

“Make a Change for Climate Change”.  
A Comparative Discourse Analysis of Online Environmental Petitions  
in the USA and UK

**Abstract:** This study examines a corpus of e-petitions calling for action against climate change, published on *Change.org* in the USA and UK. The investigation focuses on the persuasive strategies employed in user-generated discourse, and compares the trends emerging in the two national contexts. The analysis centres on how petitioners engage with climate science, re-mediating scientific concepts by explaining global phenomena in their own words and referring to authoritative sources. The study thus explores the use of interactive metadiscourse devices typical of popular science writing. The approach is based on corpus-assisted discourse analysis. Findings indicate that climate change was perceived as a well-documented threat requiring urgent action. It was frequently addressed in conjunction with other topics, particularly, wildlife and water conservation in the USA, and land protection in the UK. All petitions contained a mediation of specialised information, encompassing general references to environmental issues and specific evidence quoted from scientific research.

Keywords: *online petitions, environmental discourse, climate change, popularisation, metadiscourse, corpus-assisted discourse studies*

## 1. Introduction

### 1.1 *Online Petitions*

Popular petitions have long been a traditional form of direct political participation. By gathering a significant number of signatures, advocates can express collective needs to higher authorities, such as government agencies and businesses, and request policy changes.<sup>1</sup> Petitions represent a valuable democratic tool that can raise public awareness on social issues, initiate new debates, and set agendas. With the advent of e-petition websites, the traditional right to petition rulers has been brought into the contemporary era.<sup>2</sup>

The modern age has seen a crisis of representative democracy, with a declining voting turnout, party membership, and trust in politicians.<sup>3</sup> In this context, populist movements have gained momentum, and digital models of political participation have emerged, harnessing the growing availability and interactivity of the Internet. By leveraging tools for digital activism, cyberspace can now be used to sensitise and mobilise online communities.<sup>4</sup> Petitions provide a straightforward means to bring issues to social, media, and political attention, without requiring the involvement of pollsters,

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<sup>1</sup> Ann Macintosh, “Using Information and Communication Technologies to Enhance Citizen Engagement in the Policy Process”, in Joanne Caddy and Christian Vergez, eds., *Promise and Problems of eDemocracy: Challenges of Online Citizen Engagement* (Paris: OECD, Organisation for Economic Co-Operation and Development, 2003), 19-142, 56.

<sup>2</sup> Georg Aichholzer and Stefan Strauß, “Electronic Participation in Europe”, in Ralf Lindner et al., eds., *Electronic Democracy in Europe* (Cham, Switz.: Springer, 2016), 55-132, 61.

<sup>3</sup> Simon Tormey, “The Contemporary Crisis of Representative Democracy”, *Democratic Theory*, 1.2 (2014), 104-112.

<sup>4</sup> Steffen Albrecht, “E-Consultations: A Review of Current Practice and a Proposal for Opening Up the Process”, in Efthimios Tambouris et al., eds., *Electronic Participation: Proceedings of 4th IFIP WG 8.5 International Conference*, ePart 2012, Kristiansand, Norway, September 3-5, 2012 (Heidelberg, Germ.: Springer, 2012), 13-24, 13.

political parties, news media, or researchers. Petitions can be launched, promoted, and signed entirely online, and citizens can use their own words to make requests about topics that matter to them.<sup>5</sup>

Nevertheless, the role of e-petitioning as a form of digital democracy remains controversial. Petitions are often criticised as ‘slacktivism’ or ‘clicktivism’, an activism devoid of real effort and participation that has a minimal, if any, impact on politics. The legitimacy of online petitions may also be compromised, as petitioners may use false names or launch frivolous causes.<sup>6</sup> Additionally, e-petitions can turn into echo chambers, especially through the comment section, where politically and ideologically like-minded people interact, and opposing opinions are rare.<sup>7</sup>

Numerous national and international e-petitioning platforms, both official and informal, are available online and controlled or sponsored by different entities. For instance, during the Obama Administration, the online petition website *We the People* (now inactive) was launched in the USA, allowing citizens to submit their stances to policy experts. The UK, on its side, has an online system that enables people to petition the Parliament and the Government, seeking changes in laws or government policies.<sup>8</sup> Among these platforms, *Change.org* stands out as one of the most popular petition sites worldwide, and it serves as the focus of this study. It is a Public Benefit Corporation owned by an American non-profit organisation. The platform generates revenue through donations and paid advertising to promote campaign visibility. The website allows anyone to launch online petitions that call on decision-makers to address issues at the local, national, or global level. Campaigners can garner support through media coverage and online sharing.<sup>9</sup> Considering these factors, *Change.org* has been selected as the ideal choice for this study due to its extensive user base, widespread popularity, accessibility, and notable effectiveness in influencing change. It serves therefore as a significant case study for exploring the discourse of e-petitions across different countries.

## 1.2 Climate Change in the USA and UK

Climate change is one of the most pressing challenges humanity faces in this century. International scientists have affirmed with increasing certainty that the warming of the atmosphere, ocean, and land is unequivocal and influenced by human activity.<sup>10</sup> Although comprehensive plans for adaptation and mitigation have been formulated, a substantial amount of work remains outstanding, and the allocation of resources continues to be constrained.<sup>11</sup> The 2023 United Nations Intergovernmental Panel on Climate Change (IPCC) report delivered a ‘final warning’ on the climate crisis.<sup>12</sup> It stated that rising greenhouse gas emissions are driving the world dangerously close to the point of no return, where

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<sup>5</sup> Loni Hagen et al., “Understanding Citizens’ Direct Policy Suggestions to the Federal Government: A Natural Language Processing and Topic Modeling Approach”, *48th Hawaii International Conference on System Sciences* (2015), 2134-2143, 2135.

<sup>6</sup> Ibid..

<sup>7</sup> Ana-Maria Cozma and Lotta Lehti, “Online Petition as an Echo Chamber”, in Marjut Johansson et al., eds., *Analyzing Digital Discourses: Between Convergence and Controversy* (Cham, Switz.: Palgrave Macmillan, 2021), 333-364.

<sup>8</sup> Scott Wright, “E-petitions”, in Stephen Coleman and Deen Freelon, eds., *Handbook of Digital Politics* (Cheltenham, UK, and Northampton, Mass.: Edward Elgan Publishing, 2015), 136-150.

<sup>9</sup> Change.org, “Business Model”, *Change.org United States* (2023), [www.change.org/en-US](http://www.change.org/en-US).

<sup>10</sup> IPCC (United Nations Intergovernmental Panel on Climate Change), *Climate Change 2021: The Physical Science Basis. Working Group I Contribution to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* (Cambridge and New York: Cambridge U.P., 2021), 4, 8; IPCC (United Nations Intergovernmental Panel on Climate Change), “Synthesis Report of the IPCC Sixth Assessment Report (AR6): Summary for Policymakers”, *IPCC* (2023), [www.ipcc.ch](http://www.ipcc.ch), 4-5.

<sup>11</sup> Ibid., 8-10.

<sup>12</sup> Fiona Harvey, “Scientists Deliver ‘Final Warning’ on Climate Crisis: Act Now or It’s Too Late”, *The Guardian* (20 March 2023), [www.theguardian.com](http://www.theguardian.com).

changes and damage to the planet may become “unavoidable and/or irreversible”.<sup>13</sup> However, swift and drastic action may still help contain the consequences.

Given the significance of this problem, a large number of petitions on the *Change.org* platform is focused on the environmental issue of climate change. Movements like *#AllinforClimateAction* and *Climate Emergency UK!* have also been launched to address this overarching matter, broken down into a series of petitions that focus on targeted and more achievable goals.<sup>14</sup>

The present study examines online petitions requesting action against climate change in the different national contexts of the United States and the United Kingdom. These countries were selected as they hold significant roles in global climate change discussions, both due to their greenhouse gas (GHG) emissions<sup>15</sup> and their involvement in international talks concerning mitigation. Additionally, their climate discourses have been extensively studied.<sup>16</sup> The US and UK share comparable policy approaches concerning climate change. They have exhibited long-standing dedication to capitalist-neoliberal development, utilitarian perspectives of nature, entrenched technological optimism, and a reluctance to take precautionary actions in the absence of definitive scientific evidence. Yet, the variations in these socio-economic and national settings can be ascribed in part to the differences in their respective domestic political landscapes.<sup>17</sup> The UK, previously associated with the European Union, is widely recognised as a leading international actor, actively engaging in and supporting global initiatives aimed at reducing GHG emissions. Notably, the UK has successfully reduced its emissions over the past few decades. In contrast, the USA has faced criticism for its hesitance in contributing to robust measures addressing climate change and its resistance to implementing domestic policies that would penalise American businesses. In the USA, climate sceptics have gained more prominence, both due to their affiliation with US universities and think-tanks and to their association with influential US policy-makers, potentially stemming from a convergence of interests and goals.<sup>18</sup> The USA has also had a complex relationship with the primary international treaties aimed at imposing binding limits on greenhouse gases, as promoted by the UN Framework Convention on Climate Change (UNFCCC). The country has never ratified the Kyoto Protocol and withdrew from the Paris Agreement during the tenure of climate denier Donald Trump,<sup>19</sup> only to rejoin it when President Biden assumed office.<sup>20</sup> Consequently, emission reduction efforts in the USA experienced significant setbacks during Trump’s presidency,<sup>21</sup> resulting in the country currently retaining its position as the world’s second-largest emitter of CO<sub>2</sub>.<sup>22</sup>

<sup>13</sup> IPCC, “Synthesis Report”, 19.

