

Article

Interest in and Awareness of French President Emmanuel Macron’s “Make our Planet Great Again” Initiative

Joshua S. Dadural and Leah R. Reznikov * 

Physiological Sciences, University of Florida, Gainesville, FL 32610, USA; jdadural@ufl.edu

* Correspondence: leahreznikov@ufl.edu; Tel.: +1-352-294-4059

Received: 31 May 2018; Accepted: 20 June 2018; Published: 25 June 2018



Abstract: President Donald Trump’s withdrawal from the Paris Agreement served as an impetus for the French President to enact “Make our Planet Great Again”, an initiative aimed at attracting international scientists to study climate change. In the current study, we evaluated the extent of interest and awareness towards this initiative. Our goal was to determine factors that impacted awareness and interest, with the hypothesis that political views and beliefs towards climate change would be strong influencers. We also predicted that there would be a greater number of scientists among the aware and interested participants. To test these hypotheses, we distributed anonymous online surveys during October–November 2017 to multiple academic departments within the University of Florida, a land grant institution with top ranking programs in environmental sciences, agriculture, biodiversity conservation, and horticulture. We recruited 185 participants. Approximately 45% of the participants were aware of French President Macron’s initiative; of those aware, 51.8% expressed interest. We found a moderate influence of political party on awareness and interest. Nearly all of the participants that were aware and interested in the initiative agreed that climate change was a real event. Slightly lower agreement was reported by the unaware and uninterested. Surprisingly, there were fewer scientists among the aware and interested participants compared to those that were unaware and uninterested participants. These findings highlight that both political party and belief towards climate change influenced interest and awareness in President Emmanuel Macron’s initiative. Thus, employing strategies that engage all political parties, as well as educating individuals on climate change, might result in more effective future global initiatives.

Keywords: Paris Agreement; Make our Planet Great Again; President Macron; climate change

1. Introduction

Global warming, which is the steady increase in global temperatures on planet Earth, has been a topic of interest for decades (Broecker 1975; Booth 1988; United Nations 1992). Continued global warming presents a potentially grim future for our planet, with rising sea levels, increased plant and animal loss, and eventual disruption to the ecosystem that is vital to support human life (Peltier and Tushingham 1989; Graham and Grimm 1990; Glynn 1991; Rubin et al. 1992). Indeed, some argue that current events, such as the recent loss of the African baobabs (Patrut et al. 2018), as well as the increased frequency of intense hurricanes (Holland and Bruyère 2014), are due, at least in part, to global warming.

Although global warming has incited significant interest, it has also been highly controversial (Roberts 1989). The controversy surrounding global warming hinges upon two main features: (1) debate whether reports stating global warming is occurring are accurate (Keller 2003); and (2) debate whether it is the result of human activities or just natural variability (Hamilton et al. 2015; Folland et al. 2018).

Despite this debate, a plan was implemented by the United Nations Framework Convention on Climate Change in December 2015 to combat climate change. This plan, known as the Paris Agreement, aims to better maintain the global environment while combatting the consequences of climate change through an international partnership with participating countries (Rogelj et al. 2016; Gomez-Echeverri 2018; Markandya et al. 2018). On 1 June 2017, the United States President Donald Trump withdrew the United States from the Paris Agreement (Tollefson 2017; Esty and Bell 2018; Park 2018). In response to President Trump's withdrawal, French President Emmanuel Macron launched an initiative to invite scientists, engineers, and entrepreneurs from the United States to come to France to initiate or continue their research on the environment and climate change (Figueres et al. 2017; Pain 2017; Macron 2018). President Macron's "Make Our Planet Great Again" initiative offered grants in excess of 1 million USD to junior and senior climate researchers (Butler 2017). Interested individuals were to apply and then undergo a selection process; if chosen, then they would conduct their research at a French institution.

Macron's "Make Our Planet Great Again" set guidelines, steps, and even incentives for those who were willing to move to France. However, the extent of success of Macron's initiative relied heavily upon the response of those he was particularly targeting: scientists from the United States (Pain 2017). The initiative would only be successful if it attracted interest from qualified candidates.

In pursuit of this goal, President Macron faced several potential challenges. For example, a 2010 survey indicated that about half of Americans were not worried about climate change (Leiserowitz et al. 2010). Similarly, estimates that only 35–44% of Americans viewed global warming as a serious problem suggested that it was not a priority for the majority of Americans (Smith and Leiserowitz 2012). Part of the reason that Americans appear to be less interested in global warming is because they view it as something that is "distant in both time and space" (Leiserowitz 2006).

