



Climate Change Proximity and Support for Sustainability Initiatives: The Case of Green Public Procurement

Ana-Maria Dimand, Ph.D., Boise State University

(co-author: Vaiva Kalesnikaite, Ph.D., Clemson University)

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MOTIVATION

Americans largely view climate change as a distant threat that will affect people and places far away (Leiserowitz et al. 2013; McDonald et al. 2015).

Communicating proximal effects of climate change may raise individual concern.

Yet, extant research on climate change issue proximity shows mixed results (Brügger et al. 2015; Bhalla 2022; Scannell and Gifford 2013; Spence and Pidgeon 2010) and focused more on individual efforts and not the government's role

We ask: Does climate change proximity affect support for local government sustainability practices and willingness to engage with the local government?

THEORETICAL FRAMEWORK: PSYCHOLOGICAL DISTANCE

Construal level theory: Psychologically close objects will be viewed more concretely than abstractly (Trope and Liberman 2003).

Types of psychological distance:

- Social;
- Temporal;
- Spatial;
- Hypothetical.

“[R]emote locations should bring to mind the distant rather than the near future, other people rather than oneself, and unlikely rather than likely events” (Trope and Liberman 2010, p. 442).

THEORETICAL FRAMEWORK: PSYCHOLOGICAL DISTANCE & PROXIMITY

However:

“As distance increases, changes in objective distance may produce smaller corresponding changes in psychological distance” (Trope and Liberman 2010, p. 444).

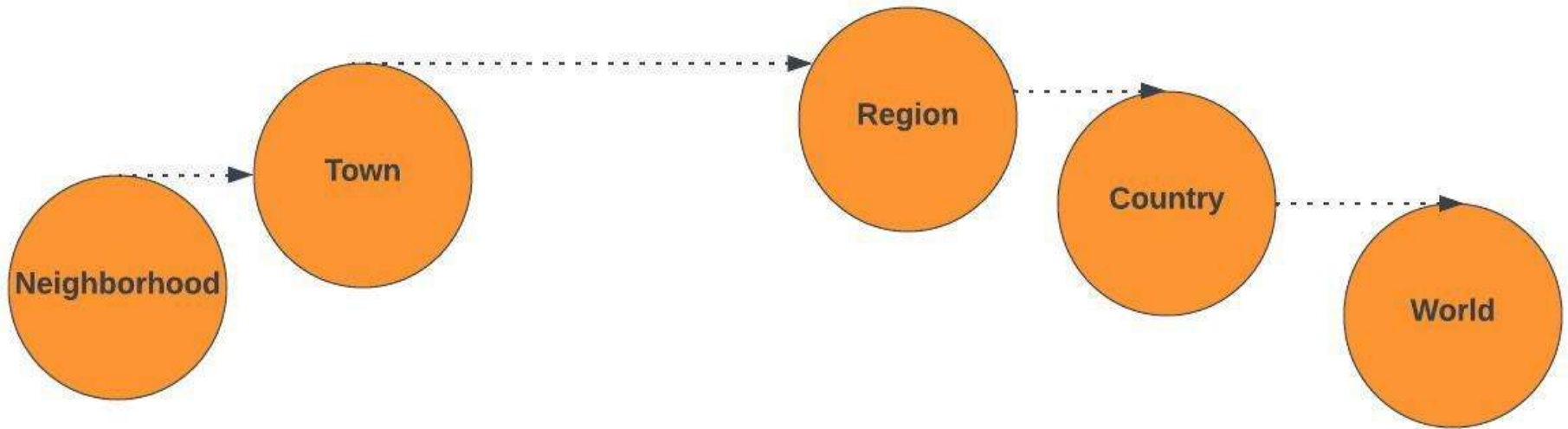


Figure 1. Changes in Psychological Distance

THEORETICAL FRAMEWORK: PROXIMIZING CLIMATE CHANGE

Proximizing climate change and its effects increases:

- issue salience (Blennow et al. 2012; Lorenzoni and Pidgeon 2006);
- the level of threat individuals feel (Lujala, Lein, and Rod 2015);
- the level of concern (Rochefort and Cobb 1994).

Proximity in prior research:

- Defined very broadly (Bhalla 2022; Scannell and Gifford 2013; Spence and Pidgeon 2010; Spence, Poortinga, and Pidgeon 2012);
- Affects views on climate change when experiencing disasters (Lujala, Lein, and Rod 2015; Osberghaus and Fugger 2022);
- Affects support for mitigation and adaptation policies (Blennow et al. 2012; Demski et al. 2017).

