Supplementary Materials

for

The drivers of individual climate actions in Europe

List of Supplementary Materials

1 Details about the psychometric modeling step

In addition to the proximal determinants of environmental actions given in the Methods, the model assumes that intentions are formed as a product of four types of influences:

1. PBC is not only assumed to interfere with the intention-behavior link, but also be a factor influencing intentions directly, resulting in that people form weaker intentions to perform a behavior if they perceive it to be difficult to implement.

2. A person's attitudes towards the energy choice alternatives are assumed to be a strong predictor of the intention to act. Attitudes are general evaluations of how positive or negative a behavioral choice might come out for the acting person and are composed of potentially competing beliefs about the potential effects the behavior has in different domains of life and their likelihood (Ajzen, 2012).

3. In addition to attitudes and PBC, intentions are also assumed to be determined by more basic value orientations, thus, the general and rather stable assumptions a person holds about what is right or wrong to do. However, such general values are not automatically relevant for forming intentions, but need to be activated. This assumption is based on the NAT. Activated values are referred to as 'personal norms' in the NAT and CADM, meaning that a feeling of moral obligation to act is created, which can be a strong determinant of an intention to act.

4. The final determinant of intentions mentioned in the CADM are social norms, or in other words the influence of other people on the choices a person makes. Other people may influence choices by either expressing expectations about what choice should be taken (referred to as injunctive social norms) or by making the choices themselves and being a model (referred to as descriptive social norms).

As stated in the Methods, personal norms function in the CADM as a variable that channels the influence of basic value orientations into intentions to act, if they become activated. This activation process is described in the NAT and involves a number of steps, such as realizing that there is a problem that has a moral dimension (referred to as awareness of need to act), that one's own choices contribute to the problem or its solution (referred to as awareness of consequences of ones actions), and the ascription of responsibility of these actions to oneself. However, personal norms function also as a mediating variable for the social impact, as a feeling of moral obligation is not only fueled by ones own values, but also by the perceived expectations of other people. This makes personal norms a second, though more proximate integrating variable in the CADM, in parallel to intentions.

Even though the survey in the ECHOES project was not designed to test the CADM, it contains a number of questions, which measure its central constructs. These are used to evaluate which concepts are of particular importance for a combined psycho-economic model of donation behavior to climate action. Inspecting the survey items closely, the following approximations for CADM variables were identified:

Intention. The following item was used as an indicator of intentions to act in favour of the energy transition: "I intend to use energy in a way that helps bringing the transition to a renewable energy system."

PBC. The following item was used as an indicator of perceived behavioral control: "As an individual, I can do a lot to support the energy transition." Whereas this item does not capture difficulty of behavior, it measures perceived efficacy, thus one component of PBC.

Personal norms. Two items in the survey referred to personal norms, namely "I feel a personal obligation to be energy efficient (e.g., using public transport instead of a personal car, turning off lights when leaving the room, using technical appliances which help to save energy)" and "I feel a personal obligation to support energy policies that support the energy transition." Both items are used in the model.

Injunctive norms. Two items in the survey referred to injunctive social norms, namely "Many people would support it if I used less energy (e.g., using public transport instead of a personal car, turning off lights when leaving the room, using technical appliances which help to save energy)" and "Many people would support it if I favored energy policies that support the energy transition (e.g., policies that increase the prices of fossil fuels)." Both items are used in the model.

Descriptive norms. Two items in the survey referred to descriptive social norms, namely "A growing number of people try to save energy (e.g., using public transport instead of a personal car, turning off lights when leaving the room, using technical appliances which help to save energy)" and "a growing number of people favor energy policies that support the energy transition." Both items are used in the model.

Awareness of need. Even if initially meant to be an item measuring belief in climate change, the following item can also be interpreted as capturing a very general awareness of a need of action in the energy sector caused by climate concern: "Most scientists say that the world's temperature has slowly been rising over the past 100 years. Do you think this has been happening?"

Awareness of consequences. Even if initially meant to be an item measuring belief in human causes to climate change, the following item can also be interpreted as capturing a very general awareness of consequences: "Assuming that the world's temperature is rising, do you think this is caused mostly by natural causes, about equally by natural causes and human activity, or mostly by human activity?"

Environmental self-identity. Although not part of the CADM, we decided to include a measure of environmental self-identity in the model as this component has been measured in the survey and is to a certain degree congruent to the more basic environmental value orientations or worldviews which are part of the CADM. This is in line with the VIP model (van der Werff and Steg, 2016). The included item was "Acting pro-environmentally is an important part of who I am."

For measuring the personality related variables, the following items were used:

Mindfulness. Two items from the Revised Cognitive and Affective Mindfulness Scale (CAMS-R) were used (Feldman et al., 2007): 'It is easy for me to concentrate on what I am doing' (mindfulness - focus) and 'I am able to pay close attention to one thing for a long period of time' (mindfulness - long-term focus). For the analysis in the econometric model, the variables were dichotomized.

