

Changing Climate, Changing Diets

Pathways to Lower Meat Consumption

Supplementary Materials

Focus group schedule (in English)

Welcome and introductions

Welcome and thank you for coming.

Pass around Participant Information Statement.

Introduction to moderator and research: we are here to examine your attitudes to climate change and food production and how this impacts on what you choose to eat, where you get information from and your perceptions of the information that is available. We are doing research in the UK, China, Brazil and the US.

The most important thing to say is that we're not here to test your knowledge. There are no right or wrong answers to the questions – we are interested in your opinions, all of which are valid regardless of where they come from. If you really don't know anything about the subject being asked about or are unsure of your opinions, then please let us know because this is useful information. In some cases, the answer to the question might be simply 'I don't know'. Also, this is a pilot, so if the questions aren't clear, please let me know by simply raising your hand.

Everything is being recorded with a view to transcribing it later but anything you say in the group will be kept confidential and any place or work names which might identify you will be removed from data transcription.

Questionnaire One (10 mins)

Before we begin this discussion, we want to get a sense of your top-of-mind attitudes to the issues being addressed – to simplify this we would like you to fill out a questionnaire. The questions will be read out. Please put your answers on the answer sheet.

1. What comes into your head when you hear the words climate change?
2. What is the source of what just came into your head? (Name more than one if relevant.)
3. Which sources would you most trust on a subject like climate change?
4. What do you think are the main factors that contribute to climate change?
5. Has your level of meat consumption ever been affected by your concerns about climate change? By meat, we mean foods such as beef, or chicken, or lamb, or pork, or foods containing them. This does not include fish.
Yes
No
6. On a scale of 1 to 10, how important is it to you that action is taken to limit the impact of meat production on climate change, where 1 is not at all important and 10 is very important?

1	2	3	4	5	6	7	8	9	10
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7. Do you think governments should introduce measures to encourage people to eat less meat and replace it with something else to help tackle climate change?
Yes
No

Discussion (10 mins)

Thinking about the answers you gave to these first questions, we would like to explore these issues in a little more depth.

1. What is the first thing that comes into your mind when you think of climate change? What did you think of when I asked specifically about the factors which were causing climate change? Do you attribute climate change mostly to human behaviour? Is meat and dairy production something you connect with climate change?
2. Where would you go for trusted information on climate change? What is the best way of checking whether information is to be trusted on climate change? Would you turn to a trusted news outlet or

journalist? Would you look at more than one source to check for consistency? Would you discuss with friends and family?

- Have you heard the statement that meat production impacts on climate change? If yes, where have you read or heard about it? Is it on your radar? Is it something you've thought about – and would it be a consideration when making choices about what to eat? If no, does the statement that meat production impacts on climate change surprise you? What are your thoughts about the statement? Do you find it convincing?

Introducing new information on climate change and food production

We've established what you all know and what you're thinking already. As part of this study, we want also to introduce some new information and I'm going to hand out an information sheet to each of you. I'm going to give you literally a few minutes just to absorb the information and then we'll have a discussion. As we're having the discussion, you can refer back to the sheet and look at it as you would with any media. The idea is that you might receive this information in the media, so I will reference some of the answers you gave before on the question of trusted information.

Information sheet discussion (15 mins)

- From what you have just read, what is the thing that sticks in your mind? What from that surprises or shocks you? What is the most powerful bit of information? Why is it powerful? Returning to the previous question about contributory factors – did any of you write down the impact of meat production? Does the relative information about transport impact make you rethink what you thought you knew?
- If you heard these claims about the climate impact of meat products from x (answer to trusted source on climate change), what would your response be? *Might be a question of consistency across sources, in which case can move directly to Q6.*
- So I've presented that information to you and we're here in a focus group, but if you were to receive that in the media you normally consume, where would it be most powerful coming from? What circumstances would make you pay attention? Overall, what would be the most important thing in terms of convincing you that the information was credible? What about if this information was coming from politicians? What about if the information was coming from scientists?

Impact of new information on attitudes and commitments to behaviour

Before we begin the final discussion we would now like you to complete a final questionnaire which asks you some of the same questions as before.

Questionnaire Two (5 mins)

- Will your level of meat consumption now be affected by your concerns about climate change?
Yes
No
- On a scale of one to 10, how important is it to you now that action is taken to limit the impact of meat production on climate change, where 1 is not at all important and 10 is very important?

