

ABERDEEN 2040

Student Travel to Study Emissions

Estrid Jonsson – University of Aberdeen Net Zero Intern

19/04/2023

Overview

- Introduction
- What was the Challenge?
- Final Calculation Methodology
- Development of Methodology
- Calculation Workbook
- Long-term Tracking and Comparison of Annual Emissions
- Q/A

Introduction

Estrid Jonsson

University of Aberdeen Intern

- 3rd year student MEng Civil and Environmental Engineering
- University of Aberdeen InternPlus Scheme 6 month internship, 15 hours/week
- Student travel to study emissions calculation methodology research project



What was the Challenge?

What was the Challenge?

Missing Data in our Emissions Profile

- Aberdeen 2040 target of achieving Net-Zero before 2040.
- Expanding reporting boundaries and baseline to include additional Scope 3 emission sources.
- Student travel to study emissions was identified as a key missing source.
- Sector guidance or calculation methodology not available



Final Calculation Methodology

Final Calculation Methodology

The final methodology is summarised in the table below

Regions	Starting Location	Travel mode	Number of Return Trips	Journey	
Africa Asia North America South America Oceania	Country	Economy passenger, Long-haul flight	1	London then to Aberdeen	Summer State
Europe	Capital	Economy passenger, Short-haul flights			
Home/UK		50/50 split, national rail and average car		Direct to Aberdeen	· ·

Results of Calculation

By using an agreed methodology, confidence in emissions data and trends is strong and can be used to measure the University's progression towards netzero.

- Total emissions
- Total student population
- Total distance travelled



Development of the Methodology

Methodologies for Country Starting Point Locations

- Capital city
- Most populated city
- Mid-point
- Furthest away point
- Busiest travel points
 - Airports
 - Train stations

Country	Capital	Most populated city	Geographical mid-point	Geographical furthest away point	Busiest Airport	Busiest Train Station
China	Beijing 7,790.7 km	Shanghai 8,859.0 km	7,600.5 km	9,367.5 km	Beijing Capital International Airport 7,785.7 km	
France	Paris 969.9 km	Paris 969.9 km	1,251.4 km	1,665.6 km	Paris Charles de Gaulle Airport 957.9 km	Gare du Nord 967.6 km

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Methodologies for Country Starting Point Locations

- Capital city
- Most populated city
- Geographical mid-point ▼
- Geographical furthest away point
- Busiest travel points
 - Airport
 - Train station



Travel Modes – Initial Assumptions

The following travel modes were initially assumed in calculations

Home/UK: 50/50 split between rail and car

• Initial assumption that 100% of students drive, however, due to Aberdeen's rail connections and sector assumptions, this was updated to a 50/50 split between the two methods.

Europe: Average passenger, short-haul flights

• At first, trains were considered as an option, but after a cost analysis and discussions within the sector, assuming all students travel by airplane was agreed to be more realistic.

Africa/Asia/North America/South America/Oceania: Average passenger, long-haul flight

• It was assumed that all students outside UK and Europe will fly.

Travel Modes

Regions



Sector Review / EAUC Contact

"...... if there's any studies concerning modes of travel based on student's home country or something similar which would be helpful in the calculation of our student travel emissions....."

- London School of Hygiene and Tropical Medicine
 - Provided helpful surveys
- University of Strathclyde
 - Airports in capital city
 - No collection of travel mode data from students outside of Scotland
- University of Plymouth
 - Only looking at UK students, basing it on post codes
 - They are calculating emissions based on average car and 4 trips per year

Sector Review - University of Edinburgh contact

Student travel emission calculation methodology

- UK Domestic would travel by train considering the relative numbers/ distances we're talking about (compared to international students), this didn't make a significant difference to the total amount of carbon produced
- Non-domestic would fly, and the flight was based on one return, direct flight, to the capital city of their home country.
 - Received the student numbers by country (both actual and expected in future years) from the central Strategic Planning team.
 - Didn't consider flight routing (e.g. Beijing Edinburgh could be Beijing Dubai London
 Edinburgh) which could add additional carbon, as there are too many variables here.
- Recommended the development of travel survey

Final Assumptions

Following sector engagement and internal discussions, the following final assumptions were applied to the methodology:

Number of trips

• Assumed 1 return trip (this may change following student surveys)

Emission factors

- Rail: National rail
- Car: Average car, unknown fuel
- Short-haul flight: Economy passenger, with RF*
- Long-haul flight: Economy passenger, with RF*

Change overs of flights

• All international flights will route via London

*Radiative forcing (RF) is a measure of the additional environmental impact of aviation. These include emissions of nitrous oxides and water vapour when emitted at high altitude. Organisations should include the influence of radiative forcing RF in air travel emissions to capture the maximum climate impact of their travel habits. However, it should be noted that there is very significant scientific uncertainty around the magnitude of the additional environmental impacts of aviation.

Impact of Updated Assumptions

Flight Routing through London instead of "as the crow flies"



Impact of Updated Assumptions

Flight Routing through London instead of "as the crow flies"

	Capital to	Pe	rcentage Differen	ce Compared to C	hosen Methodolo	gy
Year	London to Aberdeen Methodology Emissions (tCO2e)	Capital	Largest city	Geographical mid-Point	Geographical furthest-away point	Busiest Airport
2015/2016	7,174.97	-10.9%	-8.5%	-9.9%	7.4%	-8.5%
2016/2017	7,529.61	-11.6%	-9.2%	-10.1%	7.9%	-8.8%
2017/2018	8,519.82	-13.3%	-10.2%	-11.4%	8.8%	-10.0%
2018/2019	8,798.06	-13.8%	-9.9%	-12.1%	8.9%	-10.7%
2019/2020	9,046.67	-14.2%	-8.6%	-12.8%	9.5%	-11.2%
2020/2021	8,421.34	-12.7%	-6.6%	-11.9%	9.3%	-10.6%
2021/2022	10,364.13	-14.2%	-7.5%	-11.8%	12.0%	-11.1%

Impact of Updated Assumptions

Average Passenger Emission Factors to Economy Passenger Factors



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Calculation Workbook

Written by: Estrid Jonsson Date:	12/04/2023			1495	IIV/FDCI	TYOE	
Reviewed by: Rose Lyne Date:	12/04/2023					FENI	
Version: 0.2 Date:	12/04/2023			A	DERD	ELIN	_

Student Travel Emissions Calulation Spreadsheet

This spreadsheet calculates student travel emissions using domicile data.

The green cells are open to editing for the user, red cells should not be changed and yellow cells contain helpful comments for the calulations.

Before any calculations are made, please read the how-to guide which gives a detailed explanation on how to use this calculation sheet.

Calculations are started by getting domicile data of the student body, this is entered in the "Data" tab in order to start calculations. Verify this domicile data in the "Verification of Data" tab and make any adjustments if needed.

Update the emission factors for the specified year in the "Emission Factors" tab. These GHG emission factors given by the government can be found here: https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting For any changes made to the orignial methodology, please update the number of trips and the split between travel modes for any countries.

To complete column D in the "Country Distances" tab, users should access http://ksgleditsch.com/data-5.html to get distance from capital to layover location for all international countries. The distance between layover location and the institution entered into D39 in the "Read Me First" tab will then be added in the "Domicile Data" tab. For countries/territories which do not appear on the mentioned websites should be found using Google Maps. For UK countries, the distance from their respective capitals to the university should be noted as the distance.

"Home" in this calculation sheet is assumed to be Scotland, however, this should be adjusted for the required country which the insitutions is situated in. Edits to this is made by changing the region of the respective home country to "Home" and assigning "UK" to the region of Scotland. Edits would have to be made under "Summaries" to update the Home summary to the required Home country. As per guidance from the Public Bodies and Climate Change Duties - Guidance on nature-based carbon reduction projects (insetting and offsetting) and annual bodies duties reporting document released by the Scottish Government on 27/02/2023, flexibility with regards to the number of journeys counted towards Scottish emissions is provided under "Domicile Data". 1 trip means a single journey between the student's home and the institution and 2 trips would imply a return journey.

Please note that all data is anonymised in this workbook, and since no individual student can be identified, there are no GDPR concerns.

For technical queries, please contact Rose Lyne at rose.lyne@abdn.ac.uk

	ENTER	R THE FOLL	DWING DATA									
	Institut	ion Name:	University of Aberdeen									
	Flight Layove	r Location:	London (UK)									
	Distance fro	om layover										
	location to Unive	rsity (km):	641.9									
4 1	Read Me First	Country D	istances Domicile Data	Emise	sion Factors	Data	Verific	ation of Da	ta Sum	maries	(+)	

Coun	itry	Region •	Distance to layover location from country capital (km)	Number of students			Commen distance location.	ts: The dist from the ca	ance should	d be update o the chose	ed to reflec en flight laye	t the over			
Afghan	istan	Asia	5725	0											
Aland is	lands	Europe	1569.14	1											
Alba	nia	Europe	1868	2											
Alge	ria	Africa	1678	1											
Ameri Sam	ican oa	Oceania	15790.66	0											
Ando	rra	Europe	955	0											
Ango	ola	Africa	6828.25	21											
Angu	illa	North America	6570.22	0											
Antigua Barbu	a and uda	North America	6581.18	1											
Argen	tina	South America	11052	2											
Arme	nia	Europe	3599	0											
Arul	ba	North America	7534.11	0											
Austr	alia	Oceania	16981.83	10										ALL DE LE CALLER D	
Aust	ria	Europe	1235.04	65										ALL DE LE COLORIZE	
Azerba	aijan	Europe	3969	30										IIII.	
Bahar	nas	North America	5104	0									Mannan		•
Bahr	ain	Asia	5071.29	3										. • T	
Bangla	desh	Asia	8004.34	11									•		
Barba	dos	North America	6778.77	1									••		/
EN 2040 Bela	rus	Europe	1871.61	5											
Read Me Firs	um t Count	Furone ry Distances	313 Domicile Data Emi	62 ssion Factors	Data	Verification of	Data Su	mmaries	(+)			: •			^

