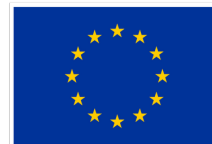


Narratives and Emotions in Public Social Media Discourse Across Europe

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Climate, Inequality & Democratic Action:
The Force of Political Emotions



Funded by
the European Union

Disclaimer

This project has received funding from the European Commission under the HORIZON Research and Innovation Actions Grant, No 101132327. The document reflects only the authors' views. The European Union is not liable for any use that may be made of the information contained herein.

Dissemination level

Public

Type

DATA – data sets, microdata etc.



CIDAPE

Climate, Inequality, and Democratic Action: The Force of Political Emotions

Narratives and Emotions in Public Social Media Discourse Across Europe

Deliverable D3.2

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Due date: June 2026



Executive Summary

This deliverable presents aggregated data from a dataset of social media posts published during the EU parliament election campaign period between April 1 and June 8, 2024, by accounts from eight European countries: Austria, Czechia, Estonia, France, Germany, Italy, Slovakia, and Spain. The posts originate from accounts associated with individuals (politicians) and organizations (political parties, news outlets, and NGOs) on Facebook, Instagram, and TikTok.

The deliverable is organized as follows. We begin by outlining the background and motivation for the dataset, situating it within CIDAPE and WP3. We then provide an overview of the data, including the types of actors covered, the selection of countries and platforms, and the variables collected and measured at the post level. Subsequent sections detail the data collection and selection procedures. We also define the key variables measured and describe the validation procedures used. Finally, we report descriptive results on the salience of key variables, aggregated by actor type, platform, and country.



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1 Background

This social media dataset has been collected in the context of the HORIZON Europe Project *CIDAPE - Climate, Inequality, and Democratic Action: The Force of Political Emotions* as part of Work Package 3 (WP3). The overall project recognizes emotions as fundamental elements within political communication and participation. Therefore, understanding citizens' emotional (re)actions to climate and environmental issues is deemed essential in order to achieve democratic action. It is important to investigate how political emotions frame both online and offline political discourse surrounding climate change and related environmental topics and how these emotions and discourses are intertwined with social inequalities. Social media platforms have established themselves as important spaces for online discourse within the digital public sphere (Bennett & Pfetsch, 2018). Stakeholders within the environmental debate, political actors, environmental NGOs, and journalistic media outlets, reach their audiences directly on these communication platforms with their algorithmically driven, engagement-oriented, and oftentimes highly emotional content.

WP3 focuses on climate- and environment-related discourse on social media. Combining qualitative and quantitative perspectives, it examines digital textual debates both in depth and at scale. The WP3 team at the University of Vienna, which leads the curation of this deliverable (D3.2), applies a quantitative, computational content analysis approach. Using this methodology, the team operationalizes key CIDAPE concepts for social media, including emotions and narrative elements such as stances on climate action, topics, and justice framing. The data collection for this dataset was supported by the Work Package 2 team at Bielefeld University, who are co-authors of this deliverable. WP2 and WP3 are preparing papers based on these data; parts of the dataset presented here, for example, were used in Habelitz et al. (2026).

This deliverable (D3.2) presents aggregated data tables based on a large, multilingual, multi-country, multi-platform dataset of public social media posts published during the campaign period for the European Parliament (EP) elections, from April 1 to June 8, 2024. It covers three platforms across eight European countries. To ensure high quality, we employed rigorous validation procedures and followed a human-in-the-loop approach involving country and language experts.

The project received ethics approval from the Ethics Committee of the University of Vienna prior to data collection. Due to data protection regulations and the respective Terms of Use of the selected social media platforms, raw text data of social media posts cannot be shared. All data tables, therefore, represent aggregated data on country, platform, and actor type level.

