

# Demand-side Indicators for Sustainable Holiday Travel: What consumers can tell us

Measuring Sustainability in Tourism –  
Opportunities and Limitations

Day 2, Workshop 5

Berlin, 3 April 2019

Dirk Schmücker



**We live in interesting times  
and are aware that we need to change our mindsets ...**

**„We are heading for  
environmental disaster unless we  
change our habits quickly“**

Indonesia 93%

Peru 86%

Germany 85%

Spain 79%

USA 70%

Japan 55%



We live in interesting times  
and are aware that we need to change our mindsets ...



... because people in Europe care about sustainability:

**59%** think you should measure progress of a country based equally on social and environmental criteria and on economic criteria.

**75%** have a positive attitude towards environmentally friendly products even if they cost a bit more

Source: European Commission 2014, Special Eurobarometer 416, ATTITUDES OF EUROPEAN CITIZENS TOWARDS THE ENVIRONMENT

Basis: Population (ages 15+) in the resp. countries 2014





**Holiday trips**, inbound, outbound, domestic  
but not business, VFR and other tourism

## Demand-side Indicators for Sustainable **Holiday** Travel: What **consumers** can tell us

**Consumer decisions and choice,**  
but not locals (e.g. acceptance), businesses and other people

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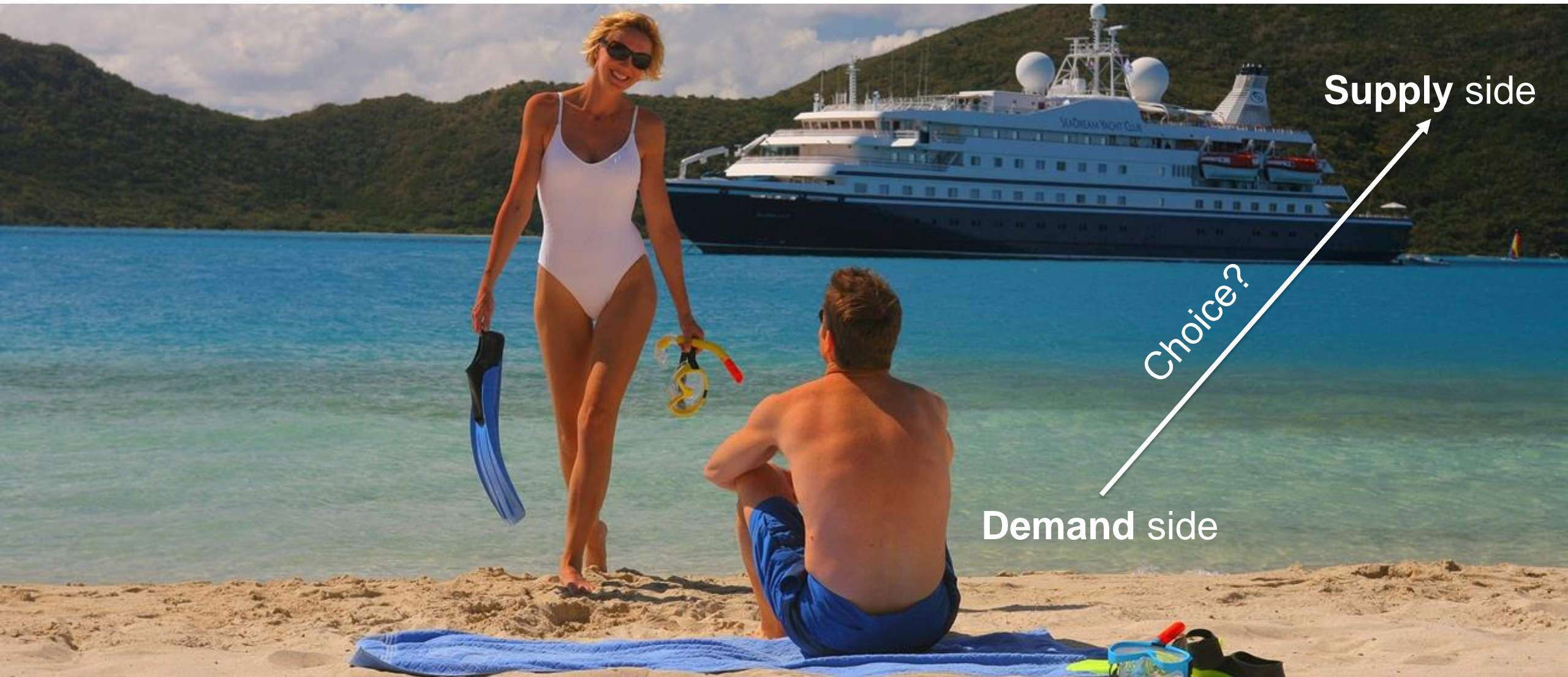
Dirk Schmücker

# Agenda

- **What can we expect from demand-side research?**
- Selected first results from a recent German study
- Implications and discussion



# Supply side – demand side perspectives



# Describe and explain

## EXPLAIN

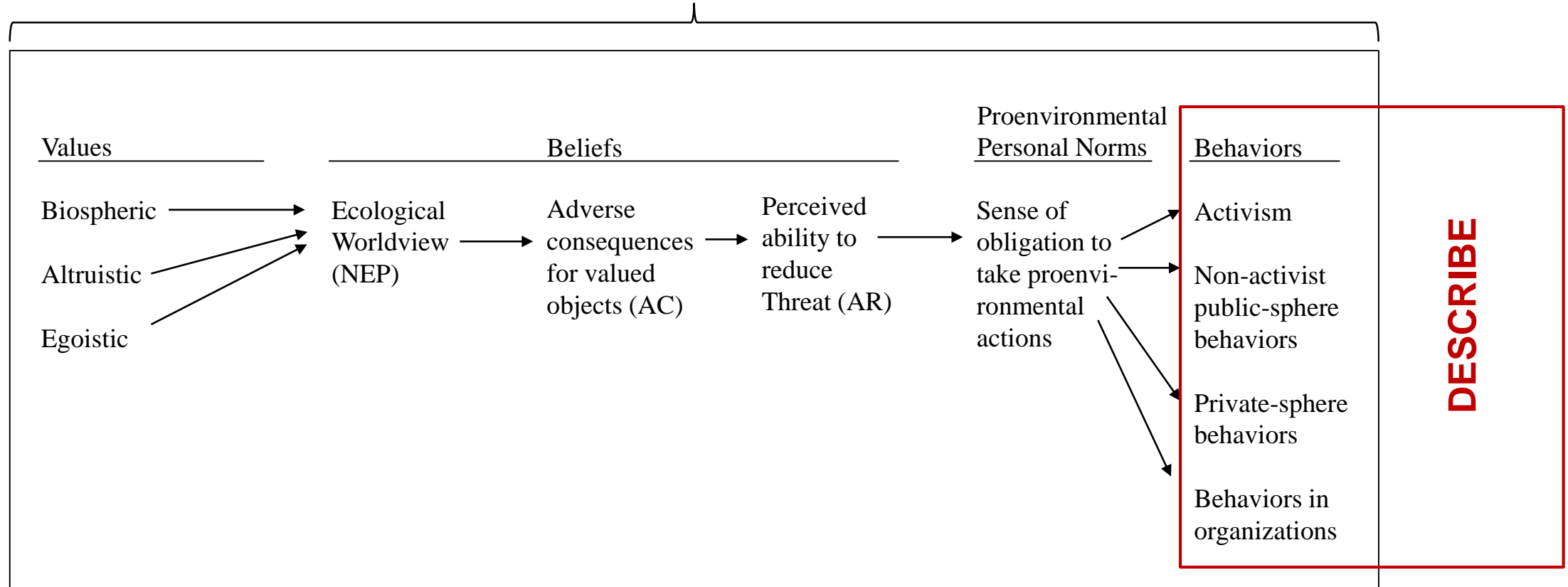


Figure from: Stern, Paul C. 2000. „New Environmental Theories: Toward a Coherent Theory of Environmentally Significant Behavior“. *Journal of Social Issues* 56 (3): 407–24. <https://doi.org/10.1111/0022-4537.00175>.

# Gather information about consumers

## Observe



- Observe **people**
- Observe their **traces** (i.e. electronic signals)

## Ask Questions



- In **personal** interviews, by phone or **online**
- Respondents must be **willing** and **able** to respond



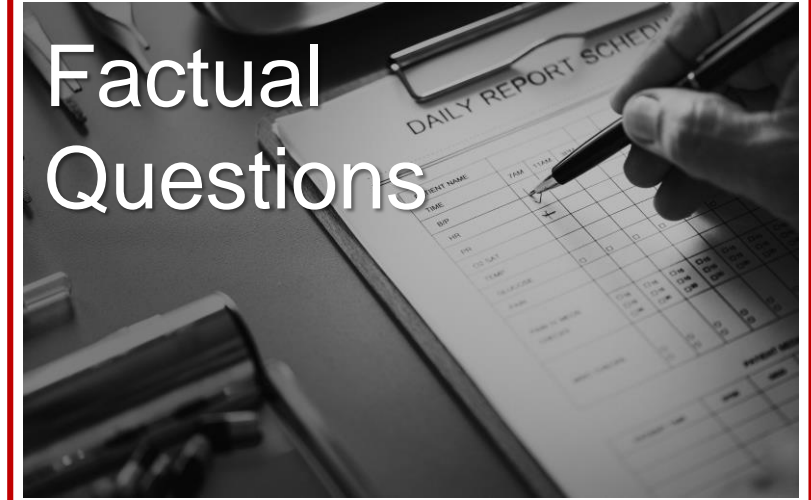
# Basic question types

## Attitudinal Questions



- Questions try to gather information about **attitudes**, **emotions** and their **feelings**, **opinions**, **ratings** and preferences etc.
- Answers cannot be checked by some objective third – not even in principle

## Factual Questions



- Try to gather information about **facts**, e.g. travel **behaviour**
- Answers could be checked by some objective third – in principle



# Potential flaws when asking people



- Questions try to gather information about attitudes, emotions and their feelings, opinions, ratings and preferences etc.
- Facts cannot be checked by some objective third – not even in principle



Statistical sampling errors

**Flawed sampling**  
(systematic biases)

**Flawed Q&A**  
(people misunderstand,  
don't know, lie, or don't  
care)

- Try to gather information about facts
- Facts could be checked by some objective third – in principle



- “It is **not known how many** tourists display environmentally sustainable behaviour.”
- “Estimates in this empirical study vary from 0% to 44%.”
- “Responses are affected by **how tourists are asked** about their behaviour.”
- “And by whether **the definition** of such behaviour includes intent.”
- “More observational studies are urgently needed.”