Moreover, in recent years, some reports have suggested that climate change scientists are unfairly scrutinized in attempts to discredit their work and/or provoke intimidation (Brown 2006). Such allegations have been largely aimed at republicans who "witch hunt" climate change scientists. Consistent with this, reports have suggested that factors affecting the perception of climate change include a pro-environmental attitude and democratic values (Malka et al. 2009; Carlton and Jacobson 2013). Similarly, it has been shown that democrats and independents are more likely to accept climate change as being anthropogenic compared to republicans (Hamilton et al. 2015). Campbell and Kay also found that the increased skepticism exhibited by some republicans towards environmental issues is likely due to conflicts between ideological values and the proposed solutions for such environmental issues (Campbell and Kay 2014). Thus, given this background, it was possible that President Macron's plea for Americans to reinvest in the environment would fall upon deaf ears.

We designed an online anonymous survey to assess the extent of interest and awareness towards French President Emmanuel Macron's "Make our Planet Great Again" initiative. We distributed the survey online to the University of Florida, a top 10 ranked public land grant university (U. S New & World Report 2018) with a national and world reputation for several programs related to the environment and conservation (Orlando and University of Florida 2017; Niche 2018).

We made several predictions based upon prior studies and hypothesized that political view (McCright and Dunlap 2011; Fielding and Hornsey 2016; Hornsey et al. 2016), science background (Krosnick et al. 2006; Ding et al. 2011), and belief towards climate change (Hornsey et al. 2016) would heavily influence interest and awareness. The methodology, results, and discussion of our findings are presented below.

2. Materials and Methods

2.1. Survey

The survey was composed of the following 15 questions (shown below). The order of questions represents the order in which they were presented online to participants. Participants were asked to

select one answer from the available answers (shown below for each question). All subjects provided informed consent for inclusion before they participated in the study. The study was conducted in accordance with the Declaration of Helsinki, and the protocol was approved by the University of Florida (UF) Institutional Review Board (IRB201701688). Informed consent is detailed in a subsequent section. The survey was limited in distribution to UF because it is the institutional home to the primary authors of this study and was therefore the only university that institutional review board (IRB) approval could be readily obtained from.

- 1— Do you provide consent for the information you provide in this survey to be used for scientific research? Responses are completely anonymous.
Answers: yes, no
- 2— What is your country of origin?
Answers: United States, France, other
- 3— What is your gender?
Answers: male, female, transgender, prefer not to say
- 4— What is your age range?
Answers: 0–18, 19–30, 31–40, 41–50, 51–60, 61+
- 5— What is the highest degree or level of school you have pursued?
Answers: high school, trade/technical/vocational school, Bachelor’s degree, Master’s degree, Professional degree, Doctorate degree
- 6— Which best describes your current employment status?
Answers: student, employed, unemployed, retired
- 7— Are you a scientist or employed in a research & development-related position?
Answers: yes, no
- 8— Choose the party that best aligns with your political views.
Answers: republican, democrat, independent, other, prefer not to say
- 9— Climate change is a real event.
Answers: I agree with this statement, I disagree with this statement, I neither agree or disagree with this statement
- 10— Early in June 2017, President Donald Trump withdrew the United States from the Paris Agreement (Accord de Paris). The agreement aims to combat greenhouse gas emissions through the financial collaboration of countries that want to alleviate global warming. In response to President Trump’s withdrawal, French President Emmanuel Macron has extended an invitation to United States scientists and researchers to move to France and “Make Our Planet Great Again.” This invitation aims at attracting foreign scientists with 4-year grants worth up to €1.5 Million (1.71 USD) each. Were you aware of this initiative prior to reading it here?
Answers: yes, no
- 11— Based on this information, how interested are you in President Macron’s offer?
Answers: interested, not interested
- 12— If you qualify or were to qualify, how likely are you to move to France and accept President Macron’s offer?
Answers: highly likely, likely, unlikely, highly unlikely
- 13— Do you think President Macron’s offer will have a measurable impact on our climate?
Answers: yes, no, not sure

14— Do you think President Macron’s offer will increase the French scientific workforce?

Answers: yes, no, not sure

15— Do you think President Macron’s offer will influence climate regulations in the United States?

Answers: yes, no, not sure

2.2. Distribution

The survey had an equal chance at distribution through all academic departments and schools within different colleges at the University of Florida. Each department or school’s dean or chairperson was contacted asking for permission to distribute the survey to their faculty and students via a secure weblink. We received approval from some (approximately 25% of those contacted), but not all. In many cases, disapproval was conveyed through a lack of response, as opposed to an outright rejection. For those that opened the survey, there was a 100% response rate for completion.

2.3. Consent

Each participant had to provide informed consent in order to access the survey. Participants were informed that the survey is part of an independent research project that aims to investigate awareness of the French government’s initiative in combatting climate change. Participants were notified that there would be no direct benefit and compensation for anyone who chose to take the survey and that the data would be shared in the form of a publication. Furthermore, participants did not have to fill in every question if they did not want to answer particular questions. The telephone number of the University of Florida’s IRB as well as that of the senior investigator (Leah Reznikov) were provided so that individuals could report any concerns or ask any questions. In the consent approval, it was emphasized that participant responses would remain anonymous and that no internet protocol addresses were collected. The survey was administered through UF Qualtrics.