Hypothesis 1: Spatial proximity of climate change effects will increase support for local government mitigation efforts.

THEORETICAL FRAMEWORK: SPATIAL DISTANCE AND VALUES

Construal level theory predicts that as psychological distance increases, individuals will more likely use their values to guide perceptions and intentions (Trope and Liberman 2010).

The ideological divide regarding climate change has been well documented in the US (McCright and Dunlap 2011; Rochefort and Cobb 1994).

Political affiliation moderates the link between experiences of extreme weather and beliefs of climate change (Ogunbode, Liu, and Tausch 2017; McDonald et al. 2015).

Hypothesis 2: The impact of spatial proximity of climate change effects on support for local government mitigation efforts will be stronger for more politically conservative individuals.

THEORETICAL FRAMEWORK: SPATIAL DISTANCE AND VALUES

Micro (individual) and macro (societal) perspectives on issues are related (Wood and Vedlitz 2007).

Construal level theory predicts that (Trope and Liberman 2010):

- When psychological distance to an object is small, evaluations will be influenced largely by the social context and others' perceptions;
- As the distance increases, evaluation will better reflect one's ideology.

Hypothesis 3: The impact of a community's predominant political ideology on individual support for local government mitigation efforts will decrease as the spatial proximity of climate change effects increases.

THEORETICAL FRAMEWORK: MITIGATION SUPPORT

Closer spatial proximity will make psychological distancing more challenging (McDonald et al. 2015) and increase the likelihood of action.

Spence et al. (2012, p. 959) argue: “bridging this disassociation between local and global impacts of climate change in order to promote personal action.”

According to construal level theory, psychological distance will affect prediction, evaluation, and action (Trope and Liberman 2010).

Hypothesis 4: The spatial proximity of climate change effects will affect an individual’s willingness to engage with the local government regarding mitigation efforts.

GREEN PUBLIC PROCUREMENT

GPP incorporates environmental requirements when buying goods and services from third parties (Behravesh et al. 2022).

Government significant purchasing power can be leveraged as a means of climate change mitigation and reducing environmental impacts of production and consumption (Dimand 2022).

Examples of GPP:

- Environmental labels;
- Reduced packaging;
- Eco-friendly transportation;
- Use of recycled materials.

METHODS AND DATA

Survey experiment sample: 1,440 US citizens, recruited through CloudResearch (Amazon MTurk panels)

Fictional newspaper prompt:

- Respondents moving to a community of Springfield
- City Council proposing a new green purchasing rule
- Overflowing landfills causing contamination and exacerbating climate change

Manipulation of issue proximity:

- 1) Local ($n=353$)
- 2) Regional ($n=334$)
- 3) Global ($n=347$)
- 4) No proximity (control) ($n=344$)

Experiment pre-registered on aspredicted.org

DEPENDENT VARIABLES

Hypotheses 1-3:

- *GPP Support:* 1 (strongly oppose) to 5 (strongly support) the new rule.
- *Willing to Pay:*
 - 1 - \$0 (not willing to pay)
 - 2 - \$1 to \$5
 - 3 - \$6 to \$10
 - 4 - \$11 to \$15
 - 5 - Over \$15

Hypothesis 4:

- *Online Comment:*
 - 1 - submit a comment
 - 2 - not submit a comment
 - 3 - maybe

INDEPENDENT VARIABLES

Hypothesis 2:

- *Conservative*: Respondent's political ideology, ranging from 1 (*extremely liberal*) to 7 (*extremely conservative*).

Hypothesis 3:

A set of binary variables representing the respondent's political ideology (*Conservative, Liberal, Other*) and their county's majority (*Conservative* or *Liberal*) vote for the 2020 presidential candidate.

- *Conservative-Conservative*: n=180
- *Conservative-Liberal*: n=203
- *Liberal-Liberal*: n=542
- *Liberal-Conservative*: n=243
- *Other-Liberal*: n=127
- *Other-Conservative*: n=80

DESCRIPTIVE STATISTICS BY TREATMENT GROUP

Dependent Variables	Local Issue Proximity (n=353)				Regional Issue Proximity (n=334)				Global Issue Proximity (n=347)				No Issue Proximity (Control) (n=344)			
	Mean	St Dev	Min	Max	Mean	St Dev	Min	Max	Mean	St Dev	Min	Max	Mean	St Dev	Min	Max
<i>GPP Support</i>	3.76	0.07	1	5	3.72	0.07	1	5	3.67	0.07	1	5	3.47	0.07	1	5
<i>Willing to Pay</i>	2.64	1.2	1	5	2.5	1.23	1	5	2.49	1.18	1	5	2.4	1.16	1	5
<i>Online Comment</i>	-	-	1	3	-	-	1	3	-	-	1	3	-	-	1	3

RESULTS: HYPOTHESIS 1

GPP Support:

- Higher support for GPP when assigned to the local issue proximity condition (mean of 5.64) compared to the control condition of no issue proximity ($M\Delta=0.376$, $p=0.026$).
- No statistically significant differences between regional ($p=0.18$) and global issue proximity ($p=0.22$) compared to the control (no issue proximity).