Juvan, Emil, and Sara Dolnicar. 2016. „Measuring environmentally sustainable tourist behaviour“. *Annals of Tourism Research* 59 (July): 30–44.  
<https://doi.org/10.1016/j.annals.2016.03.006>.

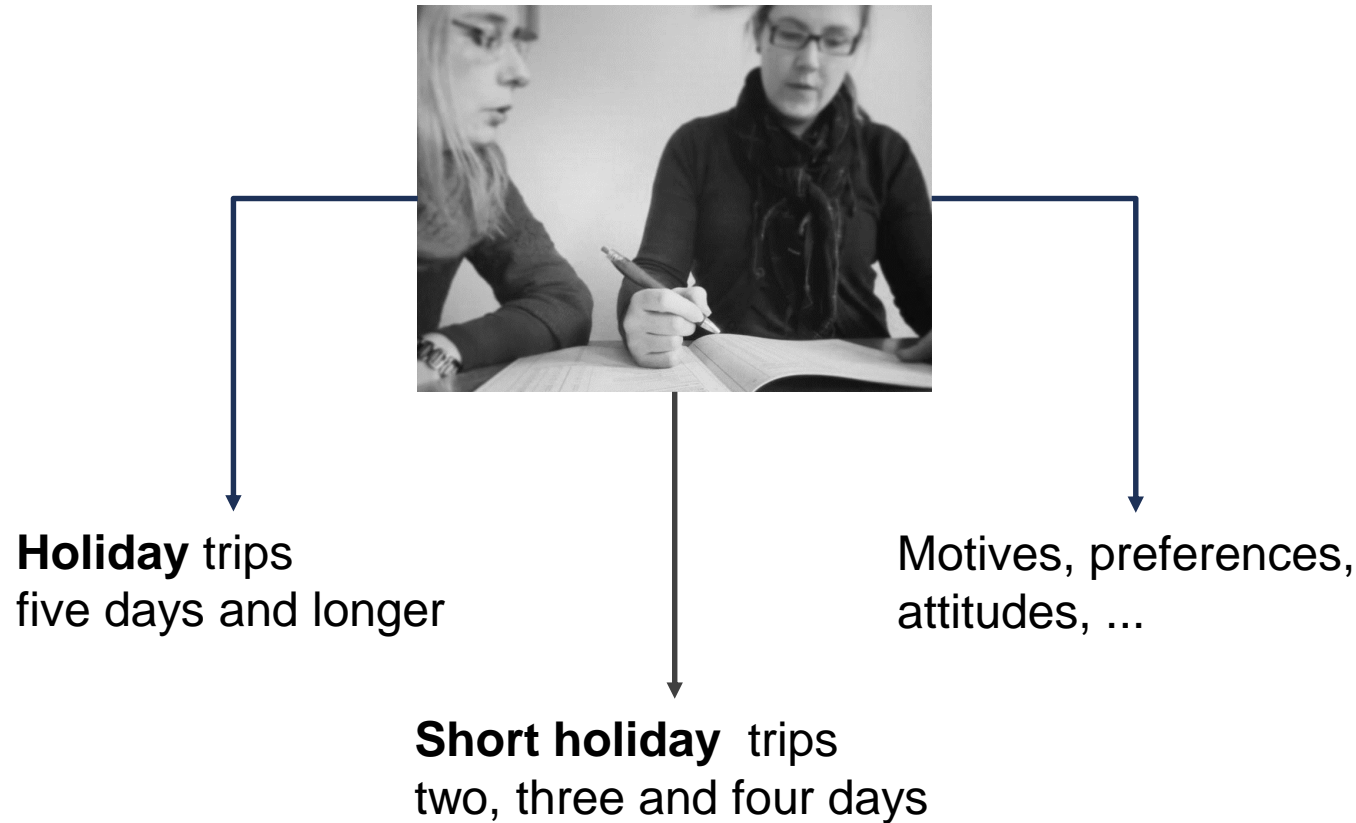


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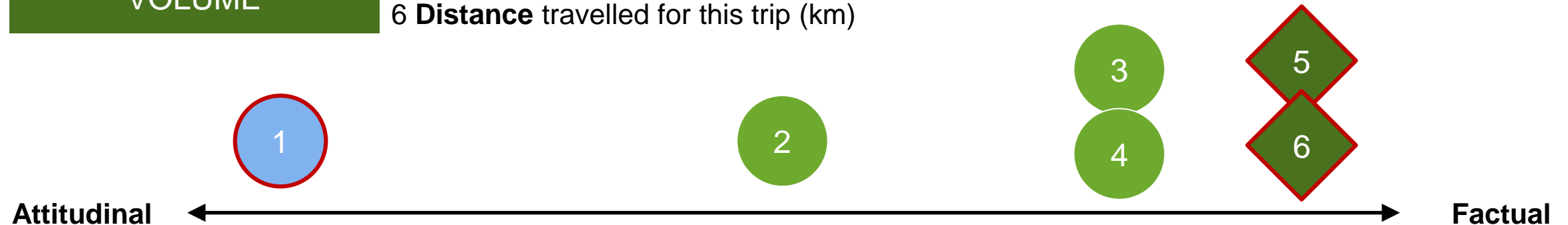
# Data source: Reiseanalyse



- ~ **8,000 face-to-face** in-home interviews in January, representing German-speaking population in Germany, 14 years and older (70.5 m)
- **2 x 2,500 online** interviews in May and November, representing German-speaking (online) population in Germany, 14-75 years (64.5 m)
- **Started in 1970** (old FRG), extended to reunified Germany in 1991, extended to cover non-Germans in 2010
- Owner: FUR (Forschungsgemeinschaft Urlaub und Reisen e.V.)

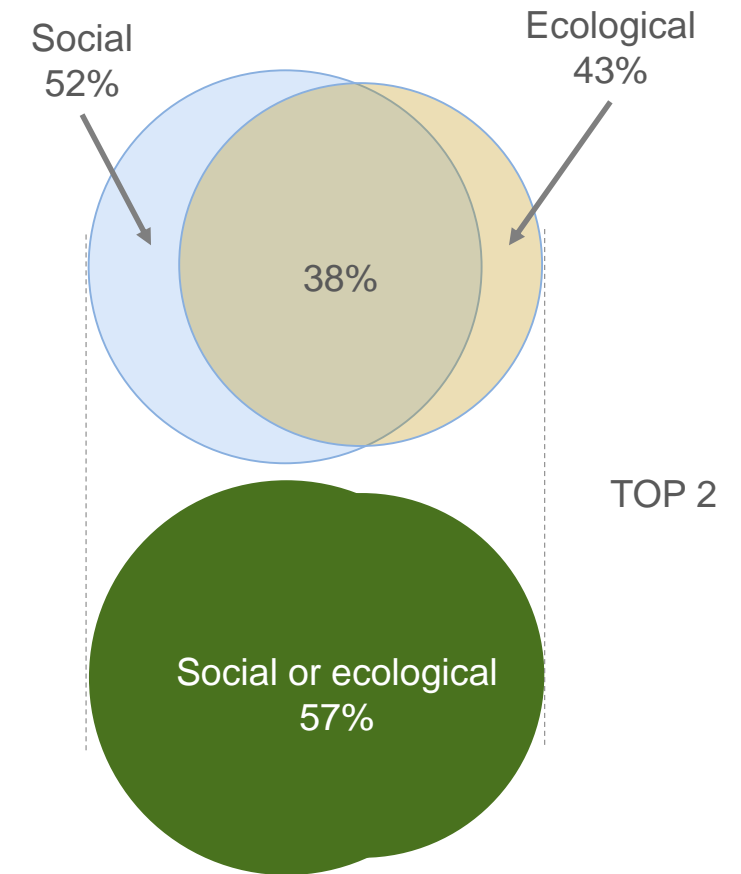
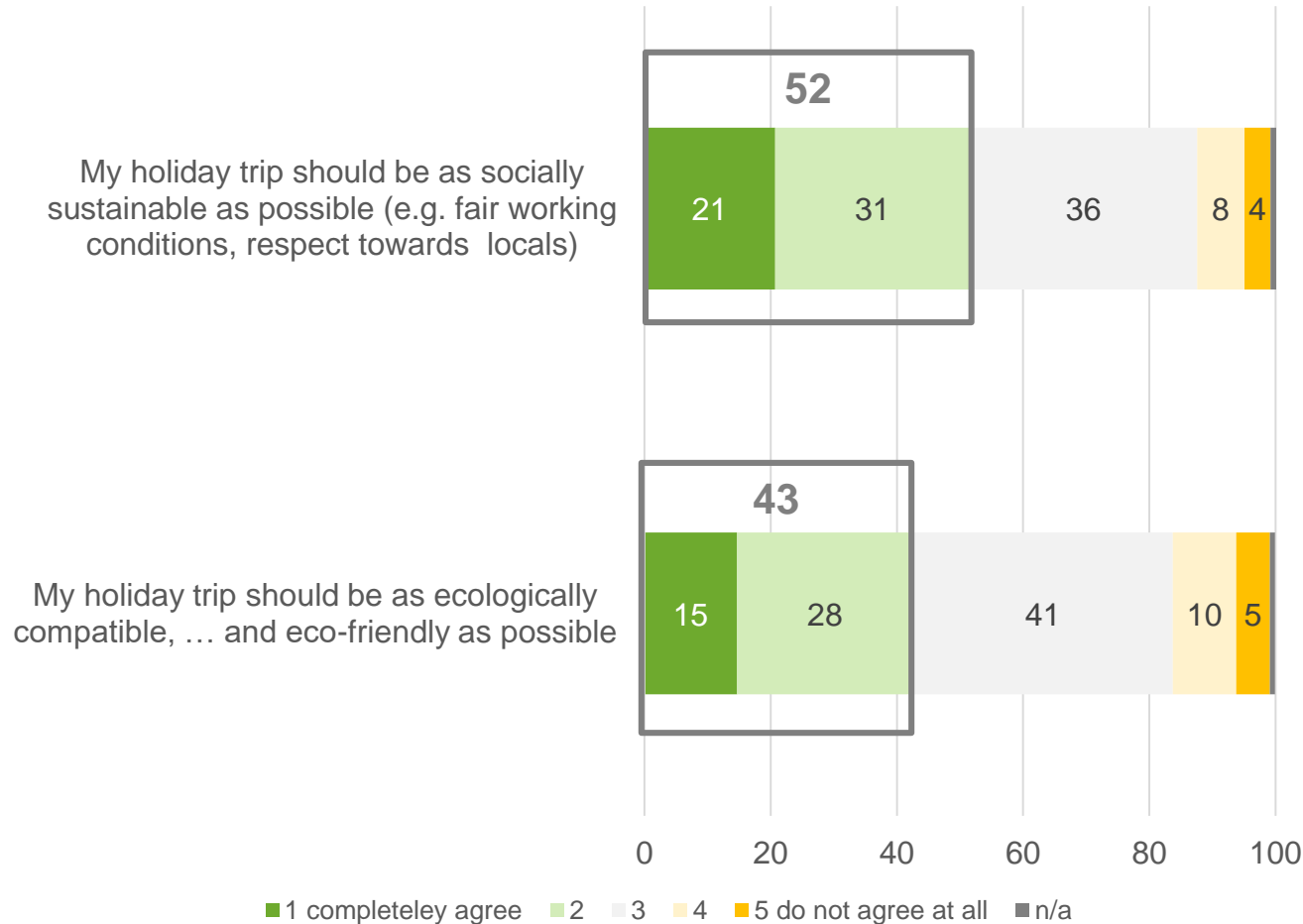
# Six demand side indicators for sustainable holiday travel