2.4. Statistics

Chi square tests were used to determine statistically significant relationships between dependent and independent variables. The Spearman rank correlation analysis was performed when determining the impact/influence of a single variable on the dependent variable (e.g., awareness and interest). For the Spearman rank correlation analysis, categorical numbers were converted to numerical values as follows: democrats, +1; independents, 0; republicans, −1. A similar strategy has been used previously (Hamilton et al. 2015). To examine the impact of belief towards climate change, we assigned the following numerical categories: agree, +1; neither agree or disagree, 0; disagree, −1. Aware (or aware and interested) was assigned 1, and unaware (or unaware and interested) was assigned, 0. Graphpad Prism 7.0a was used for the Chi square analysis and JMP 14.0.1 was used for the Spearman rank correlation. Significance was defined as $p < 0.05$.

2.5. Results

A total of 185 individuals participated. All participants provided consent. The least number of participants that answered any single question was 183, resulting in a 98.9% completion rate. We believe that the brevity of the survey accounted for the low dropout ratio and high completion rate.

The population of participants consisted of approximately 51.4% females and 47.6% males, with one individual identifying as transgender and another not disclosing their gender (Table 1). The age distribution was skewed, with the majority (62.8%) falling into the 19–30 year range (Table 1). Consistent with this, a large portion of the respondents were either pursuing or had obtained their Bachelor’s degree (46.7%) (Table 1), and 60.9% identified themselves as being a student (Table 1). These figures are expected given the population (e.g., university) sampled.

Table 1. Demographics of population studied.

Gender	# Responses	%
Male	88	47.6
Female	95	51.4
Transgender	1	0.5
Prefer not to say	1	0.5
Total	185	100
Age Range		0
0–18	12	6.6
19–30	115	62.8
31–40	23	12.6
41–50	8	4.4
51–60	15	8.2
61+	10	5.5
Total	183	100
Employment Status		0
Student	112	60.9
Employed	70	38
Unemployed	2	1.1
Retired	0	0
Total	184	100
Country of origin		0
United States	151	81.6
France	2	1.1
Other	32	17.3
Total	185	100
Highest degree or level of school pursued		0
High school	14	7.6
Trade/technical/vocational school	2	1.1
Bachelor’s degree	86	46.7
Master’s degree	36	19.6
Professional degree	2	1.1
Doctorate degree	44	23.9
Total	184	100
Scientist or Research & Development position		0
Yes	63	34.2
No	121	65.8
Total	184	100
Party alignment of political views		0
Republican	34	18.4
Democrat	87	47
Independent	40	21.6
Other	14	7.6
Prefer not to say	10	5.4
Total	185	100

We first examined awareness of the initiative. Of the 185 participants, 83 (44.9%) were aware of French President Macron’s initiative prior to the survey (Table 2). Of those that were aware, 51.8% were interested in the initiative (Table 2). When we assessed the responses of the 102 individuals that were unaware of the initiative, less than half displayed interest (Table 2). The combined results were consistent with data suggesting that approximately half of Americans are not concerned about climate change (Leiserowitz et al. 2010).

Table 2. Interest and awareness in the initiative.

Awareness and/or Interest	Number of Participants
Aware	83
Unaware	102
Aware & interested	43
Aware & uninterested	40
Unaware & interested	43
Unaware & uninterested	58

As highlighted earlier, political values can influence and shape one's beliefs and interests in climate change (Carlton and Jacobson 2013; Mildenerger et al. 2017). Thus, we hypothesized that political affiliation would influence interest and awareness in the initiative. There were more republicans in the unaware group compared to the aware group (Table 3). The Chi square analysis revealed a significant relationship between political view and awareness of the initiative ($X^2(4) = 12.58, p = 0.014$). The Spearman rank correlation analysis suggested that political party was a weak but significant predictor of awareness ($r_s = 0.23, p = 0.004$, Table 3). Therefore, we further stratified the population and compared the distribution of political parties among the aware and interested versus those that were unaware and uninterested (Table 3). The Chi square analysis revealed a highly significant relationship between political affiliation and interest and awareness ($X^2(4) = 22.6, p = 0.0001$). Similarly, the Spearman rank correlation analysis indicated that political party was a moderate and significant predictor of being aware and interested ($r_s = 0.42, p < 0.0001$). The finding that political party influenced interest and awareness in the initiative was consistent with previous literature demonstrating that political values strongly influence concern about global warming (Krosnick et al. 2006).

Table 3. Political Party and interest and awareness.