Willingness to Pay:

- The mean of *Willing to Pay* when assigned to the local issue proximity is higher than no issue proximity (control) ($M\Delta=0.238$, $p=0.042$).
- We find some support for Hypothesis 1.

RESULTS: HYPOTHESIS 2

Interactions Between Treatments and Respondents' Political Affiliation

DV: GPP Support

	B	OR
Local Issue Proximity	0.217 (0.315)	1.243 (0.392)
Regional Issue Proximity	0.444 (0.314)	1.6 (0.49)
Global Issue Proximity	-0.05 (0.32)	0.952 (0.305)
Conservative	-0.5*** (0.058)	0.606*** (0.035)
Conservative x Local Issue Proximity	0.06 (0.8)	1.059 (0.084)
Conservative x Regional Issue Proximity	-0.041 (0.08)	0.96 (0.078)
Conservative x Global Issue Proximity	0.1 (0.082)	1.102 (0.09)
Log likelihood	-2123.87	
Wald χ^2	275.08***	
Observations	1375	

Note: ***p <.01, **p <.05, *p <.1, standard errors in parentheses. No issue proximity (control) serves as the reference category. Cut points not reported.

RESULTS: HYPOTHESIS 2

Interactions Between Treatments and Respondents' Political Affiliation

DV: Willing to Pay

	B	OR
Local Issue Proximity	0.201 (0.294)	1.222 (0.36)
Regional Issue Proximity	0.389 (0.291)	1.475 (0.429)
Global Issue Proximity	-0.038 (0.3)	0.963 (0.289)
Conservative	-0.362*** (0.056)	0.696*** (0.039)
Conservative x Local Issue Proximity	0.056 (0.078)	1.058 (0.083)
Conservative x Regional Issue Proximity	-0.081 (0.08)	0.922 (0.072)
Conservative x Global Issue Proximity	0.062 (0.08)	1.064 (0.085)
Log likelihood	-1972.88	
Wald χ^2	165.89***	
Observations	1375	

Note: ***p <.01, **p <.05, *p <.1, standard errors in parentheses. No issue proximity (control) serves as the reference category. Cut points not reported.

RESULTS: HYPOTHESIS 3

DV: GPP Support

	Full Sample		Local Issue Proximity		Regional Issue Proximity		Global Issue Proximity		No Issue Proximity	
	B	OR	B	OR	B	OR	B	OR	B	OR
Liberal-Liberal	1.516*** (0.149)	4.554*** (0.679)	1.515*** (0.281)	4.55*** (0.279)	1.659*** (0.466)	5.254*** (2.447)	1.383*** (0.294)	3.986*** (0.172)	1.669*** (0.309)	5.306*** (1.639)
Liberal-Conservative	1.766*** (0.172)	5.848*** (1.005)	1.783*** (0.334)	5.945*** (1.987)	2.001*** (0.502)	7.425*** (3.727)	1.939*** (0.351)	6.951*** (2.437)	1.681*** (0.423)	5.373*** (2.27)
Conservative-Liberal	0.127 (0.207)	1.135 (0.235)	0.185 (0.45)	1.203 (0.542)	0.143 (0.412)	1.154 (0.476)	0.212 (0.293)	1.237 (0.482)	0.112 (0.472)	1.118 (0.528)
Other-Liberal	0.579** (0.246)	1.78** (0.439)	0.961 (0.54)	2.614* (1.141)	0.621 (0.514)	1.861 (0.956)	0.425 (0.349)	1.53 (0.534)	0.224 (0.497)	1.251 (0.622)
Other-Conservative	0.59 (0.301)	1.803* (0.543)	1.541** (0.589)	4.667** (2.748)	0.151 (0.601)	1.163 (0.7)	0.161 (0.39)	1.174 (0.458)	0.612 (0.639)	1.844 (1.178)
Female	0.146 (0.11)	1.157 (0.127)	-0.101 (0.186)	0.904 (0.168)	0.354 (0.221)	1.425 (0.315)	-0.053 (0.227)	0.948 (0.215)	0.296 (0.206)	1.345 (0.277)
Income	-0.026 (0.021)	0.975 (0.02)	-0.048 (0.048)	0.954 (0.046)	-0.07** (0.033)	0.932** (0.03)	-0.049 (0.038)	0.952 (0.036)	0.048 (0.234)	1.049 (0.245)
Education	0.007 (0.04)	1.007 (0.04)	0.068 (0.101)	1.07 (0.109)	0.094 (0.06)	1.099 (0.066)	0.032 (0.074)	1.033 (0.076)	-0.136 (0.057)	0.873 (0.05)
Age	0.001 (0.004)	1.001 (0.004)	-0.006 (0.008)	0.994 (0.008)	-0.001 (0.008)	0.1 (0.008)	0.009 (0.007)	1.009 (0.007)	0.005 (0.008)	1.005 (0.008)
White	-0.004 (0.134)	0.996 (0.134)	-0.251 (0.287)	0.778 (0.223)	-0.197 (0.286)	0.821 (0.245)	0.212 (0.293)	1.237 (0.362)	0.048 (0.234)	1.049 (0.245)
Log likelihood	-1883.47		-467.82		-441.25		-480.89		-466.86***	
Wald X ²	277.47***		79.92***		78.43***		49.22***		64.96***	
Observations	1327		340		322		339		326	

