

# Best practices in data sharing: Creating value together

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“Unlocking the Power of Data to shape the Future of Travel”  
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# Carbon footprint emissions: destination Netherlands

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Travelling Large: Inbound Tourism and Inbound Day Visitors

Dutch Board for Tourism and Conventions

Data on the characteristics of incoming tourists;  
Central Statistics Bureau; Dutch Emission Register

# Carbon footprint emissions: reference values

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	<b>2022</b>	<b>Unit</b>
CO <sub>2</sub> emissions per average Dutch outbound holiday*	671	kg
CO <sub>2</sub> emissions per average Dutch outbound holiday per day*	69	Kg
Total CO <sub>2</sub> emissions Dutch outbound holidays*	7.87	Mton
Average annual CO <sub>2</sub> emissions per person in the Netherlands	7.27	Ton
Average CO <sub>2</sub> emissions per person per day in the Netherlands	19.9	Kg
Total Dutch CO <sub>2</sub> emissions**	127.9	Mton

Sources: Emissieregistratie (2022), Neelis et al. (2021), CBS (2022)

\*2020 figures, since 2021 figures are not published yet.

\*\*excluding LULUCF (forestry and land use)

# Carbon footprint emissions: by country of origin

	<b>Per day (kg)</b>	<b>Per trip (kg)</b>	<b>Total (Mton)</b>
Germany	33	241	1.414
Belgium	29	156	0.342
France	42	307	0.252
UK	45	303	0.363
Italy	67	471	0.173
Spain	73	527	0.185
Poland	48	362	0.201
Austria	51	370	0.055
Sweden	51	434	0.050
Denmark	39	328	0.040
United States	214	1,449	1.491
USA Total LOS*	214	1,789	1.841
<i>Total/Average</i>	52	357	4.566

Source: analyses of NBTC OIT 2022

\*Emissions of the whole trip, including the part of the trip outside of the Netherlands, not included in the total figure of 4.566 Mton

# Carbon footprint emissions: by accommodation

	<b>Per day (kg)</b>	<b>Per trip (kg)</b>	<b>Total (Mton)</b>
Hotel/pension	65	436	2.814
Bed-and-breakfast	49	306	0.428
Apartment	40	306	0.353
Holiday homes	35	282	0.172
Campsite	22	167	0.114
Group accommodation	52	373	0.050
Private home	44	307	0.270
Boat	21	145	0.014
Second home	34	341	0.032
Home of family/friends	37	251	0.306
Other	34	213	0.013
<i>Total/Average</i>	52	357	4.566

