Indicator 5.3.3: Political Party Engagement with Health and Climate Change

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Indicator 5.3.1: Political party engagement with health and climate change

Main Text:

A key obstacle to consolidating political commitment to address the climate crisis remains electing politicians and parties who prioritise climate change and its associated risks to public health. This indicator tracks European political parties' emphasis of public health and climate change in official party communication via press releases. The indicator is based on over 550,000 press releases from 139 political parties in 23 EU countries and the UK, covering a period from 2010 to 2025. The data were analysed using a fine-tuned language model trained validated to identify the primary substantive focus of the press releases. The results are presented according to the associated party family of each party. The figure highlights the dramatic influence that the COVID-19 pandemic had on the political agenda, with a significant increase in press releases addressing public health in 2020 and 2021. However, the data also show that press releases focusing on climate change has remained relatively stable over the past 15 years, with Green parties a notable exception. Green, Liberal and Conservative parties are the most likely to link public health to climate change, while radical right-wing parties are the least likely to do so. At the height of the pandemic in 2020, nearly 250 press releases were issued by social democratic parties that framed climate change as a public health issue. Yet, these numbers have since declined, with parties focusing on the climate-health nexus in only about one percent of their press releases in 2024.

Party Press Releases on Climate Change & Public Health by Party Family
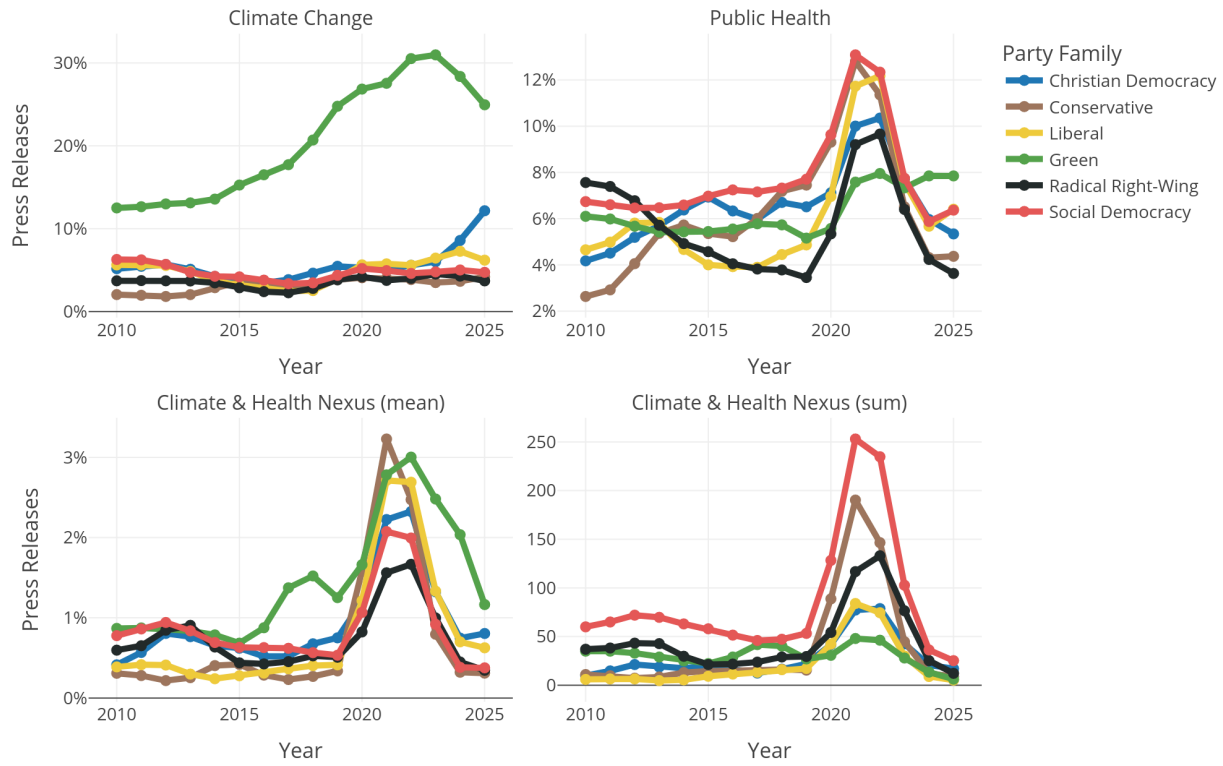
Appendix

Indicator 5.3.3

Political party engagement with health and climate change

This indicator tracks European political parties' emphasis of public health and climate change in official party communication via press releases. The indicator is based on over 550,000 press releases from 139 political parties in 23 EU countries and the UK, covering a period from 2010 to 2025. The data were analysed using a validated fine-tuned language model trained on pre-labeled data that identifies the primary substantive focus of the press releases. The results are presented according to the party family according to ParlGov. The figure highlights the dramatic influence that the COVID-19 pandemic had on the political agenda, with a significant increase in press releases addressing public health in 2020 and 2021. However, the data also show that press releases focusing on climate change has remained relatively stable over the past 15 years, with Green parties a notable exception. Social Democratic, Liberal and Conservative parties are the most likely to link public health to climate change, while radical right-wing parties are the least likely to do so. At the height of the pandemic in 2020, nearly 250 press releases were issued by social democratic parties that framed climate change as a public health issue. However, these numbers have since declined, with parties focusing on the climate-health nexus in only about one percent of their press releases in 2024.