Awareness and/or Interest	Independent	Democrat	Republican	Other	Prefer Not to Say
Aware	18	46	8	9	2
Unaware	23	41	25	5	8
Aware & interested	12	23	1	6	1
Aware & uninterested	6	23	7	3	1
Unaware & interested	7	25	4	3	4
Unaware & uninterested	14	16	22	2	4

Value in column designates number of participants

We predicted that belief in climate change would influence awareness and/or interest in President Macron's initiative (Hornsey et al. 2016). More specifically, we hypothesized that those that believed climate change was a real event would show more interest and awareness in the initiative. Overall, 90.81% of the total participants agreed that climate change was a real event (Table 4). This percentage was largely the same for the aware (92.7%) and not aware (89.2%) (Table 4) participants ($X^2(2) = 2.14, p = 0.34$). As such, the Spearman rank correlation analysis indicated that belief towards climate change was not a significant predictor of being aware ($r_s = 0.058, p = 0.43$). The examination of those that were aware and interested (Table 4) versus those that were unaware and uninterested (Table 4) revealed a trend for a relationship ($X^2(2) = 4.86, p = 0.08$). The Spearman rank correlation analysis indicated that belief towards climate change was weak but was a significant predictor of being aware and interested ($r_s = 0.22, p = 0.028$) in the initiative. For those agreeing that climate change was a real event, there was nearly an even distribution for interest and uninterest in the initiative (Table 5). Participants who either disagreed (Table 5) or neither agreed or disagreed (Table 5) showed less interest in the initiative compared to those that agreed. Consistent with this, the Chi square analysis revealed a significant relationship between interest or disinterest and belief towards climate change ($X^2(3) = 8.98, p = 0.01$).

Thus, in sum, these data supported the hypothesis that belief towards climate change impacted interest and awareness.

Table 4. Belief that climate change is a real event.

Awareness and/or Interest	Agree	Neither Agree or Disagree	Disagree
All	168	14	3
Aware	77	4	2
Unaware	91	10	1
Aware & interested	41	0	1
Unaware & uninterested	49	8	1

Value in column designates number of participants

Table 5. Interest and belief in climate change.

Agreement that Climate Change is Real	Interested	Uninterested
Agree	83	84
Disagree	0	3
Neither agree nor disagree	3	14

Value in column designates number of participants

Because President Macron's initiative was aimed at attracting scientists and researchers, we further examined whether being in a science or a research and development-related position impacted awareness. We hypothesized that being a scientist would positively influence interest and awareness. The relative proportions of scientists who were aware or unaware of the initiative was similar (Table 6). Consistent with this, the Chi square analysis found no significant relationship between the variables of "scientist" and "awareness" ($X^2(1) = 0.64, p = 0.52$). Therefore, we further stratified the population and asked whether scientists represented a larger portion of those who were both interested and aware (Table 6) versus those who were unaware and uninterested (Table 6). The Chi square analysis revealed a significant relationship among the variables of "scientist", "aware and interested", and "unaware and uninterested" ($X^2(1) = 4.67, p = 0.04$). However, surprisingly, fewer scientists were among those that were interested and aware. This result therefore did not support the hypothesis that a science background positively impacted interest and awareness.

Table 6. Interest and awareness and science background.

Awareness and/or Interest	Scientist	Not Scientist
Aware	26	56
Unaware	37	65
Aware & interested	10	32
Unaware & uninterested	26	32

Value in column designates number of participants

3. Discussion & Conclusions

We investigated interest and awareness towards French President Macron's "Make Our Planet Great Again" initiative through an online survey analysis. Our study convened and was concluded prior to initial announcements of its success and the selected winners (Pain 2017; Ministère and L'innovation 2018). We found that less than 50% of our participants were aware of the initiative. Of the individuals who were aware of the initiative, a little over half expressed interest in it. This result was consistent with previous data indicating that about half of Americans are not worried about climate change (Leiserowitz et al. 2010), as well as data suggesting that few Americans view addressing climate change as a high priority (Ding et al. 2011).

We found a significant relationship among political affiliation and awareness and interest in the initiative. Specifically, we found a significant correlation between political view and interest and awareness, with democrats showing more interest and awareness and republicans showing less interest and awareness. This finding was perhaps not unexpected, given the numerous previous studies indicating that there is a strong influence of political alignment on belief towards climate change (McCright and Dunlap 2011; Hart et al. 2015; Mildenerger et al. 2017). However, this generalization warrants some caution, as there is significant variation in republican and democratic views on climate change that are dependent upon geographical location and congressional district (Mildenerger et al. 2017).

Our study also found that a large proportion of participants believed that climate change was a real event. This finding was consistent with data suggesting that approximately 70% of Americans believe in global warming (Leiserowitz et al. 2011). This finding also paralleled that described by Mildenerger and colleagues for the state of Florida (Mildenerger et al. 2017). We also found that belief in climate change was a weak but significant predictor of awareness or interest. Previous studies have suggested that knowledge-based factors can be outcompeted by ideological views (Kahan et al. 2012; Hart et al. 2015). For example, when an individual holds onto existing values and/or beliefs, new information that challenges their beliefs is often discounted or ignored (Kemmelmeier 2015). Indeed, this is a form of preserving identity and self-integrity (Cohen et al. 2007). It is also consistent with data suggesting that beliefs are a product of knowledge and prior thought (Krosnick et al. 2006). Thus, it is possible that even though many of individuals were in agreement that climate change was real event, their ideological values prevented them from being more interested and aware of the initiative. This would also account for the relatively weak association.