1.1 Comparative Logic Content Analysis

Climate change and many environmental issues are experienced and caused locally, yet the climate system itself is global (IPCC, 2023). This global nature manifests in shared atmospheric processes, cross-border impacts, and collective-action challenges that transcend national jurisdictions (IPCC, 2023). Emissions produced in one place have consequences elsewhere. Climate politics are complex: political arenas on local, national, regional, and global levels are closely intertwined in a multilevel system of climate governance (Di Gregorio et al., 2019). Studying and understanding democratic action in the context of climate change can therefore benefit from working with these levels. A methodological approach that takes these levels seriously is the comparative research design. Such a design enables the testing of theories across contexts on the same level and supports the description and explanation of both similarities and differences (Esser & Hanitzsch, 2012; Livingstone, 2003). Here, “contexts”, the units being compared, frequently refer to countries as political, geographic, and cultural units (Esser & Hanitzsch, 2012). The underlying assumption is that the data obtained (here, post-level measures of social media content) are representative of their respective contexts.

In this deliverable, we focus on the European Union (EU) as a regional, multinational political arena, with considerable scope for shaping climate policy both within its jurisdiction and as a global political actor. Within the EU, we examine selected countries as political, geographic, and cultural units. EU member states represent key political arenas: national agendas shape the overall direction of the EU, and member states are responsible for negotiating and implementing international agreements such as the Kyoto Protocol. The dataset presented in D3.2 was created primarily to support comparative designs comparing national political arenas within the



EU. This dataset thus speaks to calls for more comparative resources that include non-English-speaking countries, contributing to a climate communication literature that has often centred on English-language data (Lind & Volk, 2025; Schäfer et al., 2026).

Moreover, the dataset is structured to enable comparison for different types of contexts. A central dimension beyond the country dimension is the social media platform, which is also frequently treated as a comparative context. Incorporating multiple platforms acknowledges the differing architectures of platforms and how these shape discourse (Bossetta, 2018). Neglecting the platform dimension risks “digital universalism” (Willem, 2021), that is, drawing broad conclusions from single-platform studies without considering platform-specific features and their limited generalizability. Combining both types of contexts, this dataset allows also to address the scarcity of comparative research on platforms across countries (Heft et al., 2024; Matassi & Boczkowski, 2021).

1.2 European Parliament Elections

When comparing discourses across contexts, a common approach is to select moments when attention converges around a shared reference point. In the climate domain, events such as the United Nations Climate Change Conferences (COPs) have served as event-based focal points (e.g., Wang & Downey, 2023). Another frequently used focusing event for comparative research are the European Parliament elections (Atkinson, 2019). Previous comparative work has, for example, used EP elections to examine candidates’ transnational linkage strategies in campaigns (Stier et al., 2021) and variation in candidates’ platform adoption (Daniel & Obholzer, 2026).

What are the European Parliament elections? Every five years, citizens of the European Union elect representatives to the European Parliament. It plays a central role in shaping and overseeing EU laws and policies. In respect to environmental policy, the European Parliament holds significant regulatory authority. It sets binding targets and standards for member states, exemplified by initiatives like the Fit for 55 package and the EU’s commitment to climate neutrality by 2050.

These policies and targets are subsumed under the comprehensive strategic framework of the European Green Deal. It aims at a just and fair transformative shift towards a sustainable future as a response to the climate crisis, focusing on policies surrounding the economy and industries, energy, and transportation (European Commission, n.d.). Yet, the Green Deal has not been without controversy: While some question the sufficiency of its policies or their practicality (Siddi, 2020), other political forces, particularly far-right movements, reject and try to mobilize against these green policies (Forchtner & Lubarda, 2023; Knüpfer & Hoffmann, 2024). Next to political backlash, other crises such as the pandemic, wars or inflation divert attention (Rauchfleisch et al., 2023) and pose additional challenges for securing ongoing support for the Green Deal. Against this backdrop, the dataset presented in D3.2 was collected to study, for example, to what extent climate and environmental policies remained an ongoing campaign topic in 2024, where and by which actors issue salience for environmental topics was driven, which stance was taken towards these policies, and what role other narrative elements and emotions played in these contexts.