Emotional regulation. Two items from the Emotion Regulation Questionnaire (ERQ) were used (Gross and John, 2003): 'I control my emotions by not expressing them' (emotional suppression) and 'I control my emotions by changing the way I think about the situation I am in' (emotional reappraisal). For the analysis in the econometric model, the variables were dichotomized.

Concern with future consequences. Two items from the Concern with Future Consequences Scale (CFCS) were used (Joireman and King, 2016): 'I consider how things might be in the future, and try to influence those things with my day to day behavior' (concern with future behavioral consequences) and 'I think it is important to take warnings about negative outcomes seriously even if the negative outcome will not occur for many years' (concern with future negative consequences). For the analysis in the econometric model, the variables were dichotomized.

All items are measured on the Likert scale with the exception of the awareness of consequences. A measure of habits was not included in the survey, but it can be argued that for donation behavior (which is not an everyday behavior), habits should not have a strong impact.

2 Details about the econometric modeling step

2.1 Estimating coefficients by Bayesian inference

Opposed to the variables in $\boldsymbol{x}_i$, s_i is not observed but rather part of the parameter space itself, requiring to condition the likelihood contribution of respondent i on s_i. The complexity of the resulting likelihood impedes inference by frequentist methods. The hierarchical structure of the model suggests a Bayesian approach, in which the conditional likelihood of the observed donations $p(y_i|\alpha_c, \boldsymbol{\beta}, s_i, \lambda, \sigma_c^2)$ is combined with the distribution of the random intercepts $p(\alpha_c|\boldsymbol{\gamma}, \delta^2)$ and with the distribution of the scale parameters $p(\sigma_c^2|r, \varrho)$, which are considered as first-stage priors in a Bayesian setting, and with the distribution of the common coefficients $p(\boldsymbol{\beta}|\boldsymbol{d})$ and $p(\lambda|\boldsymbol{g})$. $\boldsymbol{d}$, $\boldsymbol{g}$ and r are chosen as fixed parameters, such that ϱ, $\boldsymbol{\gamma}$ and δ^2 remain as unknown hyperparameters and follow the second-stage prior distributions $p(\boldsymbol{\gamma}, \delta^2|\boldsymbol{q})$ and $p(\varrho|\boldsymbol{h})$, such that the joint conditional posterior distribution is proportional to

$$
\begin{aligned}
p(\alpha_1,\ldots,\alpha_C,&\boldsymbol{\beta},\lambda,\sigma_1^2,\ldots,\sigma_C^2,\boldsymbol{\gamma},\delta,\varrho|y_1,\ldots,y_N,s_1,\ldots,s_n,\boldsymbol{d},\boldsymbol{q},\boldsymbol{h},r)\propto \\
&\prod_i p(y_i|\alpha_c,\boldsymbol{\beta},s_i,\sigma_c^2)p(\alpha_c|\boldsymbol{\gamma},\delta^2)p(\sigma_c^2|r,\varrho)p(\boldsymbol{\beta}|\boldsymbol{d})p(\lambda|\boldsymbol{g})p(\boldsymbol{\gamma},\delta^2|\boldsymbol{q})p(\varrho|\boldsymbol{h}),
\end{aligned}
\tag{1}
$$

where $\boldsymbol{d}$, $\boldsymbol{q}$ and $\boldsymbol{h}$ are the parameters of the corresponding prior distributions. The above exposition is conditional on a specific value of s_i for each respondent. To relax this conditionality, s_i needs to be integrated out of (1), leading to the unconditional posterior kernel

$$
\begin{aligned}
p(\alpha_1,\ldots,\alpha_C,&\boldsymbol{\beta},\lambda,\sigma_1^2,\ldots,\sigma_C^2,\boldsymbol{\gamma},\delta,\varrho|y_1,\ldots,y_N,\boldsymbol{d},\boldsymbol{q},\boldsymbol{h},r)\propto \\
&\prod_i \int_{s_i} p(y_i|\alpha_c,\boldsymbol{\beta},s_i,\sigma_c^2)p(\alpha_c|\boldsymbol{\gamma},\delta^2)p(\sigma_c^2|r,\varrho)p(\boldsymbol{\beta}|\boldsymbol{d})p(\lambda|\boldsymbol{g})p(\boldsymbol{\gamma},\delta^2|\boldsymbol{q})p(\varrho|\boldsymbol{h})p(s_i)\,ds_i,
\end{aligned}
\tag{2}
$$