Country List	 Domicile Data 	T	Comment	s: Compile	the domic	ile data re	ceived fro	m registry			
Aland Islands	Aland Islands		into this s	sheet. Dele	ting any d	ata which	does not c	oncern your			
Albania	Albania		calculatio	ons. Please	e make sur	e that the	'Domicile'	' column			
	Albania		remains a	as column	B as this is	necessar	y for calcu	ulations.			
Algeria	Algeria										
Angola	Angola										
	Angola		The Domi	cile data i	n column E	is the stu	dent's hor	ne country.			
	Angola										
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Antigua anu bai	Antigua and ba	irbuda									
Argentina	Argentina										
	Argentina										
Australia	Australia										
	Australia										
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	Appea	rs Co	mment	s: By filterin	g away bla	inks from	the "Break_Ref		
	in the	col	umn fro	om the "Data	a" sheet, a	list of all	countries		
	domic	ile <mark>rep</mark>	resent	ed by stude	nts from th	nat specif	ic year is compil	ed.	
Break_Ref	data	Co	py this l	list in to the	left of the	"Appear	s in the domicile	2	
Aland Island	ls	1 dat	a" colu	mn. By com	paring the	countrie	s in the data colu	umn	
Albania		1 to t	the don	nicile data, a	Il countrie	es should	appear once. If	not,	
Algeria		1 the	e data fr	rom registry	should be	reviewe	d and compared	to	
Angola		1 the	domic	ile data to s	earch for d	liscreptar	icies. Note that	'No	
Antigua and	Barbuda	1 dat	a recor	der" should	be ignore	d as no ca	Iulation of		
Argentina		1	tances	can be made	2.				
Australia		1							
Austria		1							
Azerbaijan		1							
Bahrain		1							
Bangladesh		1							
Barbados		1							
Belarus		1							
Belgium		1							
Bolivia		1							
Botswana		1							
Brazil		1							
Brunei		1							
Bulgaria		1							
Cameroon		1							
Canada		1							
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, Cayman Isla	nds	1							
Chile		1							
China		1							
Colombia		1							
Costa Rica		1							
Croatia		1							
Cyprus - EU		1							
Cyprus - Uns	specified	1							
Czech Reput	blic	1							
Denmark		1							
Ecuador		1							
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England		1							- munum
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Faroe Island	s	1							- munum.



						F	Percent Sp	lit Betwee	n Travel M	odes			Carbo	n Emissior	n Factors (I	kgCO2e/km	1)				C	arbon Emi	ssions (tCO2	!e)		
Country	Region	Distance to Aberdeen from capital (km)	Number of studer	Trips per yea	ar Car	Rail	Bus	Ferry	Domestic flight	Short- haul flight	Long- haul flight	Car 👻	Rail	Bus 💌	Ferry	Domestic flight	Short- haul fligh	Long- haul fligh	Car v	Rail	Bus 💌	Ferry	Domestic flight	Short- haul fligh	Long- haul fligh [*] •	Total emissions
Afghanistan	Asia	6366.9	0	2							100.00%	0	0	0	0	0	0	0.1468	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aland islands	Europe	2211.04	1	2						100.00%		0	0	0	0	0	0.1651	0	0.00	0.00	0.00	0.00	0.00	0.73	0.00	0.73
Albania	Europe	2509.9	2	2						100.00%		0	0	0	0	0	0.1651	0	0.00	0.00	0.00	0.00	0.00	1.66	0.00	1.66
Algeria	Africa	2319.9	1	2							100.00%	0	0	0	0	0	0	0.1468	0.00	0.00	0.00	0.00	0.00	0.00	0.68	0.68
American Samoa	Oceania	16432.56	0	2							100.00%	0	0	0	0	0	0	0.1468	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Andorra	Europe	1596.9	0	2						100.00%		0	0	0	0	0	0.1651	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Angola	Africa	7470.15	21	2							100.00%	0	0	0	0	0	0	0.1468	0.00	0.00	0.00	0.00	0.00	0.00	46.05	46.05
Anguilla	North America	7212.12	0	2							100.00%	0	0	0	0	0	0	0.1468	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Antigua and Barbuda	North America	7223.08	1	2							100.00%	0	0	0	0	0	0	0.1468	0.00	0.00	0.00	0.00	0.00	0.00	2.12	2.12
Argentina	South America	11693.9	2	2							100.00%	0	0	0	0	0	0	0.1468	0.00	0.00	0.00	0.00	0.00	0.00	6.87	6.87
Armenia	Europe	4240.9	0	2						100.00%		0	0	0	0	0	0.1651	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aruba	North America	8176.01	0	2							100.00%	0	0	0	0	0	0	0.1468	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Australia	Oceania	17623.73	10	2							100.00%	0	0	0	0	0	0	0.1468	0.00	0.00	0.00	0.00	0.00	0.00	51.74	51.74
Austria	Europe	1876.94	65	2						100.00%		0	0	0	0	0	0.1651	0	0.00	0.00	0.00	0.00	0.00	40.28	0.00	40.28
Azerbaijan	Europe	4610.9	30	2						100.00%		0	0	0	0	0	0.1651	0	0.00	0.00	0.00	0.00	0.00	45.67	0.00	45.67
Bahamas	North America	5745.9	0	2							100.00%	0	0	0	0	0	0	0.1468	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bahrain	Asia	5713.19	3	2							100.00%	0	0	0	0	0	0	0.1468	0.00	0.00	0.00	0.00	0.00	0.00	5.03	5.03
Bangladesh	Asia	8646.24	11	2							100.00%	0	0	0	0	0	0	0.1468	0.00	0.00	0.00	0.00	0.00	0.00	27.92	27.92
Barbados	North America	7420.67	1	2							100.00%	0	0	0	0	0	0	0.1468	0.00	0.00	0.00	0.00	0.00	0.00	2.18	2.18
Belarus	Europe	2513.51	5	2						100.00%		0	0	0	0	0	0.1651	0	0.00	0.00	0.00	0.00	0.00	4.15	0.00	4.15
Belgium	Europe	954.9	62	2						100.00%		0	0	0	0	0	0.1651	0	0.00	0.00	0.00	0.00	0.00	19.55	0.00	19.55
Belize	North America	9026.9	0	2							100.00%	0	0	0	0	0	0	0.1468	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benin	Africa	5647.9	0	2							100.00%	0	0	0	0	0	0	0.1468	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bermuda	North America	6190.38	0	2							100.00%	0	0	0	0	0	0	0.1468	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bhutan	Asia	8280.85	0	2							100.00%	0	0	0	0	0	0	0.1468	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bolivia	South America	10581.9	2	2							100.00%	0	0	0	0	0	0	0.1468	0.00	0.00	0.00	0.00	0.00	0.00	6.21	6.21
Bosnia and Herzegovina	Europe	2262.38	0	2						100.00%		0	0	0	0	0	0.1651	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Botswana	Africa	9484.92	1	2							100.00%	0	0	0	0	0	0	0.1468	0.00	0.00	0.00	0.00	0.00	0.00	2.78	2.78
Brazil	South America	9327.9	29	2							100.00%	0	0	0	0	0	0	0.1468	0.00	0.00	0.00	0.00	0.00	0.00	79.41	79.41
Virgin Islands (British)	North America	7301.4	1	2							100.00%	0	0	0	0	0	0	0.1468	0.00	0.00	0.00	0.00	0.00	0.00	2.14	2.14
Brunei	Asia	11906.44	10	2							100.00%	0	0	0	0	0	0	0.1468	0.00	0.00	0.00	0.00	0.00	0.00	34.95	34.95
Read M	e First	Country Dist	ances	Domicile	e Data	Emissio	n Factors	Data	Verif	ication of E	Data Su	immaries	(+)	0	0	0	0.1651		0.00	0.00	0.00	0.00	0.00	214.00	0.00	214.00