2 Data Overview

The presented dataset comprises $N = 181.782$ social media posts. One row represents one post in the raw data. Specifically, the data contain posts from accounts of selected politicians, political parties, NGOs, and news outlets in the period leading up to the 10th European Parliament elections, held on 6–9 June 2024. From the 27 EU member states, we focus on eight countries: Austria, Czechia, Estonia, France, Germany, Italy, Slovakia, and Spain. The posts were published between 1 April and 8 June 2024 on Facebook, Instagram, or TikTok. For each post, the dataset includes variables related to the posting actor (e.g., name, role), post-level metadata (e.g., posting date, platform, country), and content features (e.g., emotions). Below, we define and describe the selected actor types, countries, and platforms in greater detail.



2.1 Actor Types

The dataset includes social media posts from a defined set of actor types. The first actor type is politicians, the second actor type is political parties, the third actor type is NGOs, and the fourth is news outlets. While we would ideally capture all four types very comprehensively (including, e.g., various political roles; various national, regional, and local NGOs; and media markets with various news providers, including alternative news outlets), we needed to be selective to keep the task manageable. For each actor type, we focused on specified actors with roles that we consider especially relevant to the context of the European Parliament elections and climate and environmental discourse. Priority was given to actors with national-level visibility and influence in their respective political arenas.

The four actor types are defined as follows in Table 1:

TABLE 1: ACTOR TYPES AND DESCRIPTIONS	
Actor Type	Definition
Politician	We consider politicians who are top candidates, elected MEPs of national political parties, who fulfil our requirements for being a relevant national party (see next actor type). We also consider national ministers. More specifically, we include • Top candidates: This is typically one candidate per party highly present and visible in the campaign. In some cases, two candidates are jointly ‘top’ candidates. Here, we include both persons. In some other cases, national parties might have no national top candidate but multiple top candidates on subnational level. In these cases, all top candidates per county are recorded. Often these candidates are ranked 1st on the list but in some countries, they might also be ranked last on the list. Top candidates are also considered when they have this role only for parts of the campaigning period. • Elected MEPs: We consider all MEPS who won a seat in the 2024 elections. • National Ministers: We consider also accounts of national ministers. Specifically, we include the accounts of the politicians who were serving as national ministers at the time period of data analysis.
Party	We consider national political parties that • are already represented in the EU parliament, or • are campaigning to be represented for the first time following the election.
NGO	We consider organizations which advocate for various positions towards climate change and environmental policies (supporting or opposing). All climate and environment-related organisations included have a national focus but show some level of engagement in European climate policymaking. Specifying those, we consider: • National organizations when they are organised on a European level or under a European umbrella organization.
News	We consider two types of news outlets: • Leading national newspapers. Included are quality newspapers and tabloid newspapers. • Transnational news outlets with European or global scope.

2.2 Countries and Platforms

Our dataset spans across eight European countries, namely Austria, Czechia, Estonia, France, Germany, Italy, Slovakia, and Spain. These nations provide a diverse sample of EU member states, as they represent



bigger and smaller economies from different geographical and cultural regions across Europe. Together, they account for 52% of the 720 parliamentary seats ¹ and represent 64% of the EU population in 2024 (Eurostat, 2024).

Most voters as well as politicians, parties, NGOs, and news outlets are present on more than one social media platform. We thus took a multi-platform approach and selected the three most important social media platforms across our sampled countries. As presented in Table 2, social media platform preferences differ slightly across countries. However, Meta-owned platforms Facebook and Instagram dominate the market. TikTok presents a smaller but growing player in 2024, surpassing X (formerly Twitter) and Reddit in percent of respondents that say they use the platform for any purpose (Newman et al., 2024). Table 2, gives an overview of several indicators for platform usage, 1) the market share, measured in monthly page views per country (Statcounter Global Stats, 2024), 2) the usage of these platforms for any purpose and 3) for news use specifically according to survey data from the Reuters Digital News Report (Newman et al., 2024).