ATTITUDE	1 General <b>attitude</b> towards ecologically/socially sustainable holidays
ORGANISATION	2 <b>Role</b> of sustainability for this trip 3 Booked trip with an <b>ecolabel</b> 4 Bought <b>CO2 compensation</b> for this trip
VOLUME	5 <b>Length of stay</b> during this trip (days) 6 <b>Distance</b> travelled for this trip (km)





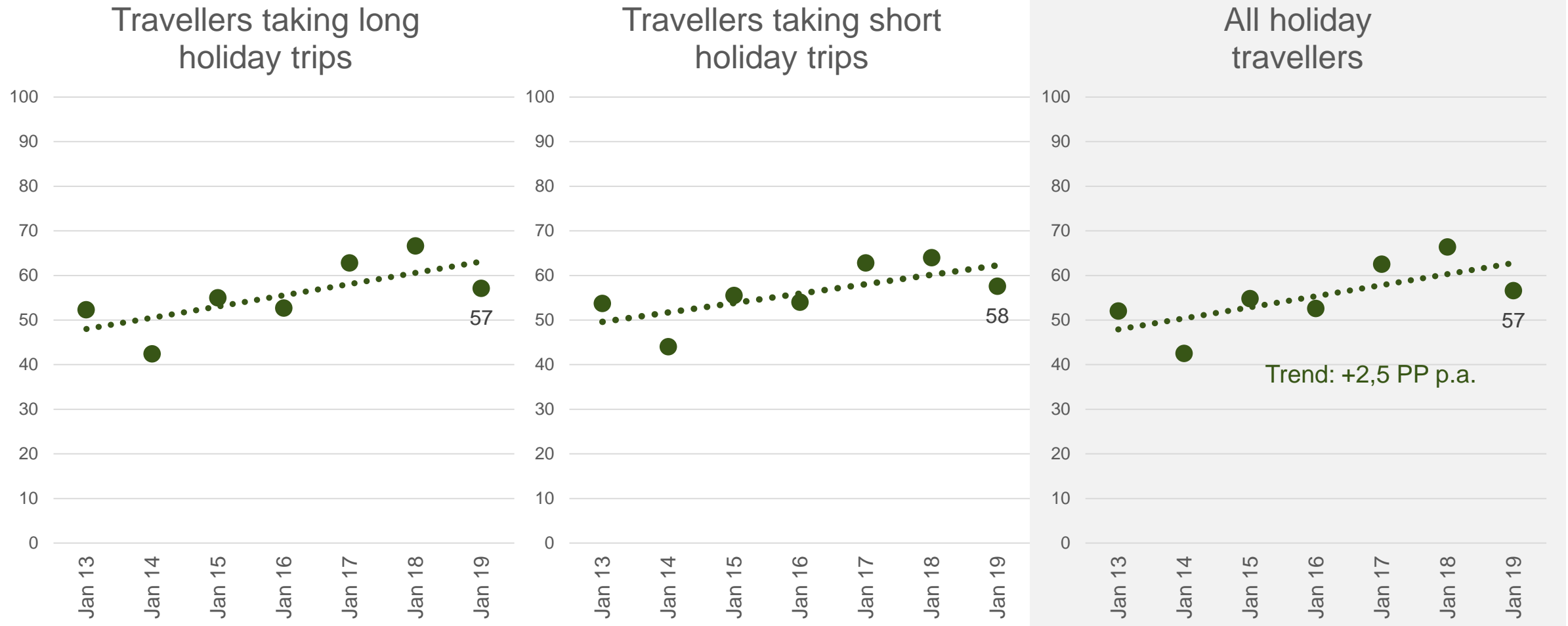
# Attitude towards sustainability in holiday travel, 2019



„If you think of holiday trips in general, regardless of a specific destination. How do you prefer to spend your holiday trips?“/„Wenn Sie einmal ganz allgemein an Urlaubsreisen denken – unabhängig von einem konkreten Reiseziel: Auf welche Weise gestalten Sie am liebsten Ihre Urlaubsreisen?“ 2 from 7 items.

Base: Holidaymakers, German-speaking population in Germany 14 years and older,, RA 2019 *face-to-face*, Figures are given as percentage

# Positive attitude growing, 2013-2019

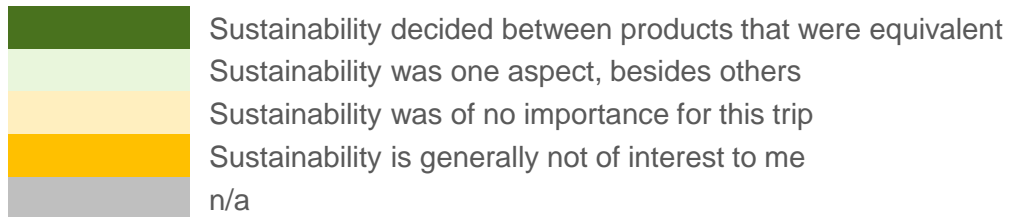
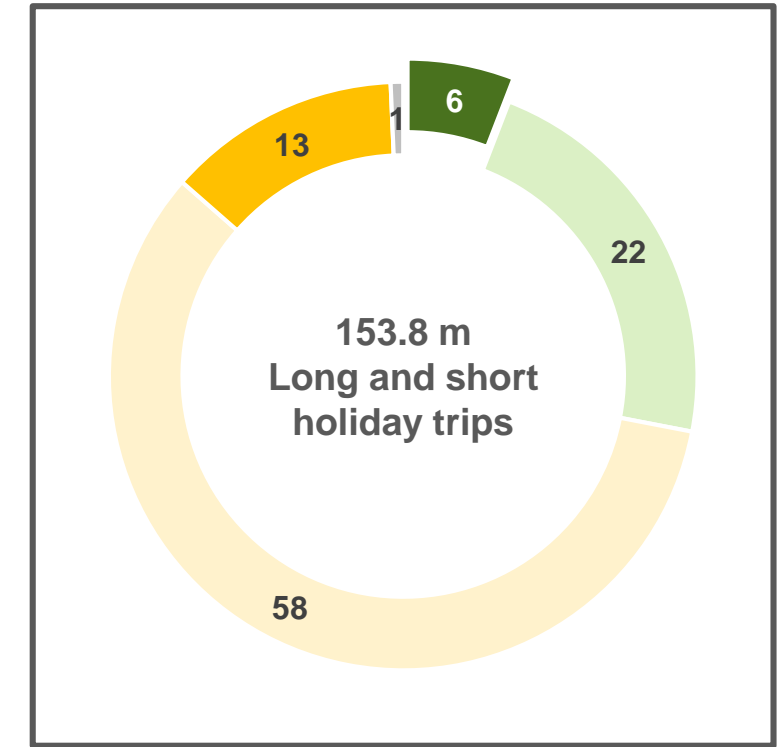
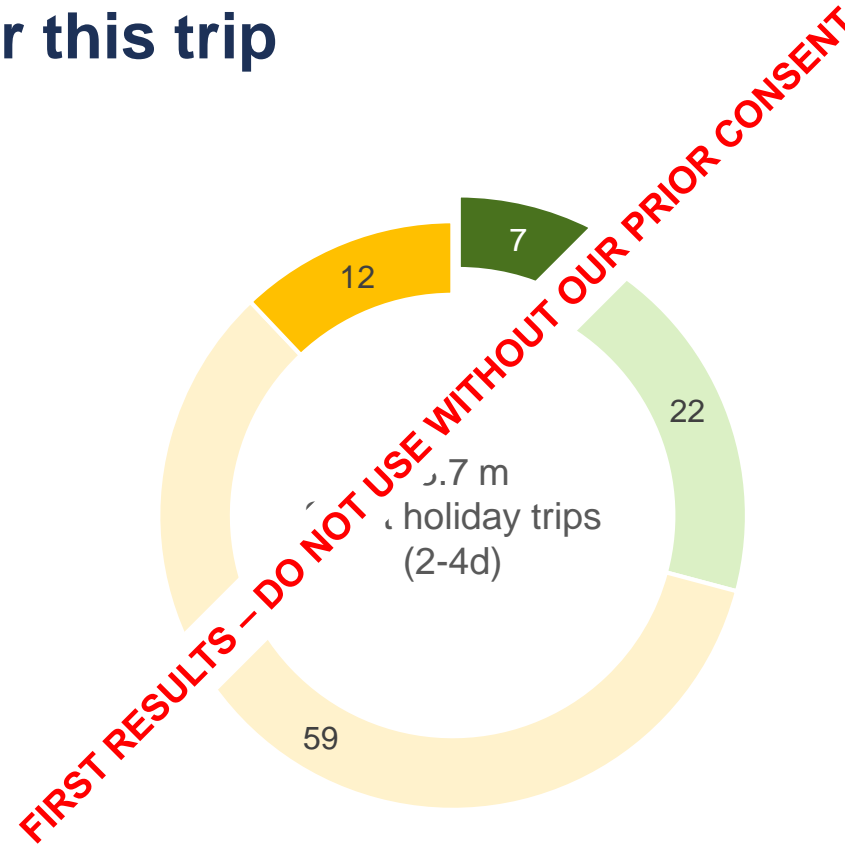
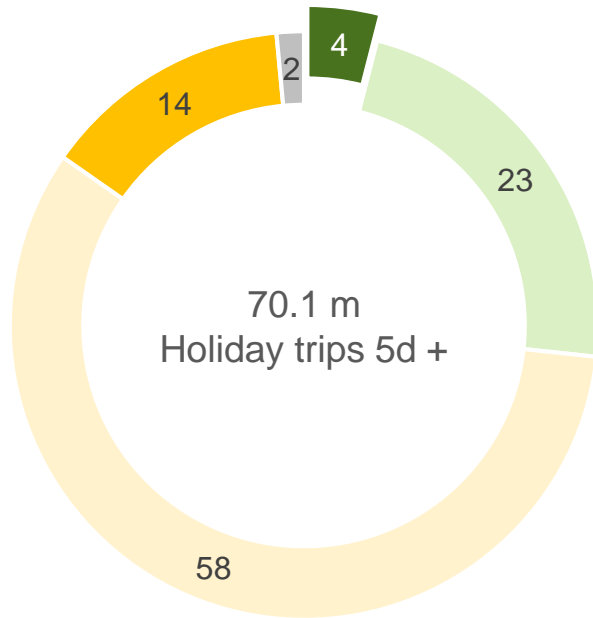