We predicted that science background would positively correlate with awareness and interest in the initiative. However, we found that the proportions of scientists among those that were aware and unaware of the initiative were largely the same. Moreover, in contrast to our expectations, we found fewer scientists among the aware and interested participants compared to the unaware and uninterested participants. A possible explanation for this result is that area of expertise dictated interest. For example, much like when the National Institutes of Health releases funding opportunities, only those researchers that qualify or are interested in the opportunity will apply. Thus, non-climate researchers might have shown disinterest because they did not believe the initiative applied to them or they believed that they were not qualified. It is also possible that ideologies, world views, and political affiliation overshadowed the influence of scientific education (Hornsey et al. 2016). Similarly, perhaps the perceived controversy surrounding climate change deterred scientists from expressing awareness and/or interest (Lewandowsky et al. 2015).

Our study was designed to examine the impact of a few limited factors on interest and awareness in French President Macron's initiative. However, one area that we did not explore is the concept of "identification with all humanity" (McFarland et al. 2012). This idea posits that some individuals care deeply for all humans (McFarland et al. 2013). Such individuals have a desire to help all humans (Maslow 1954), and therefore, might be more engaged in initiatives that benefit all humans. Indeed, it has been suggested that individuals that exhibit global identity are more likely to act in ways that favor the environment (Reese 2016). Consistent with this, Renger and Reese found that high global identity predicted pro-environmental activism (Renger and Reese 2017). Thus, it is possible that a portion of our participants that were interested and aware of the initiative exhibited global identity. It would be interesting to determine whether individuals who were aware and interested in the "Make our Planet Great Again" initiative also demonstrated interest and awareness in other global initiatives and/or policies.

In summary, our data indicate that President Macron stimulated some interest within the United States amongst academicians and scientists. Based upon prior studies, the interest and awareness were approximately equivalent to what one might expect. If our data were extrapolated to include other universities and even the general population of the United States, then President

Macron should have been able to recruit a few hundred or thousands of people. Consistent with this, it was announced in December 2017 that over 1800 individuals had expressed interest in President Macron's initiative. In his first round of recruitment, he enlisted 18 scientists, 13 of which were from the United States (Pain 2017). In May 2018, an additional six scientists from the United States joined the "Make our Planet Great Again" initiative (Ministère and L'innovation 2018). Thus, President Macron's initiative was successful in attracting United States scientists to study climate change in France. Perhaps strategies focused on obtaining interest from all political parties will prove more effective for future initiatives.

Author Contributions: Conceptualization, J.S.D.; Data curation, J.S.D. and L.R.R.; Formal analysis, J.S.D. and L.R.R.; Investigation, J.S.D. and L.R.R.; Methodology, J.S.D. and L.R.R.; Project administration, L.R.R.; Supervision, L.R.R.; Writing—original draft, J.S.D. and L.R.R.; Writing—review & editing, J.S.D. and L.R.R.

Funding: This research received no external funding.

Acknowledgments: The authors thank all the participants for their time and effort in completing the survey. The authors also thank Marcela Perrone-Bertolotti for providing helpful information concerning French culture, rules, and regulations.

Conflicts of Interest: The authors declare no conflicts of interest.