We select a normal distribution as prior of $\boldsymbol{\beta}$ and λ, giving

$$\boldsymbol{\beta}\sim N(\boldsymbol{a}_\beta,\boldsymbol{A}_\beta),\ \text{and} \tag{3}$$

$$\lambda\sim N(a_\lambda,A_\lambda) \tag{4}$$

with the corresponding parameters $\boldsymbol{d}=(\boldsymbol{a}_\beta,\boldsymbol{A}_\beta)$ and $\boldsymbol{g}=(a_\lambda,A_\lambda)$; and we select a Gamma distribution as prior of ϱ, giving

$$\varrho\sim G(a_\varrho,A_\varrho), \tag{5}$$

where $\boldsymbol{h}=(a_\varrho,A_\varrho)$ are the corresponding prior parameters. The natural conjugate priors for the common parameters $\boldsymbol{\gamma}$ and δ^2 are

$$
\begin{aligned}
\delta^2 &\sim IG(a_{\delta^2},A_{\delta^2}),\\
\boldsymbol{\gamma}|\delta^2 &\sim N(\boldsymbol{a}_\gamma,\delta^2\boldsymbol{A}_\gamma^{-1}),
\end{aligned}
\tag{6}
$$

where a_{δ^2} refers to the degrees of freedom and A_{δ^2} to the scale of the inverted Gamma distribution. $\boldsymbol{A}_\gamma$ is the covariance parameter of the prior distribution of $\boldsymbol{\gamma}$, chosen to be normal, and $\boldsymbol{a}_\gamma$ is its mean vector. See Supplementary Table 7 below for the prior values used.

2.2 Gibbs sampling

Analytical and numerical calculation of the posterior in (2) is not straightforward, but given the latent variable structure of the model applying Gibbs sampling (Gamerman and Lopes, 2006; Geweke, 2005) for posterior inference suggests itself. Gibbs sampling estimates the model parameter $\boldsymbol{\theta} = (\alpha_1, \ldots, \alpha_C, \boldsymbol{\beta}, \sigma_1^2, \ldots, \sigma_C^2, \boldsymbol{\gamma}, \delta, \varrho)'$ by obtaining a sample with $m = 1, \ldots, M$ draws from the posterior distribution.

We can approximate the unconditional posterior of $\boldsymbol{\theta}$ by obtaining draws from the conditional posterior in (1) under different random draws of s_i, whose posterior distribution $p\left(s_i|\mu_{s_i}, \sigma_{s_i}^2\right)$ was estimated by the Bayesian structural equation model for each respondent as described in section 1. This assures that posterior uncertainty surrounding s_i is reflected in the empirical posterior distribution of $\boldsymbol{\theta}$, and all subsequent derivations thereof[1].

The Gibbs sampler used in our study thus estimates the parameter $\boldsymbol{\theta}$ by M draws generated from $p(\boldsymbol{\theta}^{m+1}|\boldsymbol{\theta}^m, \boldsymbol{Y})$, after B initial draws to reach convergence of the sampler. Sampling from the model introduced in the Methods requires sampling from the following distributions:

1. $p(s_i|\mu_{s_i}, \sigma_{s_i}^2) \quad \forall\, i = 1, \ldots, n,$

2. $p(y_i^*|\alpha_c, \boldsymbol{\beta}, s_i, \lambda, \sigma_c^2, y_i) \quad \forall\, i = 1, \ldots, n,$

3. $p(\boldsymbol{\beta}, \lambda|\alpha_1, \ldots, \alpha_C, s_1, \ldots, s_n, \sigma_1^2, \ldots, \sigma_C^2, \boldsymbol{y}^*),$

4. $p(\alpha_c|\boldsymbol{\beta}, s_{i\,\in\,c}, \lambda, \sigma_c^2, \boldsymbol{y}_{i\,\in\,c}^*) \quad \forall\, c = 1, \ldots, C,$

5. $p(\sigma_c^2|\alpha_c, \boldsymbol{\beta}, s_{i\,\in\,c}, \lambda, \boldsymbol{y}_{i\,\in\,c}^*) \quad \forall\, c = 1, \ldots, C,$

6. $p(\varrho|\sigma_1^2, \ldots, \sigma_C^2),$

7. $p(\boldsymbol{\gamma}|\alpha_1, \ldots, \alpha_C, \delta^2),$

8. $p(\delta^2|\alpha_1, \ldots, \alpha_C, \boldsymbol{\gamma}).$

[1]This procedure is based on the assumption that $p\left(s_i|\mu_{s_i}, \sigma_{s_i}^2\right)$ does not depend on parameter $\boldsymbol{\theta}$, i.e. that the personal norm score is truly exogenous to the propensity to donate for the assessed mitigating action, after controlling for basic country-specific and individual-level characteristics. See section 2.2 in (Koop, 2003) for a discussion of the role of stochastic regressors in Bayesian analysis.