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			Number of					Total	Emissio	ns (tCO2	e)						Perce	ent of To	tal Emi	ssions		
Region	Total Emissions (TCO2e)	Region	Students								-,			-								
Africa	878.23	Africa	489			5,00	00.00							-			1.04%	2.52%	3.47%			
Asia	2,688.98	Asia	1,021					-						-			2.0470					
urope	2,021.92	Europe	3,018			2,50	00.00	_						-					12.24	6		
lome	261.90	Home	7,384											-								
North America	819.31	North America	408			(e)											11.42%					
Oceania	74.59	Oceania	14			8 ^{2,00}	00.00							_								
South America	181.06	South America	64			Sa								_			.65%					
JK	248.98	UK	1,730			§ 1,50	00.00	_														
TOTAL	7,174.97	TOTAL	14,128) su																
						sio														27.40	ac .	
			Percent of			E 1,00	00.00													37.48		
			Student			_											28.18%					
Region	Percent of Total Emissions	Region	Population			50	00.00	_	_													
Africa	12.24%	Africa	3.46%																			
Asia	37.48%	Asia	7.23%								_			-								
Europe	28.18%	Europe	21.36%				0.00	Aria T			b 0001	Fourth	1112	+								
Home	3.65%	Home	52.27%				ATTICA	ASIA EU	горе Но	Amer	n Oceani ca	 South America 	UK	+						_		
North America	11.42%	North America	2.89%											+	Africa	Asia ≡Eu	ope Hor	me Nort	th America	Oceania	South	4m
Oceania	1.04%	Oceania	0.10%																			
South America	2.52%	South America	0.45%																			
ик	3.47%	UK	12.25%																			
Travel Mode	Distance Traveled (km)	Travel Mode	Emissions (tCO2e)					Dis	tance Tr	aveled	km)					Percei	nt of Tra	vel Dista	ance			
Travel Mode	Distance Traveled (km)	Travel Mode	Emissions (tCO2e) 405.05				35,000,000.00	Dis	tance Tr	aveled	km)					Percei	nt of Tra	vel Dista	ance			
Fravel Mode Car	Distance Traveled (km) 2,166,614.24 2,166,614.24	Travel Mode Car Bail	Emissions (tCO2e) 405.05 105.84				35,000,000.00	Dis	tance Tr	aveled (km)					Percer	nt of Tra	vel Dista	ance			
Travel Mode Car Rail Bus	Distance Traveled (km) 2,166,614.24 2,166,614.24 0.00	Travel Mode Car Rail Bus	Emissions (tCO2e) 405.05 105.84 0.00				35,000,000.00	Dis	tance Tr	aveled	km)					Percei	nt of Tra	vel Dista	ance			-
Travel Mode Car Rail Bus Ferry	Distance Traveled (km) 2,166,614,24 2,166,614,24 0,00	Travel Mode Car Rail Bus Ferry	Emissions (tCO2e) 405.05 105.84 0.00 0.00				35,000,000.00	Dis	tance Tr	aveled (km)		1			Percei	nt of Trav	vel Dista	ance			
Travel Mode Car Rail Bus Ferry Domestic Elight	Distance Traveled (km) 2,166,614.24 2,166,614.24 0.00 0.00 0.00	Travel Mode Car Rail Bus Ferry Domestic Flight	Emissions (tCO2e) 405.05 105.84 0.00 0.00				35,000,000.00 30,000,000.00	Dis	tance Tr	aveled (km)		1			Percer	nt of Trav	vel Dista	ance			
Travel Mode Car Rail Bus Ferry Domestic Flight Short-Haul Flight	Distance Traveled (km) 2,166,614.24 2,166,614.24 0.00 0.00 12,248,103,44	Travel Mode Car Rail Bus Ferry Domestic Flight Short-Haul Flight	Emissions (tCO2e) 405.05 105.84 0.00 0.00 0.00 1 2.021.92			and (ferre)	35,000,000.00 30,000,000.00 25,000,000.00	Dis	tance Tr	aveled (km)		1			Percer	nt of Trav	vel Dista	ance			
Travel Mode Car Rail Bus Ferry Domestic Flight Short-Haul Flight Jong-Haul Flight	Distance Traveled (km) 2.166,614.24 2.166,614.24 0.00 0.00 0.00 t 12,248,103.44 311626 722 08	Travel Mode Car Rail Bus Ferry Domestic Flight Short-Haul Fligh Long-Hau Fligh	Emissions (tCO2e) 405.05 105.84 0.00 0.00 0.00 t 2,021.92 4 6 62 17			and (km)	35,000,000.00 30,000,000.00 25,000,000.00 20,000,000.00	Dis	tance Tr	aveled (km)		1			Percer	nt of Trav	vel Dista	ance			
Travel Mode Car Rail Bus Ferry Domestic Flight Short-Haul Flight Long-Haul Flight	Distance Traveled (km) 2,166,614,24 2,166,614,24 0,00 0,00 1,2,248,103,44 1,2,248,103,44 1,1626,722,08 4,8,208,05,00	Travel Mode Car Rail Bus Ferry Domestic Flight Short-Haul Fligh Long-Haul Fligh TOTAL	Emissions (tCO2e) 405.05 105.84 0.00 0.00 0.00 t 2.021.92 t 4,642.17 7 174.97			t Tautolia	35,000,000.00 30,000,000.00 25,000,000.00 20,000,000.00	Dis	tance Tr	aveled (km)					Percer	nt of Trav	vel Dista	ance			
Travel Mode Car Rail Bus Ferry Domestic Flight Short-Haul Flight Long-Haul Flight FOTAL	Distance Traveled (km) 2,166,614.24 2,166,614.24 0.00 0.00 1,2,248,103.44 31,626,722.08 48,208,054.00	Travel Mode Car Rail Bus Ferry Domestic Flight Short-Haul Fligh Long-Haul Fligh TOTAL	Emissions (tCO2e) 405.05 105.84 0.000 0.000 10.0000 10.00000 10.0000 10.00000 10.00000 10.00000 10.00000 10.00000 10.00000 10.00000 10.00000 10.000000 10.00000000			and translated (free)	35,000,000.00 30,000,000.00 25,000,000.00 20,000,000.00 15,000,000.00	Dis	tance Tr	aveled (km)					Percei	nt of Trav	vel Dista	ance			
Travel Mode Car Rail Bus Domestic Flight short-Haul Flight Ong-Haul Flight OTAL 'ravel Mode	Distance Traveled (km) 2,166,614,24 2,166,614,24 0,00 0,00 t 12,248,103,44 31,626,722.08 48,208,054,00 Percent of Travel Distance	Travel Mode Car Rail Bus Ferry Domestic Flight Short-Haul Fligh TOTAL	Emissions (tCO2e) 405.05 105.84 0.00 0.00 1.2,021.92 1.4,642.17 7,174.97 Percent of Emissions			Distance Francia (irm)	35,000,000.00 30,000,000.00 22,000,000.00 20,000,000.00 15,000,000.00	Dis	tance Tr	aveled (km)					Percer	nt of Tra	vel Dista	ance			
Fravel Mode Car tail Jus Ferry Joomestic Flight Short-Haul Flight roTAL Fravel Mode	Distance Traveled (km) 2,166,614.24 2,166,614.24 0,00 0,00 1,2,248,103.44 31,626,722.08 48,208,054.00 Percent of Travel Distance	Travel Mode Car Rail Bus Ferry Domestic Flight Short-Haul Fligh Long-Haul Fligh TOTAL Travel Mode	Emissions (tCO2e) 405.05 105.84 0.00 0.000 t 2,021.92 t 4,642.17 7,174.97 Percent of Emissions			Dictancia Provolatari (Previ)	35,000,000.00 30,000,000.00 25,000,000.00 15,000,000.00 5,000,000.00	Dis	tance Tr	aveled (km)					Percer	nt of Tra	vel Dista	ance			
ravel Mode Car Lail Bus Sus Cerry Domestic Flight Short-Haul Flight OTAL Cortex Car Car	Distance Traveled (km) 2,166,614.24 2,166,614.24 0,00 0,00 t 12,248,103.44 31,626,722.08 48,208,054.00 Percent of Travel Distance 4,49%	Travel Mode Car Rail Bus Ferry Domestic Flight Short-Haul Fligh TOTAL Travel Mode Car 0.5	Emissions (tCO2e) 405.05 105.84 0.00 0.000 t 2.021.92 t 4,642.17 7,174.97 Percent of Emissions 5,65%			Detauro Francia A (km)	35,000,000.00 30,000,000.00 25,000,000.00 20,000,000.00 15,000,000.00 5,000,000.00	Dis	tance Tr	aveled (km)					Percer	at of Trav	vel Dista	ance			
Travel Mode Car Rail Bus Ferry Domestic Flight Short-Haul Flight ToTAL Travel Mode Car Rail Due	Distance Traveled (km) 2.166,614.24 2.166,614.24 0.00 0.00 1.2.248,103.44 31,626,722.08 48,208,054.00 Percent of Travel Distance 4.49% 4.49%	Travel Mode Car Rail Bus Ferry Domestic Flight Short-Haul Fligh TOTAL Travel Mode Car Rail Our	Emissions (tCO2e) 405.05 105.84 0.00 0.00 t.2,021.92 t.4,642.17 7,174.97 Percent of Emissions 5.65% 1.48%			Distance Francisci (m)	35,000,000.00 30,000,000.00 25,000,000.00 20,000,000.00 15,000,000.00 5,000,000.00	Dis	tance Tr	aveled (km)					Percer	at of Trav	vel Dista	ance			
Travel Mode Car Car Rail Bus Serry Domestic Flight Short-Haul Flight IroTAL Travel Mode Car Car Bus Car Car	Distance Traveled (km) 2,116,614,24 2,166,614,24 0,00 0,00 1,2,248,103,44 31,626,722,08 48,208,054,00 Percent of Travel Distance 4,49% 4,49% 0,00%	Travel Mode Car Rail Bus Ferry Domestic Flight Short-Haul Fligh Long-Haul Fligh Travel Mode Car Rail Bus Ferry	Emissions (tCO2e) 405.05 105.84 0.00 0.00 1.2,021.92 t 4.642.17 7,174.97 Percent of Emissions 5.65% 1.48% 0.00%			Distance Provided (Irea)	35,000,000.00 30,000,000.00 25,000,000.00 15,000,000.00 5,000,000.00 0.00		tance Tr	aveled (km)					Percer	at of Trav	vel Dista	ance			
ravel Mode Car tail Jus Serry Domestic Flight short-Haul Flight roTAL Fravel Mode Car tail Jus Secry	Distance Traveled (km) 2,166,614.24 2,166,614.24 0,00 0,00 1,2,248,103.44 31,626,722.08 48,208,054.00 Percent of Travel Distance 4,49% 4,49% 0,00% 0,00%	Travel Mode Car Rail Bus Ferry Domestic Flight Short-Haul Fligh Long-Haul Fligh TOTAL Travel Mode Car Rail Bus Ferry Domestic Flight	Emissions (tCO2e) 405.05 105.84 0.00 0.000 t 2,021.92 t 4,642.17 7,174.97 Percent of Emissions 5.65% 1.48% 0.00%			Dictement Provided (fem)	35,000,000.00 30,000,000.00 0 0 0 0 0 0,000,000.00 0 0,000,00	Dis	tance Tr	raveled (km)	JIFU	arrest			Percer	at of Tra	vel Dista	ance			
Travel Mode Car Rail Bus Ferry Domestic Flight Short-Haul Flight ToTAL Travel Mode Car Rail Bus Ferry Domestic Flight	Distance Traveled (km) 2.166,614.24 2.166,614.24 0.00 0.00 1.2,248,103.44 31,626,722.08 48,208,054.00 Percent of Travel Distance 4.49% 4.49% 0.00% 0.00% 0.00%	Travel Mode Car Rail Bus Ferry Domestic Flight Short-Haul Fligh Long-Haul Fligh TOTAL Travel Mode Car Rail Bus Ferry Domestic Flight	Emissions (tCO2e) 405.05 105.84 0.00 0.00 t.2.021.92 t.4.642.17 7.174.97 Percent of Emissions 5.65% 1.48% 0.00%			Distance removable (ww)	35,000,000.00 30,000,000.00 20,000,000.00 15,000,000.00 5,000,000.00 0.00	Dis	tance Tr	eaveled (km)	In the second second	and the fit			Percer	at of Tra	vel Dista	ance			
ravel Mode Car tail Us Sury Oomestic Flight short-Haul Flight (OTAL Travel Mode Car tail Us Sury Oomestic Flight short-Haul Flight Short-H	Distance Traveled (km) 2,116,614,24 2,166,614,24 0,00 0,00 1,2,248,103,44 31,626,722.08 48,208,054,00 Percent of Travel Distance 4,49% 4,49% 0,00% 1,25,41% 1,25,41%	Travel Mode Car Rail Bus Ferry Domestic Flight Short-Haul Fligh TOTAL Travel Mode Car Rail Bus Ferry Domestic Flight Bus Ferry Domestic Flight	Emissions (tCO2e) 405.05 105.84 0.00 0.000 12,021.92 t 4,642.17 7,174.97 Percent of Emissions 5.65% 1.48% 0.00% 0.00%			Distance Provided (Ired)	35,000,000.00 30,000,000.00 25,000,000.00 15,000,000.00 5,000,000.00 0.00	Dis	tance Tr	aveled (بورط مرجع	km)	Hear Today	a traft	- Car	• Rail = Bus	Percei	omestic Flig	vel Dista	Haul Flight	- Long-Hau	í Flight	
ravel Mode Car Lail Sus Gerry Domestic Flight ihort-Haul Flight roTAL Car Car Car Car Car Car Car Car Car Car	Distance Traveled (km) 2,166,614.24 2,166,614.24 0.00 0.00 1,2,248,103.44 3,1626,722.08 48,208,054.00 Percent of Travel Distance 4,49% 0,00% 0,00% 1,25,41% 65,60%	Travel Mode Car Rail Bus Ferry Domestic Flight Short-Haul Fligh TOTAL Travel Mode Car Rail Bus Ferry Domestic Flight Short-Haul Fligh Long-Haul Fligh Long-Haul Fligh Long-Haul Fligh Long-Haul Fligh Long-Haul Fligh	Emissions (tCO2e) 405.05 105.84 0.00 0.000 t 2,021.92 t 4,642.17 7,174.97 Percent of Emissions 5.65% 1.48% 0.00% 0.00% 0.00% 1.28.18%			Dictemore removation (free)	35,000,000.00 30,000,000.00 20,000,000.00 20,000,000.00 10,000,000.00 5,000,000.00 0.00	Dis	tance Tr	aveled (هولاط د	km)	Head fields	as realit	• Car	• Rail = Bus	Percei	ormestic Flig	ht • Short-	Haul Flight	- Long-Hau	l Flight	
Travel Mode Car Rail Bus Ferry Domestic Flight Short-Haul Flight FOTAL Fravel Mode Car Aail Bus Ferry Domestic Flight short-Haul Flight ong-Haul Flight	Distance Traveled (km) 2,116,614,24 2,166,614,24 0,00 0,00 1,2,248,103,44 31,626,722,08 48,208,054,00 Percent of Travel Distance 4,49% 4,49% 0,00% 1,25,41% 6,560%	Travel Mode Car Rail Bus Ferry Domestic Flight Short-Haul Fligh Long-Haul Fligh TOTAL Car Rail Bus Ferry Domestic Flight Short-Haul Fligh Short-Haul Fligh Short-Haul Fligh Short-Haul Fligh Long-Haul Fligh Short-Haul Fligh Short-Haul Fligh Comestic Flight	Emissions (tCO2e) 405.05 105.84 0.00 0.000 t 2,021.92 t 4,642.17 7,174.97 Percent of Emissions 5.65% 1.48% 0.00% 0.00% t 28.18% t 64.70% Emissions	(km)		Determined (frm)	35,000,000.00 30,000,000.00 22,000,000.00 9 20,000,000.00 9 15,000,000.00 0.00 0.00	Dis	tance Tr	aveled (بوو ^{رم} ح	km)		and the fit	• Car	• Rail = Bus	Percer	omestic Flig	ht • Short-	Haul Flight	- Long-Hau	il Flight	
Travel Mode Car Rail Bus Ferry Domestic Flight Short-Haul Flight ToTAL Travel Mode Car Rail Bus Ferry Domestic Flight Long-Haul Flight	Distance Traveled (km) 2,166,614.24 2,166,614.24 0,00 0,00 1,2,248,103.44 3,1,626,722.08 48,208,054.00 Percent of Travel Distance 4,49% 0,00% 0,	Travel Mode Car Rail Bus Ferry Domestic Flight Short-Haul Fligh TOTAL Travel Mode Car Rail Bus Ferry Domestic Flight Short-Haul Fligh Long-Haul Fligh Long-Haul Fligh Short-Haul Fligh Long-Haul Fligh Long-Haul Fligh Long-Haul Fligh Long-Haul Fligh Car Split Betwo	Emissions (tCO2e) 405.05 105.84 0.00 0.000 t 2,021.92 t 4,642.17 7,174.97 Percent of Emissions 5.65% 1.48% 0.00% 0.00% 0.00% 0.00% t 28.18% t 64.70% ten Travel Modes	(km)	Short-haul	Long-hau	35,000,000.00 30,000,000.00 22,0,000,000.00 20,000,000.00 10,000,000.00 5,000,000.00 0.00 11,000,000.00 11,000,000.00 0.00	Dis	tance Tr	aveled (ه رو ^{رم}	km)	Heal root	a rest	• Car	• Rail = Bus	Percer	omestic Flig	ht • Short-	Haul Flight	- Long-Hau	l Flight	
Travel Mode Car Rail Bus Ferry Domestic Flight Short-Haul Flight Travel Mode Car Rail Bus Ferry Domestic Flight Short-Haul Flight Compendent Car Rail Car Ra	Distance Traveled (km) 2.166,614.24 2.166,614.24 0.00 0.00 1.0.00 1.0.248,103.44 31,626,722.08 48,208,054.00 Percent of Travel Distance 4.49% 4.49% 4.49% 0.00% 1.0.00	Travel Mode Car Rail Bus Ferry Domestic Flight Short-Haul Fligh Long-Haul Fligh Travel Mode Car Rail Bus Short-Haul Fligh Long-Haul Fligh Long-Haul Fligh Long-Haul Fligh Long-Haul Fligh Long-Haul Fligh Short-Haul Fligh Long-Haul Fligh Split Betwore Rail Bus	Emissions (tCO2e) 405.05 105.84 0.00 0.00 t.2,021.92 t.4,642.17 7,174.97 Percent of Emissions 5.65% 1.48% 0.00% t.28.18% t.64.70% ten Travel Modes Ferry	(km) Domestic flight	Short-haul	Long-hau	35,000,000.00 20,000,000.00 20,000,000.00 20,000,000.00 10,000,000.00 5,000,000.00 0.00 10,000,000,00 10,000,000	Dis	tance Tr	p veled (km)	Heal field.	a de la constante de	• Car	• Rail = Bus	Percer	ormestic Flig	ht • Short-	Haul Flight	- Long-Hau	í fight	
Travel Mode Car Rail Bus Serry Domestic Flight Short-Haul Flight roTAL Fravel Mode Car Rail Bus Oomestic Flight Short-Haul Flight ong-Haul Flight Nort-Haul Flight Internet Car Rail Rail Rail Rail Rail Rail Rail Rail	Distance Traveled (km) 2,1166,614,24 2,166,614,24 0,00 0,00 1,02,04 1,2,248,103,44 31,626,722.08 48,208,054.00 Percent of Travel Distance 4,49% 4,49% 0,00% 4,49% 0,00% 5,25,41% 6,5,60% Car 0,00	Travel Mode Car Rail Bus Ferry Domestic Flight Short-Haul Fligh Long-Haul Fligh Travel Mode Car Rail Bus Ferry Domestic Flight Long-Haul Fligh Long-Haul Fligh Long-Haul Fligh Long-Haul Fligh Long-Haul Fligh Split Betwee Rail Bus Solit Bus	Emissions (tCO2e) 405.05 105.84 0.00 0.00 t 2,021.92 t 4,642.17 7,174.97 Percent of Emissions 5.65% 1.48% 0.00% 0.00% t 28.18% t 64.70% t 64.70% t Ferry 0.000	(km) Domestic flight 0.00	Short-haul flight 0.00	Long-hau flight 5,983,334	35,000,000.00 30,000,000.00 25,000,000.00 15,000,000.00 5,000,000.00 0.00 14 1 1 1 1 1 1 1 1 1 1 1 1 1	Dis	tance Tr	eveled (km)	Healthoot	a start	• Car	• Rail = Bus	Percei	ormestic Flig	ht • Short-	Haul Flight	Long-Hau	I fight	