<sup>14</sup> Change.org, “Movements”, *Change.org United States* (2023), [www.change.org/en-US](http://www.change.org/en-US).

<sup>15</sup> OECD (Organisation for Economic Co-operation and Development), “Greenhouse Gas Emissions”, *OECD.Stat* (2023), [https://stats.oecd.org/Index.aspx?DataSetCode=air\\_ghg](https://stats.oecd.org/Index.aspx?DataSetCode=air_ghg).

<sup>16</sup> See Maxwell T. Boykoff, *Who Speaks for the Climate? Making Sense of Media Reporting of Climate Change* (Cambridge: Cambridge U.P., 2011).

<sup>17</sup> *Ibid.*, 137-138.

<sup>18</sup> Maxwell T. Boykoff, “Flogging a Dead Norm? Newspaper Coverage of Anthropogenic Climate Change in the United States and United Kingdom from 2003 to 2006”, *Area*, 39.4 (2007), 470-481, 478; Maxwell T. Boykoff and S. Ravi Rajan, “Signals and Noise: Mass-Media Coverage of Climate Change in the USA and the UK”, *EMBO Reports*, 8.3 (2007), 207-211, 209.

<sup>19</sup> Donald J. Trump, “Statement by President Trump on the Paris Climate Accord”, *Trump White House* (1 June 2017), <https://trumpwhitehouse.archives.gov/briefings-statements/statement-president-trump-paris-climate-accord/>.

<sup>20</sup> Joseph R. Biden Jr., “Paris Climate Agreement”, *The White House* (20 January 2021), <https://www.whitehouse.gov/briefing-room/statements-releases/2021/01/20/paris-climate-agreement/>.

<sup>21</sup> Antonella Napolitano and Maria Cristina Aiezza, “Trump is Erasing Climate Change... Language: A Corpus-Assisted Critical Discourse Analysis of the US Online Environmental Communications under Obama and Trump”, *Lingue & Linguaggi*, 29 (2019), 147-177.

<sup>22</sup> UNEP (United Nations Environment Programme), “State of the Climate: Climate Action Note – Data you Need to Know”, *UNEP* (2021), [www.unep.org](http://www.unep.org).

## 2. Aims and Purposes

The present paper aims at exploring the discourse of e-petitions calling for climate change reduction in the USA and UK. The study examines the persuasive strategies exploited in the user-generated discourse to gain support for environmental causes. In particular, the analysis focuses on how e-petitioners engage in popularisation of climate science. The investigation also compares the discursive trends that emerge in the two distinct national and regulatory contexts.

## 3. Methods and Data

The study examines a selection of petitions published on the USA and UK versions of *Change.org*.<sup>23</sup> The texts were retrieved using the search function of the websites, with the words “climate change”, “global warming”, and, respectively, “USA”, “US”, “United States”, and “UK”, “United Kingdom”.

In the final corpus, a total of 116 petitions (58 per country) were included, selected based on the number of signatures. The minimum signature threshold for the USA was set at 9,000, while for the UK at 4,000. The selected petitions have a wide range of signatories, ranging from 1,442,107 to 9,394 for the USA and from 918,205 to 4,126 for the UK, as of July 10<sup>th</sup>, 2022. The popularity level of individual petitions was not considered. The petitions were published between 2011 and 2022. While the study acknowledges the temporal changes within this timeframe, the primary focus of this research was not on conducting a diachronic analysis. *Change.org* provides an option for petitioners to declare “victory” when they believe that tangible change has been achieved. Celebrating these successes serves as a reward to those involved and reinforces the voices advocating for positive change, thereby maintaining motivation to persist in ongoing efforts. The company’s approach prioritises therefore petitions that showcase personal stories and offer the potential for small victories.<sup>24</sup> In the corpus under study, in the USA component, 12 petitions culminated in victories, whereas the UK section includes only 2 such cases. Since victory declarations are infrequent and subjective, this study did not focus on individual outcomes and did not distinguish between successful and unsuccessful petitions. The collected texts include: the name(s) of addressee(s); the creator’s name/nickname and location; the number of supporters; the creation date; the titles of embedded videos and captions in the pictures; the petition text; any statement of petition victory. The final corpus contains a total of 50,102 tokens and 7,054 types: 24,858 tokens and 4,718 types for the USA; 25,244 tokens and 4,514 types for the UK. Text length varies from 160 to 904 words for the USA and 95 to 1,603 for the UK. The comment sections were excluded from the study to ensure uniformity across the corpus, since not all of the petitions in the dataset included responses, and to maintain a consistent focus on the main petition texts.

Previous studies have analysed e-petitions as instances of persuasive writing aimed at enhancing endorsement by other citizens through a series of rhetorical strategies. Petitions commonly use traditional persuasive appeals, including: ethos appeals, which emphasise the author’s credibility; pathos appeals, which suggest the need for urgent action and exploit compassion and sensationalism; logos appeals, which provide specific supporting data.<sup>25</sup> This paper focuses on some of the recurring discursive strategies used by petitioners to gain support for their environmental causes.

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<sup>23</sup> Change.org, *Change.org United Kingdom* (2022), [www.change.org/?lang=en-GB](http://www.change.org/?lang=en-GB); Change.org, *Change.org United States* (2022), [www.change.org/?lang=en-US](http://www.change.org/?lang=en-US).

<sup>24</sup> David Karpf, *Analytic Activism: Digital Listening and the New Political Strategy* (Oxford: Oxford U.P., 2016); Change.org, “Declaring Petition Victory”, *Change.org* (2023), <https://guide.change.org/declare-petition-victory>.

<sup>25</sup> Helen Briassoulis, “Online Petitions: New Tools of Secondary Analysis?”, *Qualitative Research*, 10.6 (2010), 715-727, 716; Hagen et al., “Understanding Citizens’ Direct Policy Suggestions”; Loni Hagen et al., “Introducing Textual Analysis Tools for Policy Informatics: A Case Study of E-Petitions”, *Proceedings of the 16th Annual International Conference on Digital*

The study also adopts a genre perspective. Many studies have investigated historical petitionary discourse, revealing that two moves are central to petitions: the statement of grievance or difficulty, also known as *narratio* and the request for redress, the *petitio*.<sup>26</sup> Online petitions can be analysed by combining the rhetorical structures of their traditional form with the related genre of fundraising letters. The latter have the similar purpose of informing readers about a problematic issue and persuading them to support a good cause through financial contributions.<sup>27</sup> Petitions also incorporate the interactive and multimodal elements of online communication and advertising, identified, for instance, in online coupons.<sup>28</sup> A rhetorical scheme for the genre of online petitions was suggested in a previous study, which identified the following moves: Attracting attention, Establishing a discourse community, Using pressure tactics, Identifying the petitioner, Addressing decision-makers, Establishing credentials, Indicating a problem, Requesting redress, Offering incentives, Referencing other materials, Inviting to support the cause, Expressing gratitude, and Concluding with pleasantries.<sup>29</sup> This paper concentrates on three significant actions employed by petitioners: Attracting attention, by using eye-catching titles and representative visuals; Indicating a problem, by describing the general or specific problem that the advocate seeks to address; Referencing other materials, by citing or alluding to external sources to provide readers with additional information about the presented issue.

The ongoing discussion surrounding climate change is polyphonic, encompassing various forms of discourse, from the original scientific discourse to its popularised versions.<sup>30</sup> Previous research has focused on the representation of climate change in different contexts. The issue was initially discussed within scientific disciplines and represented using technical language. As climate science spread through environmental organisations and the media, also governments and intergovernmental bodies started to establish specific frames to interpret and represent it. As discussions of climate change transitioned from scientific circles to government entities, the discourse shifted therefore from a more technical to a more technocratic tone. Climate change has thus been viewed from different perspectives, as statistical evidence, as a risk to the planet, but also as a threat to development and a social problem to be addressed in the context of sustainable development.<sup>31</sup> Media representations have played a significant role in influencing perceptions of climate science, governance, and the

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*Government Research* (2015), 10-19; Ahmed El Noshokaty et al., “Success Factors of Online Petitions: Evidence from Change.org”, in Tung X. Bui and Ralph H. Sprague, eds., *2016 49<sup>th</sup> Hawaii International Conference on System Sciences* (Koloa, Hawaii: IEEE, Institute of Electrical and Electronics Engineers, 2016), 1979-1985; Loni Hagen et al., “E-Petition Popularity: Do Linguistic and Semantic Factors Matter?”, *Government Information Quarterly* (2016), 1-13; Nurrahma Restia Fatkhiyati, “Rhetorical Strategy and Linguistics Features in E-Petition Through Change.org”, *Lingua Cultura*, 13.4 (2019), 239-245.