Sampling from these distributions is standard in Bayesian econometric literature, and the reader is referred to Gamerman and Lopes (2006) and Rossi et al. (2005), for instance.

3 Supplementary Tables

Supplementary Table 1: Distribution of Members of European Parliament across parties of the 27 EU countries based on their position on climate change. Classification and data taken from (Schaller and Carius, 2019).

Position on climate change	Party	Country	MEPs 2014	MEPs 2019
Cautious	Slovak National Party (SNS)	Slovakia	0	0
Cautious	Law and Justice (PiS)	Poland	19	26
Cautious	Bulgarian National Movement (VMRO)	Bulgaria	2	2
Cautious	Flemish Interest (VB)	Belgium	1	3
Cautious	Order and Justice (TT)	Lithuania	2	0
Cautious	Lega Nord (Lega)	Italy	5	28
Cautious	Golden Dawn (XA)	Greece	3	2
Cautious	National Rally (former National Front) (RN)	France	23	22
Cautious	Freedom and Direct Democracy (SPD)	Czech Republic	0	2
Total			55	85
Sceptical	Sweden Democrats (SD)	Sweden	2	3
Sceptical	Alternative for Germany (AfD)	Germany	7	11
Sceptical	Conservative People's Party of Estonia (EKRE)	Estonia	0	1
Sceptical	Danish People's Party (DF)	Denmark	4	1
Sceptical	Freedom Party of Austria (FPOE)	Austria	4	3
Total			17	19

Supplementary Table 2: Description of data; definition, source and descriptive characteristics of the data used in the econometric step, i.e. the variables given in table 1 in the Main text.

Variable	**Source**[1]	**Question / procedure**	**Value**	**min**	**mean**	**max**	**sd**
Consumption (MWh)	75 to 113	Construction of the variables based on a Life Cycle Approach, see Bird et al. (2019)	continuous	3.53	8.87	28.31	2.88
Mobility (MWh)		– *same as above* –	continuous	0.00[2]	11.84	145.39	11.79
Heating and cooling (MWh)		– *same as above* –	continuous	0.66	7.82	118.19	6.90
Collective efficacy	114	randomly inserted for 50% of respondents: '... about the amount that results from driving 800 kilometers in an average passenger car. If 1,000 survey participants choose to give 5 Euros you will collectively offset the green house gas emissions produced by driving 800,000 Kilometers (= 20 times around the world!)'.	1 if respondent saw the information on collective efficacy, 0 else	0.00	0.50	1.00	0.50
Male	2	Please indicate your gender.	1 if 'Male', 0 else	0.00	0.51	1.00	0.50
Urban	4	Which of the following best describes where you live? Please select one	1 if 'Town/city (with more than 10,000 inhabitants)', 0 else	0.00	0.70	1.00	0.46
Number of children of respondent	9	How many children do you have?	Exact number between 0 and 5, 6 for 'more than 5 children'	0.00	1.10	6.00	1.12
Household size	8	How many people currently live in your household, including yourself?	Exact number between 1 and 5, 6 for 'more than 5 people'	1.00	2.73	6.00	1.24
Age 35-44	1	How old are you?	1 if in age bracket '35-44', 0 else	0.00	0.22	1.00	0.42
Age 45-54		– *same as above* –	1 if in age bracket '45-54', 0 else	0.00	0.20	1.00	0.40
Age 55+		– *same as above* –	1 if in age bracket '55+', 0 else	0.00	0.23	1.00	0.42
Ancillary benefit = jobs	32	The use of more renewable energy sources will create new jobs	1 if 'Strongly agree' or 'Moderately agree', 0 else	0.00	0.55	1.00	0.50

Continuation of Table 2

Variable	Source[1]	Question / procedure	Value	min	mean	max	sd
Ancillary benefit = environment	31	The use of more renewable energy sources will benefit the environment	1 if 'Strongly agree' or 'Moderately agree', 0 else	0.00	0.81	1.00	0.39
Social status = below average	12	Think of a ladder with 5 steps representing where people stand in [insert country]. At step 5 are people who are the best off, those who have the most money, the most education, and the most respected jobs. At step 1 are the people who are worst off, those who have the least money, least education, and the least respected jobs or no job. Where would you place yourself on this ladder?	1 if '1 – worst off' or '2', 0 else	0.00	0.18	1.00	0.39
Social status = above average		– *same as above* –	1 if '4' or '5 – best off', 0 else	0.00	0.21	1.00	0.41
Political econ = left from center	13	How would you describe your political outlook with regard to economic issues (e.g. taxes, cooperative vs. protective foreign economic policy, etc.)?	1 if 'Left' or 'Center-left', 0 else	0.00	0.33	1.00	0.47
Political econ = right from center		– *same as above* –	1 if 'Center-right' or 'Right', 0 else	0.00	0.29	1.00	0.45
Political social = left from center	14	How would you describe your political outlook with regard to social issues (e.g., family, religion, national security, traditional values, etc.)?	1 if 'Left' or 'Center-left', 0 else	0.00	0.34	1.00	0.47
Political social = right from center		– *same as above* –	1 if 'Center-right' or 'Right', 0 else	0.00	0.28	1.00	0.45
Mostly natural causes	34	Assuming that the world's temperature is rising, do you think this is caused mostly by natural causes, about equally by natural causes and human activity, or mostly by human activity?	1 if 'Mostly by natural causes', 0 else	0.00	0.08	1.00	0.27
Mostly human causes		– *same as above* –	1 if 'Mostly by human activities', 0 else	0.00	0.55	1.00	0.50