TABLE 2: PLATFORM MARKET SHARE AND PLATFORM USAGE PER COUNTRY

Country	Popu- lation (in M) ¹	Market share (%) ²	Facebook		Market share (%) ²	Instagram		Market share (%) ²	TikTok*	
			usage any purpose (%) ³	usage news (%) ³		usage any purpose (%) ³	usage news (%) ³		usage any purpose (%) ³	usage news (%) ³
Austria	9.2	59.84	49	20	17.44	35	11	-	14	4
Czechia	10.9	53.07	67	36	15.56	35	12	-	14	4
Estonia*	1.4	67.64	-	-	8.85	-	-	-	-	-
France	68.4	53.32	55	32	14.69	36	16	-	17	8
Germany	83.4	53.36	37	16	22.46	31	11	-	14	5
Italy	59	70.56	62	37	13.61	50	20	-	24	9
Slovakia	5.4	70.08	70	49	7.99	35	16	-	17	6
Spain	48.6	82.37	52	26	7.6	52	21	-	29	11

Note: ¹ EU population data in Millions from German Statistisches Bundesamt (2024).

² Platform market share (in %) of monthly pageviews, data according to Statcounter GlobalStats October 2024,

* TikTok was not included in the report.

³ Platform usage data for any purpose and for news use specifically according to Reuters Digital News Report (2024), * Estonia was not included in the report.

These platforms also differ in their architecture. While Facebook allows, for example, pages next to personal profiles, the inclusion of hyperlinks and multiple ways of reacting to a post (Love, Wow, Haha, Sad, Angry, Care), Instagram is more focused on visual posts with images or videos and does not support external links as easily as Facebook. TikTok is further entirely structured around fast-paced short-videos. Moreover, algorithmic curation on Facebook and Instagram is more reliant on a user's social network and who they follow, while TikTok's algorithm is highly centred around individual content preferences.

3 Data Collection

Data collection included automated steps where possible. The *human-in the loop principle* was, however, integrated throughout the process to ensure a valid corpus creation. A central feature of the human-in the loop pipeline was the integration of experts for the languages and country context considered (Lind et al., 2025). The overall process of data collection was set-up and coordinated by the WP3 team at the University of Vienna,

¹ <https://results.elections.europa.eu/en/seats-political-group-country/2024-2029/>



the implementation was executed by the WP3 team in Vienna and WP2 team at Bielefeld University. CIDAPE partners with expertise for the countries and languages were further providing feedback on final lists and supported the understanding of national particularities (examples below).

The first step of data collection was the *systematic collection of relevant actors*. Working along the defined actor types, countries, and platforms, we recorded names and roles of individual actors. The central goal was to include, first and foremost, all relevant actors for the defined scope of actor types (high recall) while excluding irrelevant actors (high precision). Each actor was recorded in a new row in the dataset. We share here the search strategies employed per actor type (see Table 3).

