

# The Tyndall Travel Strategy

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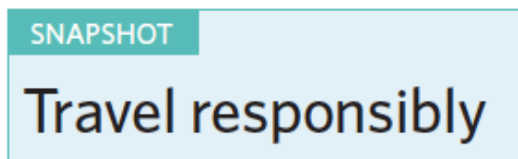
with contributions from Stuart Capstick, Adam Corner, David Cutting, Martin Johnson, Asher Minns, Heike Schroeder, Kate Walker-Springett, Lorraine Whitmarsh, Ruth Wood, and the Tyndall community

*Tyndall Working Paper 161*  
<http://tyndall.ac.uk/travel-strategy>

## **A clean, green science machine**

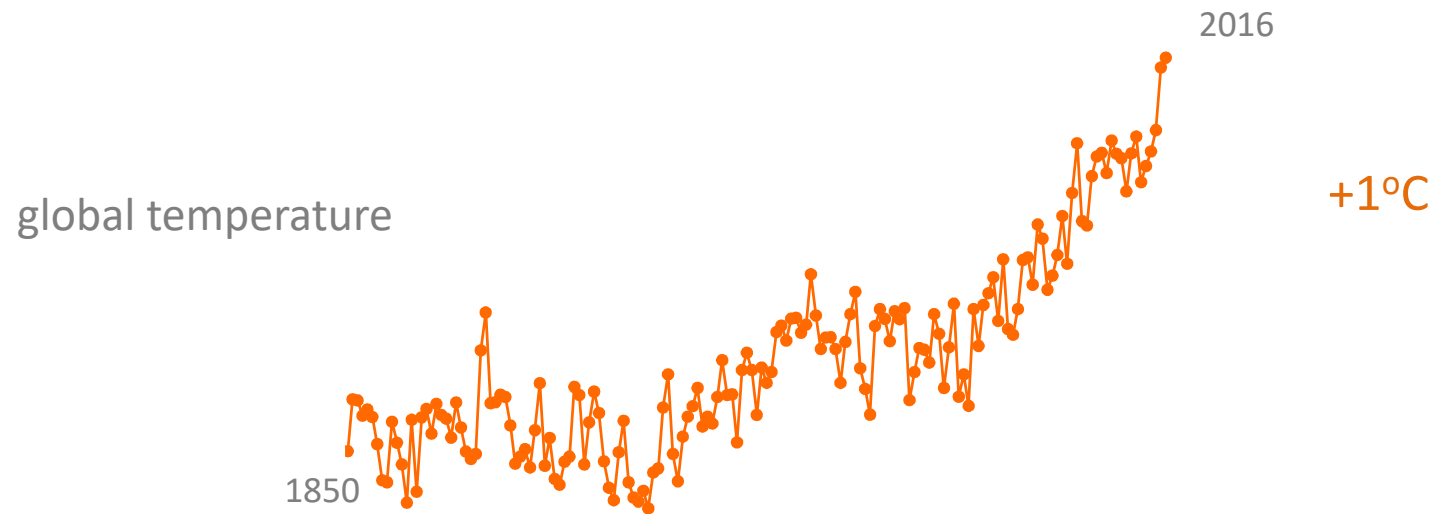
*As the world warms and technology improves, researchers and institutions should look at their carbon footprints and question whether they really need to travel to academic conferences.*