„If you think of holiday trips in general, regardless of a specific destination. How do you prefer to spend your holiday trips?“/„Wenn Sie einmal ganz allgemein an Urlaubsreisen denken – unabhängig von einem konkreten Reiseziel: Auf welche Weise gestalten Sie am liebsten Ihre Urlaubsreisen?“, TOP 2 social or ecological sustainable

Base: Holidaymakers, German-speaking population in Germany 14 years and older, n=6,37, 58.6 Mio., RA 2019 *face-to-face*, Figures are given as percentage

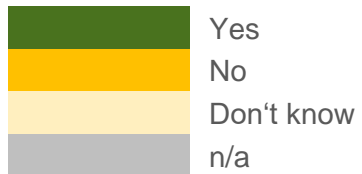
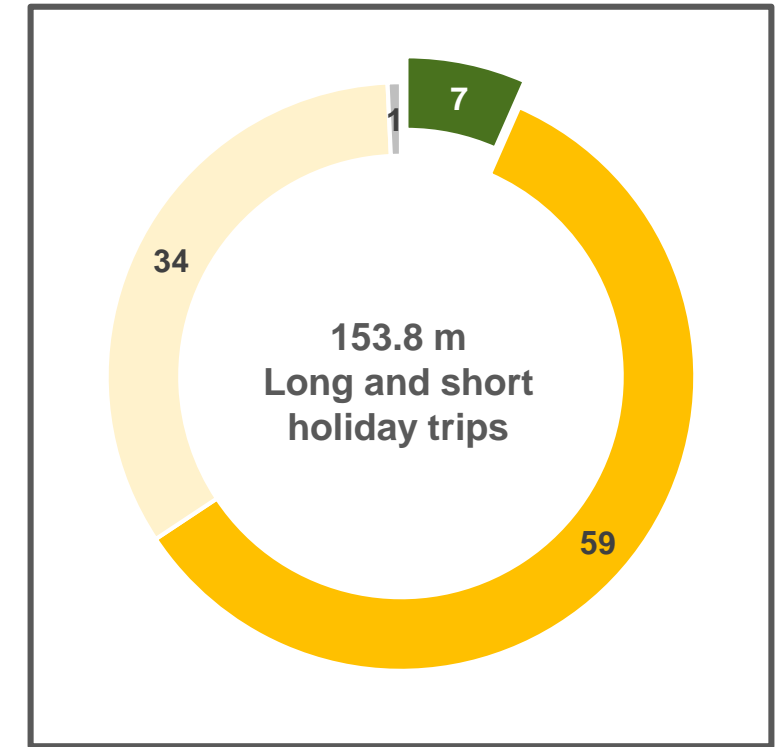
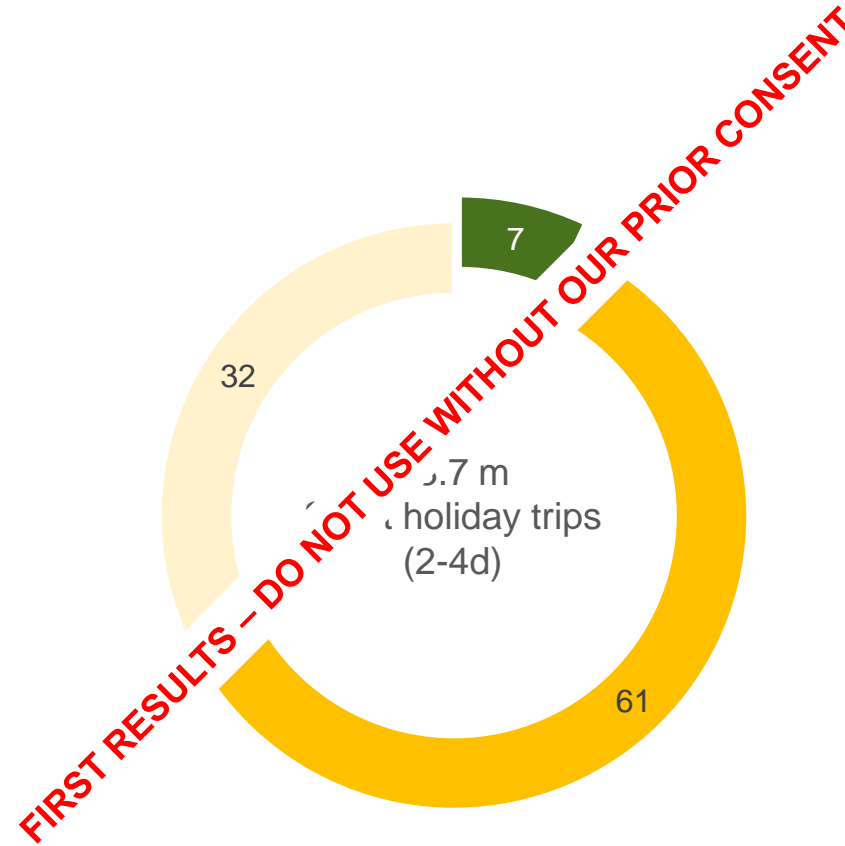
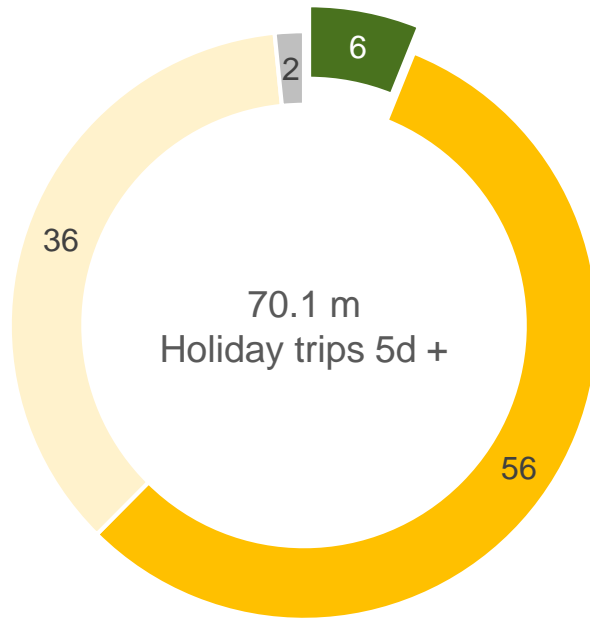


# Role of sustainability for this trip



„Thinking back to your last holiday trip: Which of the following statements applies?“/„Wenn Sie einmal an diese Urlaubsreise nach zurückdenken: Welche der folgenden Aussagen trifft zu?; Holiday trips 5d+, without trips of accompanying children, Base: Holidaymakers, German-speaking population in Germany 14 years and older, RA 2019 *face-to-face*; Short holiday trips 2-4d (1st, 2nd and 3rd trip in a half-year), without trips of accompanying children, Base: German-speaking population in Germany 14-75 years, RA 11/2018 *online*, Figures are given as percentage