			Split Betwee	en Travel Modes	(km)			
	Car	Rail	Bus	Ferry	Domestic flight	Short-haul	Long-haul	
Region	cu.		bus	,	Doniestie liight	flight	flight	
Africa	0.00	0.00	0.00	0.00	0.00	0.00	5,983,334.18	
Asia	0.00	0.00	0.00	0.00	0.00	0.00	18,319,812.36	
Europe	0.00	0.00	0.00	0.00	0.00	12,248,103.44	0.00	
Home	1,110,701.28	1,110,701.28	0.00	0.00	0.00	0.00	0.00	
North America	0.00	0.00	0.00	0.00	0.00	0.00	5,581,889.08	
Oceania	0.00	0.00	0.00	0.00	0.00	0.00	508,145.80	
South America	0.00	0.00	0.00	0.00	0.00	0.00	1,233,540.66	
UK	1,055,912.96	1,055,912.96	0.00	0.00	0.00	0.00	0.00	
			Percent Solit Be	ween Travel Mo	odes (km)			
			creent opint be			Short-haul	Long-haul	
Region	Car	Rail	Bus	Ferry	Domestic flight	flight	flight	
Africa	0.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	18.92%	
Asia	0.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	57.93%	
Europe	0.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	100.00%	0.00%	
Home	51.26%	51.26%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	
North America	0.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	17.65%	
Oceania	0.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	1.61%	
South America	0.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	3.90%	
UK	48.74%	48.74%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	
		Spl	it Between Trav	el Modes Emissi	ons (tCO2e)			
	6	D-U	Burg	Farm	Demestic flight	Short-haul	Long-haul	
Region	Cdr	Ndii	DUS	Ferry	Domestic hight	flight	flight	
Africa	0.00	0.00	0.00	0.00	0.00	0.00	878.23	
Asia	0.00	0.00	0.00	0.00	0.00	0.00	2,688.98	
Europe	0.00	0.00	0.00	0.00	0.00	2,021.92	0.00	
Home	207.65	54.26	0.00	0.00	0.00	0.00	0.00	
North America	0.00	0.00	0.00	0.00	0.00	0.00	819.31	
Oceania	0.00	0.00	0.00	0.00	0.00	0.00	74.59	
South America	0.00	0.00	0.00	0.00	0.00	0.00	181.06	
UK	197.40	51.58	0.00	0.00	0.00	0.00	0.00	l
			and Callt Date	Travel Mard	(+CO2-)			
		PE	acent spirt betw	veen naver 1000	es (ittoze)	Short Laud	Long have	
Region	Car	Rail	Bus	Ferry	Domestic flight	flight	flight	
Africa	0.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	18 92%	
Asia	0.00%	0.00%	#DIV/0	#DIV/01	#DIV/0	0.00%	57 02%	
Furone	0.00%	0.00%	#DIV/0	#DIV/0	#DIV/0	100.00%	0.00%	
Home	51.26%	51 26%	#DIV/0	#DIV/01	#DIV/0	0.00%	0.00%	
North America	0.00%	0.00%	#DIV/0	#DIV/0	#DIV/0	0.00%	17 65%	
Oceania	0.00%	0.00%	#DIV/0:	#DIV/0:	#DIV/0:	0.00%	17.03%	
South Amorica	0.00%	0.00%	#DIV/0:	#DIV/0:	#DIV/0:	0.00%	1.01%	
South America	0.00%	49 74%	#DIV/0:	#DIV/0:	#DIV/0:	0.00%	5.90%	
UK	48./4%	40.74%	#DIV/0:	#DIV/0:	#DIV/0:	0.00%	0.00%	
Africa Cummerci								
annoa summarii	PA							