*Nature, Editorial*



*Nature Climate Change, Snapshot*

# zero emissions needed to address climate change

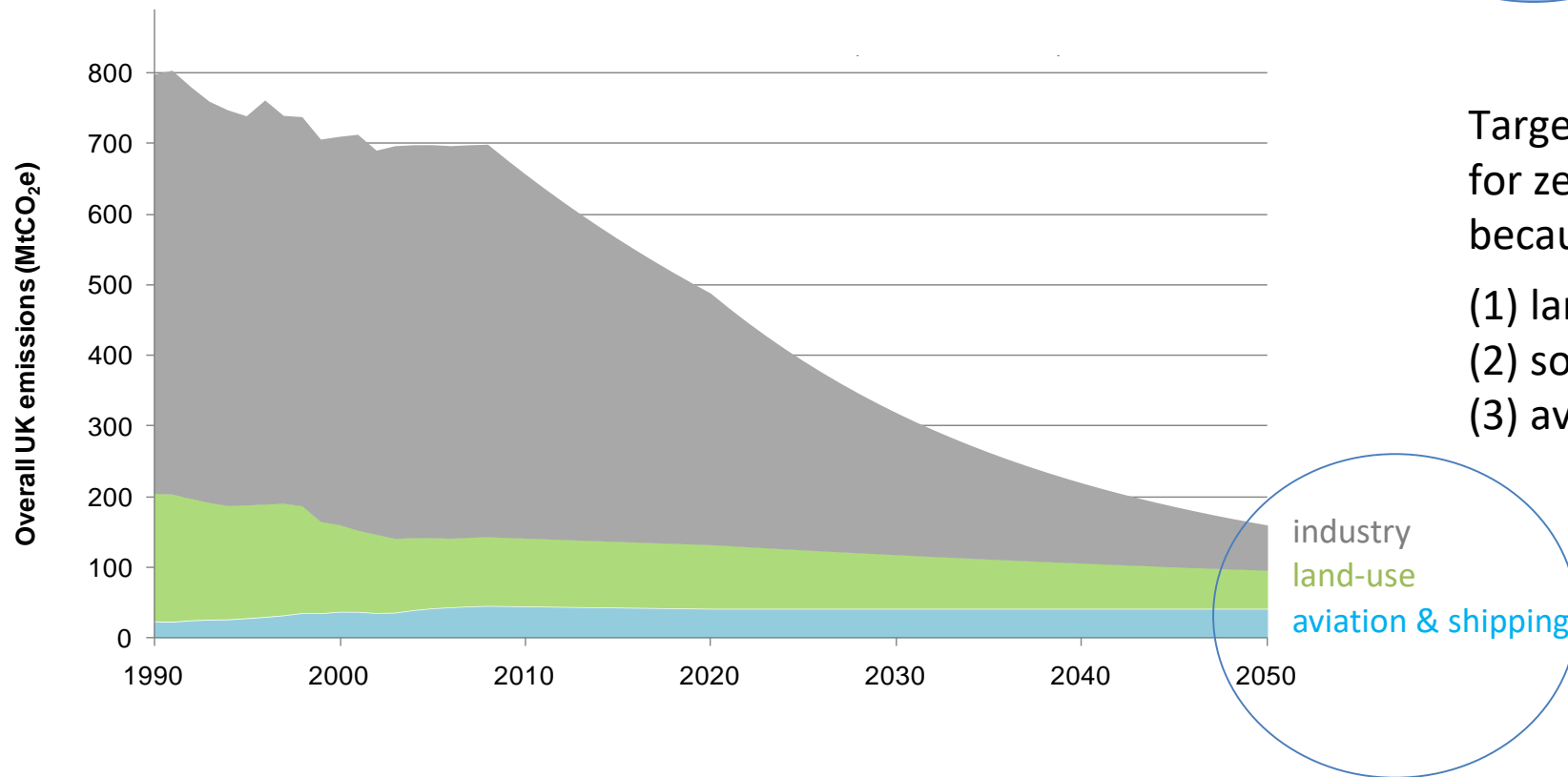


good news: we have been heard...

Switzerland, UK, EU (and USA) all working towards  
70-85% emission reductions by 2050

UK planned emissions reductions by sector

these are the  
plans of the UK  
Government,  
not the  
scientists, the  
government!