<sup>26</sup> John H. Fisher et al., *An Anthology of Chancery English* (Knoxville, Tenn.: U. of Tennessee P., 1984); Gwilym Dodd, *Justice and Grace: Private Petitioning and the English Parliament in the Late Middle Ages* (Oxford: Oxford U.P., 2007); Matti Peikola, “Supplicatory Voices: Genre Properties of the 1692 Petitions in the Salem Witch-Trials”, *Studia Neophilologica*, 84.1 (2012), 106-118.

<sup>27</sup> Vijay K. Bhatia, “Generic Patterns in Fundraising Discourse”, *New Directions for Philanthropic Fundraising*, 22 (1998), 95-110; Douglas Biber et al., *Discourse on the Move: Using Corpus Analysis to Describe Discourse Structure* (Amsterdam: John Benjamins, 2007), 43-73.

<sup>28</sup> Maria Cristina Aiezza, “Go Before They’re Gone: A Comparative Analysis of Online Travel Coupons Advertising”, in Maurizio Gotti et al., eds., *Ways of Seeing, Ways of Being: Representing the Voices of Tourism* (Bern: Peter Lang, 2017), 102-129.

<sup>29</sup> Maria Cristina Aiezza, “Sign and Make Your Mark on the World a Positive One”: A Discourse and Genre Analysis of UK Online Petitions to Reduce Single-Use Plastics, *Anglistica AION*, 22.1 (2018), 109-130.

<sup>30</sup> Anna Franca Plastina, *Social-Ecological Resilience to Climate Change: Discourses, Frames and Ideologies* (Newcastle upon Tyne: Cambridge Scholars Publishing, 2020).

<sup>31</sup> Chris Taylor, “The Discourses of Climate Change”, in Timothy Cadman, ed., *Climate Change and Global Policy Regimes: Towards Institutional Legitimacy* (London: Palgrave Macmillan, 2013), 17-31; Katherine E. Russo, *The Evaluation of Risk in Institutional and Newspaper Discourse: The Case of Climate Change and Migration* (Naples: Editoriale Scientifica, 2018).

urgency for climate mitigation or adaptation measures. The consensus on anthropogenic climate change presented by the IPCC has become a contentious issue, influenced by climate ‘sceptics’ or ‘contrarians’<sup>32</sup>. In this politically-charged context, conflicting interpretations are crafted, negotiated, and contested among differing perspectives<sup>33</sup>. Mass-media norms, especially the emphasis on balanced reporting, have contributed to presenting global warming as a subject surrounded by uncertainty.<sup>34</sup>

It has been argued that a primary function of environmental discourse “is not to be informative but persuasive”.<sup>35</sup> Persuasion in climate discourse has indeed been the subject of multiple studies, as it plays a critical role in shaping public opinion, influencing policy decisions, and driving collective action. Researchers have explored the strategies employed in climate-related communication to effectively convey the urgency and importance of addressing climate change. This includes investigating the role of emotions, such as fear and anxiety, in motivating individuals to take action<sup>36</sup>. The use of metaphors,<sup>37</sup> narratives,<sup>38</sup> and visual imagery<sup>39</sup> to frame reality, attract attention, and foster empathy have also been analysed. In particular, various studies examining users’ responses to climate-related icons and messages have demonstrated that, while exploiting fearful depictions of climate change can successfully capture people’s interest and emphasise the importance of the issue, it may also yield counterproductive effects. Fear often fails to genuinely inspire personal involvement, giving rise to various barriers that hinder engagement. These obstacles may include uncertainty and scepticism, blaming others or external factors, prioritising other more immediate concerns, experiencing fatalism or helplessness.<sup>40</sup> Employing non-threatening imagery and icons that resonate with individuals’ everyday emotions and concerns within the broader environmental context tends instead to be the most effective way to engage people.<sup>41</sup> Additionally, non-expert icons are found to be more appealing and relevant to local communities compared to technical representations of climate change-related phenomena.<sup>42</sup> These findings underscore the importance of integrating dramatic representations with elements that enable individuals to establish a meaningful connection with the causes and consequences of climate change in a positive manner. This approach helps them recognise the relevance of climate change to their local community and personal life, understanding that they can take positive actions in response.<sup>43</sup> Other studies have examined the influence of different messengers, such as scientists, activists, and public figures, in shaping public perceptions and promoting action to

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<sup>32</sup> Boykoff, *Who Speaks for the Climate?*

<sup>33</sup> Maxwell T. Boykoff and Jules M. Boykoff, “Balance as Bias: Global Warming and the US Prestige Press”, *Global Environmental Change*, 14 (2004), 125-136; Anabela Carvalho, “Representing the Politics of the Greenhouse Effect: Discursive Strategies in the British Media”, *Critical Discourse Studies*, 2, 1 (2005), 1-29; Cinzia Bevitori, “Values, Assumptions and Beliefs in British Newspaper Editorial Coverage of Climate Change”, in Christopher Hart and Piotr Cap, eds., *Contemporary Critical Discourse Studies* (London and New York: Bloomsbury Academic, 2014), 603-625.

<sup>34</sup> Maxwell T. Boykoff, “The Cultural Politics of Climate Change Discourse in UK Tabloids”, *Political Geography*, 27 (2008), 549-569; Boykoff, *Who Speaks for the Climate?*; Maxwell T. Boykoff and Jules M. Boykoff, “Climate Change and Journalistic Norms: A Case-Study of US Mass-Media Coverage”, *Geoforum*, 38 (2007), 1190-1204.

<sup>35</sup> Richard J. Alexander, *Framing Discourse on the Environment: A Critical Discourse Approach* (New York and Oxon, UK: Routledge, 2009), 42.

<sup>36</sup> Russo, *The Evaluation of Risk*.

<sup>37</sup> Othman Khalid Al-Shboul, *The Politics of Climate Change Metaphors in the U.S. Discourse: Conceptual Metaphor Theory and Analysis from an Ecolinguistics and Critical Discourse Analysis Perspective* (Cham, Switz.: Palgrave Macmillan, 2023).

<sup>38</sup> Kjersti Fløttum and Øyvind Gjerstad, “Narratives in Climate Change Discourse”, *WIREs Climate Change*, 8,1 (2016), e429.

<sup>39</sup> Saffron O’Neill and Mike Hulme, “An Iconic Approach for Representing Climate Change”, *Global Environmental Change*, 19,4 (2009), 402-410; Saffron O’Neill and Sophie Nicholson-Cole, “‘Fear Won’t Do It’: Promoting Positive Engagement with Climate Change Through Visual and Iconic Representations”, *Science Communication*, 30 (2009), 355-379.

<sup>40</sup> Irene Lorenzoni et al., “Barriers Perceived to Engaging with Climate Change Among the UK Public and Their Policy Implications”, *Global Environmental Change*, 17 (2007), 445-459; O’Neill and Nicholson-Cole, “‘Fear Won’t Do It’”.

<sup>41</sup> O’Neill and Nicholson-Cole, “‘Fear Won’t Do It’”.

<sup>42</sup> O’Neill and Hulme, “An Iconic Approach”.

<sup>43</sup> O’Neill and Nicholson-Cole, “‘Fear Won’t Do It’”, 376.

address climate change.<sup>44</sup> The circulation climate change denialism has also been explored both in traditional news outlets<sup>45</sup> and on social media<sup>46</sup>. In the context of climate change involvement, new media entities play indeed relevant roles, including providing information, encouraging interaction, widening participation.<sup>47</sup>

This analysis explores the user-generated popularisation of climate change knowledge from its original scientific discourse to its dissemination among the general public.<sup>48</sup> Based on a previous study of petitions against single-use plastics,<sup>49</sup> it appeared evident that petitioners became aware of the problem after exposure to news, especially if particularly shocking. In their petitions, advocates attempted to persuade readers of the negative impacts of plastic on marine life by citing scientific facts from multiple sources, such as online articles, websites, Wikipedia entries, and official regulations. Relevant data were copied and pasted or, more commonly, re-narrated even without proper references. Users tended to include information from various media, also referencing distressing images shown in viral videos and documentaries. In particular, the scholar used the expression “Blue Planet effect”<sup>50</sup> to describe the impact of natural historian David Attenborough’s programme on building British environmental conservatism. Especially after viewing the man-made devastation depicted in *Blue Planet II*, a documentary series aired on the BBC, many citizens decided to use the power of the Internet to encourage others to take action.

