



# Consumer preferences and energy system integration

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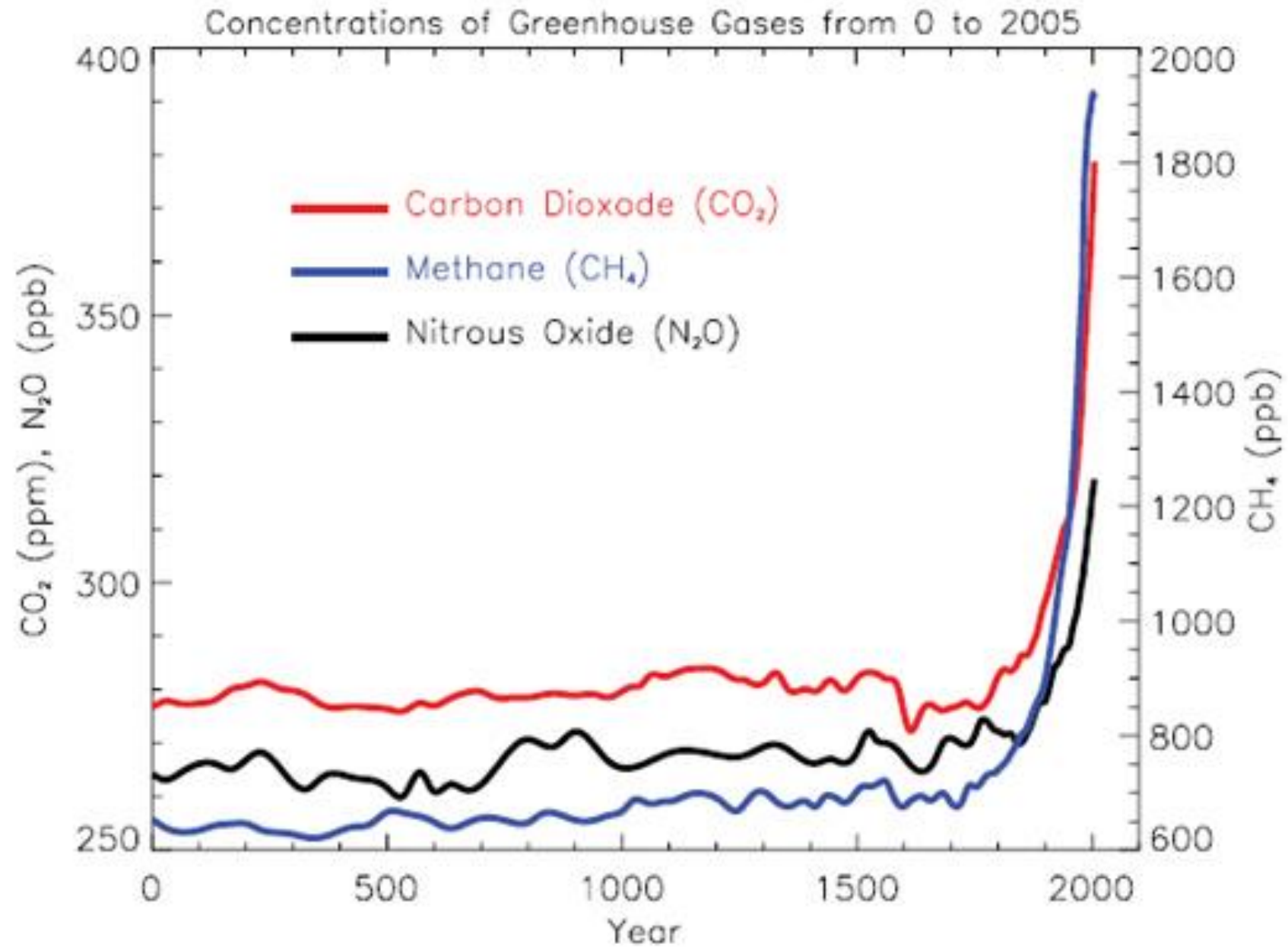
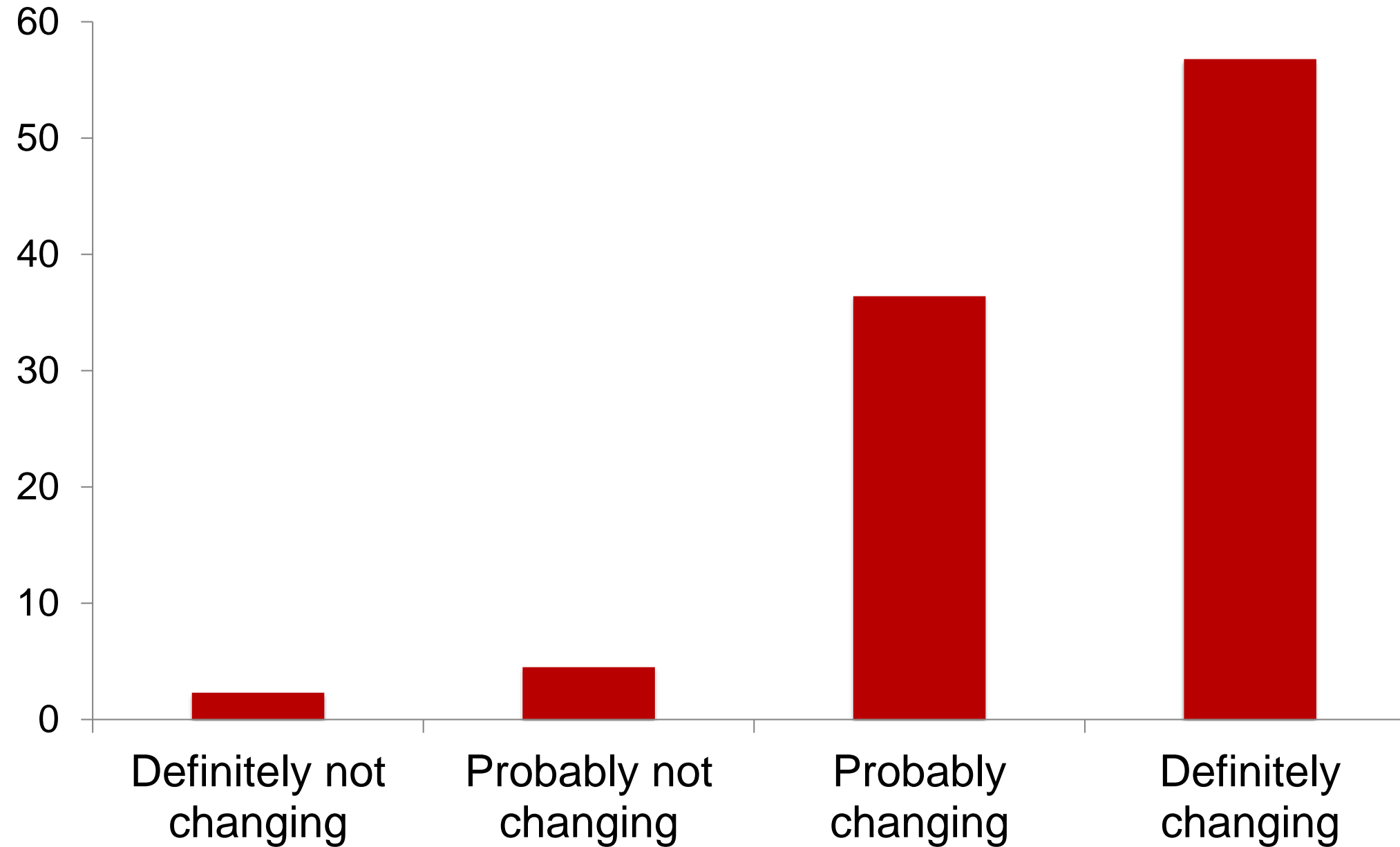
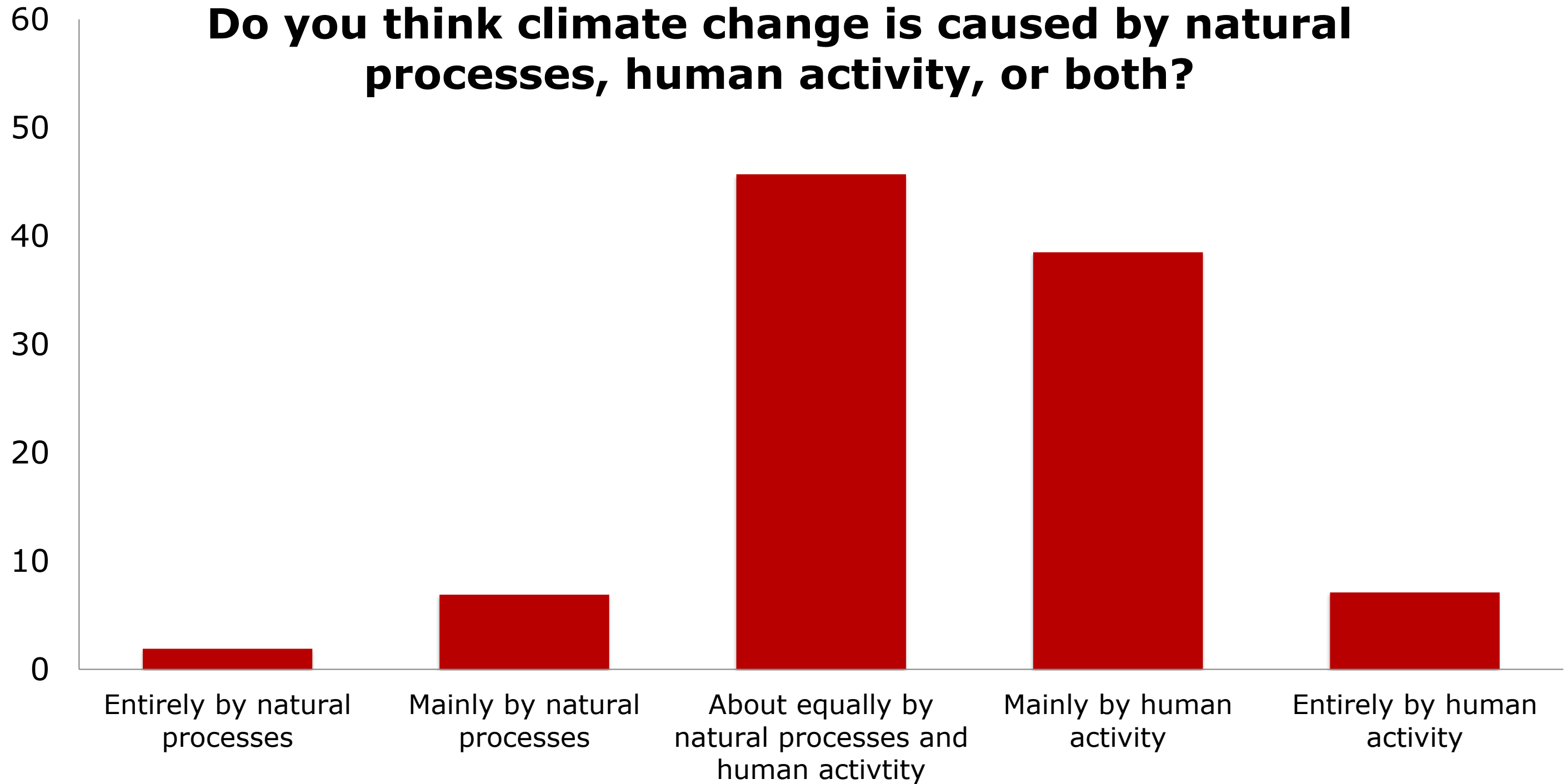