References

- Booth, William. 1988. Johnny appleseed and the greenhouse. Replanting the forests of the earth could help mitigate global warming; what was once fantasy is now a policy option, but it is still a lot of trees. *Science* 242: 19–20. Available online: <https://www.ncbi.nlm.nih.gov/pubmed/17757617> (accessed on 10 June 2018).
- Broecker, Wallace S. 1975. Climatic change: Are we on the brink of a pronounced global warming? *Science* 189: 460–43. Available online: <https://www.ncbi.nlm.nih.gov/pubmed/17781884> (accessed on 10 June 2018).
- Brown, Paul. 2006. Republicans accused of witch-hunt against climate-change scientists. *International Journal of Health Services* 36: 417–19. Available online: <https://www.ncbi.nlm.nih.gov/pubmed/16878400> (accessed on 18 May 2018).
- Butler, Declan. 2017. Climate scientists flock to france's call. *Nature* 547: 269. Available online: <https://www.nature.com/news/climate-scientists-flock-to-france-s-call-1.22318> (accessed on 10 May 2018). [CrossRef] [PubMed]
- Campbell, Troy H., and Aaron C. Kay. 2014. Solution aversion: On the relation between ideology and motivated disbelief. *Journal of Personality and Social Psychology* 107: 809–24. Available online: <https://www.ncbi.nlm.nih.gov/pubmed/25347128> (accessed on 15 May 2018). [CrossRef] [PubMed]
- Carlton, Stuart J., and Susan K. Jacobson. 2013. Climate change and coastal environmental risk perceptions in florida. *Journal of Environmental Management* 130: 32–39. Available online: <https://www.ncbi.nlm.nih.gov/pubmed/24056234> (accessed on 30 April 18). [PubMed]
- Cohen, Geoffrey L., David K. Sherman, Anthony Bastardi, Lillian Hsu, Michelle McGoey, and Lee Ross. 2007. Bridging the partisan divide: Self-affirmation reduces ideological closed-mindedness and inflexibility in negotiation. *Journal of Personality and Social Psychology* 93: 415–30. Available online: <https://www.ncbi.nlm.nih.gov/pubmed/17723057> (accessed on 29 April 2018). [CrossRef] [PubMed]
- Ding, Ding, Edward W. Maibach, Xiaoquan Zhao, Connie Roser-Renouf, and Anthony Leiserowitz. 2011. Support for climate policy and societal action are linked to perceptions about scientific agreement. *Nature Climate Change* 1: 462–66. Available online: <https://www.nature.com/articles/nclimate1295> (accessed on 29 April 2018). [CrossRef]
- Esty, Daniel C., and Michelle L. Bell. 2018. Business leadership in global climate change responses. *American Journal of Public Health* 108: S808–84. Available online: <https://www.ncbi.nlm.nih.gov/pubmed/29698101> (accessed on 14 May 2018). [CrossRef] [PubMed]
- Fielding, Kelly S., and Matthew J. Hornsey. 2016. A social identity analysis of climate change and environmental attitudes and behaviors: Insights and opportunities. *Frontiers in Psychology* 7: 121. Available online: <https://www.ncbi.nlm.nih.gov/pubmed/26903924> (accessed on 10 June 2018). [CrossRef] [PubMed]

- Figueres, Christiana, Hans Joachim Schellnhuber, Gail Whiteman, Johan Rockström, Anthony Hopley, and Stefan Rahmstorf. 2017. Three years to safeguard our climate. *Nature*, 593–595. Available online: <https://www.nature.com/news/three-years-to-safeguard-our-climate-1.22201> (accessed on 10 June 2018). [CrossRef] [PubMed]
- Orlando, Steve, and University of Florida. 2017. *Global Impact*. Gainesville: University of Florida News. Available online: <http://news.ufl.edu/articles/2017/04/eight-uf-programs-ranked-top-10-in-the-world-according-to-new-rankings.php> (accessed on 10 June 2018).
- Folland, Chris K., Olivier Boucher, Andrew Colman, and David E. Parker. 2018. Causes of irregularities in trends of global mean surface temperature since the late 19th century. *Science Advances* 4: Eaao5297. Available online: <https://www.ncbi.nlm.nih.gov/pubmed/29881771> (accessed on 10 June 2018). [CrossRef] [PubMed]
- Glynn, Peter W. 1991. Coral reef bleaching in the 1980s and possible connections with global warming. *Trends in Ecology & Evolution* 6: 175–79. Available online: <https://www.ncbi.nlm.nih.gov/pubmed/21232450> (accessed on 11 June 2018). [PubMed]
- Gomez-Echeverri, Luis. 2018. Climate and development: Enhancing impact through stronger linkages in the implementation of the paris agreement and the sustainable development goals (sdgs). *Philosophical Transactions of the Royal Society A*, 376. Available online: <https://www.ncbi.nlm.nih.gov/pubmed/29610377> (accessed on 12 June 2018).
- Graham, Russell W., and Eric C. Grimm. 1990. Effects of global climate change on the patterns of terrestrial biological communities. *Trends in Ecology & Evolution* 5: 289–92. Available online: <https://www.ncbi.nlm.nih.gov/pubmed/21232376> (accessed on 12 June 2018).
- Hamilton, Lawrence C., Joel Hartter, Mary Lemcke-Stampone, David W. Moore, and Thomas G. Safford. 2015. Tracking public beliefs about anthropogenic climate change. *PLoS ONE* 10: e0138208. Available online: <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0138208> (accessed on 11 June 2018). [CrossRef] [PubMed]
- Hart, P. Sol, Erik C. Nisbet, and Teresa A. Myers. 2015. Public attention to science and political news and support for climate change mitigation. *Nature Climate Change* 5: 541–45. Available online: <https://www.nature.com/articles/nclimate2577> (accessed on 14 May 2018). [CrossRef]
- Holland, Greg, and Cindy L. Bruyère. 2014. Recent intense hurricane response to global climate change. *Climate Dynamics* 42: 617–27. Available online: <https://link.springer.com/article/10.1007/s00382-013-1713-0> (accessed on 10 June 2018). [CrossRef]
- Hornsey, Matthew J., Emily A. Harris, Paul G. Bain, and Kelly S. Fielding. 2016. Meta-analyses of the determinants and outcomes of belief in climate change. *Nature Climate Change* 6: 622. Available online: <https://www.nature.com/articles/nclimate2943> (accessed on 15 May 2018). [CrossRef]
- Kahan, Dan M., Ellen Peters, Maggie Wittlin, Paul Slovic, Lisa Larrimore Ouellette, Donald Braman, and Gregory Mandel. 2012. The polarizing impact of science literacy and numeracy on perceived climate change risks. *Nature Climate Change* 2: 732–35. Available online: <https://www.nature.com/articles/nclimate1547> (accessed on 03 May 2018). [CrossRef]
- Keller, Charles. 2003. Global warming: The balance of evidence and its policy implications. A review of the current state-of-the-controversy. *The Scientific World Journal* 3: 357–411. Available online: <https://www.ncbi.nlm.nih.gov/pubmed/12806101> (accessed on 10 June 2018). [CrossRef] [PubMed]
- Kemmelmeier, Markus. 2015. The closed-mindedness that wasn't: Need for structure and expectancy-inconsistent information. *Frontiers in Psychology* 6: 896. Available online: <https://www.ncbi.nlm.nih.gov/pubmed/26191017> (accessed on 4 May 2018). [CrossRef] [PubMed]
- Krosnick, Jon A., Allyson L. Holbrook, Laura Lowe, and Penny S. Visser. 2006. The origins and consequences of democratic citizens' policy agendas: A study of popular concern about global warming. *Climatic Change* 77: 7–43. Available online: <https://link.springer.com/article/10.1007/s10584-006-9068-8> (accessed on 11 June 2018). [CrossRef]
- Leiserowitz, Anthony, Edward Maibach, Connie Roser-Renouf, and Nicholas Smith. 2011. *Climate Change in the American Mind: Americans' Global Warming Beliefs and Attitudes in May 2011*. New Haven: Yale University and George Mason University, Yale Project on Climate Change Communication.
- Leiserowitz, Anthony, Nicholas Smith, and Jennifer R. Marlon. 2010. *Americans' Knowledge of Climate Change*. New Haven: Yale Project on Climate Change Communication.