It appears therefore that the process employed by petitioners is similar to that used by popular science writers, who exploit various strategies to explain natural phenomena to audiences who may lack domain-specific knowledge.<sup>51</sup> In this context, metadiscourse plays a crucial role in framing scientific work for non-science audiences, using interactive and interactional linguistic resources.<sup>52</sup> In particular, evidentials indicate the external origin of material in the current text and lend credibility to it by drawing attention to the reliability of its source. Code glosses provide additional information by rephrasing and clarifying potentially unfamiliar terms or usages, while also linking issues in the specialist domain to everyday contexts.<sup>53</sup> Popular science texts also employ sentence definitions and extended definitions to describe technical terms and concepts.<sup>54</sup>

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<sup>44</sup> Graham Huggan, *Nature’s Saviours: Celebrity Conservationists in the Television Age* (London: Routledge, 2013); Maxwell T. Boykoff and Michael K. Goodman, “Conspicuous Redemption? Reflections on the Promises and Perils of the “Celebrization” of Climate Change”, *Geoforum*, 40 (2009), 395-406.

<sup>45</sup> Katherine E. Russo, “Speculations About the Future: Populism and Climate Change in News Discourse”, in Encarnación Hidalgo-Tenorio et al., eds., *Populist Discourse: Critical Approaches to Contemporary Politics* (London and New York: Routledge, 2019), 190-206.

<sup>46</sup> Emma Frances Bloomfield and Denise Tillery, “The Circulation of Climate Change Denial Online: Rhetorical and Networking Strategies on Facebook”, *Environmental Communication*, 13.1 (2019), 23-34.

<sup>47</sup> Saffron J. O’Neill and Maxwell T. Boykoff, “The Role of New Media in Engaging the Public with Climate Change”, in Lorraine Whitmarsh et al., eds., *Engaging the Public with Climate Change: Communication and Behaviour Change* (London: Earthscan, 2010), 233-251.

<sup>48</sup> Maurizio Gotti, “Reformulation and Recontextualization in Popularization Discourse”, *Ibérica*, 27 (January-June 2014), 15-34.

<sup>49</sup> Aiezza, “Sign and Make Your Mark on the World a Positive One”.

<sup>50</sup> Ibid..

<sup>51</sup> Helena Calsamiglia and Teun Van Dijk, “Popularization Discourse and Knowledge about the Genome”, *Discourse & Society* 15.4 (2004), 369-389; Maurizio Gotti, “Reformulation and Recontextualization in Popularization Discourse”, *Ibérica*, 27 (2014), 15-34.

<sup>52</sup> Silvia Masi, “Metadiscourse in English and Italian: An Analysis of Popular Scientific Discourse Online”, in Susan Kermas and Thomas Christiansen, eds., *The Popularization of Specialized Discourse and Knowledge across Communities and Cultures* (Bari: EdiPuglia, 2013), 315-329.

<sup>53</sup> Ken Hyland, *Metadiscourse: Exploring Interaction in Writing* (London and New York: Continuum, 2005), 51-52, 95-98.

<sup>54</sup> John M. Swales and Christine B. Feak, *Academic Writing for Graduate Students: Essential Skills and Tasks*, Third Edition (Ann Arbor, Mich.: U. of Michigan P., 2012).

The present study integrates quantitative and qualitative analytical perspectives. To compare environmentalist discourses in the USA and UK, petitions were categorised based on the main topic, author, and addressee. Attention-grabbing elements such as titles and images were considered, and instances of popularisation were manually identified in the texts. The investigation combined Discourse Analysis with Corpus Linguistics,<sup>55</sup> employing corpus analysis tools to identify and compare themes and patterns through frequencies, keywords, and collocations. These observations allowed the researcher to pinpoint areas for subsequent close analysis. The corpus was investigated through the software *WordSmith Tools*<sup>56</sup> and POS-tagged and explored through the online corpus query system *Sketch Engine*.<sup>57</sup> The analysis focused on the discursive trends evidenced in the two contexts and on the forms of re-mediation of scientific climate language, especially through the use of evidentials, definitions, and external references.

## 4. Analysis

### 4.1 *Attracting Attention*

The petitions on *Change.org* follow a structured format while allowing for considerable freedom in the textual contents, as long as they comply with the Community Guidelines.<sup>58</sup> In this study, petitions were categorised based on their primary topic. Climate change was the main theme for 8 petitions both in the USA and the UK subcorpora. The remaining texts connected instead the issue of climate change to a range of related interests, including: protecting land and water, conserving wildlife, reducing fossil fuels, contrasting plastic waste, avoiding palm oil, spreading climate knowledge in education and media, improving farming practices, and using cleaner transportation. Notably, the USA citizens tended to devote more petitions to wildlife (14, including 4 on hunting, versus 7 in the UK, with 1 related to hunting) and water conservation (7, compared to 4 in the UK). The topic of land and nature protection was instead more prominent in the UK (8 petitions, compared to 3 in the USA).

The corpus collected petitions solely based on search words, origin, and popularity, without regard to the authors. In the USA, nearly half of the petitioners (26 out of 58) were represented by single-/multi-issue organisations or formal/informal advocacy groups, compared to only 13 in the UK petitions. This may create an appearance of imbalance of the corpus, as the authors' expertise and knowledge of the topics varied, ranging from ordinary people, to enthusiasts, to experts. Nevertheless, popularisation features were present throughout the corpus, not just in the petitions submitted by organisations, and scientific precision was found to be equally variable (see Paragraph 4.4).

The petitions were directed mainly towards national (such as Congress, President, and representatives in the USA, and Parliament, Prime Minister, and ministers in the UK) and local government bodies (e.g., governors and mayors in the USA, city councils in the UK). In addition to this, some petitions also addressed organisations, such as companies and retailers, educational entities, and international or foreign authorities.

Given the abundance of petitions available on the website and the tendency to read only headlines in online texts, petitioners need to persuade web users to read their texts in full and share their cause. This function is primarily enacted through an incisive title and representative visuals. The titles in the corpus effectively conveyed the petitioners' demands. As *Change.org* guidelines suggest, titles should

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<sup>55</sup> Paul Baker et al., *Discourse Analysis and Media Attitudes: The Representation of Islam in the British Press* (Cambridge: Cambridge U.P., 2013); Alan Partington et al., *Patterns and Meanings in Discourse: Theory and Practice in Corpus-Assisted Discourse Studies (CADS)* (Amsterdam and Philadelphia: John Benjamins Publishing Company, 2013).

<sup>56</sup> Mike Scott, *WordSmith Tools 7.0* (Oxford: Lexical Analysis Software and Oxford U.P., 2014).

<sup>57</sup> Lexical Computing CZ s.r.o., *Sketch Engine* (2023), [www.sketchengine.eu](http://www.sketchengine.eu).

<sup>58</sup> Change.org, “Community Guidelines”, *Change.org United States* (2020), [www.change.org](http://www.change.org).



communicate a sense of urgency, frequently achieved through the use of the imperative mood. Imperatives often used in the titles included, in the USA: “stop” (11), “tell” (9), “protect” (6), “save” (6), “ban” (4), “help” (4), “end” (3), “let” (3). Similarly, in the UK, imperative verbs comprised: “stop” (9), “ban” (7), “save” (5), “make” (4), “get” (3), “support” (3). The exhortations were, therefore, focused on halting environmental degradation and protecting the natural world. The use of verbs such as “tell” and “get” also emphasised the role of petitions in collecting support and appealing to authorities:

Tell Congress: Climate Change is an Emergency and needs more awareness<sup>59</sup>

Get BBC to show Cowsspiracy and Earthlings<sup>60</sup>

Other attention-grabbing techniques employed included capitalisation, exclamation marks, expressions of urgency such as “\*EMERGENCY\*”, “this winter” (in the USA subcorpus), “now”, “take urgent action”, and “before it’s too late” (in the UK component).

All petitions used visual media to capture the attention of readers. In the United States, 8 petitions and 2 in the UK started with a video, while pictures were the primary tool for the rest. Images mostly included representations of animals (28 in the USA and 23 in the UK), such as polar bears, orangutans, cows, birds, whales, and of natural landscapes (29 in the USA and 19 in the UK), such as forest, countryside, sea shores, glaciers. Some pictures (17 USA and 15 UK) also showed human presence, including campaigners, petitioners, and popular figures, such as politicians or environmentalists. In both subcorpora, nearly half of the images aimed to shock and move viewers by revealing the devastating events of climate change, deforestation, and pollution on animals, land, and sea. Other pictures depicted instead peaceful images of the animals or nature that the petitioner wished to safeguard, unspoilt by human action. Another section of the images utilised posters or slogans to provide information and reinforce the exhortation presented in the title.

