

Supplementary Materials: Survey Instrument and Condition Mapping

The Impact of Language and Framing on Climate Change Purchasing and Donation Behavior

Administered via SurveyMonkey, March 2024. Scenario order was randomized. This supplementary document reproduces the retained survey record supplied for revision. Where the retained record contains a condition label rather than verbatim option wording, that entry is identified as a summary; no missing wording has been reconstructed.

Condition Mapping

Scenario	Survey item	Primary framing feature(s)	Response format
1	Q9	Charity allocation; vague/local-national-international	Percentage allocation
2	Q10	Charity allocation; greater specificity	Percentage allocation
3	Q11	Local/tangible solar impact; social encouragement	Choice
4	Q12	Global appeal; social encouragement	Choice
5	Q13	Urgency: high/moderate/low	0–100 likelihood for each email
6	Q14	Sustainable purchasing; price/sustainability tradeoff	Binary choice
7	Q15	Willingness to pay; product sustainability	Open numeric
8	Q16	Climate/personal allocation choice	Choice
9	Q17	Specificity; energy-efficiency benefit	Binary choice
10	Q18	Immediate vs. long-term impact	Binary choice
11	Q19	Local/national/international allocation	Choice
12	Q20	Specific/local vs. broad/global mission	Binary choice
13	Q21	Local vs. global tree planting	Binary choice
14	Q22	Urgency: high/moderate/low (retained record summarizes subject-line wording)	0–100 likelihood
15	Q23	Social pressure: high vs. moderate	0–100 likelihood
16	Q24	Goal completion / final 2%	0–100 likelihood
17	Q25	High pressure + above-average ask (retained record summarizes ask options)	0–100 likelihood
18	Q26	Default choice architecture	Choice
19	Q27	Rational/emotional/moral appeal (retained record summarizes appeal text)	0–100 likelihood
20	Q28	Urgency + temporal framing (retained record summarizes option text)	0–100 likelihood

21	Q29	Goal-gradient/loyalty context; local vs. global	Binary choice
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Retained Survey Instrument

Section 1: Demographic Questions

Q1. What is your age?

Open text field

Q2. What is your gender?

- Male
- Female
- Non-binary / third gender
- Prefer not to say

Q3. What is your income range?

- Under \$15,000
- \$15,000–\$29,999
- \$30,000–\$49,999
- \$50,000–\$74,999
- \$75,000–\$99,999
- \$100,000–\$150,000
- Over \$150,000
- Prefer not to say

Q4. What is the highest level of school you have completed or the highest degree you have received?

- Less than a high school degree
- High school degree or equivalent (e.g., GED)
- Some college but no degree
- Associate degree
- Bachelor's degree
- Graduate degree

Q5. What state do you reside in?

Dropdown selection

Q6. What is your race?

Open text / selection field

Q7. What political party do you identify with the most?

- Democrat
- Republican
- Independent
- Other (please specify)
- Prefer not to say

Q8. To what extent do you consider yourself to be religious?

Scale response field

Section 2: Climate Scenario Questions

Scenarios were presented in randomized order. Each scenario was followed by a response prompt: a 0–100 likelihood-to-donate slider, a donation allocation task, or a binary choice, as indicated.

Scenario 1: Charity Allocation (Vague)

Q9. Congratulations! You won \$100 in a raffle to allocate to a climate charity of your choice. How would you distribute (as a %) the \$100 between the following? (Put 0% for none.)

- A local environmental organization
- A national environmental organization
- An international environmental organization
- Keep the money for yourself

Response: Percentage allocation across four options (must sum to 100%)

Scenario 2: Charity Allocation (Specific)

Q10. Now, imagine you have more clarity on where this money is going. How would this change where you distribute (as a %) the \$100?

Response: Percentage allocation with specific organization descriptions provided (must sum to 100%)

Scenario 3: Local Solar Energy (Local Tangible Impact)

Q11. A factory within a 25-mile radius of your house burns coal for energy. Your town needs help replacing this energy system with solar power to reduce greenhouse gas emissions in the air. Everyone is strongly encouraged to either...

