645		
Legumes	30	23,289		
Cereals	13	14,457		
Rice	10	13,743		
Other	9,2	21,905		
Olive oil	9	22,732		
Biscuits	7,4	9,645		
Eggs	7	31,54		
Cheese	6,5	57,115		
Coffee	3,5	2,47		
Nuts	3	6,251		
Pasta	3	4,123		
	Total	531,345		

OTHERS					
Type	Paper quantity (Kg)	Shipping distance (Km)	CO2 emission (Kg)	Calculation method	Source
Letters delivery to participants	1,2	35000	59	Average emissions in the U.S. for ground and aviation packages of various sizes.	(16)
Pallet delivery from Italy	250	1200	42		
		Total	101		

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SOURCES	
(1)	https://www.carbonindependent.org/22.html
(2)	https://www.carbonindependent.org/21.html
(3)	https://travelandclimate.org/transport-calculations
(4)	https://www.autoexpress.co.uk/ford/puma/mpg
(5)	https://www.epa.nsw.gov.au/-/media/epa/corporate-site/resources/wasteregulation/fogo/22p4164-emissions-impacts-composting-food-waste.pdf
(6)	https://8billiontrees.com/trees/how-many-trees-are-cut-down-each-year-for-paper/
(7)	https://timeforchange.org/plastic-bags-and-plastic-bottles-co2-emissions-during-their-lifetime/
(8)	https://www.carbonchain.com/blog/understand-your-aluminum-emissions
(9)	https://www.beveragedaily.com/Article/2010/09/15/Benchmark-study-on-glass-offers-clear-carbon-footprint-picture
(10)	https://www.brightest.io/calculate-carbon-footprint-waste-emissions
(11)	https://www.carbonindependent.org/17.html
(12)	https://www.imperial.ac.uk/news/185946/how-green-your-beer/
(13)	https://greenly.earth/en-gb/blog/ecology-news/what-is-the-carbon-footprint-of-the-wine-industry
(14)	https://www.environmentalleader.com/2009/01/carbon-footprint-of-tropicana-orange-juice-17-kg/
(15)	https://myemissions.green/food-carbon-footprint-calculator/
(16)	https://consumerecology.com/carbon-footprint-of-package-shipping-transport/#:~:text=The%20carbon%20footprint%20of%20a,0.98%20kg%20CO2e.