Source: analyses of NBTC OIT 2022

# Carbon footprint emissions: by transport mode

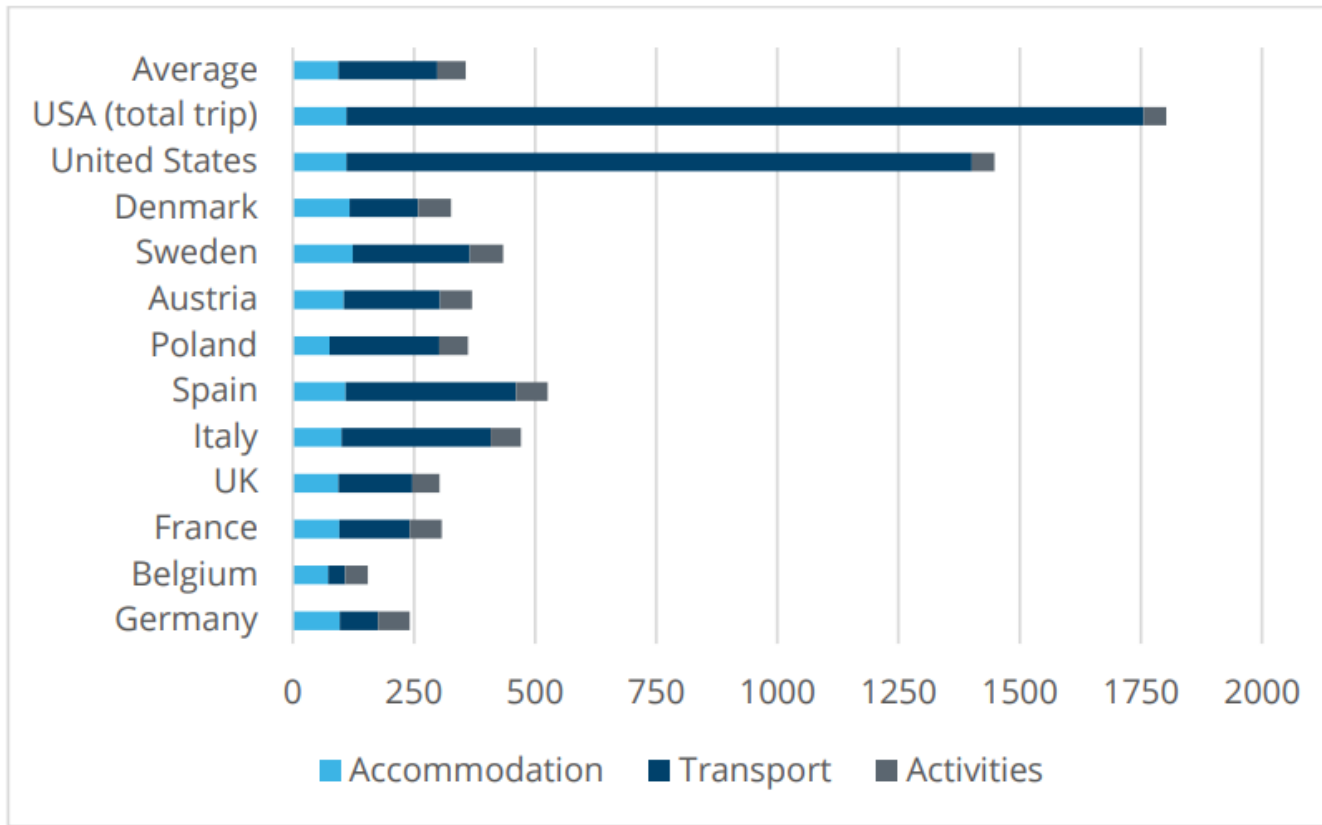
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	<b>Per day (kg)</b>	<b>Per trip (kg)</b>	<b>Total (Mton)</b>
Airplane	94	689	2.441
Boat/Ferry	48	313	0.072
Train	24	161	0.252
Car*	37	245	1.687
Coach/Bus	23	151	0.041
Other	31	243	0.075
<i>Total/Average</i>	<i>52</i>	<i>357</i>	<i>4.566</i>

Source: analyses of NBTC OIT 2022

\*There was not made a distinction between fuel cars and electric cars in the questionnaire. The emission factor for cars does consider the mix of vehicles (and thus fuel types) in the Netherlands, to estimate the average emissions.

# Carbon footprint emissions: per trip component



Source: analyses of NBTC OIT 2022

# Carbon footprint emissions: eco-efficiency

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	<b>KG CO<sub>2</sub> per trip</b>	<b>€ spent per trip</b>	<b>Eco-efficiency (kg CO<sub>2</sub>/€)</b>
Germany	241	617	0.39
Belgium	156	429	0.36
France	307	657	0.47
UK	303	715	0.42
Italy	471	835	0.56
Spain	527	835	0.63
Poland	362	820	0.44
Austria	370	820	0.45
Sweden	434	870	0.50
Denmark	328	870	0.38
United States	1449	1425	1.02
<i>Average</i>	<i>357</i>	<i>635</i>	<i>0.56</i>