1	2	3	4	5	6	7	8	9	10
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- Do you **now** think governments should introduce measures to encourage people to eat less meat and replace it with something else to help tackle climate change?
Yes
No

Discussion (20 mins)

- Would you say that the body of information that I presented to you – and contextualizing it in the range of sources that you would trust and assuming that you thought it was credible – would that change your attitudes to this subject? Would it make you feel differently about the need for action or the need to prioritize it? Which bit of information triggered that change?
- Thinking about the information that you just received, would you now be willing to reduce your meat consumption? If yes, to what degree? What could you do – could you make reductions across the week? Does this tie in with other considerations such as health concerns, animal welfare, etc.?

If no, what would stop you reducing your meat consumption in relation to your concerns about climate change? *Explore: the commitment in terms of cost, social pressures, the taste of meat, meat being part of a balanced diet, and beliefs in the power of individuals.*

To all: Have you ever attempted to reduce your consumption in the past? What happened?

3. On the question of whether governments should introduce measures to encourage people to eat less meat and replace it with something else to help tackle climate change – what did you think about that?

Yes

No

(collect numbers)

I'm going to give you a few options of what could be done; please tell me which you like the most and which you like the least. Why?

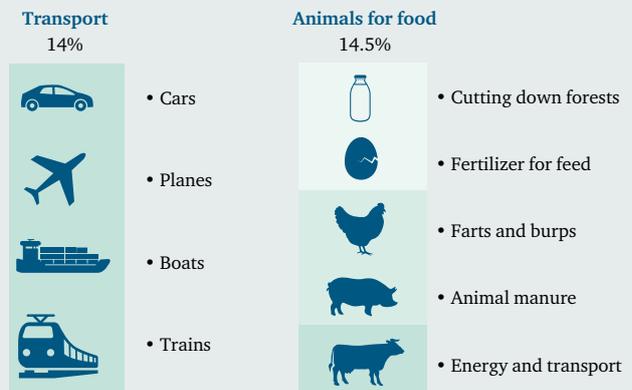
- Labelling of environmental impact on meat products
- Public information campaigns
- Taxes on meat products
- Removal of government subsidies to the meat industry
- Subsidies or promotions for meat alternatives

4. How would people react if there was a situation where there had been campaigning and information in the media about climate change and showing that meat-eating was causing damage, and at the same time just to reduce meat consumption was the cheapest, easiest way of reducing global emissions? What if then the government said, we know you're not going to like it but we're just going to have to do it, like rules on smoking and driving, and we will put taxes on meat or take away subsidies to meat production and that is going to mean that meat is more expensive, but it's got to be done and there are other substitutes that you can eat and we'll inform you of that? How would people react? Do you think people would go along with it? Do you think people would actively resist? Would it be accepted eventually?

Information sheet presented to respondents during the focus groups (in English)

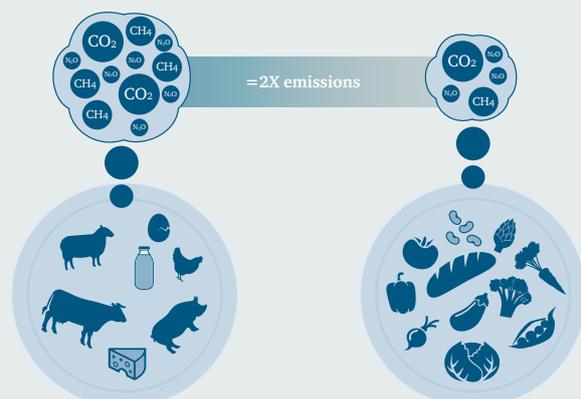
Climate change is caused by human activities, producing gases such as carbon dioxide, methane and nitrous oxide that heat up the planet. Producing animals for their meat and their products such as milk and eggs is responsible for almost 15% of those gases globally. (United Nations Food and Agriculture Organization, 2013)

This is roughly equal to all the climate changing emissions from the fuels burned, by all cars, trucks, trains, boats, and planes, combined. (United Nations Food and Agriculture Organization, 2013; Intergovernmental Panel on Climate Change, 2014)



Scientists now know that to keep global warming below dangerous levels, we must stop burning fossil fuels, and we must also limit the amount of animal products we collectively eat. (Hedenus et al., 2014; Bajželj et al., 2014; Pelletier and Tyedmers, 2010)

For people who don't eat animal products, the amount of greenhouse gases produced to make their food can be half of that for the average person who does eat animal products. (Scarborough et al., 2014; Heller and Keoleian, 2014)



Survey (in English)

Demographic variables

1. Age
2. Gender
3. Location/region
4. Media consumption habits (political proxy)
5. Variable measuring wealth – personal/household income (preferably on a fixed scale related to country distribution, that can be compared internationally on PPP basis or similar)
6. Religion and ethnicity

Q1.

How do you feel about the amount of meat and dairy you eat in a normal month? Which of the following best describes how you feel about the amount of ...