ABERDEEN 2040

Read Me First Country Distances Domicile Data

Emission Factors Data Verification of Data

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rotal Emissions - Arrical (CO2+)Percent of Arrical messionPercent of Student StudentPercent of Arrical populationPercent of populationPercent of population	Africa Summari	es							
Part of training of the second sec									
Total Environment (Core)Animan Pricent OrdNumber of PopulationStudent PopulationPopulationAlgeria0.0680.0080.001			Percent of			Percent of African	Percent of		
Countrie(CO22)InsidonsEnsidonsStudentsPopulationPopulationAlgeria0.6880.0880.015%1.000.02780.015%1.001.00Angola0.00000.00000.00000.00000.00000.00001.001.001.00Berbin0.00000.00000.00000.00000.00000.00000.00001.00 <td></td> <td>Total Emissions - Africa</td> <td>African</td> <td>Percent of Total</td> <td>Number of</td> <td>Student</td> <td>Total Student</td> <td></td> <td></td>		Total Emissions - Africa	African	Percent of Total	Number of	Student	Total Student		
Algeria0.680.08%0.01%1.000.00%0.01%0Angela64.655.24%0.06%0.000.00%0.00%0.00%0.00%0Betnin0.000.00%0.00%0.00%0.00%0.00%0.00%0.00%0Burkina Faso0.000.00%<	Countries	(tCO2e)	Emissions	Emissions	Students	Population	Population		
Angola46055.24%0.64%21.004.29%0.15%0Berin0.000.00%0.00%0.00%0.00%0.00%0.00%0Burtundi0.000.00%0.00%0.00%0.00%0.00%0.00%0Cameroon5.330.61%0.00%	Algeria	0.68	0.08%	0.01%	1.00	0.20%	0.01%		
Benin0.000.00%0.00%0.00%0.00%0.00%0.00%Borswana2.780.32%0.04%1.000.00%	Angola	46.05	5.24%	0.64%	21.00	4.29%	0.15%		
Bortwina Faso 0.028 0.03% 0.00%	Benin	0.00	0.00%	0.00%	0.00	0.00%	0.00%		
Burking Faso0.000.00%0.00%0.00%0.00%0.00%Burundi0.030.01%0.00% <t< td=""><td>Botswana</td><td>2.78</td><td>0.32%</td><td>0.04%</td><td>1.00</td><td>0.20%</td><td>0.01%</td><td></td><td></td></t<>	Botswana	2.78	0.32%	0.04%	1.00	0.20%	0.01%		
Burneli 0.00 0.00% 0.00% 0.00% 0.00% Cameroon 5.33 0.61% 0.00% <t< td=""><td>Burkina Faso</td><td>0.00</td><td>0.00%</td><td>0.00%</td><td>0.00</td><td>0.00%</td><td>0.00%</td><td></td><td></td></t<>	Burkina Faso	0.00	0.00%	0.00%	0.00	0.00%	0.00%		
Cameroon5.330.61%0.07%3.000.61%0.02%0Cape Verde0.000.01%0.00%0.00%0.00%0.00%00Canary Islands1.040.12%0.00%0.00%0.01%0.00%0.00%00Central African Republic0.000.00%0.00%0.00%0.00%0.00%0.00%0.00%00Chad0.000.00%0.00%0.00%0.00%0.00%0.00%000 <td>Burundi</td> <td>0.00</td> <td>0.00%</td> <td>0.00%</td> <td>0.00</td> <td>0.00%</td> <td>0.00%</td> <td></td> <td></td>	Burundi	0.00	0.00%	0.00%	0.00	0.00%	0.00%		
Caper Verde0.0000.000%0	Cameroon	5.33	0.61%	0.07%	3.00	0.61%	0.02%		
Canary Islands 1.04 0.01% 0.00%	Cape Verde	0.00	0.00%	0.00%	0.00	0.00%	0.00%		
Central African RepublicComC	Canary Islands	1.04	0.12%	0.01%	1.00	0.20%	0.01%		
Republic 0.00 0.00% 0.00% 0.00% 0.00% Chad 0.00 0.00% 0.00% 0.00% 0.00% 0.00% Comoros 0.00 0.00% 0.00% 0.00% 0.00% 0.00% Congo 0.00 0.00% 0.00% 0.00% 0.00% 0.00% Congo 0.00 0.00% 0.00% 0.00% 0.00% 0.00% (Democratic 0.00 0.00% 0.00% 0.00% 0.00% 0.00% Republic Of) 0.00 0.00% 0.00% 0.00% 0.00% 0.00% Egypt 23.16 2.64% 0.32% 19.00 3.89% 0.13% 0.00 Egypt 23.16 2.64% 0.03% 0.00 0.00%	Control African								
Nepolitic Comoros0.0000.00% <t< td=""><td>Denville</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	Denville								
Chad0.00%0	Republic	0.00	0.00%	0.00%	0.00	0.00%	0.00%		
Comoros0.000.00% <th< td=""><td>Chad</td><td>0.00</td><td>0.00%</td><td>0.00%</td><td>0.00</td><td>0.00%</td><td>0.00%</td><td></td><td></td></th<>	Chad	0.00	0.00%	0.00%	0.00	0.00%	0.00%		
Congo (Democratic (Dem	Comoros	0.00	0.00%	0.00%	0.00	0.00%	0.00%		
Congo (Democratic Republic Of)OneOneOneRepublic Of)0.0000.000%0.000%0.000%0.000%Djibouti0.0000.000%0.000%0.000%0.000%Egypt23.162.64%0.32%19.003.89%0.13%Equotrial Guinea0.000%0.000%0.000%0.00%0.000%Eritrea0.000%0.000%0.000%0.000%0.00%Eritrea0.000%0.000%0.000%0.00%0.00%Eswatini0.000%0.000%0.000%0.00%0.00%Gabon0.000%0.000%0.00%0.00%0.00%Gabana0.000%0.00%0.00%0.00%0.00%Gahana65.887.50%0.02%0.01%0.00%Guinea0.000.00%0.00%0.00%0.00%Guinea0.000.00%0.00%0.00%0.00%Guinea0.000.00%0.00%0.00%0.00%Guinea0.00%0.00%0.00%0.00%0.00%Guinea0.00%0.00%0.00%0.00%0.00%Guinea0.00%0.00%0.00%0.00%0.00%Guinea0.00%0.00%0.00%0.00%0.00%Guinea0.00%0.00%0.00%0.00%0.00%Guinea0.00%0.00%0.00%0.00%0.00%Guinea0.00%0.00%0.00%0.00%0.00% <t< td=""><td>Congo</td><td>0.00</td><td>0.00%</td><td>0.00%</td><td>0.00</td><td>0.00%</td><td>0.00%</td><td></td><td></td></t<>	Congo	0.00	0.00%	0.00%	0.00	0.00%	0.00%		
(Democratic Republic Of)0.000.00%<	Congo								
Republic Of Dibouti0.0000.00	(Democratic								
Djibouti0.0000.0000.0000.0000.0000.0000.0000Equetrial Guina0.0000.0000.0000.0000.0000.00000Guina0.0000.0000.0000.0000.0000.0000.0000.0000Eritra0.000 <th< td=""><td>Republic Of)</td><td>0.00</td><td>0.00%</td><td>0.00%</td><td>0.00</td><td>0.00%</td><td>0.00%</td><td></td><td></td></th<>	Republic Of)	0.00	0.00%	0.00%	0.00	0.00%	0.00%		
Egypt23.162.64%0.32%19.003.89%0.13%011Equatorial Guinea0.000.00%0.	Djibouti	0.00	0.00%	0.00%	0.00	0.00%	0.00%		
Equatorial Guinea0.000.00% <th< td=""><td>Egypt</td><td>23.16</td><td>2.64%</td><td>0.32%</td><td>19.00</td><td>3.89%</td><td>0.13%</td><td></td><td></td></th<>	Egypt	23.16	2.64%	0.32%	19.00	3.89%	0.13%		
Guinea0.000.00%	Equatorial								
Fritrea0.000.00% <th< td=""><td>Guinea</td><td>0.00</td><td>0.00%</td><td>0.00%</td><td>0.00</td><td>0.00%</td><td>0.00%</td><td></td><td></td></th<>	Guinea	0.00	0.00%	0.00%	0.00	0.00%	0.00%		
Eswatini0.000.00% <t< td=""><td>Eritrea</td><td>0.00</td><td>0.00%</td><td>0.00%</td><td>0.00</td><td>0.00%</td><td>0.00%</td><td></td><td></td></t<>	Eritrea	0.00	0.00%	0.00%	0.00	0.00%	0.00%		
Ethiopia 5.76 0.66% 0.08% 3.00 0.61% 0.02% 0 Gabon 0.00 0.00% </td <td>Eswatini</td> <td>0.00</td> <td>0.00%</td> <td>0.00%</td> <td>0.00</td> <td>0.00%</td> <td>0.00%</td> <td></td> <td></td>	Eswatini	0.00	0.00%	0.00%	0.00	0.00%	0.00%		
Gabon 0.00 0.00%	Ethiopia	5.76	0.66%	0.08%	3.00	0.61%	0.02%		
Gambia 3.01 0.34% 0.04% 2.00 0.41% 0.01% 0 Ghana 65.88 7.50% 0.92% 39.00 7.98% 0.28% 0 4 Guinea 0.00 0.00% <	Gabon	0.00	0.00%	0.00%	0.00	0.00%	0.00%		
Ghana 65.88 7.50% 0.92% 39.00 7.98% 0.28% 0 0 Guinea 0.00 0.00%	Gambia	3.01	0.34%	0.04%	2.00	0.41%	0.01%		
Guinea 0.00 0.00% <th< td=""><td>Ghana</td><td>65.88</td><td>7.50%</td><td>0.92%</td><td>39.00</td><td>7.98%</td><td>0.28%</td><td></td><td></td></th<>	Ghana	65.88	7.50%	0.92%	39.00	7.98%	0.28%		
Guinea-Bissau 0.00 0.00%	Guinea	0.00	0.00%	0.00%	0.00	0.00%	0.00%		
Ivory Coast 1.65 0.19% 0.02% 1.00 0.20% 0.01% 0 Kenya 52.57 5.99% 0.73% 24.00 4.91% 0.17% 0 0 Lesotho 0.000 0.00% 0.00% 0.00% 0.00% 0 <td< td=""><td>Guinea-Bissau</td><td>0.00</td><td>0.00%</td><td>0.00%</td><td>0.00</td><td>0.00%</td><td>0.00%</td><td></td><td></td></td<>	Guinea-Bissau	0.00	0.00%	0.00%	0.00	0.00%	0.00%		
Kenya 52.57 5.99% 0.73% 24.00 4.91% 0.17% Lesotho 0.00 0.00% 0.00 0.00% 0.0	Ivory Coast	1.65	0.19%	0.02%	1.00	0.20%	0.01%		
Lesotho 0.00 0.00% <t< td=""><td>Kenya</td><td>52.57</td><td>5.99%</td><td>0.73%</td><td>24.00</td><td>4.91%</td><td>0.17%</td><td></td><td></td></t<>	Kenya	52.57	5.99%	0.73%	24.00	4.91%	0.17%		
Liberia 0.00 0.00% <t< td=""><td>Lesotho</td><td>0.00</td><td>0.00%</td><td>0.00%</td><td>0.00</td><td>0.00%</td><td>0.00%</td><td></td><td></td></t<>	Lesotho	0.00	0.00%	0.00%	0.00	0.00%	0.00%		
Libya 9.61 1.09% 0.13% 11.00 2.25% 0.08% 0 Madagascar 0.00 0.00% 0.00	Liberia	0.00	0.00%	0.00%	0.00	0.00%	0.00%		
Madagascar 0.00 0.00% 0.00% 0.00% 0.00% Malawi 15.19 1.73% 0.21% 6.00 1.23% 0.04% 0.00% Mali 0.00 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% Mauritania 0.00 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% Mauritius 0.00 0.00%<	Libya	9.61	1.09%	0.13%	11.00	2.25%	0.08%		
Malawi 15.19 1.73% 0.21% 6.00 1.23% 0.04% Mali 0.00 0.00% 0.00 0.00% 0.00% Mauritania 0.00 0.00% 0.00% 0.00% 0.00% Mauritius 0.00 0.00% 0.00% 0.00% 0.00% 0.00%	Madagascar	0.00	0.00%	0.00%	0.00	0.00%	0.00%		
Mali 0.00 0.00% 0.00% 0.00% Mauritania 0.00 0.00% 0.00 0.00% 0.00% Mauritius 0.00 0.00% 0.00% 0.00% 0.00%	Malawi	15.19	1.73%	0.21%	6.00	1.23%	0.04%		
Mauritania 0.00 0.00% 0.00% 0.00% Mauritius 0.00 0.00% 0.00% 0.00% 0.00%	Mali	0.00	0.00%	0.00%	0.00	0.00%	0.00%		
Mauritius 0.00 0.00% 0.00% 0.00 0.00% 0.00%	Mauritania	0.00	0.00%	0.00%	0.00	0.00%	0.00%		
	Mauritius	0.00	0.00%	0.00%	0.00	0.00%	0.00%		
Morocco 0.00 0.00% 0.00% 0.00% 0.00%	Morocco	0.00	0.00%	0.00%	0.00	0.00%	0.00%		
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Long-term Tracking and Comparison of Annual Emissions