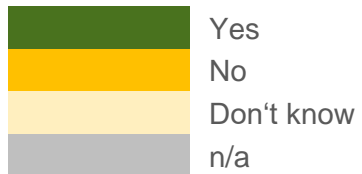
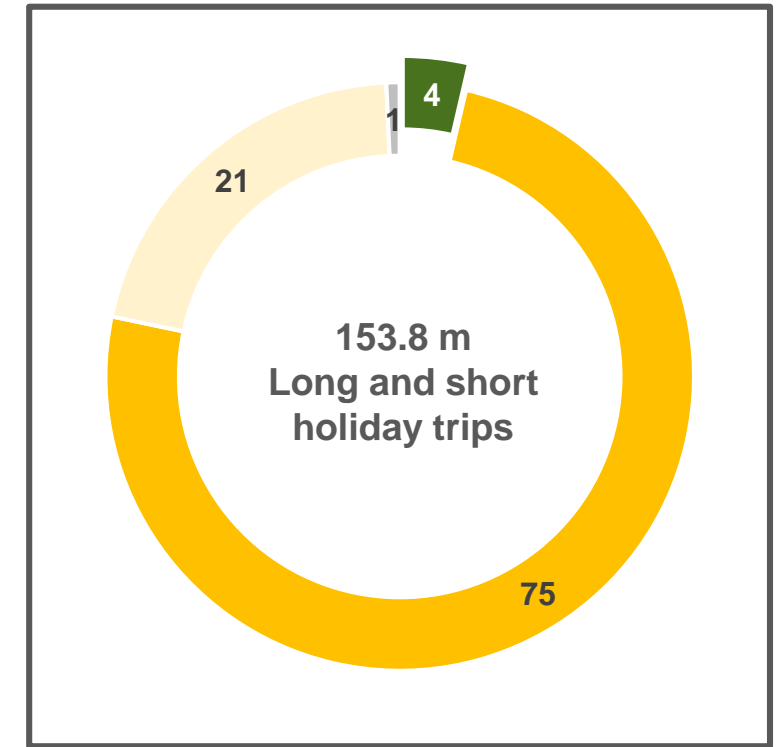
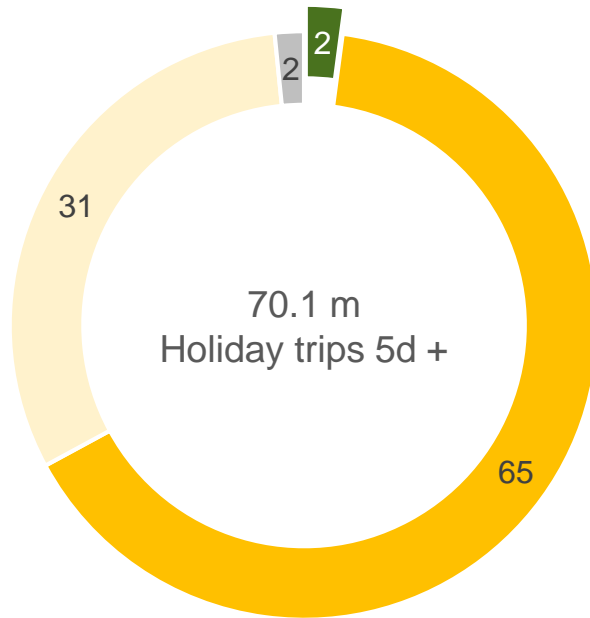
# Use of ecolabels



„Did the accommodation or the tour operator have an ecolabel or some specific sustainability mark?“, „Hatten die Unterkunft oder der Reiseveranstalter bei dieser Urlaubsreise ein besonderes Umweltzeichen (Ökolabel, etc.) oder eine besondere Nachhaltigkeitskennzeichnung?“, Holiday trips 5d+, without trips of accompanying children, Base: Holidaymakers, German-speaking population in Germany 14 years and older, RA 2019 *face-to-face*; Short holiday trips 2-4d (1st, 2nd and 3rd trip in a half-year), without trips of accompanying children, Base: German-speaking population in Germany 14-75 years, RA 11/2018 *online*, Figures are given as percentage

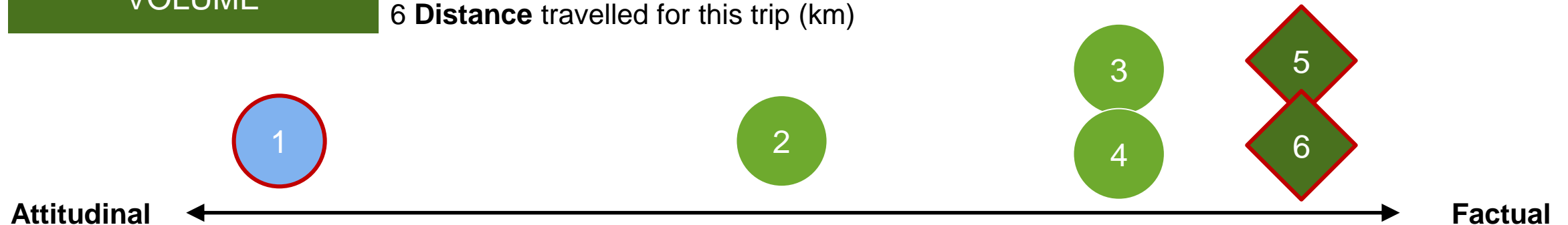
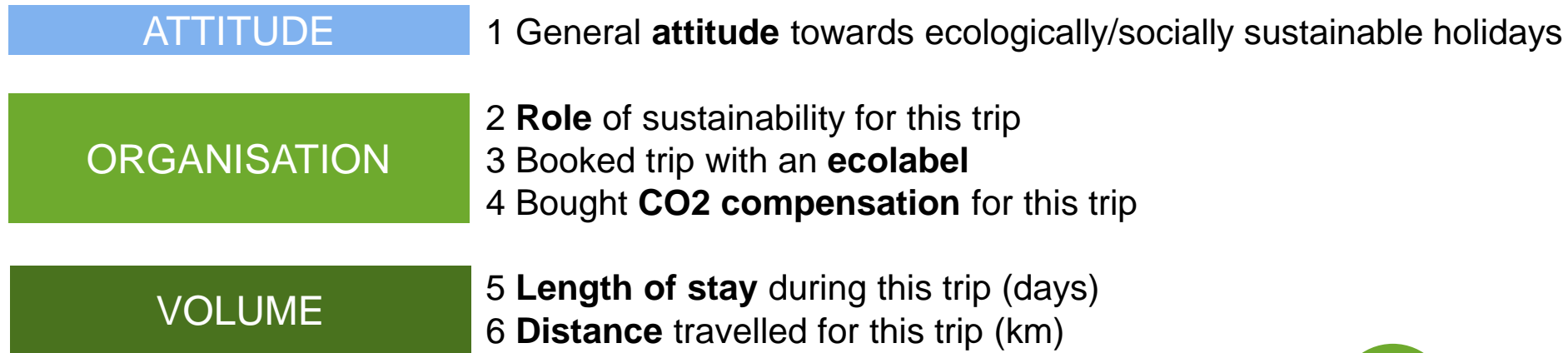


# Use of CO2 compensation



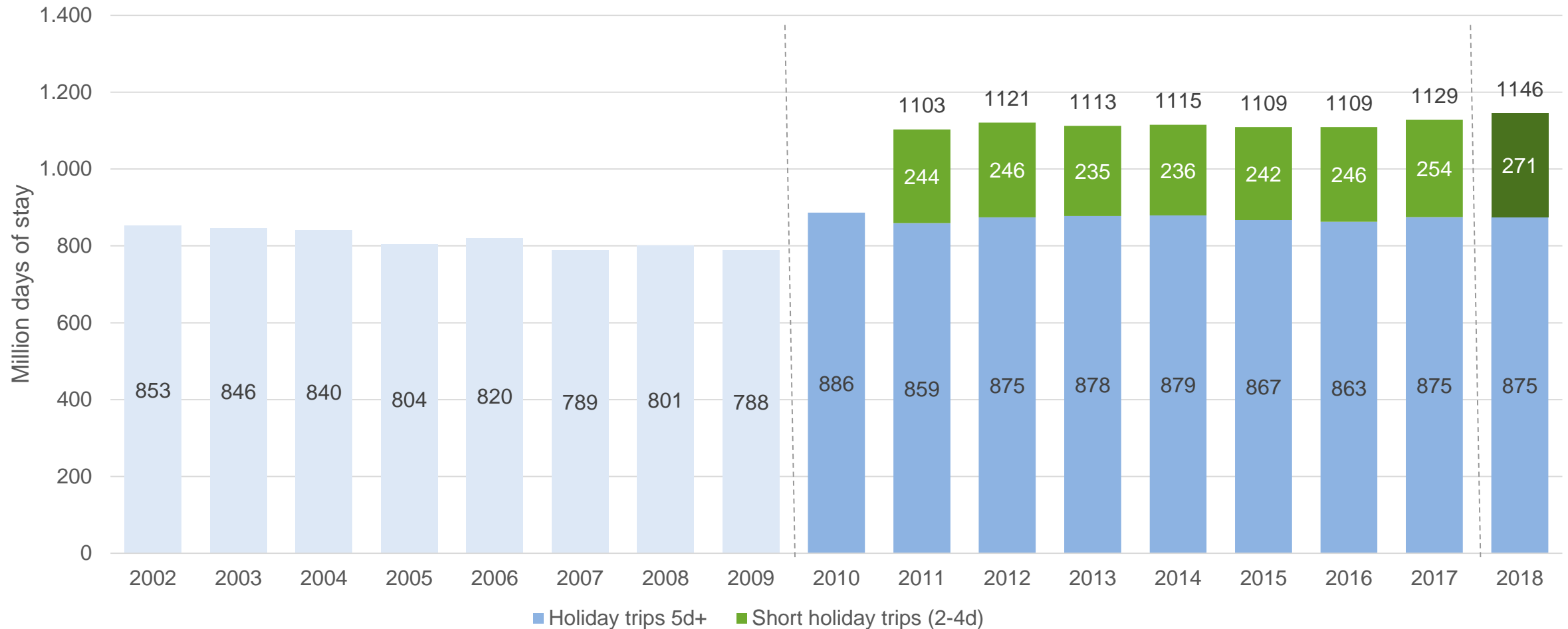
„Did you buy a CO2 compensation for transport or sojourn during this trip (e.g. Atmosfair, myClimate)?“/„Haben Sie bei dieser Urlaubsreise eine CO2-Kompensation für An- und Abreise oder Aufenthalt getätigt (z. B. bei Atmosfair, MyClimate)?“; Holiday trips 5d+, without trips of accompanying children, Base: Holidaymakers, German-speaking population in Germany 14 years and older, RA 2019 *face-to-face*; Short holiday trips 2-4d (1st, 2nd and 3rd trip in a half-year), without trips of accompanying children, Base: German-speaking population in Germany 14-75 years, RA 11/2018 *online*, Figures are given as percentage