- **A)** Meat you eat. By meat, we mean foods such as beef, or chicken, or lamb, or pork, or foods containing them. This does not include fish.
- **B)** Dairy you eat and drink. By dairy, we mean milk from animals, or products made from it, such as cheese, or yoghurt or butter, or foods containing them. This also includes eggs from poultry.

Please select one answer only for each column.

	Meat	Dairy
1. I normally eat this and would like to eat more of it if I could		
2. I normally eat this but would like to eat less of it if I could		
3. I normally eat this and do not want to change the amount I normally eat		
4. I do not normally eat this but would like to		
5. I do not normally eat this and do not want to eat this in the future		
6. I don't know [ANCHOR AT BOTTOM]		

Q2a.

How important are each of the following in deciding [IF CODES 1–3, OR CODE 6 AT Q1_A] [how much meat you personally eat nowadays] [IF CODES 4-5 AT Q1_A] [why you personally do not eat meat nowadays]? Please select one answer for each row.

	1 Very important	2 Fairly important	3 Not very important	4 Not at all important	5 Don't know [ANCHOR AT RIGHT]	6 Not applicable [ANCHOR AT RIGHT]
1. Whether you think that the meat available is safe to eat						
2. Eating food that is good for your health						
3. The impact of the farming and production of meat on climate change, also known as global warming						
4. The way in which animals are cared for						
5. Eating the food you enjoy eating						
6. The price of meat and what you can afford						
7. What your family and friends normally eat						
8. Being able to trust the source(s) from which meat comes						

Q2b.

How important are each of the following in deciding [IF CODES 1-3, OR CODE 6 AT Q1_B] [how much dairy you personally eat and drink nowadays] [IF CODES 4-5 AT Q1_B] [why you personally do not eat and drink dairy nowadays]? Please select one answer for each row.

	1 Very important	2 Fairly important	3 Not very important	4 Not at all important	5 Don't know [ANCHOR AT RIGHT]	6 Not applicable [ANCHOR AT RIGHT]
1. Whether you think that the dairy products available are safe to eat and drink						
2. Eating and drinking foods and drinks that are good for your health						
3. The impact of the farming and production of dairy products on climate change, also known as global warming						
4. The way in which animals are cared for						
5. Eating and drinking the foods and drinks you enjoy						
6. The price of dairy products and what you can afford						
7. What your family and friends normally eat and drink						
8. Being able to trust the source(s) from which dairy products come						

Q3.

How big a part, if any, do you think the following activities play in human contribution to climate change?
 Please select one answer in each row that applies.

	1 A lot	2 A moderate amount	3 A little	4 Nothing at all	5 Don't know [ANCHOR AT RIGHT]
1. Exhaust emissions from trains, planes, cars, trucks and ships					
2. Farming, processing and packaging the meat and dairy products that we eat and drink					
3. Burning coal, oil and gas in power stations to produce electricity					
4. Heating and cooling our homes and offices					
5. Disposal and treatment of waste such as rubbish in landfill, and sewage treatment					
6. Industry and manufacturing, for example the production of goods					
7. Cutting down of trees and forests					

Q4.

Thinking about things you might do in order to limit your own contribution to climate change, how likely or unlikely would you be to make the following changes within the next year? Please select one answer in each row that applies.

	1 I am already doing this as much as I possibly can [ANCHOR AT LEFT]	2 Certain to	3 Very likely to	4 Fairly likely to	5 Fairly unlikely to	6 Very unlikely to	7 Certain not to	8 Not applicable [ANCHOR AT RIGHT]
1. Walking, cycling or using public transport instead of driving a car or motorbike								
2. Not flying, or replacing some flights with train or bus journeys								
3. Eating less meat, or replacing the meat in some meals with alternatives such as beans								
4. Eating fewer dairy products or replacing dairy products with alternatives such as soya milk								
5. Saving energy at home, for example by installing insulation or switching off lights								
6. Recycling materials such as glass, paper and plastic								
7. Avoiding products which have a lot of packaging								
8. Avoiding buying new goods, for example mending what you have or buying used products instead								

Q5.

Experts now know that producing animals for meat and dairy products contributes to a number of health and environmental problems, including climate change. Climate change is recognized as a major problem.

If you wanted to find accurate information about the contribution of meat and dairy products to climate change, how helpful or not do you think each of the following sources would be?

	1 Very helpful	2 Fairly helpful	3 Not very helpful	4 Not at all helpful	5 Don't know [ANCHOR AT RIGHT]	6 Not applicable [ANCHOR AT RIGHT]
1. Government information, for example from government websites or communications						
2. Information from environmental groups, such as Greenpeace and WWF						
3. Information from food companies and product labelling on food itself						
4. Information on social media, e.g. Facebook, Twitter, Instagram						
5. Information from experts and scientists						
6. Information from family and friends						
7. Information from public personalities who you respect						
8. Information in the media (newspapers, TV, radio and news or current affairs websites)						

Q6.