#### 4.2 Keyword Analysis

The software *WordSmith Tools* was used to obtain keywords and compare petitions initiated in the USA and UK. Only words present in at least 5 petitions were considered, with the p value set at 0.001. The resulting *Keyword List* (see Table 1) signalled the relevance of words referring to government authorities and environmental issues. Significant terms were concordanced and further analysed in their context of occurrence.

Key word	USA		Key word	UK	
	Freq.	%		Freq.	%
U	50	0.20	UK	154	0.61
SENATOR	36	0.14	GOVERNMENT	82	0.32
REPRESENTATIVE	36	0.14	PLANNING	35	0.14
YORK	33	0.13	PLASTIC	49	0.19
EPA	27	0.11	MP	20	0.08
SENATE	25	0.10	MINISTER	26	0.10
GOVERNOR	21	0.08	PARLIAMENT	15	0.06
PARK	29	0.12	BORIS	15	0.06
CONGRESS	24	0.10	HOUSING	15	0.06

<sup>59</sup> Trent Miles, “Tell Congress: Climate Change is an Emergency and Needs More Awareness”, *Change.org United States* (24 January 2020), [www.change.org](http://www.change.org).

<sup>60</sup> Sarah Gate, “Get BBC to show Cowsspiracy and Earthlings”, *Change.org United Kingdom* (25 July 2019), [www.change.org](http://www.change.org).

STATES	26	0.10	COP26	14	0.06
AMERICAN	17	0.07	M	29	0.11
SCOTT	21	0.08	GOVE	13	0.05
TRUMP	21	0.08	JOHNSON	16	0.06
TROPHY	16	0.06	PRIME	19	0.08
NATIONAL	57	0.23	MICHAEL	15	0.06
OCEAN	35	0.14	COUNCIL	44	0.17
GENERAL	27	0.11	NATURE	31	0.12
FIGHT	29	0.12	WHERE	27	0.11
PROGRAMS	18	0.07	LAW	20	0.08
LANDFILLS	12	0.05	TESCO	10	0.04
UNITED	35	0.14	WHILST	10	0.04
NON	24	0.10	NOVEMBER	10	0.04
ENDANGERED	30	0.12			
POINT	27	0.11			
ADMINISTRATIO N	10	0.04			

Table 1. Keywords of the USA vs the UK subcorpora

Both lists included references to the institutions addressed, such as “Senator”, “Representative”, “EPA”, “Senate”, “Governor”, “Congress” for the USA, and “Government”, “MP”, “Minister”, “Parliament”, “Boris” “Johnson”, “Michael” “Gove”, “council” for the UK.

Several USA keywords referred to animal protection, through the designation of an area as a “park” to preserve flora and fauna, the contrast to “trophy” hunting, the safeguard of “endangered” species and the “ocean” ecosystem and wildlife. The war metaphor “fight” also appeared among the USA keywords, primarily used as a verb, to indicate opposition to climate change and support for the environment. Petitioners went as far as to use the form “fight back” to suggest that their protest was a response to an earlier attack:

We are witnessing the collapse of our entire ecosystem and we will not sit idly by and do nothing, so today we stand together and fight back to #SaveFL!<sup>61</sup>

Furthermore, the acronym “EPA” was particularly relevant during the previous administration, as the Environmental Protection Agency was under the control of climate deniers Trump and Pruitt, who downplayed the importance of ecological concerns and underestimated climate issues.<sup>62</sup>

In the UK keywords related to environmental issues, the problem of “plastic” pollution was particularly relevant, especially in relation to single-use items and food packaging. The lack of “nature” protection, especially the consideration of woodland in “planning” for “housing” stood out:

The current planning laws are ensuring we speed faster into the Climate-Nature crises – by building on our carbon sinks – creating more extreme weather, floods, droughts and rising sea levels. [UK]<sup>63</sup>

“COP26” also appeared in the UK keywords, referring to the 2021 conference held in Glasgow. Petitioners had initially hoped this would bring change for the climate, but later expressed disappointment and scepticism towards its actual achievements.

<sup>61</sup> Florida Naturekeepers Inc., “Florida’s Gulf Coast is Dying! Millions of Dead Fish, Sea Turtles, Manatees and Dolphins!”, *Change.org United States* (1 August 2018), [www.change.org](http://www.change.org).

<sup>62</sup> Napolitano and Aiezza, “Trump is Erasing Climate Change”.

<sup>63</sup> Lucy Philip, “Halt Harmful Housing with New Environmental Planning Law”, *Change.org United Kingdom* (6 October 2021), [www.change.org](http://www.change.org).

### 4.3 Climate-Related Language

Given the high relevance of the issue of climate change in the petitions under study, it appeared interesting to compare the usage of the term “climate” in the USA and UK subcorpora. *SketchEngine* was utilised to obtain a *Word Sketch Difference*, a corpus-derived summary of the grammatical and collocational behaviour of the word. Figure 1 shows the right-hand nominal collocates of “climate” in the two subcorpora. The collocates highlighted in green represent those more peculiar to the USA subcorpus, while those in red are more typical of the UK texts. The second column from the left presents the frequency of the lemma in the USA petitions, the third column indicates its occurrences in the UK petitions, and the fourth and fifth columns display their respective typicality scores (logDice). The logDice statistical measure quantifies the strength of the collocation, with higher scores indicating stronger collocations.<sup>64</sup>

Among the terms modified by “climate”, the expected “change” had similar relevance in both subcorpora. It is necessary to note that, since the tool *Word Sketch Difference* produces case sensitive collocates, different (and not combined) collocations were retrieved for “Change” and “change”.<sup>65</sup>

Figure 1 reveals that, in the USA component, the contrast to climate change denial was present, as indicated by the phrases “climate denial” and “skeptical”. Although these instances were limited, it is intriguing to note that such climate disbelief tended to contradict the prevailing scientific consensus represented by “climate scientist” and “science”. UK petitioners used more overtly negative terminology, associating climate with terms such as “emergency”, “crisis”, “disaster”, “breakdown”, and “catastrophe”. The frequent occurrence of the phrase “climate emergency” in the UK corpus referred to the declaration of a state of environment and climate emergency adopted by the British parliament in 2019<sup>66</sup> and gradually followed by local jurisdictions throughout the country.

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<sup>64</sup> Pavel Rychlý, “A Lexicographer-Friendly Association Score”, in Petr Sojka and Aleš Horák, eds., *Proceedings of Recent Advances in Slavonic Natural Language Processing (RASLAN) 2008* (Brno: Masaryk University, 2008), 6-9.

<sup>65</sup> Lexical Computing CZ s.r.o., “Using Case Sensitive and Case Insensitive Searches with Corpora”, *Sketch Engine* (2023), [www.sketchengine.eu](http://www.sketchengine.eu).

<sup>66</sup> BBC News, “UK Parliament Declares Climate Change Emergency”, *BBC News* (1 May 2019), [www.bbc.co.uk](http://www.bbc.co.uk).

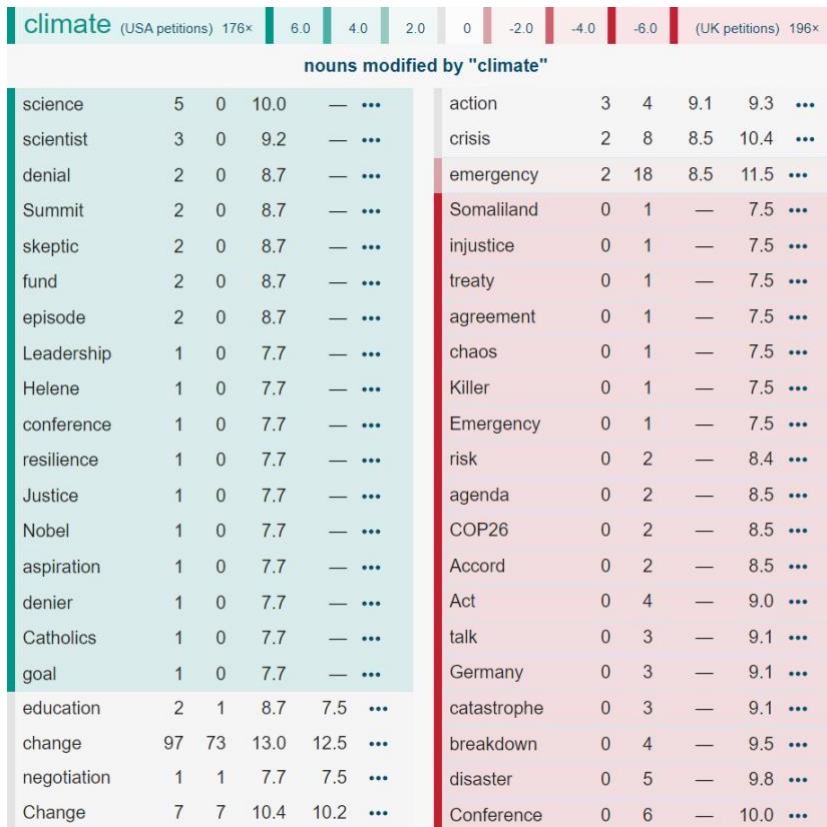


Figure 1. Word Sketch Difference: right-hand nominal collocates of “climate” in the USA (green) and UK (red) subcorpora

To gain further insight into the use of the phrase “climate change” in the petitions, a concordance search of “climate change is” was conducted in each subcorpus using *WordSmith Tools*. The search aimed to identify definitions, explanations, and opinions related to the concept.<sup>67</sup> As seen in the concordances in Figures 2 and 3, the number of results was limited (9 in the USA subcorpus and 10 in the UK). The concordances showed that, in both subcorpora, petitioners described climate change as a major “issue”, a “threat”, and a “crisis”. Furthermore, in the USA, it was depicted as “real”, “irrefutable”, in order to counteract climate scepticism. The UK collocates also featured continuous forms such as “climate change is happening”, “bringing” disasters and “accelerating”, used to emphasise the urgent nature of the situation.