Continuation of Table 2

Variable	Source[1]	Question / procedure	Value	min	mean	max	sd
Climate change happening = No or Probably not	33	Most scientists say that the world's temperature has slowly been rising over the past 100 years. Do you think this has been happening?	1 if 'No' or 'Probably not', 0 else	0.00	0.06	1.00	0.24
Climate change happening = Probably		*– same as above –*	1 if 'Probably', 0 else	0.00	0.34	1.00	0.47
Climate change happening = Yes, definitely		*– same as above –*	1 if 'Yes, definitely', 0 else	0.00	0.43	1.00	0.50
Emotional suppression	22	I control my emotions by not expressing them. *Item from the ERQ (emotional regulation questionnaire) in Gross and John (2003).*	1 if 'Strongly agree' or 'Moderately agree', 0 else	0	0.40	1	0.49
Situational Emotional reappraisal	23	I control my emotions by changing the way I think about the situation I am in. *Item from the ERQ (emotional regulation questionnaire) in Gross and John (2003).*	1 if 'Strongly agree' or 'Moderately agree', 0 else	0	0.46	1	0.50
Concern with future behavioural consequences	24	I consider how things might be in the future, and try to influence those things with my day to day behavior. *Item from the CFCS (consideration of future consequences scale) in Joireman and King (2016).*	1 if 'Strongly agree' or 'Moderately agree', 0 else	0	0.67	1	0.47
Concern with future negative consequences	25	I think it is important to take warnings about negative outcomes seriously even if the negative outcome will not occur for many years. *Item from the CFCS (consideration of future consequences scale) in Joireman and King (2016).*	1 if 'Strongly agree' or 'Moderately agree', 0 else	0	0.72	1	0.45
Mindfulness - focus	26	It is easy for me to concentrate on what I am doing. *Items from the CAMS-R (revised cognitive and affective mindfulness scale) in Feldman et al. (2007).*	1 if 'Strongly agree' or 'Moderately agree', 0 else	0	0.62	1	0.48
Mindfulness – long-term focus	27	I am able to pay close attention to one thing for a long period of time. *Items from the CAMS-R (revised cognitive and affective mindfulness scale) in Feldman et al. (2007).*	1 if 'Strongly agree' or 'Moderately agree', 0 else	0	0.58	1	0.49

Continuation of Table 2

Variable	**Source**[1]	**Question / procedure**	**Value**	**min**	**mean**	**max**	**sd**
Income	15	Household net monthly income. Constructed from the midpoints of the country-specific income quartile categories supplied to respondents.	continuous, in €1000s	0.02	1.87	7.20	1.42
PN score[3]	33, 34, 36, 37, 38, 39, 49, 53, 54, 61, 63	Construction of the variable is explained in section 1	continuous	-0.10	4.45	7.16	1.23
Damage from climate events	(Munich RE, 2016; European Environment Agency, 2019; International Energy Agency, 2019)	Cummulated economic losses from climate-related extremes between 2007 and 2017 taken from (Munich RE, 2016; European Environment Agency, 2019) (i.e. ‘Meteorological events’ + ‘Hydrological events’ + ‘Climatological events’). Adjusted for purchasing power (International Energy Agency, 2019).	in €100s	0.00	2.49	8.60	2.52
Social cost of carbon	(Ricke et al., 2018)	This is the country specific social cost of carbon estimated by (Ricke et al., 2018, median values from Fig. 2).	\$ per tCO_2	-5.05	-0.52	3.42	1.53
World Giving Index	(Charities Aid Foundation, 2018)	Index for the year 2018.	continuous	17.00	34.04	56.00	11.65
Progress regarding Paris Agreement	(Climate Action Network Europe, 2018)	Indicator developed by the Climate Action Network Europe.	continuous	16.00	40.15	77.00	14.18

[1] Numbers in brackets refer to literature sources as given in the section ‘References’, numbers without brackets refer to respective number in our questionnaire.
[2] 329 respondents stated to have no mobility requiring energy input.
[3] PN score enters the regression through its distribution rather than fixed values for each respondent, reported measurements herein were calculated from the individual means of this distribution.