- Leiserowitz, Anthony. 2006. Climate change risk perception and policy preferences: The role of affect, imagery, and values. *Climatic Change* 77: 45–72. Available online: <https://link.springer.com/article/10.1007/s10584-006-9059-9> (accessed on 11 June 2018). [CrossRef]
- Lewandowsky, Stephan, Michael E. Mann, Nicholas J. L. Brown, and Harris Friedman. 2015. Science and the public: Debate, denial, and skepticism. *Journal of Social and Political Psychology* 4: 2195–3325. [CrossRef]
- Macron, Emmanuel. 2018. Make our Planet Great Again. Available online: <https://www.makeourplanetgreatagain.fr> (accessed on 4 May 2018).
- Malka, Ariel, Jon A. Krosnick, and Gary Langer. 2009. The association of knowledge with concern about global warming: Trusted information sources shape public thinking. *Risk Analysis* 29: 633–47. Available online: <https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1539-6924.2009.01220.x> (accessed on 13 May 2018). [CrossRef] [PubMed]
- Markandya, Anil, Jon Sampedro, Steven J. Smith, Rita Van Dingenen, Cristina Pizarro-Irizar, Iñaki Arto, and Mikel González-Eguino. 2018. Health co-benefits from air pollution and mitigation costs of the paris agreement: A modelling study. *Lancet Planet Health* 2: e126–33. Available online: <https://www.ncbi.nlm.nih.gov/pubmed/29615227> (accessed on 13 May 2018). [CrossRef]
- Maslow, Abraham H. 1954. *Motivation and Personality*. New York: Harper & Row.
- McCright, Aaron M., and Riley E. Dunlap. 2011. The politicization of climate change and polarization in the american public's views of global warming, 2001–2010. *Sociological Quarterly* 52: 155–94. Available online: <https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1533-8525.2011.01198.x> (accessed on 15 May 2018). [CrossRef]
- McFarland, Sam, Derek Brown, and Matthew Webb. 2013. Identification with all humanity as a moral concept and psychological construct. *Current Directions in Psychological Science* 22: 194–98. Available online: <http://journals.sagepub.com/doi/10.1177/0963721412471346> (accessed on 25 May 2018). [CrossRef]
- McFarland, Sam, Matthew Webb, and Derek Brown. 2012. All humanity is my ingroup: A measure and studies of identification with all humanity. *Journal of Personality and Social Psychology* 103: 830–53. Available online: <https://www.ncbi.nlm.nih.gov/pubmed/22708625> (accessed on 25 May 2018). [CrossRef] [PubMed]
- Mildenberger, Matto, Jennifer R. Marlon, Peter D. Howe, and Anthony Leiserowitz. 2017. The spatial distribution of republican and democratic climate opinions at state and local scales. *Climatic Change* 145: 539–48. Available online: <https://link.springer.com/article/10.1007/s10584-017-2103-0> (accessed on 26 May 2018). [CrossRef]
- Ministère, De L'enseignement Supérieur, and D. L. R. E. D. L'innovation. 2018. Climat et Développement Durable. Available online: <http://www.enseignementsup-recherche.gouv.fr/cid129713/make-our-planet-great-again-14-nouveaux-laureats-en-france-13-laureats-en-allemande.html> (accessed on 5 May 2018). (In French)
- Nations, United. 1992. United Nations Framework Convention on Climate Change. Available online: https://unfccc.int/files/essential_background/background_publications_htmlpdf/application/pdf/conveng.pdf (accessed on 11 June 2018).
- Niche. 2018. 2018 Best Colleges for Environmental Science in America. Available online: <https://www.niche.com/colleges/search/best-colleges-for-environmental-science/?page=2> (accessed on 11 June 2018).
- Pain, Elisabeth. 2017. French president's climate talent search nabs 18 foreign scientists. *Science*. Available online: <http://www.sciencemag.org/news/2017/12/french-president-s-climate-talent-search-nabs-18-foreign-scientists> (accessed on 10 May 2018).
- Park, David J. 2018. United states news media and climate change in the era of us president trump. *Integrated Environmental Assessment and Management* 14: 202–04. Available online: <https://www.ncbi.nlm.nih.gov/pubmed/29193745> (accessed on 12 May 2018). [CrossRef] [PubMed]
- Patrut, Adrian, Stephan Woodborne, Roxana T. Patrut, Laszlo Rakosy, Daniel A. Lowy, Grant Hall, and Karl F. von Reden. 2018. The demise of the largest and oldest african baobabs. *Nature Plants*. [CrossRef] [PubMed]
- Peltier, William Richard, and A. M. Tushingham. 1989. Global sea level rise and the greenhouse effect: Might they be connected? *Science* 244: 806–10. Available online: <https://www.ncbi.nlm.nih.gov/pubmed/17802238> (accessed on 11 June 2018). [CrossRef] [PubMed]
- Reese, Gerhard. 2016. Common human identity and the path to global climate justice. *Climatic Change* 134: 521–31. Available online: <https://link.springer.com/article/10.1007/s10584-015-1548-2> (accessed on 12 June 2018).