Source: analyses of NBTC OIT 2022



# Carbon footprint emissions: smaller DMOs

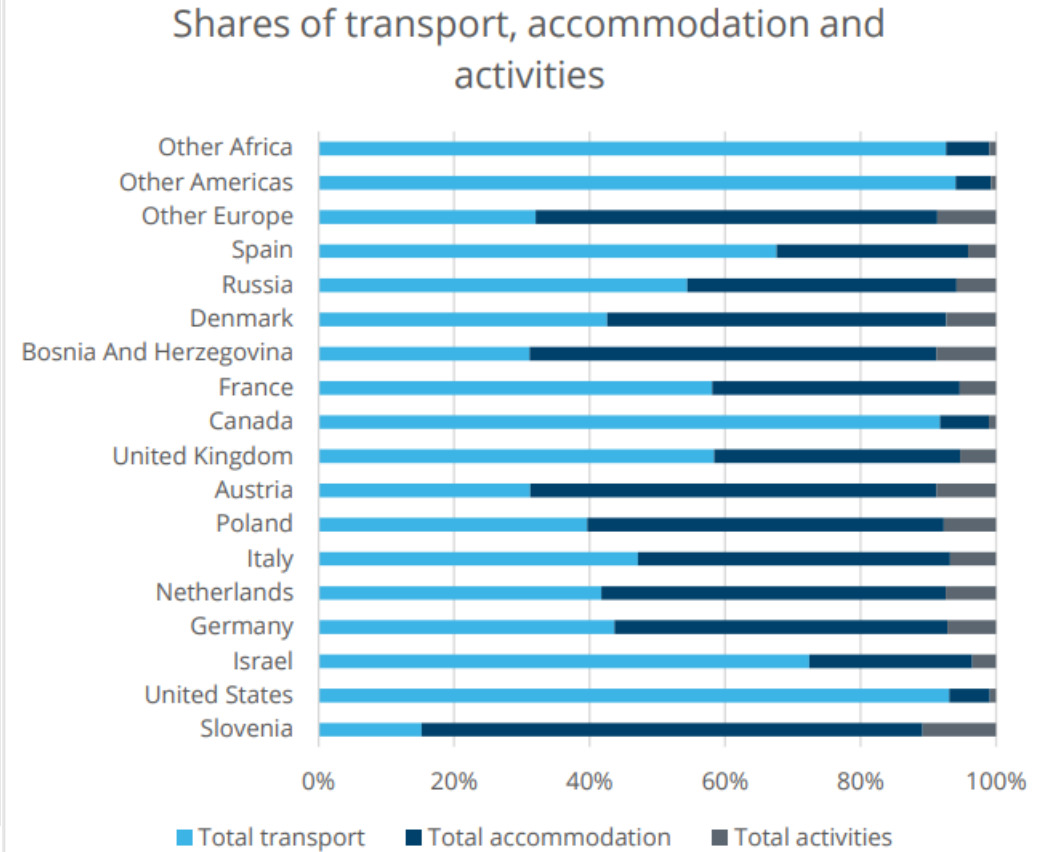
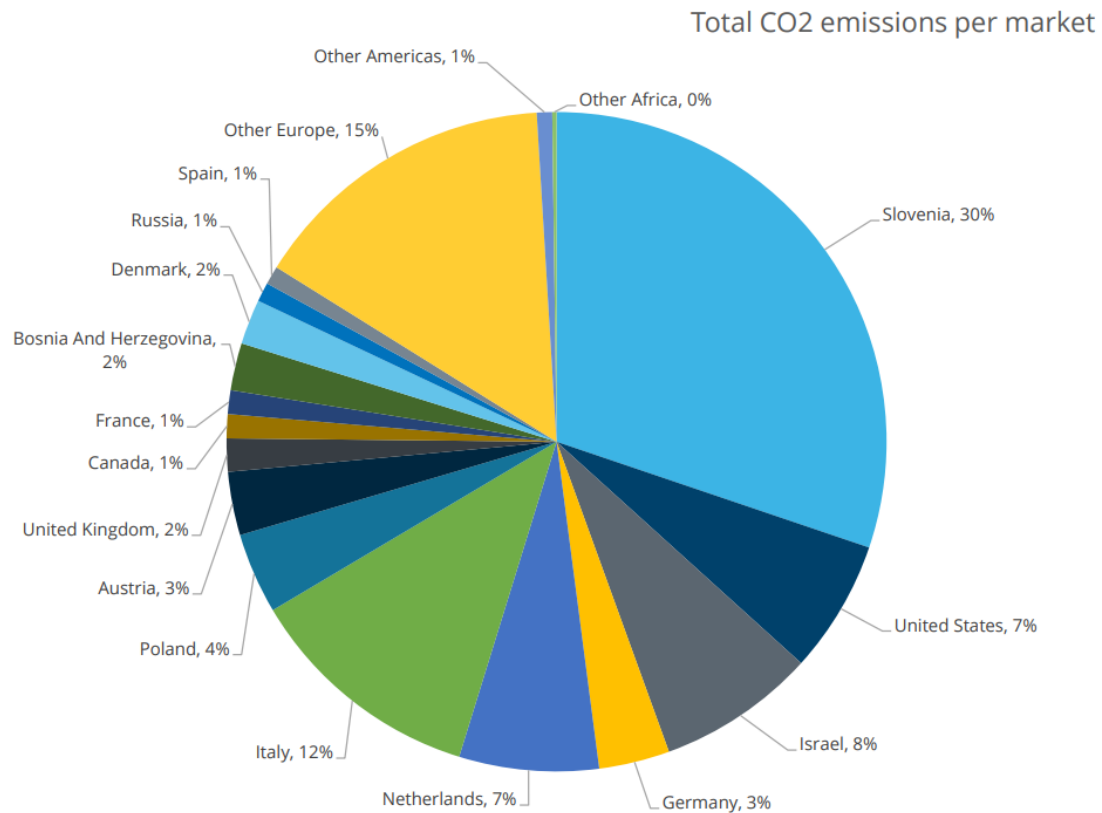
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SASTDES Carbon Footprint Tool