Figure 1. Atmospheric concentrations of important long-lived greenhouse gases over the last 2,000 years. Increases since about 1750 are attributed to human activities in the industrial era. Concentration units are parts per million (ppm) or parts per billion (ppb), indicating the number of molecules of the greenhouse gas per million or billion air molecules, respectively, in an atmospheric sample.

## Do you think the world's climate is changing?



# Do you think climate change is caused by natural processes, human activity, or both?



# Psychology and ESI

- › Which behaviour is critical for ESI?
- › Which factors influence the behaviour?
- › Which strategies can be implemented to change these factors and behaviour
  - Acceptability and expected effects

# Sustainable energy behaviour







De Groot & Steg (2007, 2008), De Groot, Steg, Keizer, Farsang, Watt (2012), Jakovcevic & Steg (2013), Steg, Abrahamse, & Dreijerink (2005); Hiratsuka, Perlaviciute & Steg (2018), Ünal, Granskaya & Steg (2019)



# Promoting sustainable energy behaviour

- › Information: if people would know, they would change their behaviour
- › Extrinsic motivation: make pro-environmental actions more attractive
- › Intrinsic motivation

# 10 Worst Environmental Issues Facing Our Planet

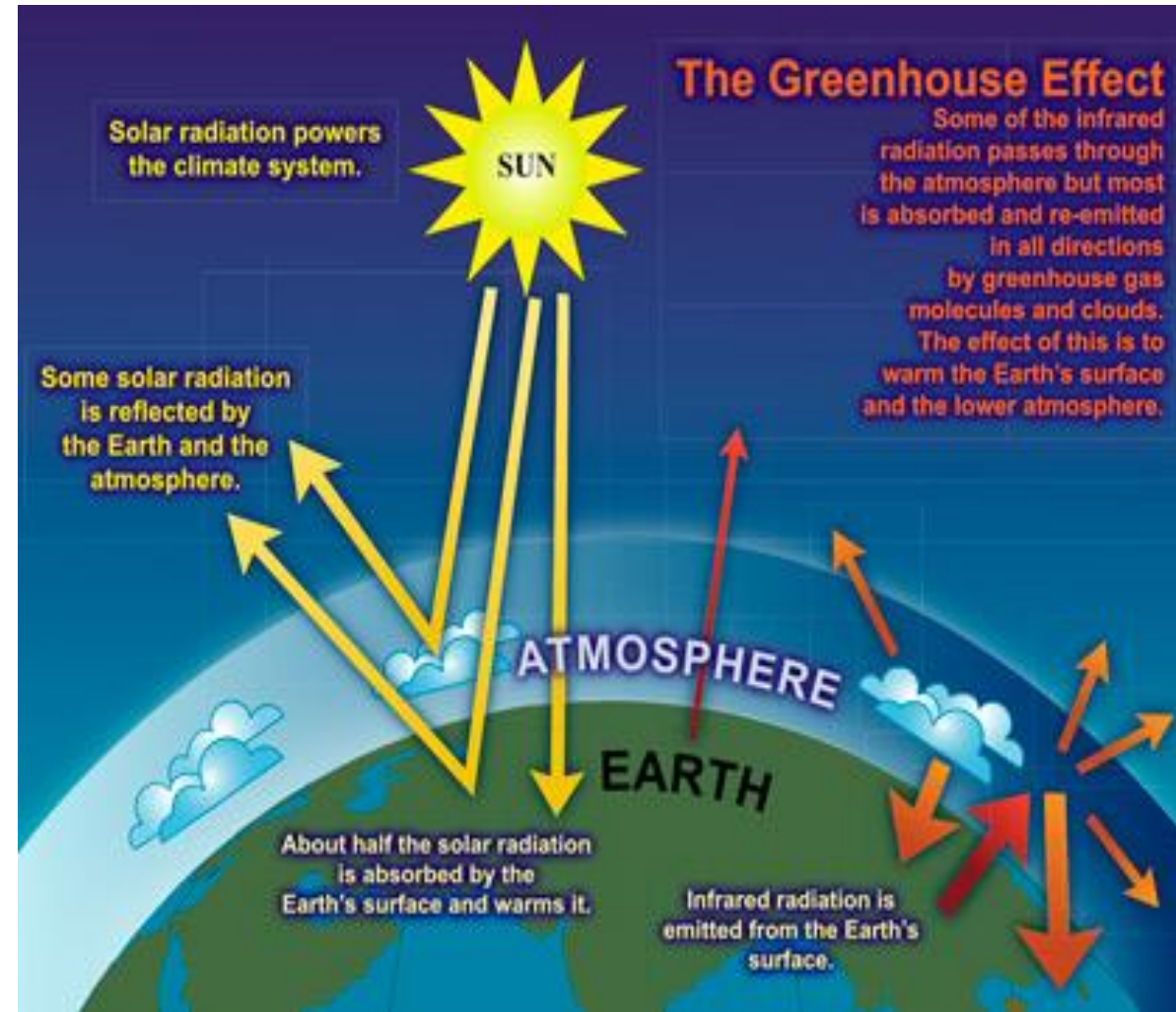


**Where does the metal you recycle end up?**


Recycle your cans, tins, foil and aerosols and make your metals matter!

You can recycle metal packaging in your red recycling bin along with lots of other things.

www.warwickdc.gmx.uk/recycling





 **Donald J. Trump**   
@realDonaldTrump 

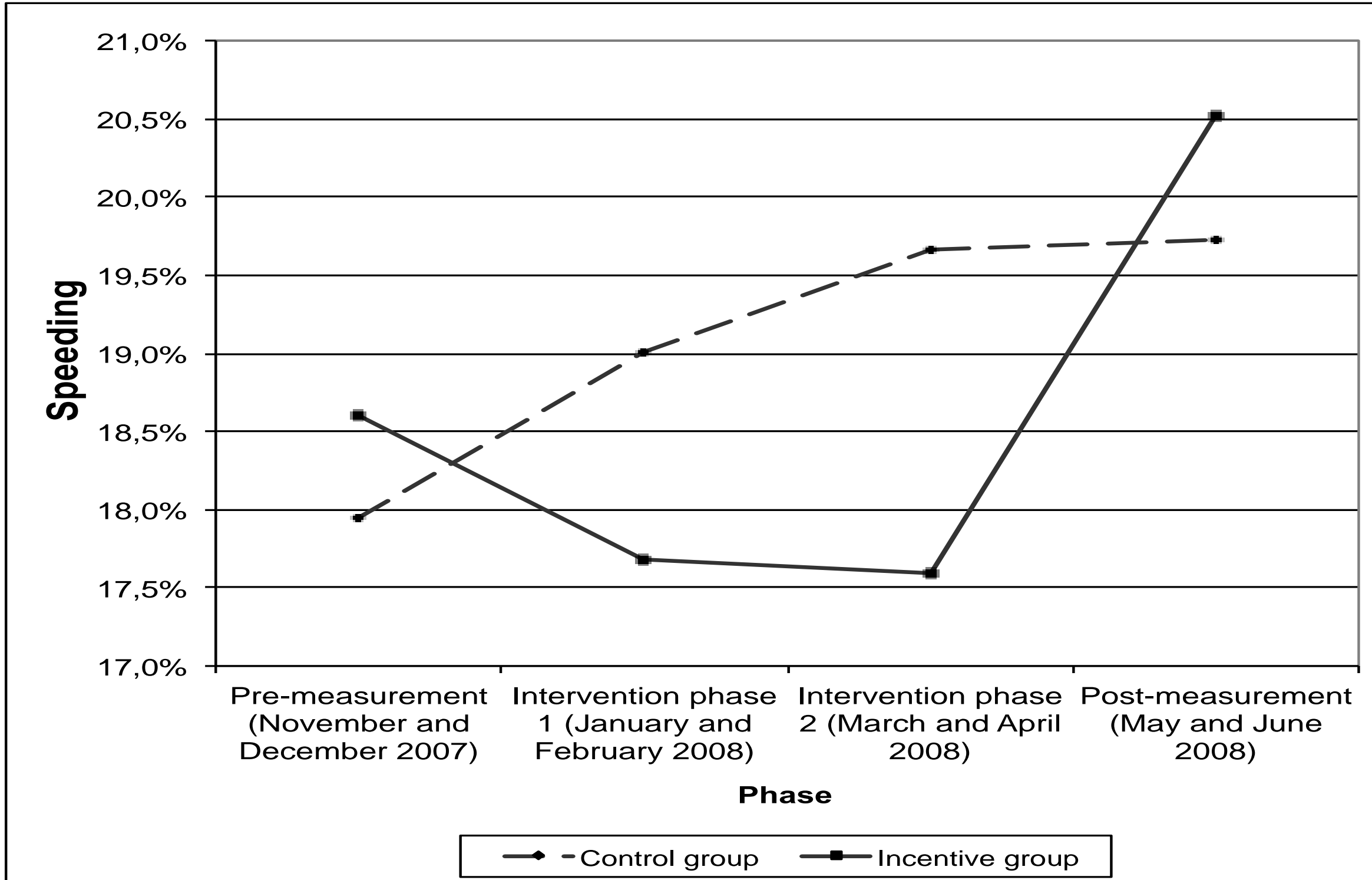
In the East, it could be the COLDEST New Year's Eve on record. Perhaps we could use a little bit of that good old Global Warming that our Country, but not other countries, was going to pay TRILLIONS OF DOLLARS to protect against. Bundle up!