Written by:	Estrid Jonsson	Date:	12/01/2023
Reviewed by:	Rose Lyne	Date:	
Version:	0.1	Date:	12/01/2023

Student Travel Emissions Calulation Tracking

This spreadsheet tracks student travel emissions using domicile data. This tracking sheet is made for tracking historic data of the Student Emissions Calculation Sheet.

The green cells are open to editing for the user, red cells should not be changed and yellow cells contain helpful comments for the calulations. Before any calculations are made, please read the How-To-Guide which gives a detailed guide on how to use this calculation sheet.

Calcualtions are started by tracking data in Emission Factors, Domicile Data and Travel Data, after which, all calculations should be automatically updated.

For	technical o	queries, p	lease co	ontact Rose	e Lyne at ros	e.lyne@abo	dn.ac.uk					
•	Read Me First	Summaries	Tracked Data	Emissions Dat	ta Travel Data	Domicile Data F	mission Factors	(+)	: •			
		Contraction (C)						\odot		 ununu.	•	

Emission source	Scope	Units	2015 - 2016	2016 - 2017	2017 - 2018	2018 - 20192	2019 - 2020	2020 - 202:	2021 - 2022	2022 - 2023	2023 - 2024	2024 - 2025	2025 - 2026	2026 - 2027	2027 - 2028	2028 - 2029	2029 - 2030
Rail	Scope 3	kg CO2e/passenger km	0.04885	0.04678	0.04424	0.04115	0.03694	0.03549	0.03549								
Car	Scope 3	kg CO2e/passenger km	0.18695	0.18242	0.18064	0.1771	0.1714	0.17148	0.17067								
Bus	Scope 3	kg CO2e/passenger km	0.02867	0.0278	0.02801	0.02779	0.02732	0.02684	0.02733								
Ferry	Scope 3	kg CO2e/passenger km	0.116063	0.116112	0.112873	0.112863	0.112864	0.112862	0.112862								
Domestic Flight	Scope 3	kg CO2e/passenger km	0.27867	0.26744	0.29832	0.25493	0.2443	0.24587	0.24587								
Short-haul flight	Scope 3	kg CO2e/passenger km	0.16508	0.15845	0.1597	0.15573	0.15298	0.15102	0.15102								
Long-haul flight	Scope 3	kg CO2e/passenger km	0.14678	0.15119	0.16279	0.14981	0.14615	0.14787	0.14787								
													<u> </u>				
Read Me	First Sum	maries Tracked Data I	Emissions Data	Travel Data	Domicile D	ata Emissi	on Factors	(+)		: •							
ABERD	EEN ZU)40											annun.	• • • • • • • • • • • • • • • • • • • •			
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									Student numbers							
Country	Region Classification	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027	2027-2028	2028-2029	2029-2030
Afghanistan	Asia	0	0	0	0	2	1	0								
Aland islands	Europe	1	1	1	1	0	0	0								
Albania	Europe	2	1	0	2	0	2	2								
Algeria	Africa	1	2	2	1	3	1	1								
American	a .					_										
Samoa	Oceania	0	0	0	0	0	0	0								
Andorra	Europe	0	0	0	0	0	0	0								
Angola	Africa	21	30	32	32	23	10	7								
Anguilla	North America	0	0	0	0	0	0	0								
Antigua and																
Barbuda	North America	1	1	1	1	1	0	0								
Argentina	South America	2	1	0	5	2	3	1								
Armenia	Europe	0	0	0	0	0	0	0								
Aruba	North America	0	0	0	0	0	0	0								
Australia	Oceania	10	14	14	18	9	5	6								
Austria	Europe	65	69	69	68	51	32	31								
Azerbaijan	Europe	30	22	21	13	15	8	11								
Bahamas	North America	0	0	0	0	0	0	0								
Babrain	Asia	3	6	6	6	5	10	11								
Bangladesh	Asia	11	8	9	12	18	36	278								
Barbados	North America	1	2	4	2	1	1	1								
Balarus	Europa	5	1	1	1	1	0	0								
Bolgium	Europe	62	67		65	47	44	44								
Bolizo	North America	02	0	0												
Benze	Africa	0	0	0	0	1	0	2			-					
Bernin	Africa	0	1	1	2	1	1	1								
Bermuda	North America	0	1	1	3	1	1	1								
Bhutan	Asia	0	0	0	0	0	0	0								
Bolivia	south America	2	5	2	5	1	1	3								
Bosnia and	Europe	0	0	0	0	1	1	1								
Herzegovina			2			2	-									
Botswana	Africa	1	2	3	4	3	3	3								
Brazil	south America	29	21	21	22	20	9	7								
Virgin Islands	North America	1	1	1	0	0	0	0								
(British)																
Brunei	Asia	10	6	7	8	10	9	7								
Bulgaria	Europe	244	187	185	196	173	146	98								
Burkina Faso	Africa	0	0	0	0	0	0	0								
Burundi	Africa	0	1	0	0	0	0	0								
Cambodia	Asia	0	0	0	0	2	2	2								
Cameroon	Africa	3	7	5	4	5	3	1								
Canada	North America	68	75	80	78	73	47	61								
Cape Verde	Africa	0	1	1	1	1	1	0								
Canary Islands	Africa	1	2	4	5	6	4	3								
ayman Islands	North America	1	2	2	1	1	1	1								
Central African	Africa	0	0	0	0	0	0	0								
Republic	ALL C					<u> </u>		U U								
Chad	Africa	0	0	0	0	0	0	0								
Chile	South America	6	4	2	4	1	1	4								
China	Asia	183	211	368	597	961	1066	1037								
Christmas																
Island	Oceania	0	0	0	0	0	0	0								
(Australia)																
ocos (Keeling)	A															
Islands	Asia	0	0	0	0	0	0	0								