SIA- RAAK

Model based calculation; local DMO input data

# Carbon footprint emissions: Slovenia, Brezice



# Resident and visitor surveys

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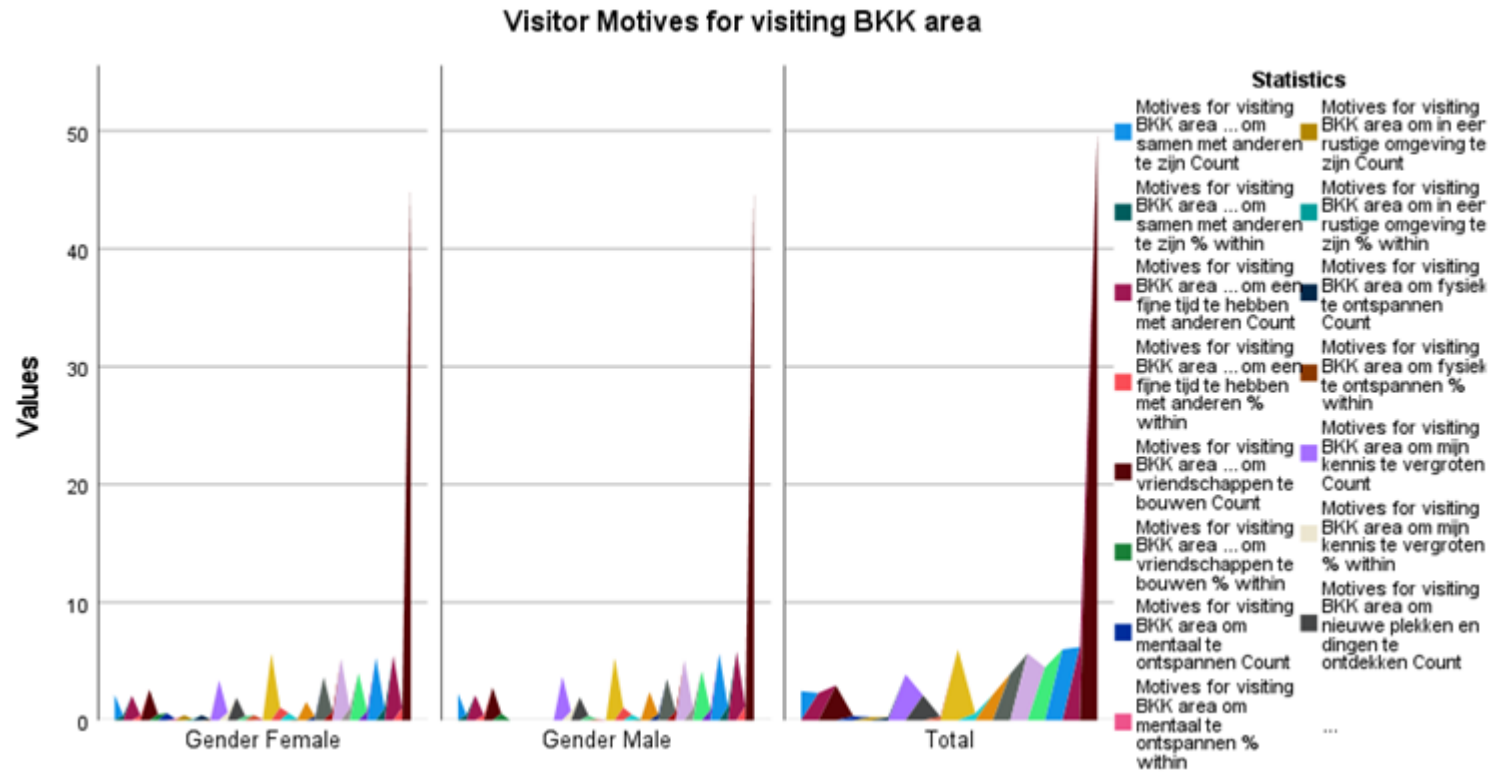
Brabant Kust de Kempen