TABLE 3: SEARCH STRATEGY PER ACTOR TYPE

Actor Type	Search Strategy
Politician	- For each national party, we identified the lead candidate(s), the individual(s) with the most prominent campaign role. To determine this, we reviewed party websites, social media campaigns, and consulted country experts. - We further included all candidates who won a seat. For verification and details, we used website like: https://www.electionseuropeennes.eu/en/slovakia/ - National ministers were searched via desk research and consulting with country experts.
Party	For the selection of national parties, we first consulted the websites of the European parliamentary groups to identify all member parties. We then conducted desk research to identify additional national parties campaigning in the EU election that were not yet members. Sources included Wikipedia (e.g., Germany: https://de.wikipedia.org/wiki/Europawahl_in_Deutschland_2024) and consultations with country experts.
NGO	- To identify national climate and environment-related organisations that show engagement in European climate policymaking, we selected NGOs, which are national members of the Green 10 network (https://green10.org/). To identify the national member organizations, we systematically inspected all 10 umbrella organizations within Green 10 Network and filter per country, looking for national members. The 10 umbrella organisations are: BirdLife Europe and Central Asia, CEE Bankwatch Network; Climate Action Network Europe, European Environmental Bureau, Friends of the Earth Europe, Greenpeace European Unit, Health and Environment Alliance, Naturefriends International, Transport & Environment, WWF European Policy Office. If a national member organization is a member of various umbrella organizations, we included it only once. E.g., “Greenpeace Spain” is member of within “Greenpeace European Unit” and also in the “Climate Action Network”. - To identify climate change counter-movement organizations active at the European level, we relied on the set identified by McKie (2019) and supplemented it with additional organizations based on desk research.
News	- National newspaper: We used the selection from the European Parliament Election Study, Longitudinal Media Study 1999, 2004, 2009 (Banducci et al., 2010). To identify the newspapers, we visit ZA5178_cod_appendix.xlsx (Codebook). - Transnational news outlets: We here selected outlets like CNN, Reuters, Al Jazeera English, which appear frequently in transnational media analysis (Coban, 2016).



We then *recorded several variables to describe actors in greater detail*. For each actor, we captured the name, a standardized English name (particularly relevant for parties), the level (national, European, or global), and the country (if applicable). We also recorded actor-type-specific variables to enable finer-grained analyses; for example, for news outlets we noted whether the outlet is classified as quality or tabloid, and for politicians we recorded whether they won a parliamentary seat.

The third step was the researching and *recording of social media handles*. To retrieve social media account information per actor, we started by visiting the actor’s website (if applicable). Sometimes actors provide links to all their social media accounts. In addition, we used a search engine—typing the platform name plus the actor’s name—and searched for the names of persons and organizations directly on the platforms. Whenever we found a potentially relevant social media account, we visited the account and scanned the profile information to gather evidence that it was an official account. Specifically, we considered whether the account was verified (where applicable), whether the number of followers appeared adequate, and which accounts followed it and which it followed. For Facebook and Instagram, we recorded the URL linked to the actor’s profile to extract the account handle. For TikTok, we recorded the username. If there were several accounts for one platform, we selected the account used for the EU election campaign. It was not possible to record social media accounts for all actors, because some were not present on any of the three platforms, and others were present on only some of them. For Instagram and Facebook, we could collect data only for accounts with a minimum number of followers (a restriction imposed by the platform providers).

The fourth step was the *collection of posts for the specified accounts* via official data access points provided by the platforms. The Facebook and Instagram dataset was downloaded via CrowdTangle, a public insights tool operated by Meta and designed to explore public social media content (CrowdTangle Team, 2024). The TikTok data was collected via the TikTok Research API (TikTok, 2024). Before using the recorded account handles, we cleaned the handles (removing leading and trailing whitespace) and conducted test runs to check for potential mistakes in account names. All posts were collected in July 2024.

Table 4 shows the number of accounts per country, platform, and actor type from which we successfully collected data. How many unique politicians, parties, NGOs and news outlets across platforms per country were included in the data collection is reported under “unique *N*”. For example, in Austria the dataset includes 10 unique NGOs. Of these, all 10 posted on Facebook during the study period, 8 posted on Instagram, and 2 posted on TikTok. While politicians, parties and NGOs were only collected within national contexts, we included six news media outlets with EU-wide or global reach that are listed here under “transnational”, on top of the national newspapers. Across platforms and countries, we collected data for a total of 434 politicians, 117 parties, 122 NGOs and 28 news outlets; those 701 unique entities had 1440 accounts across the three platforms at the point of data collection.