Supplementary Table 3: Country-wise means of the four variables used to create Figure 3 in the main article. Details about the measurement of these variables and descriptive information is found in Supplementary Table 2.

CountryName	**Ancillary benefit = jobs** in %	**Damage from climate events** in €/capita	**Progress regarding Paris Agreement** in %	**Share of donors** in %
Austria	58	737,87	37	31
Belgium	50	309,76	35	17
Bulgaria	60	67,31	26	39
Croatia	65	204,12	43	32
Cyprus	51	125,59	30	54
Czech Republic	36	138,13	33	27
Denmark	48	860,07	49	9
Estonia	45	0,04	24	31
Finland	55	120,27	42	44
France	65	412,31	65	19
Germany	47	604,41	45	23
Greece	66	235,06	32	30
Hungary	69	41,30	32	39
Ireland	62	774,53	21	42
Italy	63	177,35	41	22
Latvia	43	13,58	41	31
Lithuania	41	0,01	42	36
Luxembourg	52	260,04	56	50
Poland	52	61,42	16	35
Portugal	71	185,54	66	33
Romania	72	97,34	33	17
Slovakia	55	61,28	34	24
Slovenia	60	634,24	34	28
Spain	65	203,19	35	14
Sweden	49	137,71	77	19
The Netherlands	37	223,78	58	18
United Kingdom	47	40,12	37	22

Supplementary Table 4: Frequency (#) and percentage (% in country) of the respondents' donations within the countries in our sample. The numbers are used in Figure 4 in the main article.

		Donation						
Country		**0€**	**1€**	**2€**	**3€**	**4€**	**5€**	**Total**
Austria	#	417	69	33	17	4	64	604
	% in country	69.0%	11.4%	5.5%	2.8%	0.7%	10.6%	100.0%
Belgium	#	501	58	12	14	3	16	604
	% in country	82.9%	9.6%	2.0%	2.3%	0.5%	2.6%	100.0%
Bulgaria	#	372	149	31	22	4	27	605
	% in country	61.5%	24.6%	5.1%	3.6%	0.7%	4.5%	100.0%
Croatia	#	408	136	26	10	2	21	603
	% in country	67.7%	22.6%	4.3%	1.7%	0.3%	3.5%	100.0%
Cyprus	#	116	8	2	1	0	124	251
	% in country	46.2%	3.2%	0.8%	0.4%	0.0%	49.4%	100.0%
Czech Republic	#	439	117	16	6	3	21	602
	% in country	72.9%	19.4%	2.7%	1.0%	0.5%	3.5%	100.0%
Denmark	#	551	26	9	4	1	13	604
	% in country	91.2%	4.3%	1.5%	0.7%	0.2%	2.2%	100.0%
Estonia	#	418	100	26	17	4	40	605
	% in country	69.1%	16.5%	4.3%	2.8%	0.7%	6.6%	100.0%
Finland	#	341	47	29	17	4	166	604
	% in country	56.5%	7.8%	4.8%	2.8%	0.7%	27.5%	100.0%
France	#	488	70	13	11	2	20	604
	% in country	80.8%	11.6%	2.2%	1.8%	0.3%	3.3%	100.0%
Germany	#	463	72	22	15	6	25	603
	% in country	76.8%	11.9%	3.6%	2.5%	1.0%	4.1%	100.0%
Greece	#	423	113	20	16	4	28	604
	% in country	70.0%	18.7%	3.3%	2.6%	0.7%	4.6%	100.0%
Hungary	#	367	135	41	24	3	30	600
	% in country	61.2%	22.5%	6.8%	4.0%	0.5%	5.0%	100.0%
Ireland	#	365	92	22	23	4	118	624
	% in country	58.5%	14.7%	3.5%	3.7%	0.6%	18.9%	100.0%
Italy	#	471	84	12	12	3	20	602
	% in country	78.2%	14.0%	2.0%	2.0%	0.5%	3.3%	100.0%
Latvia	#	414	136	5	10	8	27	600
	% in country	69.0%	22.7%	0.8%	1.7%	1.3%	4.5%	100.0%
Lithuania	#	370	97	16	46	8	43	580
	% in country	63.8%	16.7%	2.8%	7.9%	1.4%	7.4%	100.0%
Luxembourg	#	300	94	45	32	4	130	605
	% in country	49.6%	15.5%	7.4%	5.3%	0.7%	21.5%	100.0%
Poland	#	391	152	20	24	4	11	602
	% in country	65.0%	25.2%	3.3%	4.0%	0.7%	1.8%	100.0%
Portugal	#	407	135	20	15	2	24	603
	% in country	67.5%	22.4%	3.3%	2.5%	0.3%	4.0%	100.0%
Romania	#	499	73	7	14	1	9	603
	% in country	82.8%	12.1%	1.2%	2.3%	0.2%	1.5%	100.0%
Slovakia	#	460	86	29	7	3	18	603
	% in country	76.3%	14.3%	4.8%	1.2%	0.5%	3.0%	100.0%
Slovenia	#	438	117	21	6	2	22	606
	% in country	72.3%	19.3%	3.5%	1.0%	0.3%	3.6%	100.0%
Spain	#	514	52	7	14	2	11	600
	% in country	85.7%	8.7%	1.2%	2.3%	0.3%	1.8%	100.0%
Sweden	#	489	58	8	10	7	31	603
	% in country	81.1%	9.6%	1.3%	1.7%	1.2%	5.1%	100.0%
The Netherlands	#	497	38	20	16	7	26	604
	% in country	82.3%	6.3%	3.3%	2.6%	1.2%	4.3%	100.0%
United Kingdom	#	487	91	16	12	2	15	623
	% in country	78.2%	14.6%	2.6%	1.9%	0.3%	2.4%	100.0%
Total	#	11406	2405	528	415	97	1100	15951
	% in country	71.5%	15.1%	3.3%	2.6%	0.6%	6.9%	100.0%