1:01 AM - Dec 29, 2017

 137,515  66,670  208,732 

# Values and persuasion





## Environment

### Do You Care About the Environment?

Take a coupon for a FREE professional tire check!



Source: [www.fueleconomy.gov](http://www.fueleconomy.gov)

- Like balloons, your tires lose pressure over time.
- Improper tire pressure increases fuel consumption which *harms our environment*.
- Properly inflating tires cuts back vehicle emissions.



Participating stations:

Snappy Lube #23  
1402 N. Main Street  
Blacksburg, VA 24060

Snappy Lube #24  
2405 Market Street  
Christiansburg, VA 24073

## Money

### Do You Care About your Finances?

Take a coupon for a FREE professional tire check!



Source: [www.fueleconomy.gov](http://www.fueleconomy.gov)

- Like balloons, your tires lose pressure over time.
- Improper tire pressure increases fuel consumption, which is expensive.
- Properly inflating cuts back fuel costs.



Participating stations:

Snappy Lube #23  
1402 N. Main Street  
Blacksburg, VA 24060

Snappy Lube #24  
2405 Market Street  
Christiansburg, VA 24073

## Control

Take a coupon for a FREE professional tire check!



Source: [www.fueleconomy.gov](http://www.fueleconomy.gov)

- Like balloons, your tires lose pressure over time.
- The average U.S. driver travels 12,000 miles yearly.
- Not everyone checks their tires regularly.