TABLE 4: NUMBER OF ACCOUNTS AND UNIQUE N PER COUNTRY, PLATFORM, AND ACTOR TYPE

Country	Platform	Politicians	Parties	NGOs	News	Total
Austria	Facebook	30	6	10	3	49
Austria	Instagram	36	6	8	3	53
Austria	TikTok	17	4	2	3	26
Austria	Unique N	37	6	10	3	56
Czechia	Facebook	22	17	12	3	54
Czechia	Instagram	22	13	6	2	43
Czechia	TikTok	14	4	-	-	18
Czechia	Unique N	26	17	12	3	58
Estonia	Facebook	10	8	3	4	25
Estonia	Instagram	9	6	2	3	20
Estonia	TikTok	1	4	-	2	7
Estonia	Unique N	11	9	3	4	27
France	Facebook	44	14	24	3	85
France	Instagram	61	13	19	3	96
France	TikTok	25	6	6	2	39
France	Unique N	67	14	24	3	108
Germany	Facebook	76	18	27	3	124
Germany	Instagram	101	18	30	3	152
Germany	TikTok	34	13	9	-	56
Germany	Unique N	104	19	33	3	159
Italy	Facebook	93	12	15	3	123
Italy	Instagram	96	11	10	3	120
Italy	TikTok	28	5	2	2	37
Italy	Unique N	102	13	18	3	136
Slovakia	Facebook	20	25	5	3	53
Slovakia	Instagram	24	19	4	3	50
Slovakia	TikTok	9	8	-	1	18
Slovakia	Unique N	28	25	5	3	61
Spain	Facebook	22	14	17	3	56
Spain	Instagram	56	14	15	3	88
Spain	TikTok	17	11	5	-	33
Spain	Unique N	59	14	17	3	93



Transn.	Facebook	-	-	-	6	6
Transn.	Instagram	-	-	-	6	6
Transn.	TikTok	-	-	-	3	3
Transn.	Unique <i>N</i>	-	-	-	6	6
Total	Facebook	317	114	113	31	575
Total	Instagram	405	100	94	29	628
Total	TikTok	145	55	24	13	237
Total	Total	867	269	231	73	1440
Total	Unique <i>N</i>	434	117	122	28	701

Note: Transn. = Transnational.

4 Data Preprocessing

All posts included in the manually labelled datasets (see below), as well as those classified as environment-related in the full dataset, were machine-translated into English using the DeepL API Pro via the Python deepl library. To monitor translation quality, country and language experts reviewed posts during coding. Overall, the machine translation quality was adequate; however, we noted occasional issues, such as untranslated hashtags.

Maintaining posts in both their original language and in English for same parts of the data served two purposes. First, because English is the project’s working language, English versions facilitated coder training and the harmonization of coding guidelines. Second, English is central to our NLP pipeline: several of the classification models we use are developed for English and perform best on English texts.

5 Variables Measured

5.1 Overview

Variables that we measured on the post level concern narrative elements and emotions (see Table 5 for an overview). To measure them various transformer-based models were employed and validated, all computational pipelines are illustrated on the following pages.

TABLE 5: VARIABLE OVERVIEW AND CORRESPONDING MEASUREMENT APPROACH			
Variable	Classes	Model	Validation
Environment-related relevance	Yes, No	“bge-m3-zeroshot-v2.0” by Laurer et al., 2023	Ebner et al., 2026 CIDAPE Experts
Topic	Agriculture, Biodiversity, Disasters, Economy, Energy, Transport, Waste (all binary)	“Political_DE-BATE_base_v1.0” (Burnham et al., 2024)	Student Coders
Stance	Positive, Neutral/Ambivalent, Negative	“Political_DE-BATE_base_v1.0” (Burnham et al., 2024)	Student Coders
Climate Justice	Yes, No	Sedlatschek et al. (working paper)	Sedlatschek et al. (working paper)
Emotions	Anger, Fear, Disgust, Sadness, Joy, Enthusiasm, Pride, Hope (all binary)	“pol_emo_mDeBERTa2” by Widmann and Wich (2023)	Student Coders



5.2 Validation Approach

To validate the measurement approach, we implement both process and output validation strategies. For process validation, we describe and reflect on model details (e.g., training data and procedures) in the sections related to the variables below. For output validation, we use two strategies. First, we report the validation results provided by the model creators, and second, we assess concurrent validity by comparing the automated measures to more trustworthy benchmarks. Below, we describe the two benchmarks we created and used for validation.