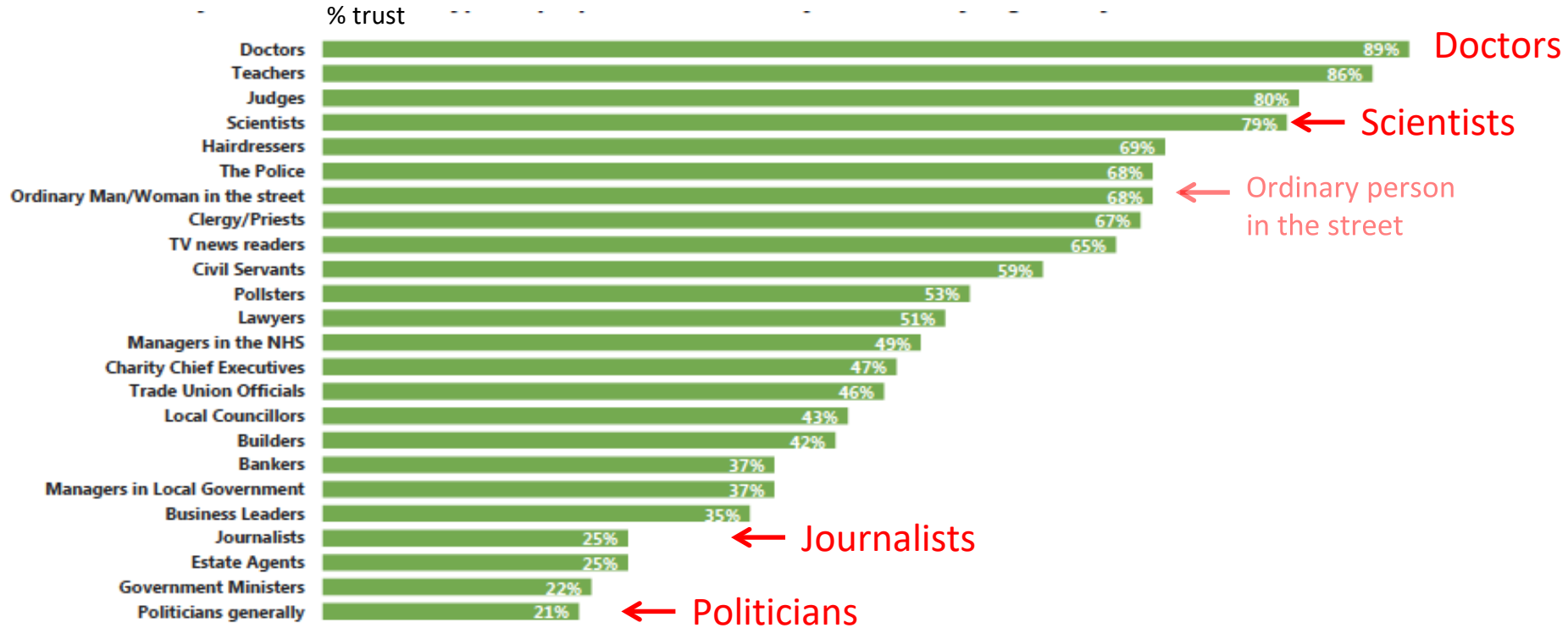


Targets for most sectors are  
for zero emissions by 2050,  
because 3 sectors can't:

- (1) land-use
- (2) some industrial processes
- (3) aviation