Note: ***p <.01, **p <.05, *p <.1, standard errors in parentheses. *Conservative-Conservative* serves as the reference category. Cut points not reported.

RESULTS: HYPOTHESIS 3

DV: GPP Support

	Full Sample		Local Issue Proximity		Regional Issue Proximity		Global Issue Proximity		No Issue Proximity	
	B	OR	B	OR	B	OR	B	OR	B	OR
Liberal-Liberal	1.516*** (0.149)	4.554*** (0.679)	1.515*** (0.281)	4.55*** (0.279)	1.659*** (0.466)	5.254*** (2.447)	1.383*** (0.294)	3.986*** (0.172)	1.669*** (0.309)	5.306*** (1.639)
Liberal-Conservative	1.766*** (0.172)	5.848*** (1.005)	1.783*** (0.334)	5.945*** (1.987)	2.001*** (0.502)	7.425*** (3.727)	1.939*** (0.351)	6.951*** (2.437)	1.681*** (0.423)	5.373*** (2.27)
Conservative-Liberal	0.127 (0.207)	1.135 (0.235)	0.185 (0.45)	1.203 (0.542)	0.143 (0.412)	1.154 (0.476)	0.212 (0.293)	1.237 (0.482)	0.112 (0.472)	1.118 (0.528)
Other-Liberal	0.579** (0.246)	1.78** (0.439)	0.961 (0.54)	2.614* (1.141)	0.621 (0.514)	1.861 (0.956)	0.425 (0.349)	1.53 (0.534)	0.224 (0.497)	1.251 (0.622)
Other-Conservative	0.59 (0.301)	1.803* (0.543)	1.541** (0.589)	4.667** (2.748)	0.151 (0.601)	1.163 (0.7)	0.161 (0.39)	1.174 (0.458)	0.612 (0.639)	1.844 (1.178)
Female	0.146 (0.11)	1.157 (0.127)	-0.101 (0.186)	0.904 (0.168)	0.354 (0.221)	1.425 (0.315)	-0.053 (0.227)	0.948 (0.215)	0.296 (0.206)	1.345 (0.277)
Income	-0.026 (0.021)	0.975 (0.02)	-0.048 (0.048)	0.954 (0.046)	-0.07** (0.033)	0.932** (0.03)	-0.049 (0.038)	0.952 (0.036)	0.048 (0.234)	1.049 (0.245)
Education	0.007 (0.04)	1.007 (0.04)	0.068 (0.101)	1.07 (0.109)	0.094 (0.06)	1.099 (0.066)	0.032 (0.074)	1.033 (0.076)	-0.136 (0.057)	0.873 (0.05)
Age	0.001 (0.004)	1.001 (0.004)	-0.006 (0.008)	0.994 (0.008)	-0.001 (0.008)	0.1 (0.008)	0.009 (0.007)	1.009 (0.007)	0.005 (0.008)	1.005 (0.008)
White	-0.004 (0.134)	0.996 (0.134)	-0.251 (0.287)	0.778 (0.223)	-0.197 (0.286)	0.821 (0.245)	0.212 (0.293)	1.237 (0.362)	0.048 (0.234)	1.049 (0.245)
Log likelihood	-1883.47		-467.82		-441.25		-480.89		-466.86***	
Wald X ²	277.47***		79.92***		78.43***		49.22***		64.96***	
Observations	1327		340		322		339		326	

Note: ***p <.01, **p <.05, *p <.1, standard errors in parentheses. *Conservative-Conservative* serves as the reference category. Cut points not reported.