5.2.1 Validation Set 1: CIDAPE National Experts

For this first benchmark dataset, a team of eight national experts (for all countries and languages) manually labelled a random sample of all posts published by two actor types: politicians or parties. The sample included $N = 750$ posts per country (split by platforms: $N_{\text{Facebook}} = 350$, $N_{\text{Instagram}} = 350$, $N_{\text{TikTok}} = 50$), summing to a total of 6,000 posts. Coders were asked to assess relevance (whether a post is environment-related). All coders underwent online training sessions and worked with an English-language codebook to ensure joint understanding of the definitions. After discussing initial test codings, three rounds of intercoder reliability tests with $N = 40$ posts each were conducted, followed by collective discussions and, where necessary, small adjustments to the codebook. The intercoder reliability (Krippendorff's alpha) for the relevance variable was $\alpha = .73$ for the first round, $\alpha = .45$ for the second round, and $\alpha = .82$ in the last and final round.

5.2.2 Validation Set 2: CIDAPE Student Coders

For the second benchmark dataset, a team of three trained student coders from the University of Vienna manually annotated a stratified random sample of $N = 632$ posts drawn across all actor types, platforms, and countries (including transnational news outlets) from the pre-filtered environment-related corpus (see environment-related content classifier). Annotations were made on the machine-translated English texts. The team completed three online training sessions using exemplar posts stratified by actor type, country and platform; these sessions focused on jointly refining the codebook and concluded with an intercoder reliability test on 66 posts. Given the modest Krippendorff's alpha values in this pilot (see Table 6), we conducted an additional online training round and proceeded to create the second benchmark using a majority-vote protocol: all three coders independently labelled the same 632 posts, and the final label was assigned when at least two coders agreed. This applies the “wisdom of the crowd”: aggregating independent judgments reduces individual error and bias, yielding estimates closer to the truth than most single judgments (Galton, 1907). The resulting consensus labels were used for downstream processing and analysis for environmental topics, stance, and emotions. To document alignment among coders, we also report Krippendorff's alpha for the full set of 632 posts (see Table 6).



TABLE 6: INTERCODER RELIABILITY (KRIPPENDORFF'S ALPHA)

Variable	Last Pilot (N Posts = 66)	Benchmark Dataset (N Posts = 632)
Relevance ^a	.65	.62
Agriculture	.81	.60
Biodiversity	.64	.60
Disasters	.32	.85
Economy	.16	.45
Energy	.72	.83
Transport	.87	.83
Waste	.81	.78
Stance	.60	.07
Anger	.60	.51
Fear	.17	.24
Disgust	.02	.06
Sadness	.19	.16
Joy	.41	.16
Enthusiasm	.11	.25
Pride	.40	.29
Hope	.07	.11

Note: The CIDAPE Student Coders had initially labelled broader sets of topics. Some topics (i.e., *Buildings* and *Emissions*) were ultimately excluded because they occurred too infrequently in the manually labelled benchmark, limiting the ability to reliably validate the automated measures. Other topics (e.g., *Activism* and *Political Events*) were excluded because, despite multiple rounds of coder training and refinement of the coding scheme, coders were unable to achieve satisfactory levels of intercoder reliability.

^a Relevance refers to the identification of environment-related posts.

5.3 Environment-Related Content Classifier

In order to select relevant posts that deal with environmental or climate topics, we adopted a rather broad definition, since different political leanings influence the terminology and areas under discussion. Our definition encapsulates not only climate change, but also environmental issues, nature conservation and sustainability efforts more broadly.