# more good news: we are trusted

survey: do you generally trust these people to tell the truth?



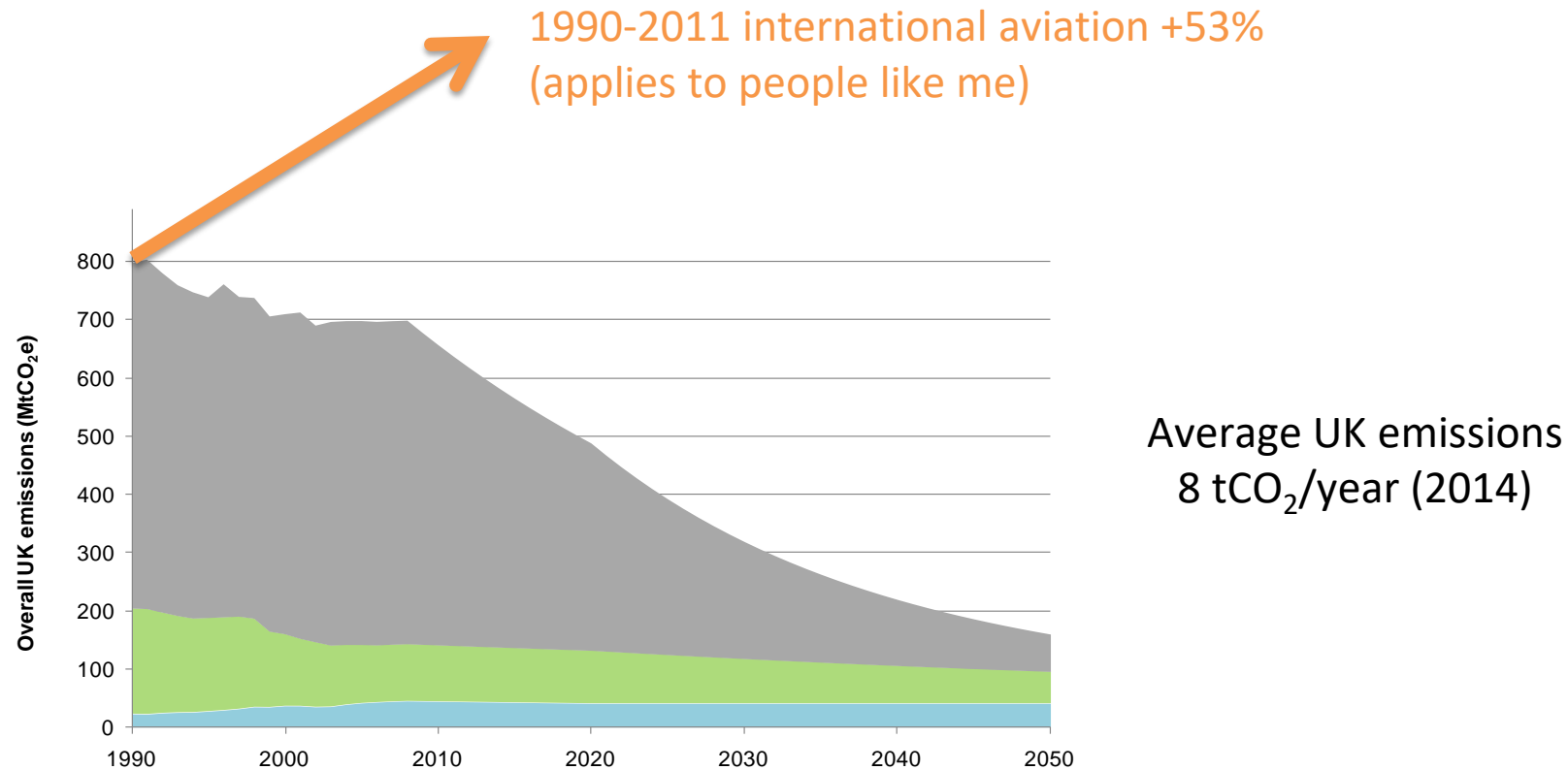
both what we do and how we look are important