RESULTS: HYPOTHESIS 3

DV: Willing to Pay										
	Full Sample		Local Issue Proximity		Regional Issue Proximity		Global Issue Proximity		No Issue Proximity	
	B	OR	B	OR	B	OR	B	OR	B	OR
Liberal-Liberal	1.547*** (0.139)	4.697*** (0.654)	1.353*** (0.272)	3.868*** (1.053)	1.685*** (0.419)	5.394*** (2.258)	1.185*** (0.329)	3.27*** (1.074)	2.078*** (0.317)	7.991*** (2.534)
Liberal-Conservative	1.5 (0.145)	4.484*** (0.651)	1.398*** (0.303)	4.046*** (1.225)	1.65*** (0.462)	5.203*** (2.405)	1.429*** (0.322)	4.174*** (1.346)	1.766*** (0.342)	5.845*** (1.99)
Conservative-Liberal	0.216 (0.191)	1.241 (0.237)	0.505 (0.367)	1.657 (0.607)	0.194 (0.399)	1.214 (0.485)	-0.216 (0.348)	0.805 (0.28)	0.465 (0.048)	1.591 (0.768)
Other-Liberal	0.501* (0.265)	1.651* (0.427)	0.911** (0.376)	2.487** (0.935)	0.417 (0.517)	1.517 (0.783)	0.006 (0.423)	1.006 (0.426)	0.485 (0.47)	1.623 (0.763)
Other-Conservative	0.640** (0.31)	1.897** (0.589)	1.246** (0.498)	3.476** (1.73)	0.532 (0.612)	1.703 (1.042)	0.07 (0.547)	1.073 (0.587)	0.739 (0.741)	2.095 (1.552)
Female	-0.134 (0.109)	0.875 (0.095)	0.078 (0.192)	1.081 (0.208)	-0.178 (0.231)	0.837 (0.193)	-0.463*** (0.154)	0.629*** (0.097)	-0.033 (0.263)	0.967 (0.254)
Income	0.007 (0.025)	1.007 (0.025)	0.036 (0.053)	1.036 (0.055)	-0.025 (0.036)	0.976 (0.035)	-0.044 (0.046)	0.957 (0.044)	0.041 (0.05)	1.042 (0.052)
Education	0.054 (0.039)	1.055 (0.041)	0.201** (0.086)	1.223** (0.105)	0.141*** (0.05)	1.151*** (0.057)	-0.024 (0.093)	0.976 (0.091)	-0.092 (0.06)	0.912 (0.055)
Age	-0.003 (0.004)	0.997 (0.004)	-0.008 (0.009)	0.992 (0.009)	-0.003 (0.009)	0.997 (0.009)	0.002 (0.007)	1.002 (0.007)	0.001 (0.01)	1.001 (0.01)
White	0.051 (0.118)	1.052 (0.124)	-0.094 (0.233)	0.911 (0.212)	0.096 (0.367)	1.1 (0.404)	-0.081 (0.223)	0.923 (0.206)	0.148 (0.239)	1.16 (0.278)
Log likelihood	-1933.45		-489.52		-462.33		-473.55		-484.47	
Wald X ²	264.87***		101.86***		61.73***		58.27***		78.95***	
Observations	1354		340		322		339		353	

Note: ***p <.01, **p <.05, *p <.1, standard errors in parentheses. *Conservative-Conservative* serves as the reference category. Cut points not reported.

RESULTS: HYPOTHESIS 4

The Effect of Issue Proximity on Residents' Willingness to Submit an Online Comment on GPP

	DV: Online Comment	
	<i>(base outcome-not submit a comment)</i>	
	B	RRR
<i>Outcome: Submit an Online Comment</i>		
Local Issue Proximity	0.66*** (0.208)	1.935*** (0.403)
Regional Issue Proximity	0.255 (0.197)	1.129 (0.254)
Global Issue Proximity	0.155 (0.197)	1.168 (0.231)
<i>Outcome: Maybe/Undecided</i>		
Local Issue Proximity	0.349 (0.222)	1.148 (0.315)
Regional Issue Proximity	-0.151 (0.215)	0.86 (0.185)
Global Issue Proximity	0.052 (0.209)	1.053 (0.22)
Log likelihood	-1418.71	
Wald X^2	15.33**	
Observations	1377	

Note: ***p <.01, **p <.05, *p <.1, standard errors in parentheses. No issue proximity (control) serves as the reference category.