				Per	rcent Split	Between	Travel Mo	odes				Per	cent Split	Between	Travel Mo	odes	
	Distance to	Trips per					Domosti	Short-	Long-	Trips per					Domosti	Short-	Long-
Country	Canital (km)	year	Car	Rail	Bus	Ferry	- Eliste	haul	haul	year	Car	Rail	Bus	Ferry	- Eliabe	haul	haul
	Capital (km)						c Flight	flight	flight						c Flight	flight	flight
Afghanistan	6,366.90	2							100.00%	2							100.00%
Aland islands	2,211.04	2						100.00%		2						100.00%	
Albania	2,509,90	2						100.00%		2						100.00%	
Algeria	2,319.90	2						100.007	100.00%	2						100.007	100.00%
Argenia	2,515.50								100.007.								100.007.
American	16,432.56								100.00*/								100.00*/
Samoa	4.505.00							100.001/	100.007.							100.001/	100.007.
Andorra	1,596.90	4						100.00%	100.001	2						100.00%	100.001
Angola	7,470.15	2							100.00%	2							100.00%
Anguilla	7,212.12	2							100.00%	2							100.00%
Antigua and	7,223.08																
Barbuda	.,	2							100.00%	2							100.00%
Argentina	11,693.90	2							100.00%	2							100.00%
Armenia	4,240.90	2						100.00%		2						100.00%	
Aruba	8,176.01	2							100.00%	2							100.00%
Australia	17,623.73	2							100.00%	2							100.00%
Austria	1,876.94	2						100.00%		2						100.00%	
Azerbaijan	4,610,90	2						100.00%		2						100.00%	
Bahamas	5 745 90	2							100.00%	2							100.00%
Babrain	5 713 19	2							100.00*/	2							100.00*/
Papeladash	9 646 24	2							100.00%	2							100.00*/
Dangladesh	3,646.24	2							100.00%	2							100.00%
barbados	7,420.67	2						100.001	100.00%	2						100.001	100.00%
Belarus	2,513.51	2						100.00%		2						100.00%	
Belgium	954.90	2						100.00%		2						100.00%	
Belize	9,026.90	2							100.00%	2							100.00%
Benin	5,647.90	2							100.00%	2							100.00%
Bermuda	6,190.38	2							100.00%	2							100.00%
Bhutan	8,280.85	2							100.00%	2							100.00%
Bolivia	10,581.90	2							100.00%	2							100.00%
Bosnia and																	
Herzegovina	2,262.38	2						100.00%		2						100.00%	
Botswana	9,484,92	2							100.00%	2							100.00%
Brazil	9 327 90	2							100.002	2							100.002
Virgin Islands	5,527.50								100.0071								100.007
(Deitich)	7,301.40	2							100.00%	2							100.00*/
(British)	11 000 44	2							100.00%	2							100.00%
Bulancia	2,506.44	2						100.00*/	100.00%	2						100.00*/	100.007.
Bulgaria	2,656.41	2						100.00%	100.0014	2						100.00%	100.001
Burkina Faso	4,994.62	2							100.00%	2							100.00%
Burundi	7,352.18	2							100.00%	2							100.00%
Cambodia	10,653.20	2							100.00%	2							100.00%
Cameroon	6,048.42	2							100.00%	2							100.00%
Canada	6,042.90	2							100.00%	2							100.00%
Cape Verde	5,211.71	2							100.00%	2							100.00%
Canary Islands	3,533.48	2							100.00%	2							100.00%
Cayman Islands	8,384.64	2							100.00%	2							100.00%
Central African																	
Republic	6,162.81	2							100.00%	2							100.00%
Chad	5 231 13	2							100.00-2	2							100.00%
Chila	12 212 92	2							100.00%	2							100.00*/
Chies	22,515.52								100.00%	2							100.007
China	8,866.90	2							100.00%	2							100.00%
Christmas																	
Island	15,850.64								100.00								100.00
(Australia)		2							100.00%	2							100.00%
Cocos (Keeling)	10 101 07																
	Read Me Fir	rst s	ummari	ies 1	Tracked	Data	Emice	ions Da	ta T	ravel D	ata	Domicil	e Data	Emi	ccion Fa	ctors	G

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		Annual Emi	ssions b	y Travel M	ethod (tC	02e)											
					2015	-2016							2016	-2017			
Country	Region Classification	Car	Rail	Bus	Ferry	Domesti c Flight	Short- haul flight	Long- haul flight	Total	Car	Rail	Bus	Ferry	Domesti c Flight	Short- haul flight	Long- haul flight	Total
Afghanistan	Asia	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aland islands	Europe	0.00	0.00	0.00	0.00	0.00	0.73	0.00	0.73	0.00	0.00	0.00	0.00	0.00	0.70	0.00	0.70
Albania	Europe	0.00	0.00	0.00	0.00	0.00	1.66	0.00	1.66	0.00	0.00	0.00	0.00	0.00	0.80	0.00	0.80
Algeria	Africa	0.00	0.00	0.00	0.00	0.00	0.00	0.68	0.68	0.00	0.00	0.00	0.00	0.00	0.00	1.40	1.40
American	Oceania																
Samoa	occumu	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Andorra	Europe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Angola	Africa	0.00	0.00	0.00	0.00	0.00	0.00	46.05	46.05	0.00	0.00	0.00	0.00	0.00	0.00	67.76	67.76
Anguilla	North America	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Antigua and	North America																
Barbuda	And the American	0.00	0.00	0.00	0.00	0.00	0.00	2.12	2.12	0.00	0.00	0.00	0.00	0.00	0.00	2.18	2.18
Argentina	South America	0.00	0.00	0.00	0.00	0.00	0.00	6.87	6.87	0.00	0.00	0.00	0.00	0.00	0.00	3.54	3.54
Armenia	Europe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aruba	North America	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Australia	Oceania	0.00	0.00	0.00	0.00	0.00	0.00	51./4	51.74	0.00	0.00	0.00	0.00	0.00	0.00	/4.61	/4.61
Austria	Europe	0.00	0.00	0.00	0.00	0.00	40.28	0.00	40.28	0.00	0.00	0.00	0.00	0.00	41.04	0.00	41.04
Azerbaijan	Europe	0.00	0.00	0.00	0.00	0.00	45.67	0.00	45.67	0.00	0.00	0.00	0.00	0.00	32.15	0.00	32.15
Banamas	North America	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.00	10.00
Bangladoch	Asia	0.00	0.00	0.00	0.00	0.00	0.00	27.02	27.02	0.00	0.00	0.00	0.00	0.00	0.00	20.02	20.02
Barbados	North Amorica	0.00	0.00	0.00	0.00	0.00	0.00	21.32	21.32	0.00	0.00	0.00	0.00	0.00	0.00	4.40	4.40
Belarus	Furone	0.00	0.00	0.00	0.00	0.00	4 15	0.00	4 15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.80
Belgium	Europe	0.00	0.00	0.00	0.00	0.00	19 55	0.00	19.55	0.00	0.00	0.00	0.00	0.00	20.27	0.00	20.27
Belize	North America	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benin	Africa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bermuda	North America	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.87	1.87
Bhutan	Asia	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bolivia	South America	0.00	0.00	0.00	0.00	0.00	0.00	6.21	6.21	0.00	0.00	0.00	0.00	0.00	0.00	16.00	16.00
Bosnia and	_																
Herzegovina	Europe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Botswana	Africa	0.00	0.00	0.00	0.00	0.00	0.00	2.78	2.78	0.00	0.00	0.00	0.00	0.00	0.00	5.74	5.74
Brazil	South America	0.00	0.00	0.00	0.00	0.00	0.00	79.41	79.41	0.00	0.00	0.00	0.00	0.00	0.00	59.23	59.23
Virgin Islands	North America																
(British)	North America	0.00	0.00	0.00	0.00	0.00	0.00	2.14	2.14	0.00	0.00	0.00	0.00	0.00	0.00	2.21	2.21
Brunei	Asia	0.00	0.00	0.00	0.00	0.00	0.00	34.95	34.95	0.00	0.00	0.00	0.00	0.00	0.00	21.60	21.60
Bulgaria	Europe	0.00	0.00	0.00	0.00	0.00	214.00	0.00	214.00	0.00	0.00	0.00	0.00	0.00	157.42	0.00	157.42
Burkina Faso	Africa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Burundi	Africa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.22	2.22
Cambodia	Asia	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cameroon	Africa	0.00	0.00	0.00	0.00	0.00	0.00	5.33	5.33	0.00	0.00	0.00	0.00	0.00	0.00	12.80	12.80
Canada	North America	0.00	0.00	0.00	0.00	0.00	0.00	120.63	120.63	0.00	0.00	0.00	0.00	0.00	0.00	137.04	137.04
Cape Verde	Africa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.58	1.58
Canary Islands	Africa	0.00	0.00	0.00	0.00	0.00	0.00	1.04	1.04	0.00	0.00	0.00	0.00	0.00	0.00	2.14	2.14
	Kead Me First	Summarie	S TI	acked Da	ita En	nissions (Jata 👘	i ravel Dat	a Do	micile Dati	a Em	hission Fa	ctors	(+)			