Supplementary Table 5: Results of the subsample regressions; re-estimation of the model used to create table 1 in the Main text, where respondents with the same level of belief in climate change were pooled into a subsample, i.e. resulting in four subsamples.

	Level I			Level II			Level III			Level IV		
Variable	**mean**	**sd**	**p>0**	**mean**	**sd**	**p>0**	**mean**	**sd**	**p>0**	**mean**	**sd**	**p>0**
Variables defined at household level												
Comsumption (MWh)	0.029	0.052	0.714	0.058	0.032	0.968	-0.044	0.024	0.026	-0.086	0.032	0.002
Mobility (MWh)	0.006	0.006	0.828	0.004	0.005	0.779	-0.005	0.003	0.049	-0.017	0.005	0.000
Heating and cooling (MWh)	-0.032	0.018	0.028	-0.007	0.009	0.223	-0.004	0.006	0.224	0.001	0.009	0.563
Collective efficacy	-0.006	0.177	0.476	0.026	0.100	0.608	0.097	0.066	0.931	0.124	0.087	0.922
Male	0.017	0.191	0.542	-0.164	0.103	0.053	-0.117	0.068	0.042	-0.223	0.093	0.007
Urban	-0.023	0.197	0.471	0.052	0.109	0.689	-0.115	0.075	0.062	-0.129	0.109	0.117
Number of children of respondent	-0.060	0.099	0.261	0.002	0.056	0.510	0.027	0.039	0.751	0.043	0.055	0.781
Household size	-0.121	0.090	0.084	0.064	0.054	0.889	-0.112	0.033	0.000	-0.118	0.044	0.004
Age 35-44	-0.169	0.233	0.226	-0.130	0.133	0.161	0.069	0.095	0.765	-0.226	0.118	0.030
Age 45-54	0.108	0.269	0.644	-0.025	0.147	0.419	-0.094	0.100	0.176	0.003	0.136	0.496
Age 55+	-0.122	0.284	0.311	-0.054	0.162	0.354	0.041	0.111	0.636	0.152	0.153	0.843
Ancillary benefit = jobs	0.522	0.241	0.993	0.172	0.121	0.926	-0.076	0.072	0.144	0.127	0.101	0.896
Ancillary benefit = environment	0.135	0.217	0.737	0.041	0.127	0.632	0.192	0.100	0.970	0.134	0.183	0.769
Social status = below average	-0.118	0.226	0.285	-0.174	0.121	0.079	-0.180	0.092	0.027	-0.265	0.114	0.012
Social status = above average	-0.125	0.230	0.283	0.037	0.137	0.599	0.064	0.088	0.764	0.338	0.120	0.998
Political econ = left from center	0.110	0.294	0.634	-0.035	0.177	0.412	-0.048	0.109	0.323	-0.049	0.143	0.364
Political econ = right from center	0.315	0.312	0.851	0.060	0.168	0.626	0.114	0.108	0.857	0.170	0.151	0.871
Political social = left from center	0.156	0.306	0.688	0.130	0.187	0.755	0.122	0.113	0.860	0.350	0.144	0.992
Political social = right from center	-0.557	0.285	0.018	-0.181	0.154	0.120	-0.091	0.103	0.182	-0.236	0.141	0.049
Mostly natural causes	-0.358	0.204	0.039	-0.078	0.149	0.289	-0.342	0.118	0.004	-0.301	0.261	0.126
Mostly human activities	0.163	0.224	0.770	-0.098	0.110	0.182	0.142	0.068	0.984	0.137	0.105	0.899
Emotional suppression	0.017	0.194	0.530	-0.185	0.108	0.042	0.042	0.071	0.724	0.019	0.092	0.577
Emotional reappraisal	0.158	0.209	0.776	0.070	0.117	0.721	-0.078	0.072	0.136	0.026	0.093	0.613
Concern with future behavioural consequences	-0.073	0.217	0.368	0.147	0.114	0.902	0.098	0.075	0.901	0.285	0.104	0.997
Concern with future negative consequences	-0.820	0.286	0.000	-0.364	0.125	0.001	-0.100	0.081	0.107	-0.254	0.117	0.013
Mindfulness - focus	-0.116	0.223	0.300	0.160	0.124	0.903	-0.004	0.079	0.483	0.420	0.110	1.000
Mindfulness – long-term focus	0.240	0.223	0.868	0.087	0.120	0.766	0.159	0.076	0.981	0.248	0.106	0.990
Income	-0.050	0.120	0.327	0.086	0.065	0.913	0.131	0.047	0.998	0.271	0.064	1.000
PN score	0.088	0.088	0.850	0.242	0.065	1.000	0.247	0.042	1.000	0.211	0.048	1.000
Variables defined at country level												
Damage from climate events	-0.051	0.083	0.147	-0.105	0.054	0.029	-0.076	0.051	0.070	-0.096	0.075	0.090
Social cost of carbon	0.201	0.197	0.869	0.299	0.250	0.929	0.138	0.136	0.850	0.170	0.195	0.809
World donation index	0.014	0.028	0.693	0.014	0.028	0.703	0.003	0.020	0.575	-0.002	0.028	0.483
Progress regarding Paris Agreement	-0.042	0.023	0.012	-0.028	0.018	0.045	-0.016	0.012	0.082	-0.022	0.018	0.097