- Donate money to support the solar energy replacement project
- Volunteer time to help with the transition
- Neither — take no action

Response: Binary/multiple choice

Scenario 4: Amazon Reforestation (Global Appeal)

Q12. The UN has just issued a global announcement highlighting the importance of citizens' support for the reforestation project in the Amazon rainforest to help replant the trees, restore habitats, and combat climate change. Everyone is strongly encouraged to either...

- Donate money to support the Amazon reforestation project
- Spread awareness on social media
- Neither — take no action

Response: Binary/multiple choice

Scenario 5: Email Urgency Framing (Donation Likelihood)

Q13. Imagine you received these 3 different emails from the Clean Air Task Force. Which email would make you most likely to donate your money?

- Email A: High urgency — "Glaciers are melting at an unprecedented rate. Scientists warn that without immediate action, coastal cities will flood within 10 years. Will you donate to stop this?"
- Email B: Moderate urgency — "Climate change is causing gradual glacier loss. Donating now can help prevent long-term damage to coastal ecosystems. Will you donate?"
- Email C: Low urgency — "Environmental organizations are working on long-term climate solutions. Your donation supports ongoing research. Will you donate?"

Response: 0–100 likelihood-to-donate slider for each email

Scenario 6: Paper Towel Purchase (Sustainable Purchasing Choice)

Q14. You are looking to purchase paper towels for your kitchen. You go to the store and have two options. Which option are you purchasing?

- Option A: Standard paper towels — lower cost, single-use
- Option B: Recycled/eco-friendly paper towels — higher cost, more sustainable

Response: Binary choice

Scenario 7: Reusable Water Bottle (Willingness to Pay)

Q15. You want to purchase a new reusable water bottle. The plastic water bottle is lightweight, lasts up to 1 year, and costs \$10. The aluminum option is heavier, lasts longer, is recyclable, and is more environmentally friendly due to the impacts of over-production of plastic and issues with proper disposal. Compared to the \$10 plastic water bottle, how much more (in \$) would you pay for an aluminum water bottle?

Response: Open numeric field (\$)

Scenario 8: \$500 Credit Allocation

Q16. You are deciding how to allocate a \$500 credit. The message states, "Choose which way you want your credit to make a difference."

- Option A: Apply credit toward energy-efficient home upgrades
- Option B: Donate credit to a climate nonprofit
- Option C: Use credit for personal expenses

Response: Choice selection

Scenario 9: Home Insulation Upgrade (Specificity Framing)

Q17. You have been saving money for home improvements and are considering upgrading your home's insulation to improve energy efficiency. Which option are you more likely to choose?

- Option A: Standard insulation — lower upfront cost, less energy-efficient
- Option B: High-efficiency insulation — higher upfront cost, significant long-term energy savings

Response: Binary choice

Scenario 10: Reusable Straws (Immediate vs. Long-Term Impact)

Q18. Imagine you are at a local store that offers two types of reusable straws at the same price (\$15 for 10 straws). Which would you purchase?

- Option A: "Buy this pack of straws to reduce plastic waste now. Every pack purchased prevents 50 plastic straws from polluting our oceans this year." (Immediate impact)
- Option B: "Invest in a sustainable future. Buying these straws today ensures that 500 plastic straws are kept out of our oceans over the next decade." (Long-term impact)

Response: Binary choice

Scenario 11: Birthday Donation Allocation

Q19. For your birthday, one of your friends wants to donate \$100 in your name to a renowned nonprofit. They ask you where you want to allocate the money.

- Option A: Local environmental nonprofit focused on your community
- Option B: National environmental organization
- Option C: International climate organization

Response: Choice selection

Scenario 12: Charity Mission Statement (Specificity)

Q20. You are considering donating to support specific environmental causes. Which charity are you more likely to donate to after reading its mission statement?

- Option A: Specific, measurable mission with local impact
- Option B: Broad, global mission statement

Response: Binary choice

Scenario 13: Local vs. Global Tree Planting

Q21. You feel like you should donate to a tree planting and forest restoration charity, but you have to pick between two options on the website.