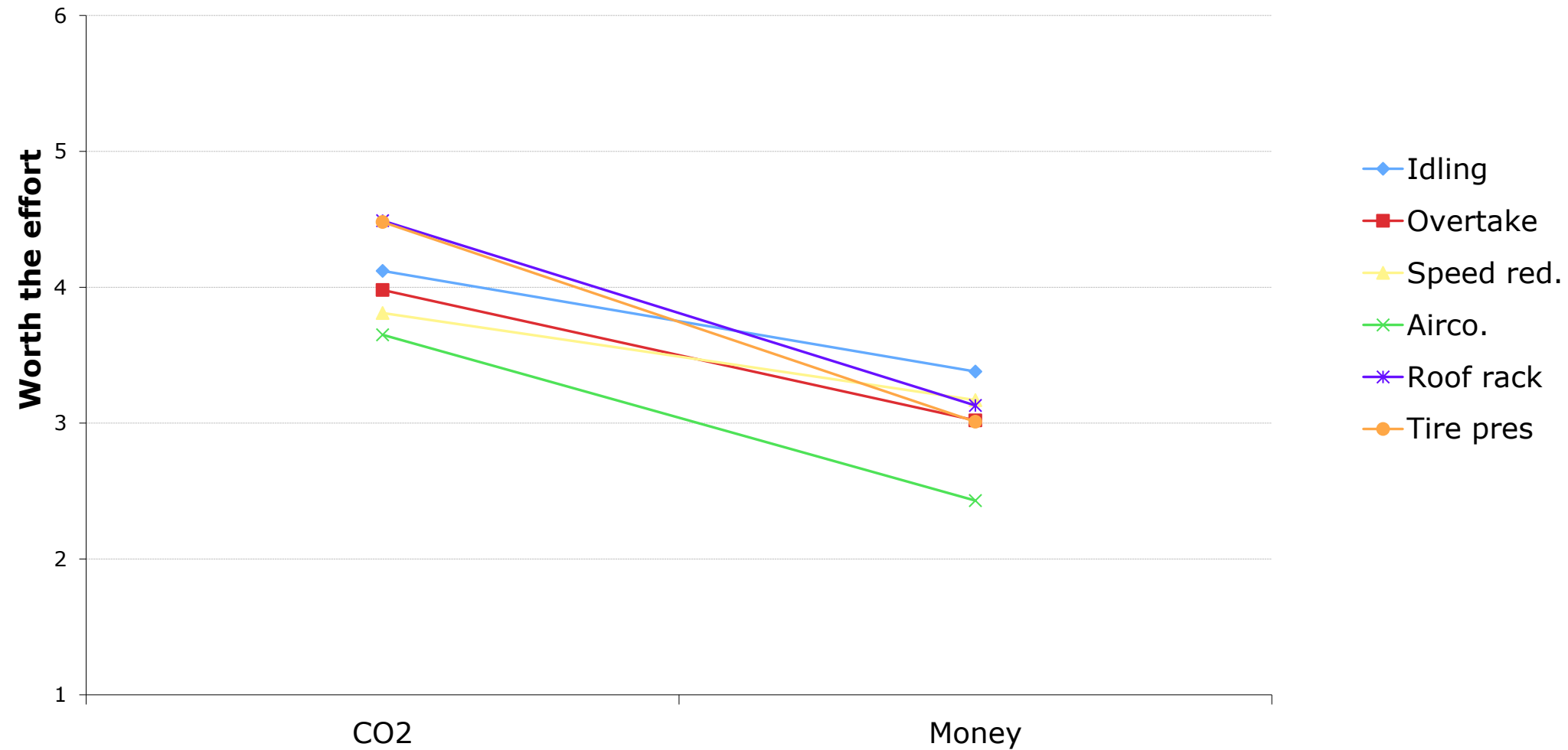


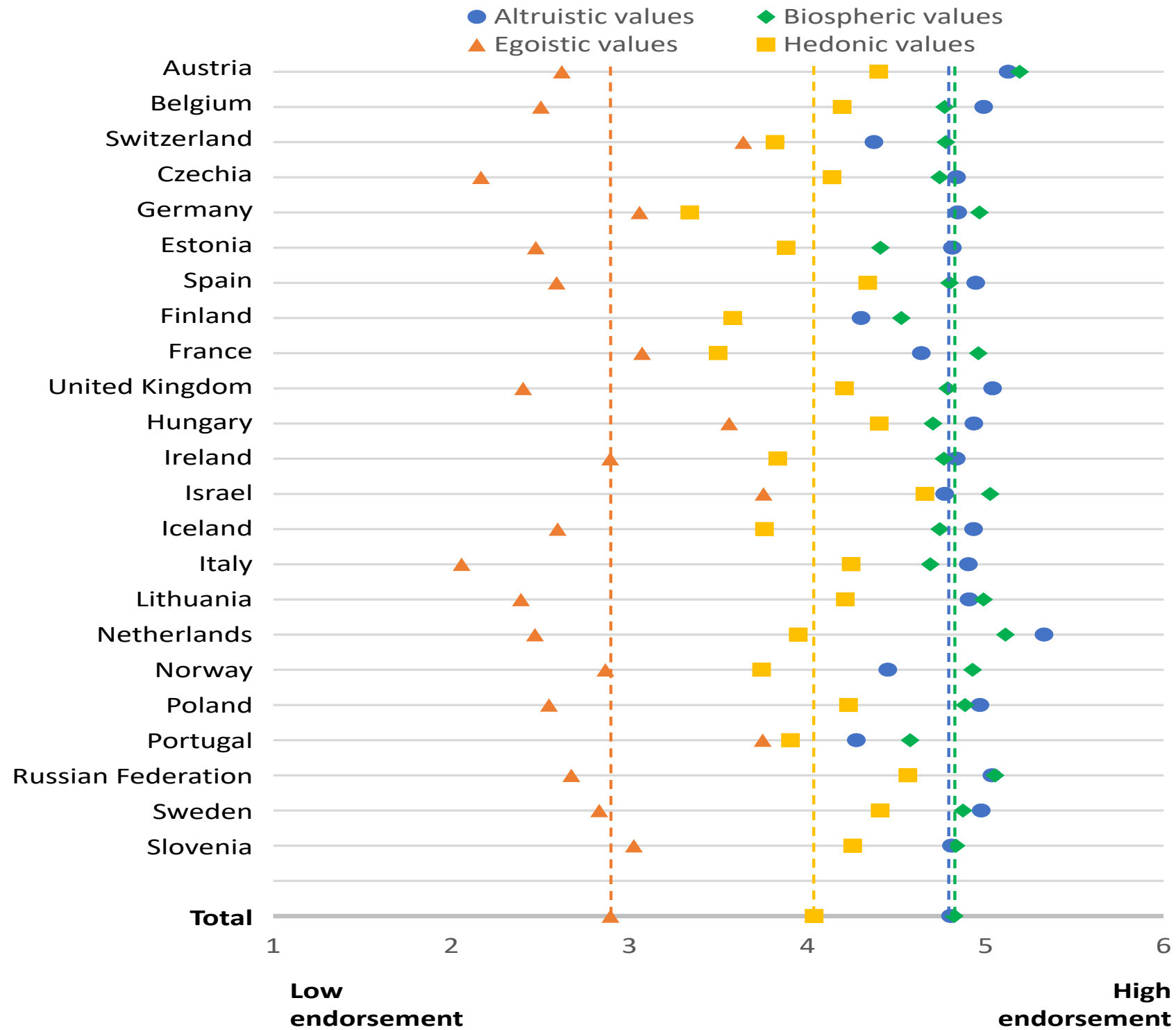
Participating stations:

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Snappy Lube #24  
2405 Market Street