<sup>67</sup> Lynne Bowker and Jennifer Pearson, *Working with Specialized Language: A Practical Guide to Using Corpora* (London and New York: Routledge, 2002), 206-209.

, and we're running out of time! ADD YOUR NAME: I believe that **climate change** is a **planetary crisis** and that Congress must do more to, environmentalists and scientists say climate change will spike more as **climate change** is **already a major** issue! Climate change has rapidly been Tell Congress: **Climate Change** is **an Emergency** and needs more awareness Trent Miles, it is a death sentence for at-risk individuals. While science tells us that **climate change** is **irrefutable**, **science** also tells us that it is not too late to happen. If you believe that understanding and mitigating the effects of **climate change** is **key to our** future, please sign and share this petition. Let's energy sources; such as coal. Mr. Trump is also a firm believer that **climate change** is **not an issue** to our nation. Both of these individuals hold gases, we would be turning our backs on ourselves and the environment. **Climate change** is **real**, and **we** need to move forward and understand its Starbucks Cups and paper cups in general. One of the major drivers of **climate change** is **the greenhouse gas** emissions emitted by landfills, which of these people are the ones who produce the world's food – farmers. **Climate change** is **the single biggest** threat to winning the fight against

Figure 2. Concordances of “climate change is” in the USA subcorpus

FOR SURREY HEATH. THE RT. HON MICHAEL GOVE MP **Climate change** is **accelerating**. **We** are witnessing the increasing impacts of State for Business, Energy and Industrial Strategy Andrea Leadsom **Climate change** is **bringing drought, floods**, extreme heat and poverty to acidity caused by climate change, and protects our coasts from erosion. **Climate change** is **happening!** **Seas** are getting rougher and more acidic; and our wellbeing. The nature crisis and climate emergency are intertwined: **climate change** is **one of the** biggest causes of the loss of wildlife; show them that the demand is there and that in the 21st century when the **climate change** is **such a big** issue, we should have the option to travel by the damage we're doing to our planet and how it will affect our futures. **Climate change** is **the biggest issue** of our time, and it must be a part of Conference ProVeg UK started this petition to German government **Climate change** is **the greatest challenge** facing humanity and the planet. importantly, it inspired me to get out there and do as much as I could. **Climate change** is **the most pressing** and threatening issue to modern day on our planet. The biggest single act a person can take to limit the impact of **climate change** is **to reduce or** eliminate from their diet the consumption of are getting rougher and more acidic; to remove anything that can ameliorate **climate change** is **utterly bonkers**. **Many** of our Scottish Islands are

Figure 3. Concordances of “climate change is” in the UK subcorpus

Another critical concept in climate science is the process of “global warming”. Concordances of the phrase “global warming” were obtained for both subcorpora, resulting in 19 occurrences in the USA and 19 in the UK subcorpus. In both components, petitioners described global warming as a consequence of human activities that release CO<sub>2</sub> into the atmosphere, such as the use of fossil fuels, incineration, fires, animal farming, deforestation, and plastic production. With their causes, petitioners sought to limit such practices. Notably, in the UK, global warming was portrayed in darker tones, as a “slaughter”, “disaster”, and a “threat”. Several UK petitions emphasised the need to reduce or prevent the emission of greenhouse gases to limit global temperature rise to 1.5 °C above pre-industrial levels, also explicitly referring to the target posed by the IPCC in its special report of 2018.<sup>68</sup>

<sup>68</sup> IPCC (United Nations Intergovernmental Panel on Climate Change), “Global Warming of 1.5 °C: Summary for Policymakers”, *IPCC* (2018), [www.ipcc.ch](http://www.ipcc.ch).

dioxide emissions, posing a threat to human health **and aggravating global warming** worldwide (The Washington Post). So what can we than carbon dioxide. Palm oil production is one of the leading **causes of global warming and** cannot stand to be overlooked any longer. As a that their decisions will make in the years to come. **Climate change and global warming have** rapidly been advancing in the past decade; and I been composted were incinerated in landfills. Incineration **contributes to global warming and** air or water pollution, a growing problem that can recoup some of the energy but also results in emissions that **contribute to global warming and** air pollution. -The sheer volume of disposable . -Greenhouse gas release from landfills is a major **contributor to global warming. -Disposable** single-use products that don't make it to , all of this wastage of food dumped into landfills **contributes to global warming. In** the bigger picture, supermarkets have hundreds of consensus that animal agriculture is the single largest **contributor to global warming, outstripping** even the transportation industry in its production of which emits carbon, creates fossil fuels, and **contributes to global warming. \*\*\*\* Unlike** grass, turf does not cool the environment. than ever, to educate children, communities and families on the **impact of global warming and** how we can reduce our carbon footprint. Please The State is collecting unprecedented and unfair amounts of money **in the “Global Warming Tax”**. Use this money to prevent further global be bothered. The fires are releasing CO2 into the air which **is causing global warming to** occur faster; resulting in the decline of our ecosystem. , like the Lorax's, is facing major environmental problems **like pollution, global warming, oil spills, littering, a Great Pacific Garbage Patch,** money in the “Global Warming Tax”. Use this money to **prevent further global warming. We** need our plants, trees and grass to reduce CO2 . In the edited document, he revealed, officials removed **references to global warming and** its link to sea level rise, which is severely threatening series on the marvel that is our planet. The subject of the **final series is global warming and** climate change, and reflects on some effects of . Globally, agricultural production of raw materials is the largest **source of global warming emissions**. Investigations in Asia and Africa show that Help farmers and end harmful business practices **that cause global warming Richard** Oswald started this petition to General Mills for us since the past billions of years and is still protecting **us from global warming, has** yet not been invited to talk about our future. Too

Figure 4. Concordances of “global warming” in the USA subcorpus

**GLOBAL WARMING: "STOP THE SLAUGHTER OF THE**

of people and cost hundreds of billions of dollars. Experts **agree that global warming caused** by humans burning fossil fuels will continue to amount of carbon dioxide that gets trapped in our **atmosphere causing global warming and** destroying our planet. This poses many risks to us the UK! Michael M started this petition to Prime Minister **Boris Johnson Global Warming is** the biggest threat to mankind and our future comfortable buying from companies that are needlessly **contributing to global warming and** putting wildlife in danger. My proposal is that all fruits with them. The destruction of the rainforest is also a major **contributor to global warming - which** affects us all. The lifestyles of indigenous tribes . The loss of animals effects us also. No more trees- no more **fresh air. Global warming- a national disaster, drouts and even ice ages! no more** IN THE ATMOSPHERE GETS PREVENTED **FROM DOING GLOBAL WARMING HARM. UNLESS PLASTICS ARE 100%** - Caroline is a perfect fit. Last words to Caroline: "**Boris Johnson likened global warming to** “cloaking the planet like a tea-cosy”, a stunningly Paris Convention in 2015, which provides for the limitation of **man-made global warming to** below 2°C compared with the pre-industrial age. In be a safe level for humanity; 2. In order to reduce the chance of **runaway Global Warming and** limit the effects of Climate Breakdown, it is take to address this emergency. References: 1- IPCC's Special **report on Global Warming of 1.5 degrees** (2018) <https://www.ipcc.ch/report/sr15/> . The International Panel on Climate Change - IPCC's Special **Report on Global Warming of 1.5°C**, published October 2018, describes the 3. The IPCC's Special **Report on Global Warming of 1.5°C**: <https://www.ipcc.ch/report/sr15/> 4. Including into rivers and add to the already extreme issue of pollution, **resulting in global warming. Currently** in the UK, firework use and buying is International Panel on Climate Change (IPCC) report says **that limiting Global Warming to 1.5°C** may still be possible - but it requires ambitious rise is likely to cause compared to a 1.5°C rise, and told us **that limiting Global Warming to 1.5°C** may still be possible if the UK gets to zero governments to determine and implement best practice methods **to limit Global Warming to** less than 1.5°C; 5. Continue to work with partners , starting by immediately declaring a national climate emergency. If **we let global warming go** beyond 1.5°C, coral reefs will be completely

Figure 5. Concordances of “global warming” in the UK subcorpus

#### 4.4 Popularisation of Climate Science

The current study also delved into the instances of popularisation found in the corpus. Some form of mediation of specialised information was retrieved in all of the petitions under investigation. Instances of popularisation ranged from very general and vague reference to environmental issues to the inclusion of specific results from scientific research. In both sections, quotes were included through direct, indirect, or partial quotes, as well as references to sources. The study also identified various forms of reports and definitions. Sources could remain unattributed or be attributed to generalised

entities or specific sources, which could be people, institutions, rules, or texts.<sup>69</sup> In the following examples, bold and underlined writing indicate clickable hyperlinks included in the petition text.