- Option A: Local tree-planting initiative — restores forests in your region
- Option B: Global reforestation initiative — plants trees in the Amazon rainforest

Response: Binary choice

Scenario 14: Email Subject Lines (Urgency — Likelihood to Open/Donate)

Q22. You receive three emails from an anti-water pollution charity. After reading these email subject lines, how likely are you to open and donate based on each?

- Option 1: High urgency subject line
- Option 2: Moderate urgency subject line
- Option 3: Low urgency subject line

Response: 0–100 likelihood-to-donate slider for each option

Scenario 15: Recycling Program (Social Pressure — High vs. Moderate)

Q23. You recently subscribed to Waste Management's email list. You received an email stating, "In our community, everyone is expected to participate in recycling programs by donating at least \$10 a month."

- Option 1: High social pressure framing — "You are one of the few people in your community who has not yet donated."
- Option 2: Moderate social pressure framing — "98% of your community has already donated to this cause."

Response: 0–100 likelihood-to-donate slider for each option

Scenario 16: Neighborhood Tree-Planting (Goal-Completion Framing)

Q24. Your neighbor sends you a pamphlet about the tree-planting nonprofit she is starting. They need \$200 more to plant their first round of trees. The rest of your neighborhood has already funded 98%, with every household contributing.

- Option 1: Standard donation ask — "Will you donate to help us reach our goal?"
- Option 2: Goal-completion framing — "We are 98% of the way to our fundraising goal. Your donation of \$200 will complete the final 2%."

Response: 0–100 likelihood-to-donate slider for each option

Scenario 17: Lead Pipe Replacement (High Pressure + Above-Average Ask)

Q25. You get an email from your district attorney stating that they need funding to replace pipes contaminated with lead. You are part of the 4% in your neighborhood who have not contributed to this urgent problem.

- Option 1: Standard ask amount
- Option 2: Above-average donation ask combined with social singling-out

Response: 0–100 likelihood-to-donate slider for each option

Scenario 18: Employer Bonus Default (Default Choice Architecture)

Q26. You have just received a \$100 bonus from your employer. By default, \$20 is donated to a renowned organization for climate change unless you choose to change it.

- Option A: Accept the default — donate \$20 to the climate organization
- Option B: Change the allocation — keep the full \$100 for yourself
- Option C: Change the allocation — donate a different amount

Response: Choice selection

Scenario 19: Income Percentage Allocation (Rational vs. Emotional vs. Moral Appeal)

Q27. You're sent a survey asking where you want to allocate the 1% of your income designated for environmental initiatives. Read through the following options and decide.

- Option A: Rational appeal — cost-effective, data-driven environmental program
- Option B: Emotional appeal — community impact, personal connection story
- Option C: Moral appeal — ethical obligation framing

Response: 0–100 likelihood-to-donate slider for each option

Scenario 20: Renewable Energy Campaign (Urgency + Temporal Framing)

Q28. A global nonprofit runs a time-sensitive campaign to raise funds for renewable energy projects in developing countries. How likely are you to donate if you see an advertisement that says...

- Option 1: High urgency + immediate impact framing
- Option 2: Moderate urgency + eventual impact framing
- Option 3: Low urgency + long-term impact framing

Response: 0–100 likelihood-to-donate slider for each option

Scenario 21: Donor Milestone Reward (Goal-Gradient / Loyalty)

Q29. You have hit the 1-year mark of donating through a local organization. They have pledged to donate \$100 on your behalf to a climate initiative of your choice. In the pamphlet, there are two options...

- Option A: Local climate initiative
- Option B: Global climate initiative

Response: Binary choice

Section 3: Climate Importance Self-Assessment

Q30. How important is climate change to the Earth?

Response: 0–100 sliding scale (0 = not at all important, 100 = extremely important)

Q31. How important is climate change in your day-to-day life?

Response: 0–100 sliding scale (0 = not at all important, 100 = extremely important)

Q32. What marketing factors most likely influence your decision to donate to climate change initiatives?

Response: Open text field

Note: Some scenario option labels in the retained record are summarized for clarity rather than preserved verbatim. Those cases are also identified in the condition-mapping table above.