To what extent do you agree or disagree with the following statement:

‘Human activities contribute to climate change.’

1. Strongly agree
2. Tend to agree
3. Neither agree nor disagree
4. Tend to disagree
5. Strongly disagree
6. Don't know [ANCHOR AT BOTTOM]

Finally, we would like to ask you a few questions about you and your household. While you do not have to answer these questions, doing so will help us ensure we reach a broad range of people. As with all the questions in this survey, your answers will be completely confidential.

Q7.

How frequently do you do the following things ...?

	1 Several times a day	2 Every day or almost every day	3 2–3 times a week	4 Once a week	5 2–3 times a month	6 Once a month/less often	7 Never
1. Use the internet							
2. Visit social networking websites (Facebook, Twitter, Pinterest, etc.)							
3. Watch conventional TV							
4. Watch TV online							
5. Read conventional newspapers (hard copy)							
6. Read newspapers/news online							
7. Listen to conventional radio							
8. Listen to radio online							
9. Tweet							

Q8.

What, if any, religion or faith tradition do you most closely identify with?

- | | |
|---------------------------------------------|------------------------------------|
| 1. Buddhist – Mahayana | 12. Hindu – Saiva |
| 2. Buddhist – Zen | 13. Hindu – Other |
| 3. Buddhist – Other | 14. Mormon |
| 4. Confucianism | 15. Muslim – Shi’a |
| 5. Christian – Catholic | 16. Muslim – Sunni |
| 6. Christian – Protestant
or Evangelical | 17. Muslim – Other |
| 7. Christian – Orthodox | 18. Sikh |
| 8. Christian – Other | 19. Other |
| 9. Jehovah’s Witness | 20. Spiritual but not
religious |
| 10. Jewish | 21. No religion – agnostic |
| 11. Hindu – Vaisnava | 22. No religion – atheist |

Q9.

What is your gross yearly household income?

1. Under \$15,000
2. \$15,001 to less than \$20,000
3. \$20,001 to less than \$25,000
4. \$25,001 to less than \$30,000
5. \$30,001 to less than \$40,000
6. \$40,001 to less than \$50,000
7. \$50,001 to less than \$75,000
8. \$75,001 to less than \$100,000
9. \$100,001 or more
10. Prefer not to answer

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Reduction in global meat consumption is key to mitigation. The authors of this report (PDF) by Chatham House argue that governments must lead in shifting attitudes and behaviors of consumers to lower meat consumption. According to the report, reduction in global meat consumption is key to mitigating climate change and keeping global warming below two degrees Celsius. Global meat consumption and greenhouse gas emissions are at all-time highs. The livestock sector accounts for 15 percent of all emissions, the equivalent to the emissions of all vehicles worldwide. If global citizens reduced meat consumption, it would result in over one-fourth of the emission reductions needed by 2050, which is necessary to keep global warming limited. A report by Chatham House, "Changing Climate, Changing Diets: Pathways to Lower Meat Consumption," released in late November, identifies the world's appetite for meat as a major driver of climate change and concludes that a worldwide shift to healthier, more plant-based diets could bring about a 25% reduction in the gap between current global emissions plans and what is needed to prevent "dangerous" climate change. "As governments look for strategies to close the Paris emissions gap quickly and cheaply, dietary change should be high on the list," says Laura Wellesley, an author of the seminal report. The report finds that a shift towards... Reduction in global meat consumption is key to mitigating climate change, according to a new report by Chatham House. An independent policy institute in London, Chatham House recently published Changing Climate, Changing Diets: Pathways to Lower Meat Consumption. Global meat consumption and greenhouse gas emissions are at all-time highs. The livestock sector accounts for 15 percent of all emissions, the equivalent to the emissions of all vehicles worldwide. If global citizens reduced meat consumption, it would result in over one-fourth of the emission reductions needed by 2050, which is necessary to keep global warming below the "danger level" of two degrees Celsius. Global meat consumption must fall to curb global warming, reduce growing strains on land and water and improve food security, health and biodiversity, a United Nations report on the effects of climate change concluded. "There are certain kinds of diets that have a lower carbon footprint and put less pressure on land," Jim Skea, professor at London's Imperial College, said on Thursday. The IPCC met this week in Geneva, Switzerland to finalise its report which should help to guide governments meeting this year in Chile on ways to implement the 2015 Paris Agreement. "The window for making these changes is closing fast. If there is further delay in reducing emissions, we will miss the opportunity to successfully manage the climate change transition in the land sector," it said.