# Worthiness savings € or CO<sub>2</sub>

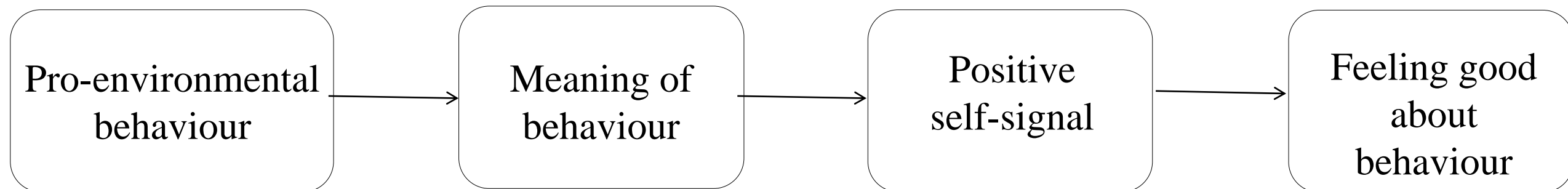




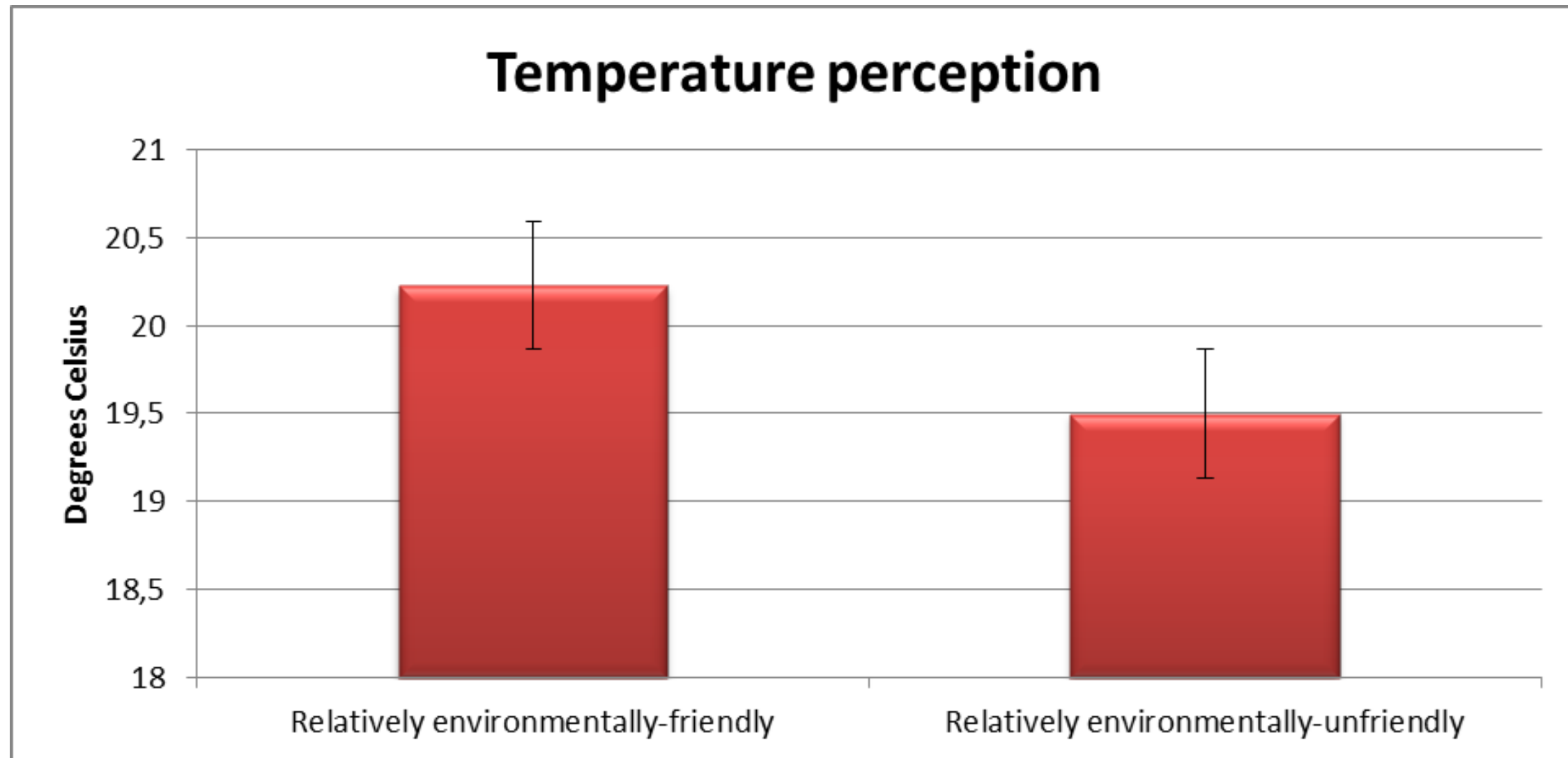


# Eudaimonia

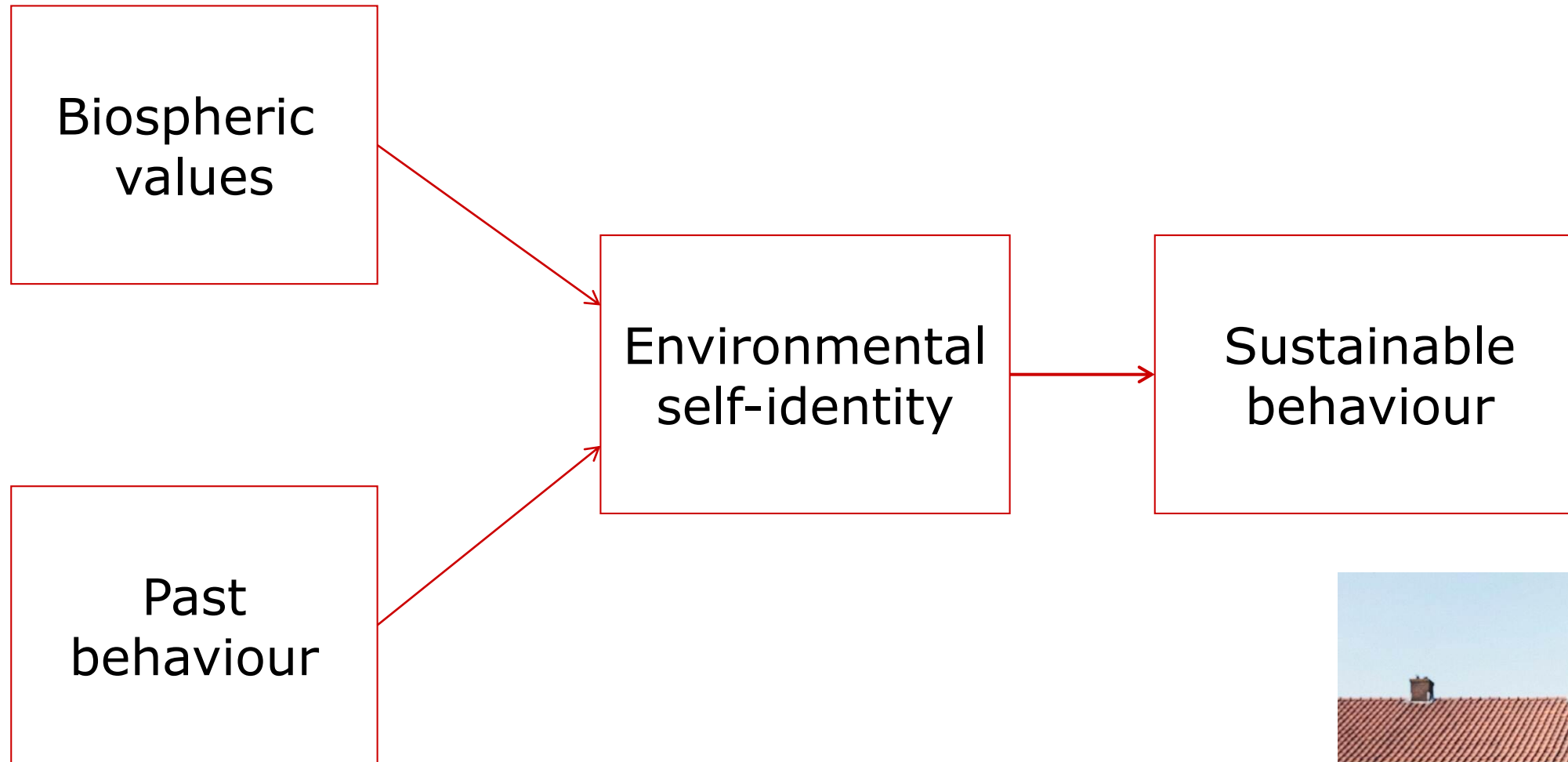
- > Acting sustainably feels good because it is meaningful
  - Particularly when voluntary and strong biospheric values
- > Positive self signal
- > Encourages pro-environmental behaviour