# Six demand side indicators for sustainable holiday travel



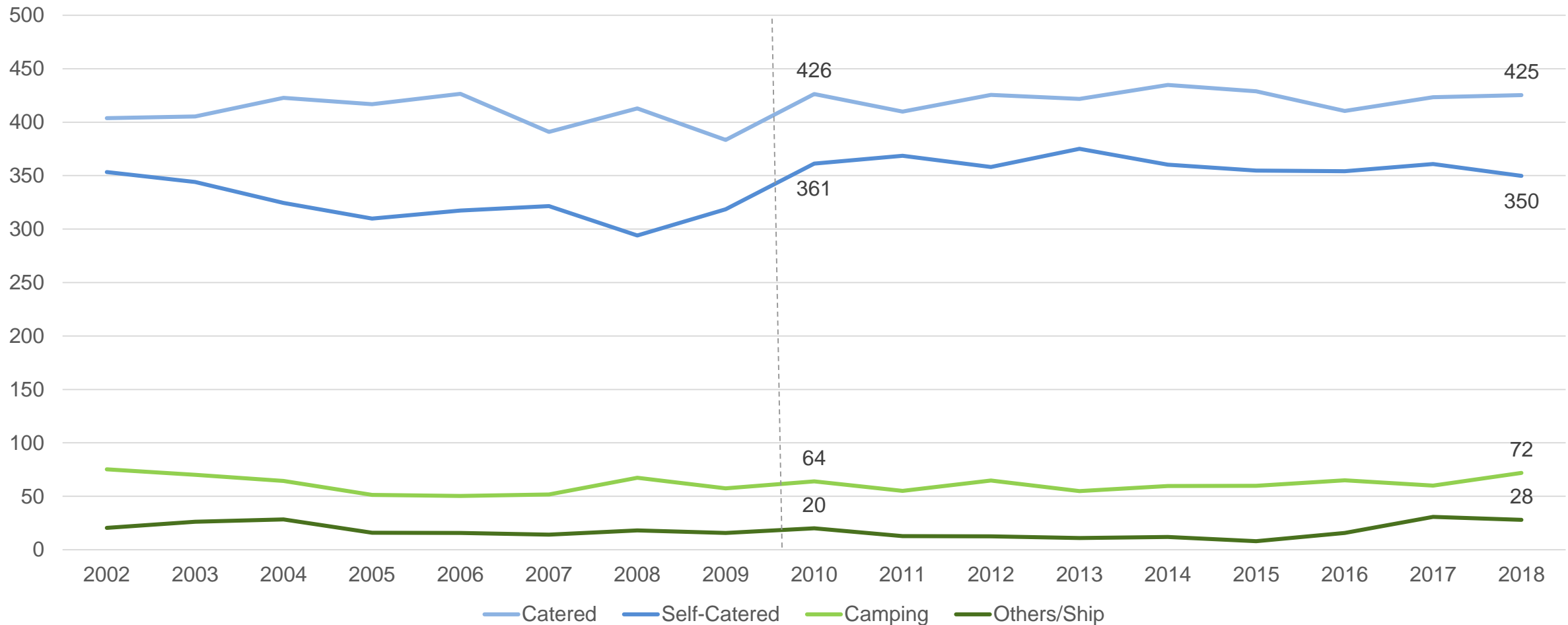


# Million days of stay on holiday trips, 2002/2011 up until 2018



Holiday trips 5d+, without trip of accompanying children, Base: German-speaking population in Germany, 14 years and older, up to 2010: Germans only, RA 2003-2019 *face-to-face*  
 Short holiday trips 2-4d (1st, 2nd and 3rd trip in the half-year), without trips of accompanying children. Base: German-speaking population in Germany, 14-75 years, up to 2017: 14-70 years, RA 2012-2019 *online*

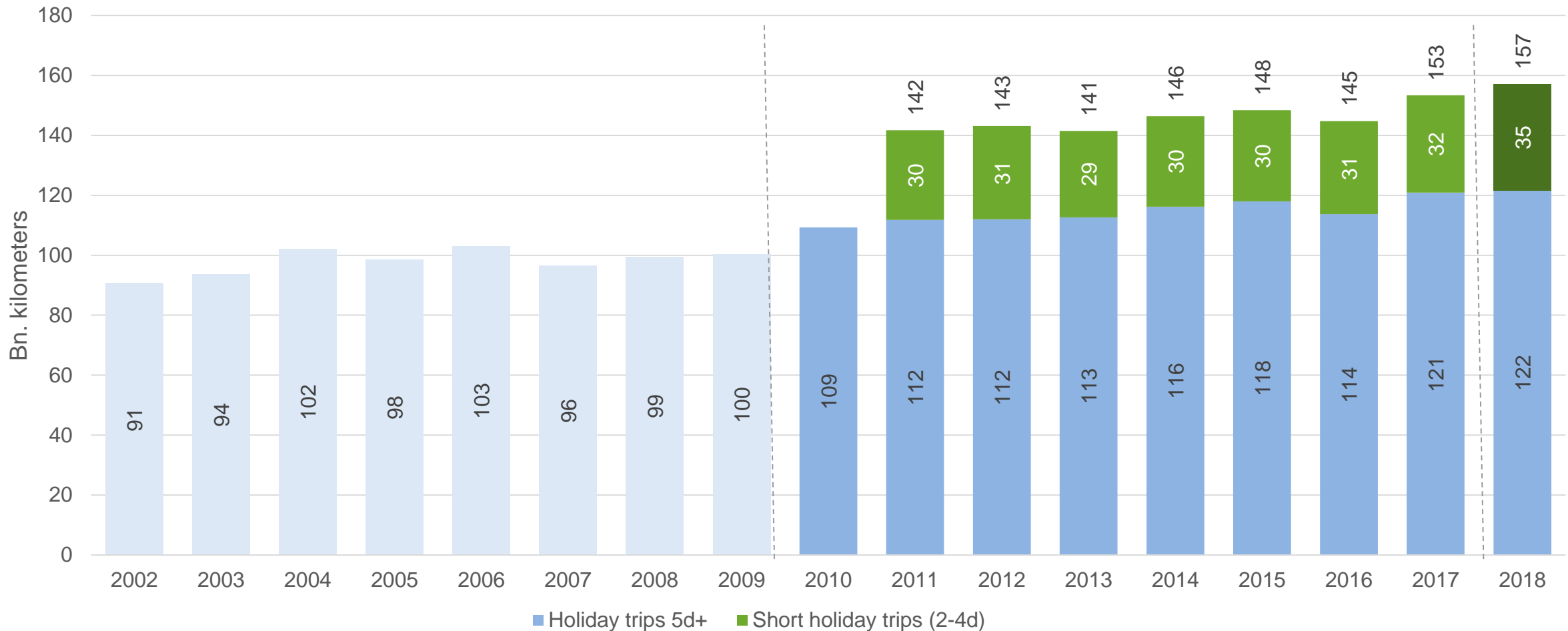
# Million days of stay, by type of accommodation (holiday trips 5d+ only)



Holiday trips 5d+, without trip of accompanying children, Base: German-speaking population in Germany, 14 years and older, up to 2010: Germans only, RA 2003-2019 *face-to-face*



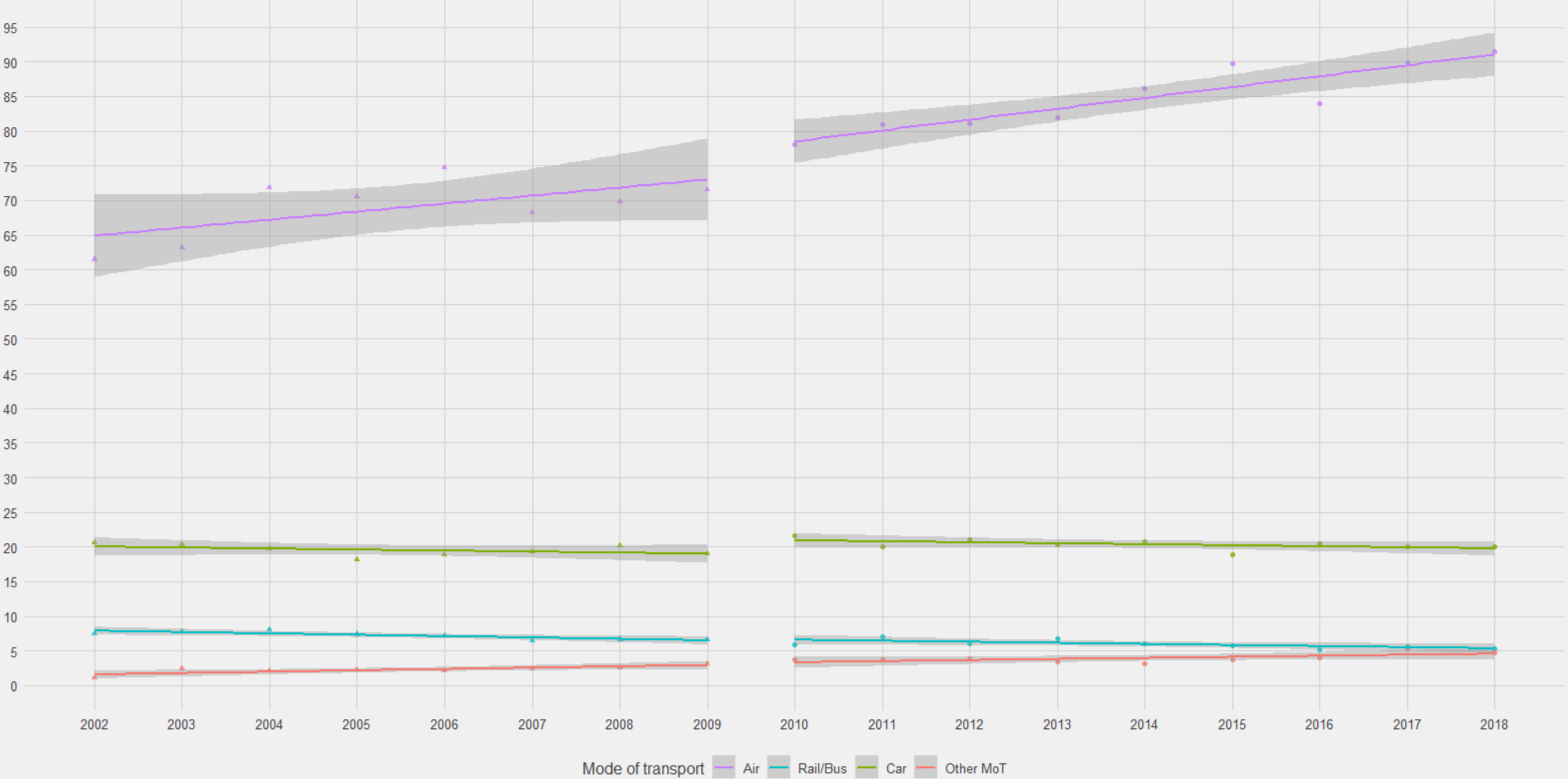
# Distance travelled (bn. Km, one-way), 2002/2011 up to 2018



