# APPENDIX A

## Article sources and download procedure

First, we developed an English search string. The construction was based on the list of policies from the policy output data set by Author citation (2014), and the three main keywords of the topic “climate”, “global warming” and “greenhouse”. It was then translated into the respective other languages by native speakers and translated back into English by another native speaker to ensure the quality of the translation. All search strings were additionally optimized for their efficiency, meaning to get as few irrelevant articles as possible when using them for the download process. This and differences in the structure of the languages explain slight differences between the different language versions. The search strings are listed below.

**English** (climat! OR greenhouse! OR global warming) AND (renewable energ! OR energy polic! OR refining OR feed-in! OR emissio! OR emissions trading OR certificate trading OR ((green OR white) AND certificate) OR combined heat OR cogeneration OR power solutio! OR energy solutio! OR CO2 OR carbon OR energy efficiency OR energy saving OR extraction OR exploitation OR geotherm! OR (solar w/5 (power OR energy)) OR (wind w/5(energy OR power)) OR hydro! OR agricultu! OR waste management OR forest OR wood!)

**German** (klima! OR treibhaus! OR globale erwärmung) AND (erneuerbare energie OR energiepolitik OR raffination OR raffinierung OR einspeisungs! OR feed-in! OR !emission! OR emissionshand! OR zertifikathandel OR ((günes OR weisses) AND zertifikat) OR !heizkraft! OR CO2 OR kohlenstoff OR kohlendioxid OR energieeffizienz OR energiespar! OR förderung OR gewinnung OR extraktion OR geotherm! OR wasserkraft OR wasserenergie OR hydro! OR sonnenkraft OR sonnenenergie OR solar! OR windkraft OR windenergie OR abfall! OR agrar! OR abfallwirtschaft OR müllentsorgung! OR wald! AND NOT klimaanlage)

**Spanish** (clima! OR efecto invernadero OR calentamiento global) AND (energ! removable OR polit! energ! OR refina! OR tarifa de alimentacin OR sistema tradicional de prima OR tarifa de entrada OR ((tarifa OR prima) AND regulada) OR emisio! OR emiso! OR (comercio AND (derecho OR bono OR crdito) AND emisio!) OR comercio de certifica! OR (ceritifcado AND (verde OR blanco)) OR cogeneracin OR solucio! energ! OR CO2 OR carbono OR eficiencia energtica OR ahorro energ! OR extrac! OR geoterm! OR (energ! AND (hidrulica OR hidrica)) OR energa solar OR energa elica OR hidro! OR agricult! OR gestin OR eliminacin OR residu! OR basura OR desperdicio OR resto OR forest! OR bosque)

**Italian** (clima! OR effetto serra OR riscaldamento globale) AND (energ! rinnovabil! OR politic! energetic! OR font! rinnovabil! OR risors! rinnovabil! OR ra\_nazione OR conbustibil! fossil! OR conto energia OR emission! OR mercato del carbonio OR crediti di carbonio OR (certifica! di inquinamento) OR certificai verdi OR certifica! energetic! OR cogenera! OR soluzione energ! OR CO2 OR carbonio OR biossido OR eficienza energ! OR sostenibil! OR ecosostenibil! OR risparmio energ! OR estrazione OR geoterm! OR energia idroelettrica OR (solare w/5 energia) OR fotovoltaic! OR ((eolic! OR vento) w/5 energia) OR idro! OR agric! OR gestione rifiuti OR forest! OR allocazione di CO2 OR biomass! OR impronta di carbonio))

Only hits in the body of the text were considered. We excluded the equivalents of sections on “Sports”, “Gardening” or “Automobile/Cars”. To increase the share of relevant articles, the downloaded articles were sampled: at least five words of the search string had to be present to make it into the actual sample. This margin was set based on the results from the pre-tests. The share of relevant articles increased drastically when at least five compared to a lower threshold of words were present.

**Table A1 Selected newspapers and online archives**

|  |  |  |  |
| --- | --- | --- | --- |
| **Country** | **Newspaper** | **Source** | **Years** |
| Canada | National Post | Lexis Nexis | 1999-2010 |
|  | The Globe and Mail | Lexis Nexis | 1995-2010 |
| Germany | Süddeutsche Zeitung | Factiva, ProQuest | 1995-2010 |
|  | Frankfurter Allgemeine Zeitung | Biblionet | 1995-2010 |
| Italy | La Stampa | Lexis Nexis | 1995-2010 |
|  | Corriere dela Sierra | Factiva, ProQuest | 1997-2010 |
| Spain | El Pais | Lexis Nexis | 1996-2010 |
|  | El Mundo | Lexis Nexis | 2002-2010 |
| Switzerland | Neue Zürcher Zeitung | wiso | 1995-2010 |
|  | Tages-Anzeiger | wiso | 1997-2010 |
| United States | USA Today | Lexis Nexis | 1995-2010 |
|  | New York Times | Lexis Nexis | 1995-2010 |

## Software

The coders used the software MaxQDA. Relying on such software increases the quality of the data with respect to replicability as the particular coding decisions can be easily reconstructed. The articles are loaded into MaxQDA and then analyzed by the coders within the software.[[1]](#footnote-1) This simplifies the coding compared to approaches when text is read in one program and data is gathered in another. MaxQDA allows assigning codes to words, sentences or paragraphs and to code variables which refer to the whole article. The codebook reflects this distinction. Before the actual coding starts, irrelevant articles were eliminated.