A description of all variables used in this table is provided in table 2 of the Supplementary Materials.

The metric in column '$p > 0$' provides an at-a-glance assessment if a given variable has a predominantly positive effect ($p > 0$ is close to one), a predominately negative effect (p>0 is close to zero) or an ambivalent effect ($p > 0$ approaches 0.5). We will focus our discussion on regressors for which at least 95% of the posterior distribution lies to the left or to the right of zero, and refer to them as "significant", in slight abuse of classical terminology.

The marginal effect of a variable relates the avg. change in WTD for a one unit increase in the associated variable. As an example, if PN Score of respondents increases by one unit, an average increase of their WTD by 22 cents is expected.

Country-specific fixed effect terms are included in the model but for brevity are not reported in this table.

Supplementary Table 6: Expected mean WTD for the investigated carbon offset program for the full sample and the 4 levels of climate change belief and split up according to the assumed reason for climate change. This table contains the data behind figure 4 in the Main text.

	Level 1	Level 2	Level 3	Level 4	Full Sample
Mean WTD all	1.16 €	1.26 €	1.48 €	2.12 €	1.68 €
95% C.I.	[0.97, 1.37]	[1.13, 1.40]	[1.38, 1.57]	[2.00, 2.25]	[1.61, 1.74]
Mean WTD natural cause	1.44 €	1.16 €	1.52 €	2.23 €	1.88 €
95% C.I.	[1.03, 1.90]	[0.97, 1.36]	[1.39, 1.66]	[2.09, 2.37]	[1.79, 1.98]
Mean WTD natural and human cause	1.19 €	1.34 €	1.57 €	1.82 €	1.53 €
95% C.I.	[0.93, 1.48]	[1.17, 1.53]	[1.41, 1.71]	[1.60, 2.03]	[1.44, 1.63]
Mean WTD human cause	0.92 €	1.09 €	0.63 €	1.42 €	0.91 €
95% C.I.	[0.61, 1.26]	[0.83, 1.40]	[0.58, 0.68]	[1.04, 1.91]	[0.79, 1.03]

Supplementary Table 7: Prior settings for the Bayesian analysis of the donation model as outlined in section 2.1 herein.

Prior	Value
r	1
a_ϱ	1
A_ϱ	0.01
$\boldsymbol{a}_{\boldsymbol{\delta}^2}$	2
$\boldsymbol{A}_{\boldsymbol{\delta}^2}$	1
$\boldsymbol{a}_{\boldsymbol{\gamma}}$	0
$\boldsymbol{A}_{\boldsymbol{\gamma}}$	0.01
$\boldsymbol{a}_\beta$	$\mathbf{0}$
$\boldsymbol{A}_\beta$	$100 \cdot \boldsymbol{I}_K$
a_λ	0
A_λ	100

where K is the length of $\boldsymbol{x}_i$ and $\mathbf{0}$ a vector of corresponding lengths holding zeros only.

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