

# Quiz on Climate Change

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# Question 1

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1.5°C (Source: <https://www.de-ipcc.de/256.php>)

## Question 2

How much has the temperature increased since the beginning of industrialization?

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about 1°C (Source:

[https://report.ipcc.ch/sr15/pdf/sr15\\_spm\\_final.pdf](https://report.ipcc.ch/sr15/pdf/sr15_spm_final.pdf))

## Question 3

What is the difference between the global average temperature at the beginning of the 19th century (before the beginning of industrialization) and the average temperature about 20,000 years ago (the coldest time during the last cold period)?

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about  $+4.5^{\circ}\text{C}$  (Source: <https://journals.ametsoc.org/doi/full/10.1175/JCLI3748.1>)

## Question 4

The consumption of fossil fuels (coal, oil, natural gas) is currently commonplace. We need gas for our cars, coal for electricity, natural gas for heating and a lot of plastic, which is almost always made of petroleum. (Only about 43% of plastics get really recycled. It's usually just burned.) What percentage of CO<sub>2</sub> emissions in Germany are caused by the burning of fossil fuels (coal, oil, natural gas)?



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about 95% (Source: <https://www.umweltbundesamt.de/daten/klima/treibhausgas-emissionen-in-deutschland>)

## Question 5

Everyone talks about CO<sub>2</sub>, which is carbon dioxide, but they all mean it all greenhouse gases. In addition to CO<sub>2</sub>, these are mainly methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O), but also e.g. Water steam. What percentage of the global methane emissions are caused by animal husbandry?

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about 37% (Source: <https://www.umweltbundesamt.de/themen/boden-landwirtschaft/umweltbelastungen-der-landwirtschaft/lachgas-methan>)

## Question 6

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about 298 (Source: [http://www.climatechange2013.org/images/report/WG1AR5\\_Chapter08\\_FINAL.pdf](http://www.climatechange2013.org/images/report/WG1AR5_Chapter08_FINAL.pdf), S.714)

## Question 7

The global warming leads to the melting of glaciers, especially at the poles. This in turn leads to sea level rise. Until the end of the century, it could well be that the sea level increases by more than two meters. As a result, hundreds of millions of people would lose their homes. What would be the economic damage (in US-dollars) in total, if the sea level rises only by one meter?

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about 1182 billion US-Dollar (Source: [http://web.mit.edu/globalchange/www/MITJPSPGC\\_Rpt156.pdf](http://web.mit.edu/globalchange/www/MITJPSPGC_Rpt156.pdf))

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(For comparison: The necessary climate protection measures would cost about 126 billion US-Dollar.)



## Question 8

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24.2 million (Source:

[http://www.europarl.europa.eu/RegData/etudes/BRIE/2018/621893/EPRS\\_BRI%282018%29621893\\_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/BRIE/2018/621893/EPRS_BRI%282018%29621893_EN.pdf))

## Question 9

About 40% of greenhouse gas emissions in Germany can be attributed to private consumption, 15% of it to nutrition, 18% to heating, 8% to flying. By measures such as investment in thermal insulation, the reduction of air travel, the reduction of meat consumption, using green electricity, driving less and smaller cars, buying organic food, switching off devices in standby, and less consumption in general, about 75% of private emissions can be reduced (i.e 30% of total emissions). What was the amount of greenhouse gases in Germany per capita in 2008 (including all Values also for industry and infrastructure)?

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11.5 metric tons (Source:

<https://www.oeko.de/oekodoc/1029/2010-081-de.pdf>)

## Question 10

How much CO<sub>2</sub> is emitted on a flight from Berlin to Mallorca and back (per person)?

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0.670 metric tons (Source: [https://germany.myclimate.org/de/flight\\_calculators/new](https://germany.myclimate.org/de/flight_calculators/new))

## Question 11

How much CO<sub>2</sub> emission is caused by 1 kg of pork (the average amount of meat per person per week in Germany)?

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4.2 kg (that is roughly 252 kg of CO<sub>2</sub> for 60 kg of meat per year)  
(Source:

<https://www.oeko.de/oekodoc/1029/2010-081-de.pdf>)