do as I say, not as I do...

My professional travel emissions during 2011-2015 = 12 tCO<sub>2</sub> per year

Emissions from long-haul flights dominate our professional carbon footprint

At the Tyndall Centre, there is no correlation between seniority and carbon footprint



aviation technology/carbon offsets not enough

# Is science above all?

Do we need to fly to do good science?

	I'm travelling	I'm home
Generate ideas	exceptional stimulation	wider audience
Make connections	build trust	wider network
Assess progress	easy & fast	improving
Promote work	kudos	new metrics
Financial cost	limiting	free
Time cost	efficient	savings
Personal impact		widen access

our issue is largely cultural  
what we need is a plan...

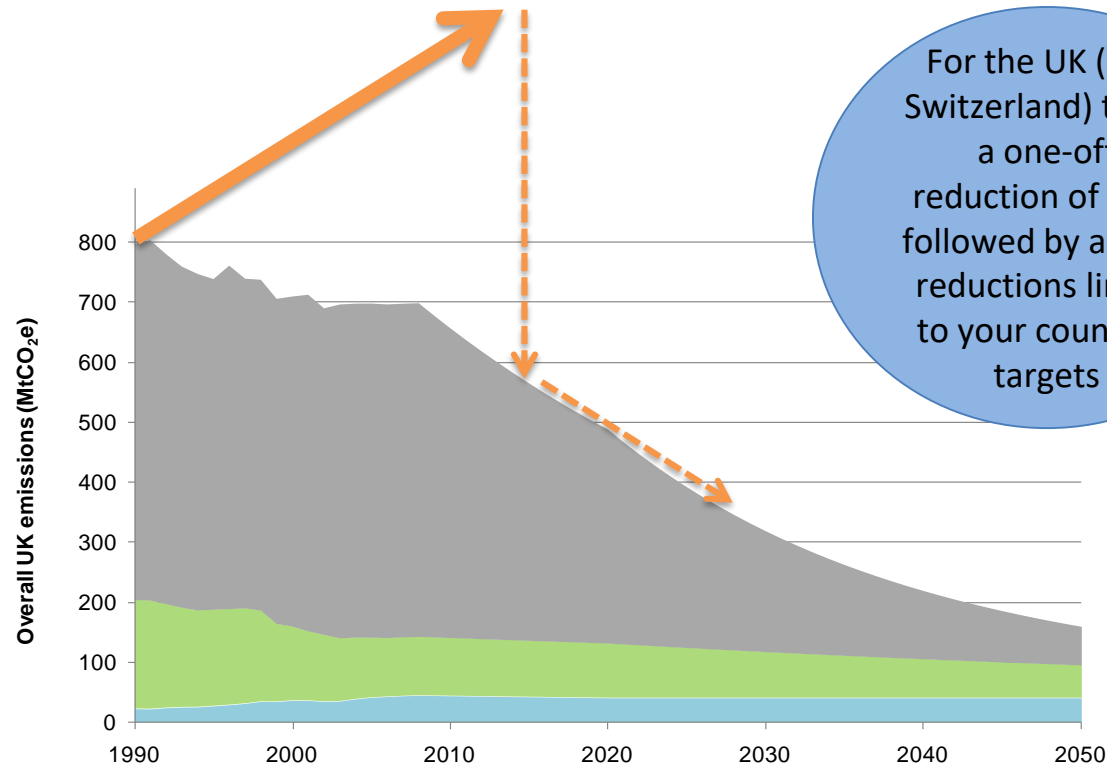
# Tyndall Travel Strategy

<http://www.tyndall.ac.uk/travel-strategy>

The Tyndall travel strategy is simple, self-guided, open and transparent.

Members monitor themselves and create their own objectives.

We recommend to align your professional carbon reductions to the targets of the country where you live.



For the UK (also Switzerland) this is a one-off reduction of 50%, followed by annual reductions linked to your country's targets

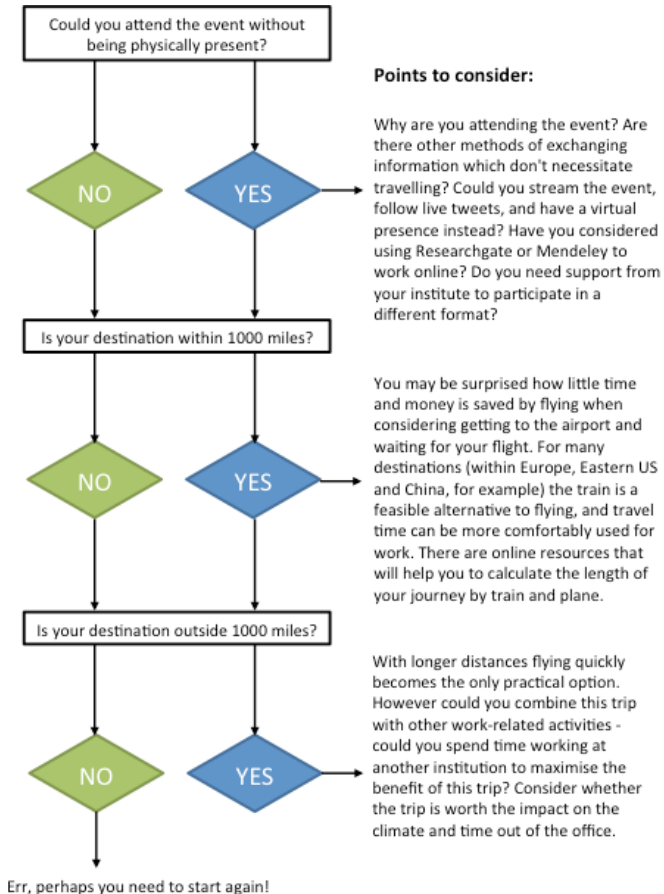
## Code of conduct:

1. Monitor, justify, reduce
2. Support, encourage, stimulate
3. Reward

# Tyndall Travel Strategy

<http://www.tyndall.ac.uk/travel-strategy>

## 1. think before you travel



## 2. justify your travel

Weight	Justification
1	Well justified emissions, for example: Conduct field work. Travel informs directly policy on climate change and global sustainability (e.g. IPCC). Travelling to meet contractual engagement (e.g. from research grants), with no alternative options available. Risk of job loss with refusal to travel.  And for <u>Stage 1</u> : Present and promote own research. Establish contacts. Attend and present work at project meetings.
2	Useful but with potential for using alternative options.  <u>Stage 1</u> : Attend a workshop not directly related to own research. <u>Stage 2</u> : Travel to present own work and promote own research. <u>Stage 3</u> : Travel to explore new topics. Could lead to important research or funding for own or group/institute research. Travel acts to move projects or significant collaborations forward (e.g. Fudan).
3	Less well justified with much potential for using alternative options. Good value mainly for low-emissions travel.  <u>Stage 3</u> : Travel to present own work and promote own research. Travel to establish or maintain own collaborations. Invited guest lectures.
4	Poorly justified emissions. Good value only for low-emissions travel.  Travel to keep up to date or renew connections with colleagues. No results presented. Little pre-travel arrangements made to optimize the usefulness of the meeting.