INTERREG Vlaanderen Nederland

MOdal shift, routing and nudging solutions in NATure areas for sustainable tourism

INTERREG North – West Europe

# Resident and visitor surveys: Brabant Kust de Kempen



Source: BKK(2024), Initial analysis results

# Resident and visitor surveys: MONA

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	Nature area 1	Nature area 2	Nature area 3
I am a day visitor to this nature area and live inside this region	18.6%	13%	80.7%
I am a day visitor to this nature area and live outside this region	61.4%	63.8%	5.3%
I am an overnight visitor to this nature area and live inside this region	3.3%	1.3%	11.1%
I am an overnight visitor to this nature area and live outside this region	16.7%	21.9%	2.9%

Source: MONA (2024), Initial analysis results

# Resident and visitor surveys: MONA

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	<b>Nature area 1</b>	<b>Nature area 2</b>	<b>Nature area 3</b>
On foot	14.7%	13.3%	7.0%
By car	79.1%	74.4%	87.7%
By camper van	1.0%	2.3%	1.2%
By bicycle	25.2%	19.6%	12.9%
By train	10.1%	6.0%	0.0%
By regular bus	1.6%	2.7%	2.3%
By shuttle bus	0.3%	2.0%	0.6%
By motorbike	1.6%	1.3%	0.0%
Other	1.3%	0.7%	1.2%

Source: MONA (2024), Initial analysis results

## Resident and visitor surveys: MONA

	<b>Nature area 1</b>	<b>Nature area 2</b>	<b>Nature area 3</b>
Longer travel time	48.4%	49.5%	23.4%
Too crowded	9.5%	9.6%	1.8%
Poor quality	9.3%	7.5%	9.4%
Lack of safety	1.0%	4.6%	0.6%
Lack of facilities	4.6%	5.6%	22.2%
High prices	30.4%	24.3%	1.8%
Inconvenient location of train or bus stop	29.7%	24.9%	3.5%
Too many transfers	19.6%	18.9%	11.1%
Too little information on the route taken	1.3%	2.3%	15.8%
Complex ticketing and payment	2.0%	2.3%	2.3%
Inconvenient departure and arrival times	10.1%	11.0%	8.2%
Other	26.8%	22.9%	39.8%

# Conclusions

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Evidence based policies and decisions

Environmental targets monitoring

Improved visitors experience

Improved liveability of tourist-intensive destinations



Thank you!

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Breda University of Applied Science

The Netherlands