## Relevance of articles and further variables

An article is coded as relevant if it either discusses one or several climate policies or it covers the phenomenon of climate change in general. This includes articles on new technologies (that might help to reduce emissions) when they make a clear connection to the topic climate change and also articles on nuclear energy with a clear connection to the (low) climate impact of nuclear energy. However, when climate change is not the main focus and is mentioned just once in an article, e.g. in a metaphoric sense or as a reference (e.g. in an electoral campaign) the article is irrelevant.

In total, we gathered data on 14 variables. Five of these variables cover characteristics like “Date”, “Length”, “Page”, “Part” and “Section” which are provided with each article. Details on the format of these variables can be found in the codebook. The substantial variables are “Relevance”, “Policy”, “Subnational Level”, “Nuclear energy”, “Opinion piece”, “Diffusion”, “Theme 1”, “Theme 2” and “Claim”. The code “Policy” was assigned to every policy discussed in an article. Thus, we know how many and which policies have been discussed. “Subnational Level” is a dummy variable indicating the presence of a subnational policy or political debate. “Nuclear energy” is a dummy that has been coded when climate change was discussed jointly with nuclear energy. “Opinion piece” is a dummy for editorials, columns, op-eds, comments or letters to the editor. “Diffusion” records the names of foreign countries, if one of their national climate policies has been discussed in the article. The two (where applicable) main “Themes” are coded. These themes are domestic arena, international relations, scientific background, current weather and uncertainty (Brossard, Shanahan, and McComas 2004, 368). The code structure for the claims is hierarchical, meaning that claims were numbered (“Claim 1”, “Claim 2”, “Claim 3”, etc.) and each claim had sub-codes indicating whether it is a “pro” or “con” claim. Using the option “export” option for coded segments, this even allows analyzing the data on the claims level.

## Reliability scores

For the reliability tests several test scores have been estimated. The values for Krippendorfs Alpha, a measure for intercoder reliability, were obtained by a comparison of the research assistants coding with the master coding of 63 articles, giving the following value ranges. Policy: 0.8-0.89, Subnational: 0.57-0.82, Opinion Piece: 0.89-0.95, Claim: 0.55-0.7, Relevance: 0.92-0.96, Theme: 0.81-0.85. After the reliability coding, the research assistants were again trained on the values with less than 0.7. Two research assistants, who failed the absolute minimum threshold of 0.5, received further individual training and reached the same levels with a second reliability test. These scores are in line with reliability scores reported in other content analysis studies (Brossard, Shanahan, and McComas 2004; Howland, Becker, and Prelli 2006).

**Table A2 Overview on text corpus**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Year** | **Down-loaded** | **Coded articles** | **Relevant articles**  | **Share of articles with claims** | **Total number of claims** |
| *New York Times* |
| 1995 | 198 | 94 | 26 | 0.46 | 20 |
| 1996 | 340 | 141 | 36 | 0.28 | 22 |
| 1997 | 480 | 207 | 107 | 0.38 | 90 |
| 1998 | 445 | 190 | 91 | 0.47 | 107 |
| 1999 | 526 | 157 | 55 | 0.55 | 68 |
| 2000 | 580 | 233 | 89 | 0.61 | 187 |
| 2001 | 611 | 315 | 146 | 0.72 | 359 |
| 2002 | 581 | 269 | 139 | 0.67 | 394 |
| 2003 | 545 | 254 | 121 | 0.64 | 228 |
| 2004 | 504 | 252 | 107 | 0.48 | 120 |
| 2005 | 615 | 310 | 178 | 0.51 | 244 |
| 2006 | 871 | 426 | 281 | 0.54 | 465 |
| 2007 | 1252 | 632 | 462 | 0.59 | 995 |
| 2008 | 1252 | 632 | 414 | 0.52 | 706 |
| 2009 | 1286 | 680 | 490 | 0.48 | 610 |
| 2010 | 868 | 438 | 300 | 0.51 | 393 |
| *USA Today* |
| 1995 | 35 | 8 | 5 | 0.40 | 4 |
| 1996 | 31 | 10 | 3 | 1.00 | 9 |
| 1997 | 90 | 46 | 33 | 0.58 | 41 |
| 1998 | 61 | 29 | 17 | 0.65 | 27 |
| 1999 | 56 | 19 | 6 | 0.33 | 11 |
| 2000 | 77 | 29 | 20 | 0.70 | 30 |
| 2001 | 107 | 47 | 41 | 0.66 | 97 |
| 2002 | 108 | 41 | 25 | 0.72 | 55 |
| 2003 | 82 | 31 | 16 | 0.75 | 40 |
| 2004 | 76 | 33 | 22 | 0.68 | 63 |
| 2005 | 84 | 39 | 24 | 0.88 | 86 |
| 2006 | 133 | 77 | 64 | 0.72 | 203 |
| 2007 | 273 | 173 | 148 | 0.78 | 586 |
| 2008 | 205 | 98 | 81 | 0.84 | 223 |
| 2009 | 290 | 136 | 109 | 0.83 | 315 |
| 2010 | 141 | 52 | 39 | 0.82 | 106 |

1. We considered using computer assisted text analysis. However, after studying several approaches and also comparisons of human vs. automated coding (Conway 2006), it turned out that the issue at hand has too many dimensions to be accounted for by the software that is currently available. [↑](#footnote-ref-1)