## 3. account for your emissions in hours spent moving

Transport Mode	Km / hour <sup>1</sup>	Wh /pkm <sup>2</sup>	gCO <sub>2e</sub> /wh <sup>3</sup>	kgCO <sub>2e</sub> /pkm <sup>4</sup>	kgCO <sub>2e</sub> /hour	Normalised to EU HS Rail (unit less)
Car	100			0.2296 <sup>5</sup>	23	3.8
Coach	90			0.0355	3.2	0.5
Ferry	46			0.1378 <sup>6</sup>	6.3	1
Rail						
European high speed electric	200	70	0.4310	0.0302	6.0	1
European Intercity electric	160	77	0.4310	0.0332	5.3	0.9
European intercity diesel	160			0.0657	11	1.7
UK average	150			0.0576	8.6	1.4
Air						
UK Domestic	850			0.3622	217	36
European	850			0.2135 <sup>7</sup>	181	30
International	850			0.2512	214	35



# Tyndall Travel Tracker (not yet beautiful but can be shared)

<http://travel.tyndall.ac.uk>

Add a Trip

My Carbon Report

My Annual Targets

System Administration

Logout from Tyndall Travel Tracker

Year  
2015

Month  
January

Destination (City)  
City Visited

Hours by Train  
0

Hours by Car  
0

Hours by Plane  
0

Hours by Coach  
0

Hours by Ferry  
0

Purpose of Trip  
Conference or Workshop

Travel Professional Justification  
Essential I had to go

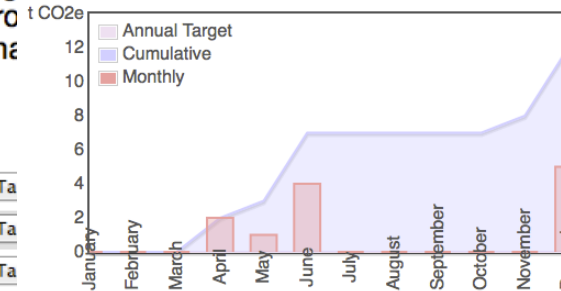
See [Travel Strategy page 4 for travel justification classification](#)

Personal Reference  
Trip to visit...

Save As Favourite

Please enter a target for the year. As a business travellers average around X g and academic researchers average around Y g current average for Tyndall staff who have X g.

Year	Target (kg CO2e)	
2013	0	Update Target
2014	0	Update Target
2015	10000	Update Target
2016	10000	Update Target
2017	10000	Update Target
2018	10000	Update Target
2019	10000	Update Target
2020	10000	Update Target
		Create Target



Compare Centre  Compare Career Stage

Year 2014 - units are kg CO2e (hours)

Month	Destination	Purpose	Justification	Reference	Train	Car	Plane	Coach	Ferry	Total	Options
January	London	Other	Well Justified	CDP/LSHTM health & climate change discussion	35 (4)	0 (0)	0 (0)	0 (0)	0 (0)	35 (4)	Edit
January	London	Policy Advising	Essential I had to go	CEFAS CCC SSC	35 (4)	0 (0)	0 (0)	0 (0)	0 (0)	35 (4)	Edit
February	Manchester	Other	Essential I had to go	Manchester Tyndall visit	69 (8)	0 (0)	0 (0)	0 (0)	0 (0)	69 (8)	Edit
March	Winsor	Meeting	Essential I had to go	iMarNet workshop	52 (6)	0 (0)	0 (0)	0 (0)	0 (0)	52 (6)	Edit
March	London	Other	Well Justified	meeting with CDP	35 (4)	0 (0)	0 (0)	0 (0)	0 (0)	35 (4)	Edit

This travel tracker tool belongs to the [Tyndall Centre for Climate Change Research at the University of East Anglia](#), but you cannot repackage it and rebrand it as yours.

By logging-in you have agreed on registration this first version of the Tyndall Travel Tracker (Tyndall Centre partnership 2) for your anonymous use by others and to be made public.

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## My public disclosure:



New Orleans, March 2016



 Tom Connolly  
@tompc35

 Follow

Virtual plenary by @clequere to reduce carbon footprint. From the back I didn't realize it was virtual. #OSM16

### What has worked:

- Raised awareness
- Support for individual efforts
- Multiple events adapted to low-C
- Engagement with others (Harvard Kennedy School, LSCE, Zurich Uni/ETH)

### Some challenges:

- Monitoring difficulty because of voluntary basis
- Missing institutional support (universities, funders, scientific bodies)
- Obstacles to career development from limited engagement