Holiday trips 5d+, without trip of accompanying children, Base: German-speaking population in Germany, 14 years and older, up to 2010: Germans only, RA 2003-2019 *face-to-face*  
 Short holiday trips 2-4d (1st, 2nd and 3rd trip in the half-year), without trips of accompanying children. Base: German-speaking population in Germany, 14-75 years, up to 2017: 14-70 years, RA 2012-2019 *online*

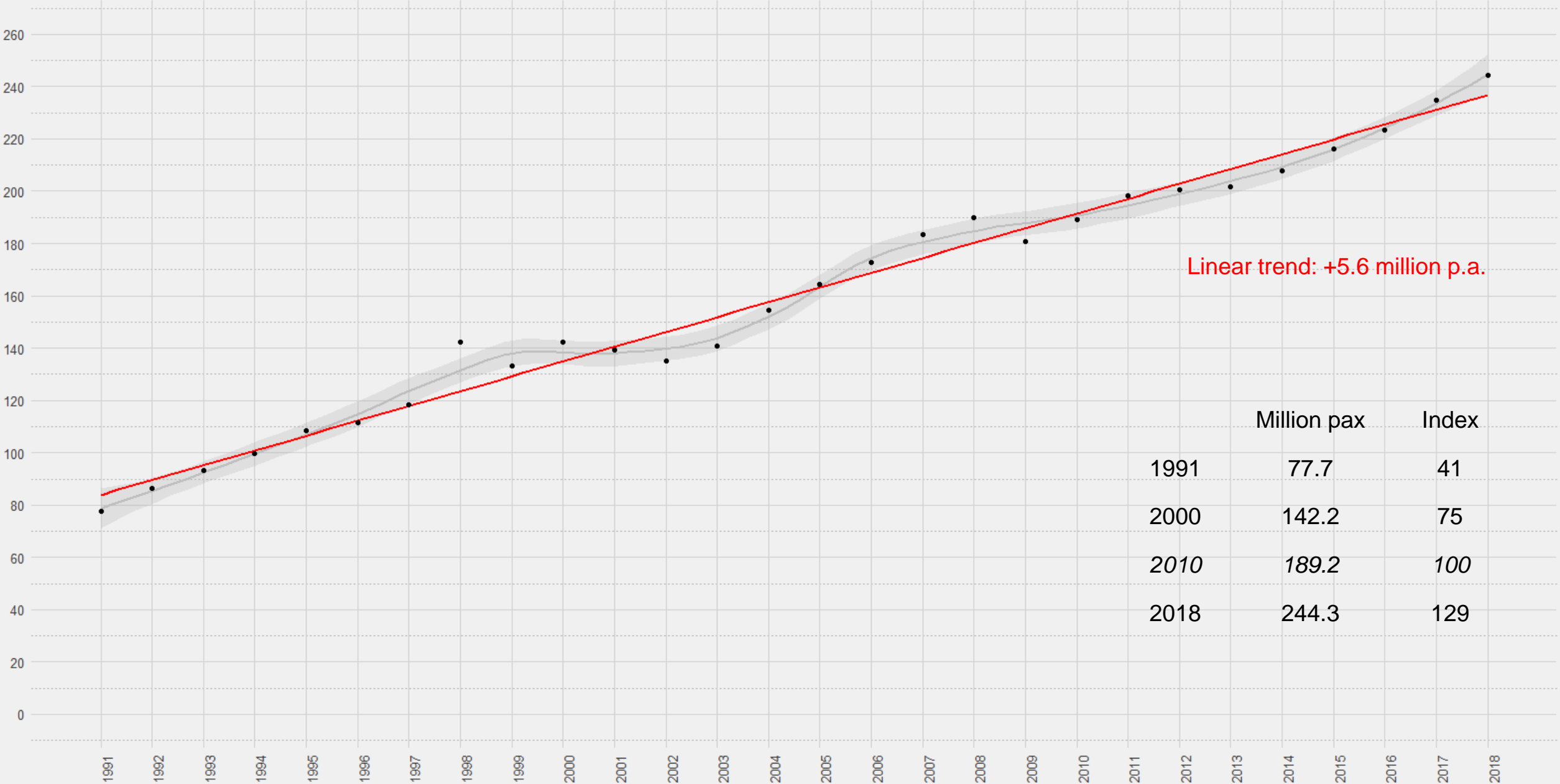
# Distances travelled (bn km)

Holiday trips 5 days+, Germany, 2002-2018



# Air passengers from German airports, 1999-2018

Million pax, local traffic (departures and arrivals), without transit



Linear trend: +5.6 million p.a.