# Warm glow

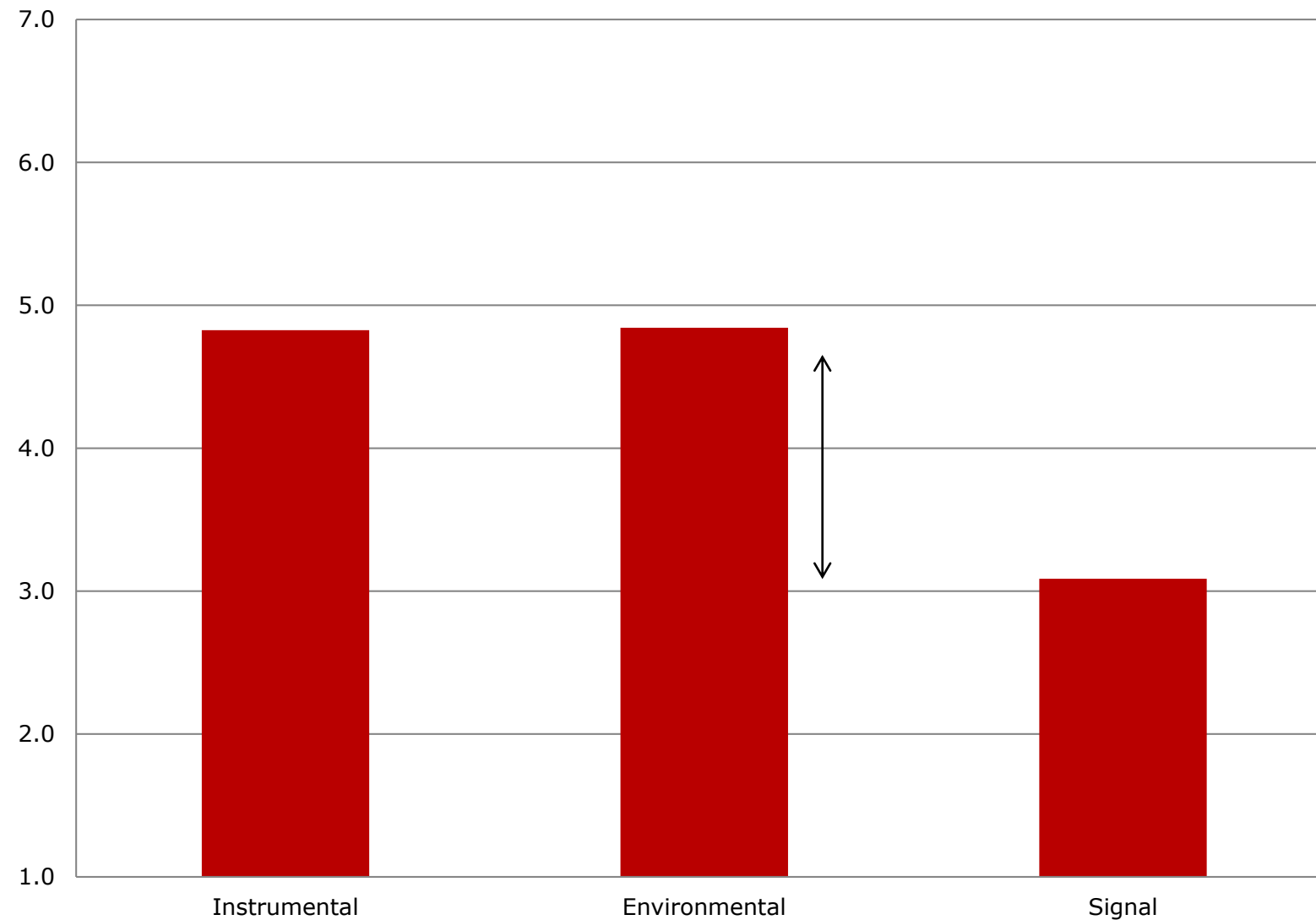


# Environmental self-identity



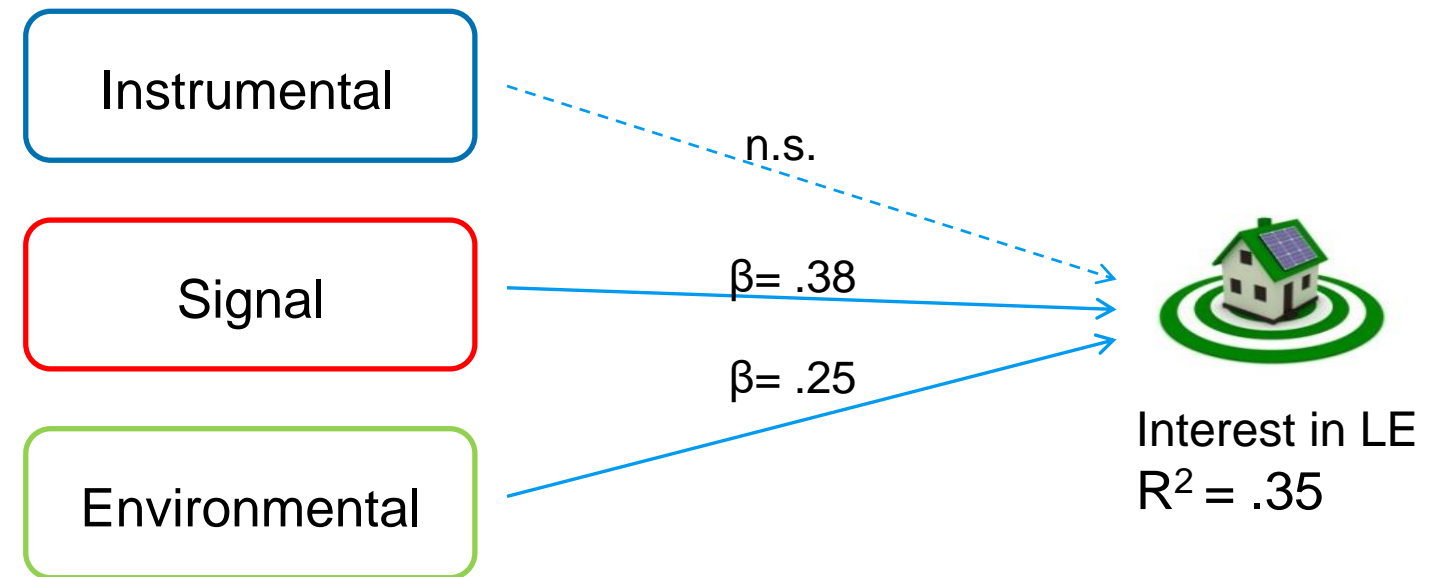
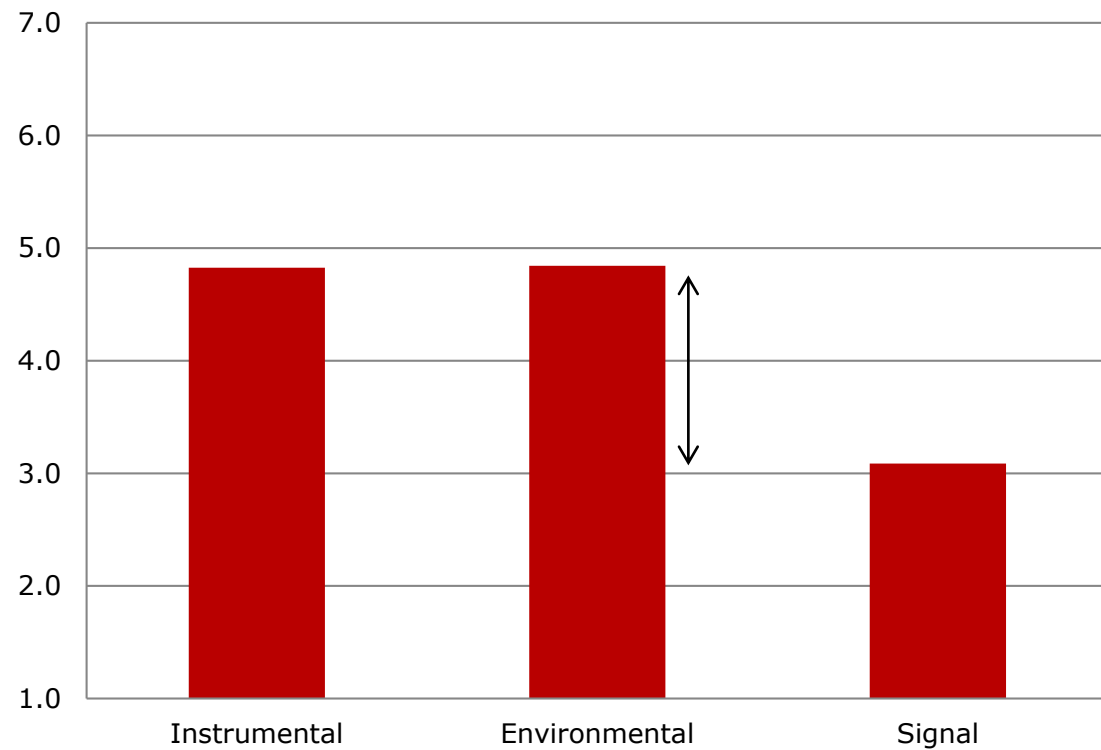
# Symbolic value

Importance ratings



# Symbolic value

Importance ratings



# Involvement in community energy initiatives



# Motives to be engaged in a community energy initiative



# Corporate Environmental Sustainability

## More sustainable energy behaviour:

- > when employees strongly endorse biospheric values
- > when they believe their organisation is committed to CER
- > CER particularly encourages sustainable energy behaviour when employees do not strongly endorse biospheric values





# Norm (dis)respect cues



Graffiti versus no graffiti  
Flyer at handlebar of bicycles  
How many people litter the flyer?