Quotes could be used to effectively summarise or illustrate a point, while also allowing for the inclusion of strong evaluations, without appearing overtly partial.<sup>70</sup> Petitions sometimes incorporated direct quotes, by reusing language from news interviews and employing reporting verbs such as “say”:

the conservancy of our most precious ancient woodland at Havant Thicket and throughout the UK is also an intrinsic part of the fight against the climate emergency. “Havant Thicket is this special place that forms part of the historic Forest of Bere which dates back almost a thousand years to 1086,” the Woodland Trust said. It is one of our rarest habitats. It has lain undisturbed for centuries, evolving into a delicate eco-system... [UK]<sup>71</sup>

Indirect reporting structures, which usually consist of a reporting verb followed by a *that*-clause, were also present in both subcorpora. Generic references to “studies”, “scientists”, “research” were used to convey knowledge and emphasise the documented seriousness of the situation:

Alaska is one of few natural states left in our country, this is why we need to preserve it. With oil drilling there, environmentalists and scientists say climate change will spike more as climate change is already a major issue! [USA]<sup>72</sup>

We are facing a climate catastrophe. Leading scientists have warned that **we have 12 years to take emergency action on climate change**, or we face the gravest threats to our local and global environment [emphasis in the original]. [UK]<sup>73</sup>

Other forms of reported speech include the use of reporting adjuncts, such as “according to”, for both direct and indirect reports:

According to Jay Michaelson, a writer for Blood and Palm oil, “each day in Indonesia, forest fires release as much carbon dioxide as the entire United States...”. [USA]<sup>74</sup>

According to research commissioned by the Catholic aid agency Cafod, the UK has spent more than twice as much overseas support on fossil fuels projects as on renewable ones. [UK]<sup>75</sup>

Partial quotes, which report only some relevant words from the source in quotation marks, were also present. These were used as scare quotes to convey an authorial attitude of distancing from the enclosed words or the reported speaker, as in the examples:<sup>76</sup>

<sup>69</sup> Monika Bednarek and Helen Caple, *News Discourse* (London and New York: Continuum, 2012), 90-93.

<sup>70</sup> Ibid..

<sup>71</sup> Stop the Chop, “Prevent the Destruction of Ancient Woodland at Havant Thicket and Surrounding Areas”, *Change.org United Kingdom* (28 April 2021), [www.change.org](http://www.change.org).

<sup>72</sup> The Resource Renewal Institute, “Protect and Restore Wildlife at Point Reyes National Seashore”, *Change.org United States* (16 September 2020), [www.change.org](http://www.change.org).

<sup>73</sup> Ariana Jordão, “Declare a National Climate Emergency Now!”, *Change.org United Kingdom* (1 February 2019), [www.change.org](http://www.change.org).

<sup>74</sup> Emily Shirvanian, “Remove Palm Oil from Products”, *Change.org United States* (3 December 2018), [www.change.org](http://www.change.org).

<sup>75</sup> SAVE THE EARTH CAMPAIGN, “GLOBAL WARMING: ‘STOP THE SLAUGHTER OF THE ENVIRONMENT’”, *Change.org United Kingdom* (7 March 2019), [www.change.org](http://www.change.org).

<sup>76</sup> Zuzana Nádraská, “The Function of Scare Quotes in Hard News: Metadiscoursal and Generic Perspectives”, *Discourse and Interaction* (2022), 101-127.

So far, TCEQ [Texas Commission on Environmental Quality] is **unapologetic** about removing sea level rise information from the draft report, saying it is “unsettled science” that is beyond the scope of the report. [emphasis in the original]. [USA]<sup>77</sup>

A massive tract of wildlife rich countryside next to Danes Moss SSSI nature reserve near Macclesfield in Cheshire is under threat from a massive housing and retail development and its stinks.

The “development” is on peatland, and it will completely contradict Government’s policy to protect peat to tackle climate change – promoted by Michael Gove when he was environment minister. [UK]<sup>78</sup>

In some cases, the title of the publication was mentioned, especially by naming specific scientific documents like the reports by the UN IPCC and the UK Climate Change Committee:

IPCC’s 2018 report emphasizes that we need major transformation, especially since we are now off track in limiting climate change to 1.5 degrees celsius. [USA]<sup>79</sup>

Climate Change Committee

The report published by the Climate Change Committee report 16 June 2021 “Independent Assessment of UK Climate Risk” Advice to Government” that highlights the urgent risks and potentially catastrophic damages to our environment, biodiversity and of flooding due to failures in National planning and building policies. [UK]<sup>80</sup>

The sources could also be listed in endnotes and, in some cases, even collected in a final “References” section, which echoes academic style. This is further enhanced by the availability of the medium, since petitioners could insert the direct links to the original texts, which might be accessed online:

**References:**

1. Fossil CO<sub>2</sub> & GHG emissions of all world countries, 2017: <http://edgar.jrc.ec.europa.eu/overview.php?v=CO2andGHG1970-2016&dst=GHGpc>
2. World Resources Institute: <https://www.wri.org/blog/2018/10/8-things-you-need-know-about-ipcc-15-c-report>
3. The IPCC’s Special Report on Global Warming of 1.5°C: <https://www.ipcc.ch/report/sr15/> [emphasis in the original] [UK]<sup>81</sup>

The problematic issue addressed could also be presented by summarising information without explicitly quoting the referred words. External sources might be embedded in the main text through clickable hyperlinks, allowing the reader to access further insights and validate the petitioners’ claims.

**Pruitt has sued the EPA on behalf of regulated industries more than a dozen times** in an attempt to weaken regulations such as the federal Clean Water Act [emphasis in the original]. [USA]<sup>82</sup>

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<sup>77</sup> Mobi Warren, “Tell Texas: Respect Scientists, Publish Uncensored Environmental Report”, *Change.org United States* (31 October 2011), [www.change.org](http://www.change.org).

<sup>78</sup> Jeremy Herbert, “Save Danes Moss Peatland from Housing and Retail Development”, *Change.org United Kingdom* (26 January 2022), [www.change.org](http://www.change.org).

<sup>79</sup> Cynthia Leung, “Go #AllinforClimateAction NOW - #Climate Emergency”, *Change.org United States* (23 August 2019), [www.change.org](http://www.change.org).

<sup>80</sup> Lucy Philip, “Halt Harmful Housing with new Environmental Planning Law”, *Change.org United Kingdom* (6 October 2021), [www.change.org](http://www.change.org).

<sup>81</sup> Cllr Shane Collins, “Mendip District Council to ‘Declare a Climate & Ecological Emergency’”, *Change.org United Kingdom* (28 January 2019), [www.change.org](http://www.change.org).

<sup>82</sup> Heal the Bay, “Demand A Strong EPA For Our Bays”, *Change.org United States* (31 January 2017), [www.change.org](http://www.change.org).



To provide clarification, short definitions in the form of code glosses were used, taking various forms. They were signalled by dashes (or hyphens), commas, parentheses, or a colon, and sometimes introduced by formulaic expressions like “such as”.