Geographic coverage of Europe

This indicator covers 23 EU countries and the UK. The countries included are: Poland, Germany, Ireland, Netherlands, Slovenia, Denmark, Hungary, Austria, Sweden, Bulgaria, Spain, Croatia, Finland, United Kingdom, Greece, Switzerland, Estonia, France, Portugal, Cyprus, Slovakia, Italy, Czech Republic, and Belgium. The countries were selected based on the availability of press releases from political parties.

Methods

The data were analysed using a fine-tuned language model trained on pre-labeled data that identifies the primary substantive focus of the press releases. The model is trained to predict the substantive focus of the press releases based on the text of the press release. The classification scheme is based on the Comparative Agendas Project (CAP) (Walgrave and Boydstun, 2019) which includes the following categories: defense, technology, culture, macroeconomics, domestic commerce, immigration, healthcare, government operations, housing, social welfare, education, agriculture, environment and climate, foreign trade, civil rights, energy, international affairs, labor, law and crime, transportation, and public lands. One small modification was made to change the focus of the category "environment" to "environment and climate" to better reflect the focus of the indicator.

The model was trained on a dataset of over 15,000 press releases that were randomly sampled from various political parties across Europe (e.g. the entire dataset). The training dataset was labelled using OpenAI's GPT-4 model (Achiam et al., 2023), which was used as a zero-shot classifier to predict the substantive focus of the press releases according to the modified CAP classification scheme. The training dataset was then manually reviewed and corrected by a team of researchers to ensure the accuracy of the labels. A multilingual xlm-RoBERTA-L model trained by Facebook AI (Conneau et al., 2019) was used as the base model for the fine-tuning process. The model achieved a weighted F1 score of 0.86 on the training dataset, indicating a high level of accuracy in predicting the substantive focus of the press releases. Full results of the model evaluation are presented below. The model has been made publicly available on HuggingFace at: https://huggingface.co/z-dickson/xlm-roberta-large-political-issues.

Table 1: Classification Report for Fine-tuned xlm-RoBERTA-L Model

Class	Precision	Recall	F1-Score	Support
0	0.88	0.89	0.89	307
1	0.86	0.88	0.87	76
2	0.93	0.96	0.95	162
3	0.99	0.91	0.95	97
4	0.83	0.83	0.83	139
5	0.89	0.91	0.90	147
6	0.94	0.89	0.92	180
7	0.77	0.91	0.83	44
8	0.89	0.81	0.84	98
9	0.82	0.92	0.87	74
10	0.86	0.89	0.88	79
11	0.75	0.70	0.72	43
12	0.91	0.83	0.87	48
13	0.40	0.33	0.36	6
14	0.69	0.92	0.79	66
15	0.57	1.00	0.73	4
16	0.89	0.67	0.76	24
17	0.84	0.89	0.87	180
18	0.69	0.45	0.55	91
19	0.00	0.00	0.00	1
20	0.81	1.00	0.89	17
Accuracy			**0.86**	1883
Macro Avg	0.77	0.79	0.77	1883
Weighted Avg	0.86	0.86	0.86	1883

After the model was trained and evaluated, it was used to classify each of the press releases in the dataset. These classifications were then used to create a time series of focus on public health and climate change in the press releases. The time series was created by aggregating the annual number of press releases devoted to climate change, public health, and the intersection between climate change and public health. The time series was then visualized using a line graph, with

the x-axis representing the year and the y-axis representing the number of press releases in each category. The results are presented according to the party family according to ParlGov (Döring and Manow, 2012).

Data sources

All data were collected from the official websites of the political parties and included press releases from 2010 to 2025. Data collected for the indicator builds upon previous work in Erfort et al. (2023) and Dickson and Hobolt (2024). Data were collected using a web scraping tool that automatically downloaded the press releases from the official websites of the political parties. The data were then cleaned and pre-processed to remove any irrelevant information, such as HTML tags and formatting. The final dataset included 553,675 press releases from 139 political parties in 23 EU countries and the UK.

Caveats/Limitations

The indicator is based on press releases from political parties, which may not accurately reflect the full range of political discourse on health and climate change. The data are also limited to the countries included in the analysis, which may not be representative of the entire European Union. Additionally, the model used to classify the press releases is not perfect and may misclassify some press releases. The model was trained on a dataset of over 15,000 press releases, but it is possible that some press releases were misclassified due to the complexity of the language used in the press releases. Finally, there are differences in the ways in which political parties utilize press releases, which may affect the results. For example, some parties may issue more press releases than others, or may use different language to describe similar issues. This may lead to differences in the number of press releases issued by different parties, which may affect the results of the analysis.

Future form of the indicator

The indicator will be updated annually to include new data and to reflect changes in the political landscape. The model used to classify the press releases will also be updated periodically to improve its accuracy and to reflect changes in the language used in the press releases. The indicator will also be expanded to include additional countries and political parties, as well as additional data sources, such as social media and news articles. This will allow for a more comprehensive analysis of the political discourse on health and climate change in Europe.

The indicator will also be expanded to include additional data sources, such as manifestos and parliamentary speeches. This will allow for a more comprehensive analysis of the political discourse on health and climate change in Europe. The indicator will also be expanded to include additional countries and political parties, as they become available. This will allow for a more comprehensive analysis of the political discourse on health and climate change in Europe.

Additional analysis

The indicator will also be expanded to include additional analyses that capture party positions on health and climate change. These future analyses will be used to assess the party's positions on health and climate change, as well as the party's overall engagement with these issues. The results of these analyses will be presented in future reports and will be used to inform policy recommendations for improving political engagement with health and climate change in Europe.

References

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