No graffiti (N= 77)

**33%**

Graffiti (N=77):

**69%**





Clean environment  
Picking up soda can  
Sweeping

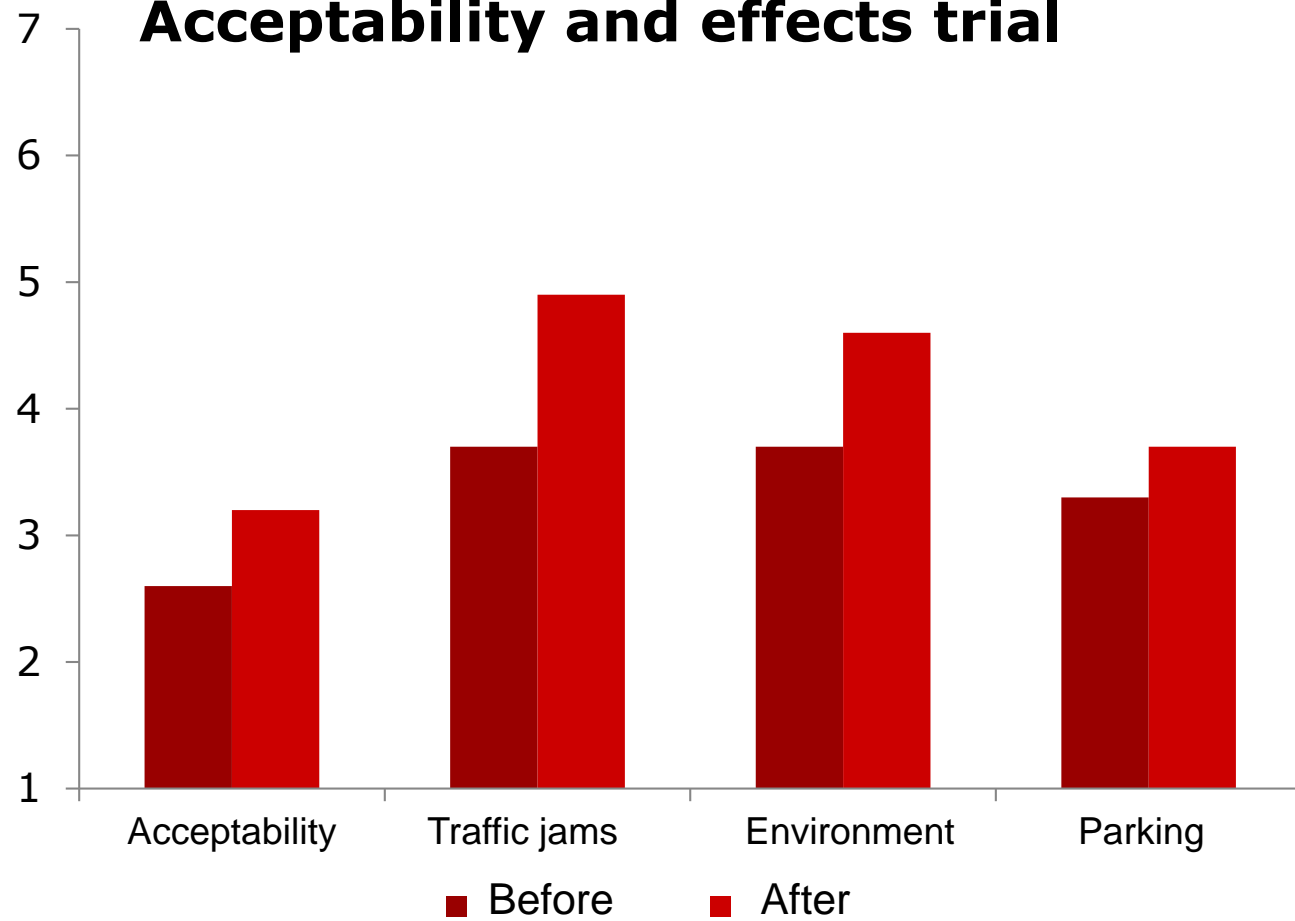
**40%**  
**64%**  
**82%**

# Factors influencing public acceptability

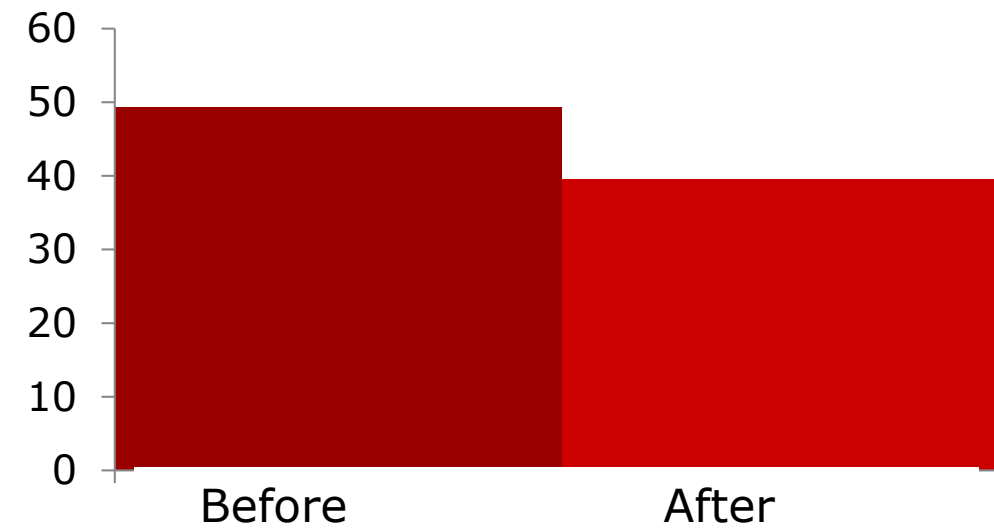


# Effective trials

## Acceptability and effects trial



## Additional costs per week (Swedish krona)



# Conclusions

- › Multiple motivations affect sustainable behaviour
- › Intrinsic motivation is a solid base for consistent sustainable behaviour
- › Create context that activates and supports biospheric values and offers co-benefits

Thank you!  
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