All local authorities are legally obliged to conserve biodiversity – the number and variety of plants and animals in a particular area. [UK]<sup>83</sup>

Numerous petitions in both subcorpora provided readers with an overview of environmental information, also including quantitative data, yet they failed to mention sources. Furthermore, these contents were sometimes presented in general and even banal terms:

Additionally, all of this wastage of food dumped into landfills contributes to global warming. In the bigger picture, supermarkets have hundreds of locations which mean thousands of pizzas and other meals being thrown out every single day when it could go to someone in need. [USA]<sup>84</sup>

The texts also contained sentence and extended definitions, which included more detailed information through longer paragraphs, as in the example:

A popular compound found in sunscreen, oxybenzone, is highly damaging to the reef. “Recent studies have shown that oxybenzone (and octinoxate & homosalate) causes deformities in coral larvae (planulae), making them unable to swim, settle out, and form new coral colonies. It also increases the rate at which coral bleaching occurs. This puts coral reef health at risk, and reduces resiliency to climate change... Researchers have found oxybenzone concentrations in some Hawaiian waters at more than 30 times the level considered safe for corals.” – <http://dlnr.hawaii.gov/blog/2016/09/03/nr16-182/> Coral reefs are an important part of the ecosystem. Healthy coral reefs can support more fish life as well as protect the shoreline. Many species are supported in Hawaiian reefs that are not found anywhere else. The effects of coral bleaching are already widespread and can be seen in all the Hawaiian islands. ... Oxybenzone has also been linked to negative impacts on human health, including both hormonal and skin related effects. [emphasis in the original] [USA]<sup>85</sup>

The topics covered in definitions comprise relevant processes, such as climate change, extinction, coral bleaching, as well as products such as Styrofoam, plastic, palm oil, and glyphosate. In addition to scientific information, some petitioners also aimed to popularise legal knowledge regarding norms that regulate, for instance, animal conservation or fossil fuel extraction. It is worth noting that texts typically presented metadiscursive resources in combination rather than in isolation.

Additionally, it is also noteworthy that, at certain times, petitions in both countries addressed the same issues and even used similar language. For instance, petitions against unsustainable palm oil production emerged during the same time frame (2018). These texts included the same information about deforestation rates, albeit not quoted, and possibly sourced from WWF news appeared on TV or on the web:

Every hour, 300 football-field-sized swaths of rich forestland are cleared to make way for palm oil plantations. These plantations are putting at least 200 species at risk for extinction, like the orangutan, the Sumatran tiger, and the Borneo elephant. In fact, 3,000 orangutans are killed every year. [USA]<sup>86</sup>

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<sup>83</sup> Save Newcastle Wildlife, “Put Nature on the Map in Newcastle”, *Change.org United Kingdom* (20 June 2017), [www.change.org](http://www.change.org).

<sup>84</sup> Satya Shanmugaselvam, The Humanitarian Project, “Stop Big Supermarket Chains from Throwing Out Food”, *Change.org United States* (2 February 2021), [www.change.org](http://www.change.org).

<sup>85</sup> Kimberly Jeffries, “Ban the Sale of Coral Damaging Sunscreen in Hawaii”, *Change.org United States* (5 September 2016), [www.change.org](http://www.change.org).

Every hour 300 football fields of precious forest in South East Asia is being ploughed to the ground to make way for palm oil plantations. Palm oil is the leading cause of orang-utan extinction. It is used in 50% of all household and food products sold in the West. [UK]<sup>87</sup>

With 5 football fields of rainforest being cut down EVERY second, we simply cannot continue in this reckless and egocentric fashion. [UK]<sup>88</sup>

This suggests that news, television programmes, and social media posts may influence the initiation of petitions. Numbers and figures play a crucial role since they provide factual information, making the reports appear objective and newsworthy.<sup>89</sup> As evident, petitions featured several statistical data, but commonly inserted without even citing the sources accessed by the petitioner.

## 5. Conclusions

The evolution of the Internet has led to the emergence of new forms of digital activism, including online petitioning platforms. These allow users, even those with limited digital skills, to express their views on various issues, including environmental problems. The authors of petitions present their opinions as collective stances that might be shared and supported by like-minded citizens.

This paper investigated the prioritisation of climate issues and popularisation of scientific knowledge related to climate change in e-petitions by users in the USA and UK. The study findings indicated that climate change was addressed not only in petitions explicitly calling for action on the issue, but also in those focusing on other main topics. Different trends in the problems addressed in the petitions were identified in the two subcorpora, with the USA showing a greater focus on wildlife and water conservation and the UK on land protection. Iconic representations were also skilfully employed in both components, featuring dramatic depictions of climate-related events, but also positive portrayals of flora and fauna, as well as people (especially activists and policy-makers), along with slogans that bolstered the exhortations presented in the petition titles.

The advocates of these petitions aimed to persuade readers about the harmful impact of human activity on the environment and to encourage action against climate change, thereby countering underestimation, misinformation, and denialism. To achieve these goals, petitioners from both countries relied on arguments and motifs originating in scientific discourse, which had been first mediated, for instance, by climate change activists, news outlets, and government bodies. Examples of such issues include the presentation of the damaging effects of fossil fuels, plastic, and palm oil production. The thematisation of petitions around certain issues related to specific events and news items appears to indicate the impact of the media on shaping public opinion. In both the USA and UK, public sentiment seemed to be deeply affected by startling news stories, leading to a heightened sense of uncertainty about the future. As a result, users were motivated to share knowledge and demand swift solutions to these pressing issues.

All of the petitions included some form of mediation of specialised information, ranging from general and vague references to environmental issues to specific evidence quoted from scientific research. Petitioners thus engaged in the re-mediation of climate science, by explaining global phenomena in their own words and referring to authoritative sources. They used a variety of

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<sup>86</sup> Cindy Dang, “ShopRite: Cut Conflict Palm Oil”, *Change.org United States* (29 May 2018), [www.change.org](http://www.change.org).

<sup>87</sup> Freya Seex, “Say no to Palm Oil”, *Change.org United Kingdom* (21 March 2018), [www.change.org](http://www.change.org).

<sup>88</sup> Bella Lack, “Supermarkets: BAN All Palm Oil from Own Brand Products”, *Change.org United Kingdom* (19 May 2018), [www.change.org](http://www.change.org).

<sup>89</sup> Bednarek and Caple, *News Discourse*, 90.

evidentials, including direct, indirect, and partial quotes, reporting adjuncts, reference to sources, and various forms of reports and definitions. Petitioners therefore often adopted a reporting style which mimicked that of popular journalism. Especially in the background section of the petitions, input material was transformed through processes of selection, reproduction, and summarisation.<sup>90</sup> The definition of news discourse as “embedded talk”<sup>91</sup> may therefore be applicable to petitions as well. Like journalists, petitioners use evidence, facts, information, and rely on newsworthy quotes and acknowledged sources to increase relevance and credibility.<sup>92</sup> Clearly, as petitions are intended to be persuasive texts, quotes are chosen to express viewpoints that align with the petitioners’ stance. Numerous petitioners cited scientific data retrieved from various sources, summarising or paraphrasing their findings and/or referencing the original research. The input materials could thus be either attributed or remain unattributed. The author’s trustworthiness in mediating such news might be projected as verified by the credentials established elsewhere in the text or by the demonstrated diligence in gathering information on critical topics. The issue of the construction and perception of credibility online has indeed become increasingly relevant,<sup>93</sup> particularly during the rise of populist movements, COVID-19 infodemic, and conspiracy theories. Therefore, investigating credibility cues in petitions would be an interesting object of further research.

The current study did not delve into the potential connection between the use of specific persuasive strategies (e.g., iconic representations) and the inherent popularity of petitions. Nevertheless, considering this relationship to investigate user engagement would present an intriguing avenue for future research.

The present paper also revealed that a platform like *Change.org* might be viewed as a wiki of social issues, a hypertext publication collaboratively edited and managed by its online audience. Petitions collect useful pieces of summarised and simplified information, which may provide lay users with basic knowledge of common or specific problems. However, it is important to note that petitions are persuasive texts and, as such, biased. Furthermore, the accuracy of the information presented in them cannot be guaranteed, necessitating constant fact-checking.

Petitioners in both countries asked politicians to prioritise the fight against climate change in national and global agendas. Nevertheless, the study also showed that citizens do not perceive climate change as a far-off evil that looms in the distant future, but rather as a concrete and imminent danger that is already impacting on our natural world as well as human and animal lives. Aligned with previous research on citizen engagement with climate change,<sup>94</sup> and consistent with *Change.org*’s business model,<sup>95</sup> petitions employed a combination of messages and icons that rendered climate change personally relevant for individuals, empowering them to take action. Based on the analysis of user-generated discourse, it appears that limiting climate change necessitates therefore collective efforts enacted through localised, small-scale initiatives.

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<sup>90</sup> Ibid..

<sup>91</sup> Graham Bell, *The Language of News Media* (Oxford: Blackwell, 1991), 52.

<sup>92</sup> Bednarek and Caple, *News Discourse*, 91-93.

<sup>93</sup> Camilla Vásquez, *The Discourse of Online Consumer Reviews* (New York: Bloomsbury, 2014); Antonella Napolitano and Maria Cristina Aiezza, “The Power of Feedback: A Comparative Discourse Analysis of TripAdvisor Reviews by Expert and Novice Users in the UK and Italy”, in Elena Di Giovanni and Francesca Raffi, eds., *Languaging Diversity Volume 3: Language(s) and Power* (Newcastle upon Tyne: Cambridge Scholars Publishing, 2017).

<sup>94</sup> See O’Neill and Hulme, “An Iconic Approach for Representing Climate Change”; O’Neill and Nicholson-Cole, “‘Fear Won’t Do It’”.

<sup>95</sup> Karpf, *Analytic Activism*.