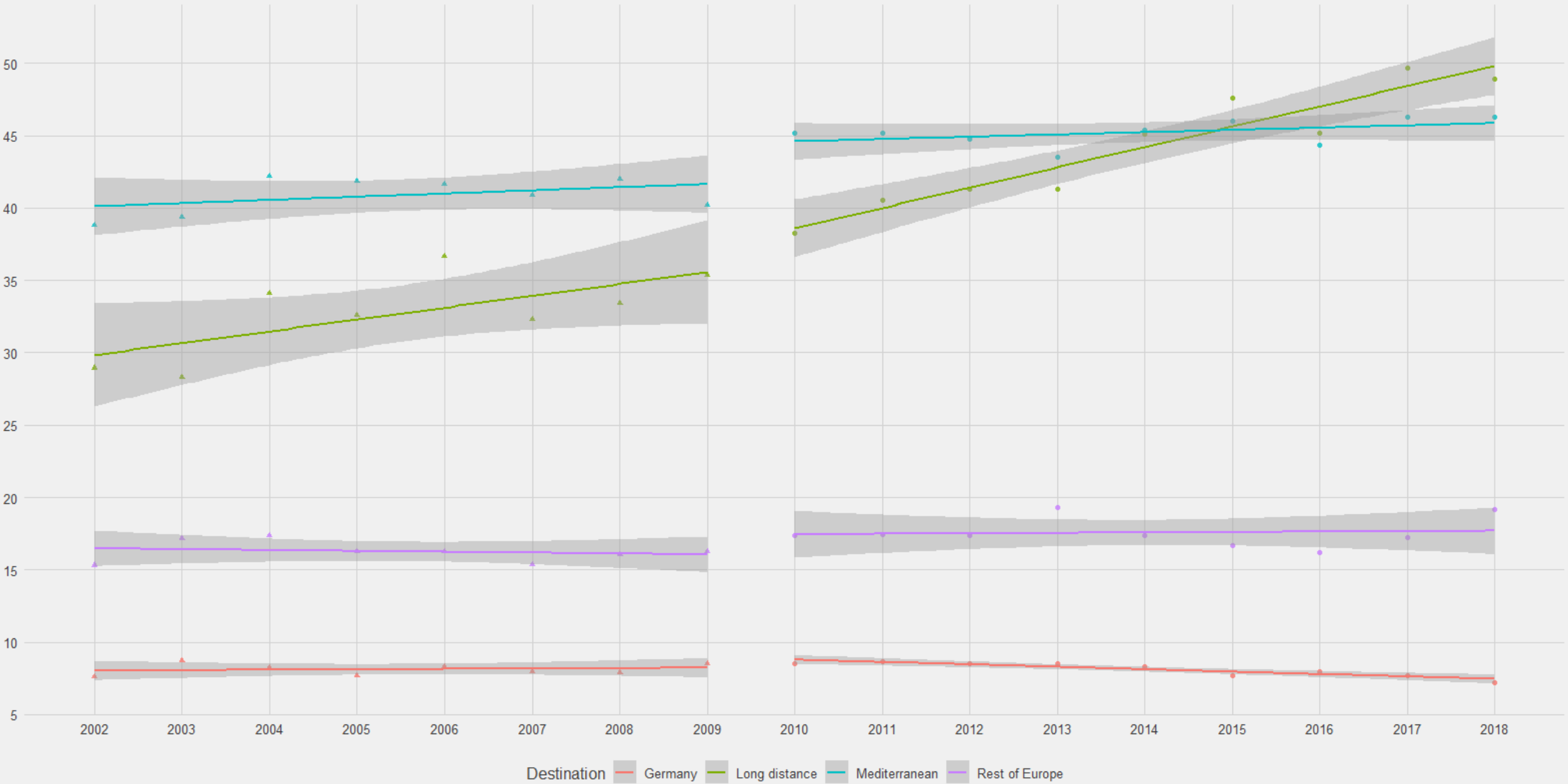
Million pax      Index

1991	77.7	41
2000	142.2	75
2010	189.2	100
2018	244.3	129



# Distances travelled (bn km)

Holiday trips 5 days+, Germany, 2002-2018



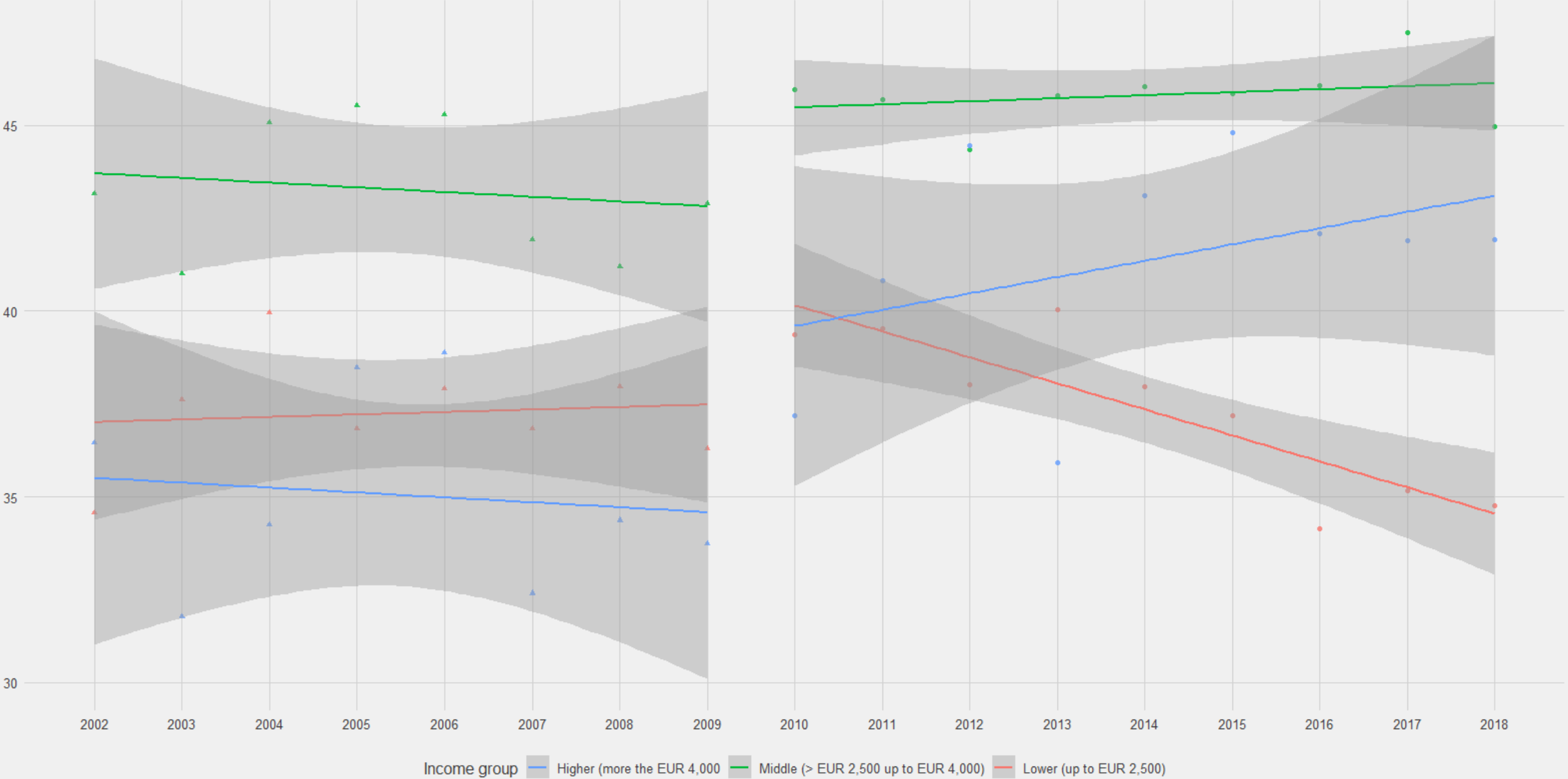
# Distances travelled (bn km)

Holiday trips 5 days+, Germany, 2002-2018



# Distances travelled (bn km)

Holiday trips 5 days+, Germany, 2002-2018 (controlled for varying group sizes)





# All indicators by income groups

	Income group	Lower (up to EUR 2,500)	Middle (EUR 2,500 – 4,000)	Higher (more than EUR 4,000)	Total
BASE	Million persons	32.5	24.2	13.7	70.5
	Share (%)	46%	34%	20%	100%
VOLUME	Million holiday trips 5d+	25.5	26.6	18.3	70.1
	Million short holiday trips 2-4d	57.1	30.4	26.6	83.7
	Total: Million holiday trips	82.6	57.0	44.9	153.8
	Share (%)	34%	37%	29%	100%
	Million days of stay	388.0	437.6	320.8	1,146.4
	Share (%)	34%	38%	28%	100%
	Distance travelled, one-way, bn. km	46.1	56.9	54.1	157.1
	Share (%)	29%	36%	34%	100%
	By airplane	27.5	36.1	36.7	91.5
	Share (%)	27%	36%	37%	100%
ORGANISATION	Share of trips with CO2 compensation reported	4%	3%	3%	4%
	Share of trips with ecolabel reported	6%	7%	7%	7%
	Sustainability was decisive for this trip	7%	5%	5%	6%
ATTITUDE	Positive general attitude towards sustainability in holiday travel	55%	58%	56%	57%

# A new perspective on THE GAP



# All indicators by attitude groups (Holiday trips 5d+ only)



	Income group	Positive attitude	No positive attitude	Total
BASE	Million persons	39,2	31,3	70.5
	Share (%)	56%	44%	100%
VOLUME	Million holiday trips 5d+	40,2	29,9	70.1
	Share (%)	57%	43%	100%
	Million days of stay	497,4	377,7	875
	Share (%)	57%	43%	100%
	Distance travelled, one-way, km	68,7	52,9	121.6
	Share (%)	56%	44%	100%
	By airplane	51,9	39,6	91.5
	Share (%)	57%	43%	100%
ORGANISATION	Share of trips with CO2 compensation reported	3%	1%	2%
	Share of trips with ecolabel reported	9%	2%	6%
	Sustainability was decisive for this trip	4%	2%	4%
	Sustainability was one aspect besides others	29%	15%	23%

Holiday trips 5d+ (without trips of accompanying children). Base: German-speaking population 14 years and older in Germany, RA 2019 *face-to-face*



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# Demand side indicators and SDG



eurostat Sustainable development in the European Union 11

## Marine conservation

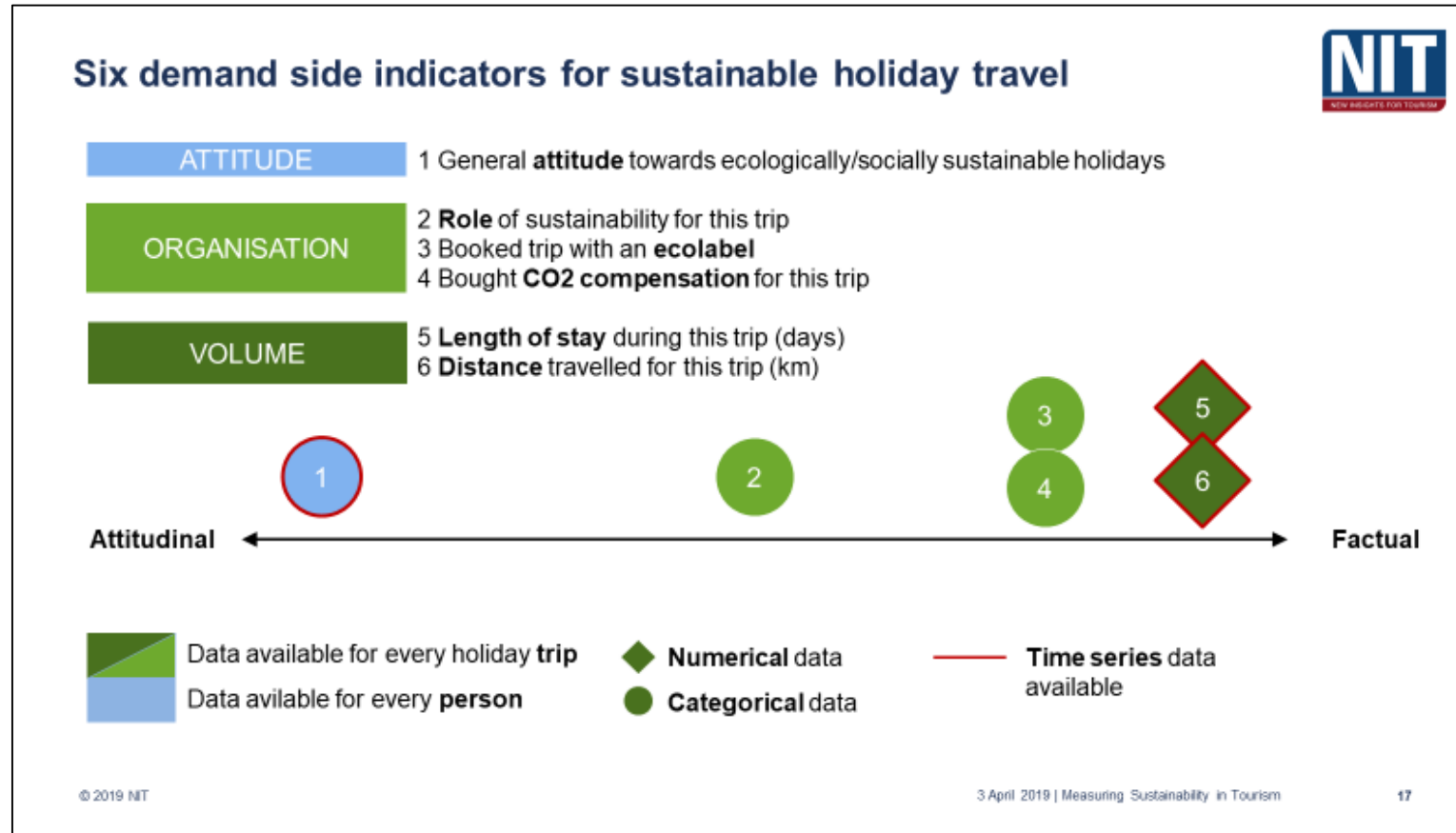
European citizens depend in many ways on the services that marine ecosystems provide, including fish and seafood, coastal protection, degradation of pollutants and climate regulation. In addition, the marine environment offers recreation and tourism opportunities. The European Commission and Member States have taken multiple steps to combat the loss of aquatic habitats and biodiversity, which poses a serious threat to human livelihoods, food security and climate stability (\*). A crucial step in terms of the protection of habitats and biodiversity has

The word „tourism“ appears exactly once in this 356 pages report

Taken from: Eurostat. 2018. „Sustainable development in the European Union“. Luxembourg.  
<https://ec.europa.eu/eurostat/documents/3217494/9237449/KS-01-18-656-EN-N.pdf/>, p. 11, p. 261

# Guiding questions

1. Which **experience** do you have with demand-side indicators from your city, region, country, continent, industry?
2. What could be **advantages and disadvantages** of demand-side indicators, compared to supply-side indicators?
3. Which demand-side indicators, if any, would you find **useful** for measuring sustainability in tourism? Under which **conditions**?





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