ANTIMAN MANAGER

ABERDEEN 2040

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Emission source by region	Units	2015 - 2016	2016 - 2017	2017 - 2018	2018 - 2019	2019 - 2020	2020 - 2021	2021 - 2022
Africa	tonnes	878.23	860.47	852.05	872.54	924.80	800.97	1,303.10
Asia	tonnes	2,688.98	2,801.52	3,414.36	3,736.35	4,590.33	4,851.62	6,262.50
Europe	tonnes	2,021.92	2,052.32	2,170.87	2,141.72	1,878.52	1,510.06	1,145.66
Home	tonnes	261.90	251.40	247.10	237.09	223.79	227.48	240.89
North America	tonnes	819.31	1,080.15	1,365.53	1,330.69	1,060.72	729.59	1,083.94
Oceania	tonnes	74.59	96.31	91.58	100.88	56.62	26.06	36.29
South America	tonnes	181.06	151.39	156.61	183.89	130.33	96.31	107.93
UK	tonnes	248.98	236.04	221.71	194.90	181.56	179.25	183.83
Total	tonnes	7,174.97	7,529.61	8,519.82	8,798.06	9,046.67	8,421.34	10,364.13
Number of students	Units	2015 - 2016	2016 - 2017	2017 - 2018	2018 - 2019	2019 - 2020	2020 - 2021	2021 - 2022
Africa	#	489	464	426	471	529	449	753
Asia	#	1.021	1.054	1.215	1,480	1,856	1,953	2.572
Europe	#	3.018	3,288	3,470	3,502	3,125	2,569	1,982
Home	#	7.384	7.292	7.305	7.222	7.141	7.307	7.768
North America	#	408	513	594	623	531	364	542
Oceania	#	14	18	16	19	11	5	7
South America	#	64	52	51	63	48	34	38
UK	#	1.730	1.689	1.613	1,461	1,428	1,418	1.458
Total	#	14,128	14,370	14,690	14,841	14,669	14,099	15,120
Carbon emission per student	Units	2015 - 2016	2016 - 2017	2017 - 2018	2018 - 2019	2019 - 2020	2020 - 2021	2021 - 2022
Africa	tonnes	1.80	1.85	2.00	1.85	1.75	1.78	1.73
Asia	tonnes	2.63	2.66	2.81	2.52	2.47	2.48	2.43
Europe	tonnes	0.67	0.62	0.63	0.61	0.60	0.59	0.58
Home	tonnes	0.04	0.03	0.03	0.03	0.03	0.03	0.03
North America	tonnes	2.01	2.11	2.30	2.14	2.00	2.00	2.00
Oceania	tonnes	5.33	5.35	5.72	5.31	5.15	5.21	5.18
South America	tonnes	2.83	2.91	3.07	2.92	2.72	2.83	2.84
UK	tonnes	0.14	0.14	0.14	0.13	0.13	0.13	0.13
Total	tonnes	15.44	15.68	16.70	15.52	14.84	15.06	14.93
Emission source by travel modes	Units	2015 - 2016	2016 - 2017	2017 - 2018	2018 - 2019	2019 - 2020	2020 - 2021	2021 - 2022
Car	tonnes	405.05	387.95	376.59	350.55	333.48	336.99	351.60
Read Me First Summaries Tracked Dat	Emissions Data	Travel Data Domicile	2 Data Emission Factors	+	:			

Emission source by travel modes	Units	2015 - 2016	2016 - 2017	2017 - 2018	2018 - 2019	2019 - 2020	2020 - 2021	2021 - 2022
Car	tonnes	405.05	387.95	376.59	350.55	333.48	336.99	351.60
Rail	tonnes	105.84	99.49	92.23	81.45	71.87	69.74	73.11
Bus	tonnes	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ferry	tonnes	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Domestic Flight	tonnes	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Short-Haul Flight	tonnes	2,021.92	2,052.32	2,170.87	2,141.72	1,878.52	1,510.06	1,145.66
Long-Haul Flight	tonnes	4,642.17	4,989.85	5,880.13	6,224.34	6,762.80	6,504.55	8,793.75
Total	tonnes	7,174.97	7,529.61	8,519.82	8,798.06	9,046.67	8,421.34	10,364.13
Distance traveled by travel mode	Units	2015 - 2016	2016 - 2017	2017 - 2018	2018 - 2019	2019 - 2020	2020 - 2021	2021 - 2022
Car	km	2,166,614.24	2,126,699.89	2,084,741.55	1,979,362.33	1,945,605.37	1,965,188.25	2,060,127.57
Rail	km	2,166,614.24	2,126,699.89	2,084,741.55	1,979,362.33	1,945,605.37	1,965,188.25	2,060,127.57
Bus	km	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ferry	km	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Domestic Flight	km	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Short-Haul Flight	km	12,248,103.44	12,952,497.56	13,593,408.80	13,752,790.68	12,279,534.26	9,999,076.56	7,586,121.70
Long-Haul Flight	km	31,626,722.08	33,003,815.82	36,120,959.76	41,548,218.12	46,273,023.96	43,988,284.30	59,469,498.94
Total	km	48,208,054.00	50,209,713.16	53,883,851.66	59,259,733.46	62,443,768.96	57,917,737.36	71,175,875.78
Read Me First Summaries Tracked Data	Emissions Data	Travel Data Domicile	Data Emission Factors	+	:			

Regional Breakdown				
	20	015 - 2016	2016	- 2017
Africa	Emissions (tCO2e)	Number of Stude	nts Emissions (tCO2e)	Number of Students
Algeria	0.681029844	1	1.402982724	2
Angola	46.05168191	21	67.76471871	30
Benin	0	0	0	0
Botswana	2.784393115	1	5.736100219	2
Burkina Faso	0	0	0	0
Burundi	0	0	2.223152188	1
Cameroon	5.326722526	3	12.80244868	7
Cape Verde	0	0	1.57591687	1
Canary Islands	1.037288389	1	2.136907365	2
Central African Republic	0	0	0	0
Chad	0	0	0	0
Comoros	0	0	0	0
Congo	0	0	0	0
Congo (Democratic Republic of)	0	0	0	0
Djibouti	0	0	0	0
Egypt	23.16260029	19	32.64850079	26
Equatorial Guinea	0	0	0	0
Eritrea	0	0	0	0
Eswatini	0	0	0	0
Ethiopia	5.758255726	3	5.931262319	3
Gabon	0	0	0	0
Gambia	3.011279768	2	3.101753564	2
Ghana	65.87548048	39	73.07429984	42
Guinea	0	0	0	0
Guinea-Bissau	0	0	0	0
lvory Coast	1.653667514	1	0	0
Kenya	52.56630966	24	45.1213855	20
Read Me First Summaries Tracked D	ta Emissions Data	a Travel Data Do	micile Data Emission Factors	(+)

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	Units	Scope	2015 - 2016	2016 - 2017	2017 - 2018	2018 - 2019	2019 - 2020	2020 - 2021	2021 - 2022
Total emissions	tCO2e	Scope 3	7,174.97	7,529.61	8,519.82	8,798.06	9,046.67	8,421.34	10,364.13
Percent change (year to y	ear)		-	4.94%	13.15%	3.27%	2.83%	-6.91%	23.07%
Percent change (since bas	eline year)		-	4.94%	18.74%	22.62%	26.09%	17.37%	44.45%
Total Students	#	Scope 3	14,128.00	14,370.00	14,690.00	14,841.00	14,669.00	14,099.00	15,120.00
Percent change (year to y	ear)		-	1.71%	2.23%	1.03%	-1.16%	-3.89%	7.24%
Percent change (since bas	eline year)		-	1.71%	3.98%	5.05%	3.83%	-0.21%	7.02%
Total distance travelled	km	Scope 3	48,208,054.00	50,209,713.16	53,883,851.66	59,259,733.46	62,443,768.96	57,917,737.36	71,175,875.78
Percent change (year to y	ear)		-	4.15%	7.32%	9.98%	5.37%	-7.25%	22.89%
Percent change (since bas	eline year)		-	4.15%	11.77%	22.92%	29.53%	20.14%	47.64%
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Read Me First Summaries	s Tracked Dat	a Emissions Da	ata Travel Data Domio	le Data Emission Factors	(+)	•			
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Questions?

Regions	Starting Location	Travel mode	Number of Return Trips	Journey	
Africa					
Asia		Economy passenger Long-baul			
North America		fliceht		London than to	
South America	Country	ingrit			
Oceania	Country		1	Aberdeen	
Europe	Capital	Economy passenger, Short-haul flights			Summer .
Home/UK		50/50 split, national rail and average car		Direct to Aberdeen	

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