- Renger, Daniela, and Gerhard Reese. 2017. From equality-based respect to environmental activism: Antecedents and consequences of global identity. *Political Psychology* 38: 867–79. Available online: <https://onlinelibrary.wiley.com/doi/abs/10.1111/pops.12382> (accessed on 12 June 2018). [CrossRef]
- U. S New & World Report. 2018. Top Public Schools National Universities. Available online: <https://www.usnews.com/best-colleges/rankings/national-universities/top-public> (accessed on 16 May 2018).
- Roberts, L. 1989. Global warming: Blaming the sun: A report that essentially wishes away greenhouse warming is said to be having a major influence on white house policy. *Science* 246: 992–93. Available online: <https://www.ncbi.nlm.nih.gov/pubmed/17806372> (accessed on 10 June 2018). [CrossRef] [PubMed]
- Rogelj, Joeri, Michel Den Elzen, Niklas Höhne, Taryn Fransen, Hanna Fekete, Harald Winkler, Roberto Schaeffer, Fu Sha, Keywan Riahi, and Malte Meinshausen. 2016. Paris agreement climate proposals need a boost to keep warming well below 2 degrees c. *Nature* 534: 631–39. Available online: <https://www.ncbi.nlm.nih.gov/pubmed/27357792> (accessed on 16 May 2018). [CrossRef] [PubMed]
- Rubin, Edward S., Richard N. Cooper, Robert A. Frosch, Thomas H. Lee, Gregg Marland, Arthur H. Rosenfeld, and Deborah D. Stine. 1992. Realistic mitigation options for global warming. *Science* 257: 148–266. Available online: <https://www.ncbi.nlm.nih.gov/pubmed/17794735> (accessed on 12 June 2018). [CrossRef] [PubMed]
- Smith, Nicholas, and Anthony Leiserowitz. 2012. The rise of global warming skepticism: Exploring affective image associations in the united states over time. *Risk Analysis* 32: 1021–32. Available online: <https://www.ncbi.nlm.nih.gov/pubmed/22486296> (accessed on 10 June 2018). [CrossRef] [PubMed]
- Tollefson, Jeff. 2017. Trump pulls united states out of paris climate agreement. *Nature* 546: 198. Available online: <https://www.nature.com/news/trump-pulls-united-states-out-of-paris-climate-agreement-1.22096> (accessed on 4 May 2018). [CrossRef] [PubMed]



© 2018 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<http://creativecommons.org/licenses/by/4.0/>).