DISCUSSION AND IMPLICATIONS

- Think global, act local? We find that respondents think *and* act local;
- As posited by the construal level theory, psychological distance is not linear (local vs. all other distances);
- No difference in how individuals of different political affiliation respond to psychological distance;
- However, in line with the construal level theory, individual perceptions are affected by the predominant political ideology under smaller spatial proximity of climate change effects.

Implications:

- Communicating local effects of climate change may help promote mitigation policies;
- GPP and other mitigation policies could be promoted by emphasizing other benefits (e.g., less pollution) than fighting climate change;
- Communication of climate change effects/risk communication.

THANK YOU!

Ana-Maria Dimand, Ph.D., anamariadimand@boisestate.edu

Vaiva Kalesnikaite, Ph.D., vkalesn@clemson.edu

APPENDIX: SURVEY TREATMENTS

1. Local Issue Proximity



Springfield City Council Seeking Public Input on a New Rule

February 28, 2022

Springfield City Council is seeking residents' input on a new rule regarding public purchasing. Traditionally, Springfield City has bought goods and services from nonprofit organizations, businesses, and other governments based on the lowest initial cost. If the new rule is approved, Springfield will move to green public purchasing. This type of purchasing targets buying goods and services that are environmentally friendly. For example, City's events would be supplied by vendors that use recyclable and biodegradable materials instead of single-use plastics that end up in landfills. While green public purchasing may be more expensive at the beginning, it provides significant financial savings long term.

City Council's move comes weeks after a recent report, which indicates that unrecyclable waste has been overflowing Springfield's landfills, causing pollution issues and contaminating local soil and bodies of water. According to the report, landfills have significantly contributed to the effects of climate change that will be felt in Springfield for years to come.

To take action on the landfill issue, Springfield City Council invites residents to submit their comments on the new rule through the City's online portal.

APPENDIX: SURVEY TREATMENTS

2. Regional Issue Proximity



Springfield City Council Seeking Public Input on a New Rule

February 28, 2022

Springfield City Council is seeking residents' input on a new rule regarding public purchasing. Traditionally, Springfield City has bought goods and services from nonprofit organizations, businesses, and other governments based on the lowest initial cost. If the new rule is approved, Springfield will move to green public purchasing. This type of purchasing targets buying goods and services that are environmentally friendly. For example, City's events would be supplied by vendors that use recyclable and biodegradable materials instead of single-use plastics that end up in landfills. While green public purchasing may be more expensive at the beginning, it provides significant financial savings long term.

City Council's move comes weeks after a recent report, which indicates that unrecyclable waste has been overflowing landfills in the United States, causing pollution issues and contaminating nation's soil and bodies of water. According to the report, landfills have significantly contributed to the effects of climate change that will be felt in the United States for years to come.

To take action on the landfill issue, Springfield City Council invites residents to submit their comments on the new rule through the City's online portal.

APPENDIX: SURVEY TREATMENTS

3. Global Issue Proximity



Springfield City Council Seeking Public Input on a New Rule

February 28, 2022

Springfield City Council is seeking residents' input on a new rule regarding public purchasing. Traditionally, Springfield City has bought goods and services from nonprofit organizations, businesses, and other governments based on the lowest initial cost. If the new rule is approved, Springfield will move to green public purchasing. This type of purchasing targets buying goods and services that are environmentally friendly. For example, City's events would be supplied by vendors that use recyclable and biodegradable materials instead of single-use plastics that end up in landfills. While green public purchasing may be more expensive at the beginning, it provides significant financial savings long term.

City Council's move comes weeks after a recent report, which indicates that unrecyclable waste has been overflowing landfills worldwide, causing pollution issues and contaminating soil and bodies of water globally. According to the report, landfills have significantly contributed to the effects of climate change that will be felt globally for years to come.

To take action on the landfill issue, Springfield City Council invites residents to submit their comments on the new rule through the City's online portal.

APPENDIX: SURVEY TREATMENTS

4. No Issue Proximity



Springfield City Council Seeking Public Input on a New Rule

February 29, 2022

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Springfield City Council invites residents to submit their comments on the new rule through the City's online portal.