To automatically detect and filter our data for environment-related content, we employed a zero-shot classification model (“bge-m3-zeroshot-v2.0” by Laurer et al., 2023) via Huggingface that works on the basis of Natural Language Inference (NLI). This model assesses whether a prompted hypothesis is true or false in regard to an inputted text and provides probability scores for its assessment. Benefits of this model are that it does not require training data (“zero-shot”), or preprocessing steps, and that it can handle multiple languages.

We used a specific prompt-setup of this model as our classifier, which has been initially developed and validated for another project that dealt with the identification of environment-related news coverage on TikTok in German and English language (Ebner et al., 2026). Since this dataset includes multiple platforms, countries/languages and actor types, we conducted another validation round, using country experts and posts by political accounts from different platforms to assure the appropriateness of the approach for our data. In the following, we first describe the development and initial validation of the classifier by Ebner et al., (2026), and secondly, the validation for our specific dataset at hand based on the benchmark created by the CIDAPE national experts.



5.3.1 Initial Development and Validation of the Computational Measurement

For the development and validation of the initial classifier, the following definition (see Table 7) was used to manually detect environment-related content in TikTok video captions (“video_description”) of news videos posted by German or Austrian news outlets in German or English language in the period of 01-2022 and 09-2025:

TABLE 7: VARIABLE DEFINITION

“Environment-related” – Does the post mention environment-related content?

Consider only the video_description for coding this variable. (1 = yes, 0 = no)

- Environment-related content is defined as content referring to climate change (global warming, greenhouse effect, rising temperatures, etc.), its consequences (natural disasters, climate migration, etc.), environmental or climate action measures (both adaptation and mitigation), or other environmental issues (e.g., plastic pollution, biodiversity loss, air pollution, etc.).
- Further, environment-related content includes posts about climate activism or greenwashing practices.
- Sustainability issues more generally are labelled as environment-related if they are discussed in the context of their impact on the environment (e.g., veganism saving carbon-emissions, fast-fashion impact on waste, etc.).
- The codebook also included examples of (non-)environmental posts and edge cases from the data for clarification purposes.

Using the definition above, two samples of each $N = 100$ posts were drawn and manually annotated as “environment-related” or “not environment-related”. One sample functioned as a basis to develop the zero-shot prompt (‘development sample’), the other as a validation sample. $Nn = 50$ posts of each sample were selected as a proportional stratified sample, accounting for the years, countries, and media types. The remaining $N = 50$ posts were each oversampled for environment-related content based on seed keywords (e.g., climate change, climate crisis, environment, sustainability, etc.)² to ensure a significant number of relevant cases within the sample.

Based on the development sample, different hypothesis templates and class descriptions, settings, as well as probability thresholds were evaluated. Examples for hypothesis phrasings were, e.g., “This text is about”, “This text mentions”, “This social media post mentions”; examples for class descriptions were e.g., “environmental matters, climate change, climate action, or environment protection”, “climate change, the environment, sustainability, climate action” OR “something unrelated to environmental issues”, “something else”.

Prompts were tested in English and German language and evaluated based on three performance scores: *Precision* describes the rate of true positives, so if the model detected the category to be true, how often is it actually true. *Recall* describes how well the model detects positives out of all actual positive instances (according to the human gold standard). The *F1-score*, finally, is calculated as the harmonic mean between precision and recall, providing a balanced measure between the two evaluation scores. All scores are measured on a 0 to 1 scale, with 1 being a perfect score.

The final setup of the NLI classifier, achieving the best performance scores (*precision*: 0.933, *recall*: 0.894, *F1*: 0.913; for the development sample), was the following:

Hypothesis_template: “This social media post mentions { }”

Classes_verbalized: [“environment, or climate change, or sustainability”, “not environment, and not climate change, and not sustainability”]

² List of keywords developed with the help of OpenAI ChatGPT 5.2., using regular expressions: English: “climate”, “environment”, “environmental”, “sustainab”, “sustainability”, “co2”, “carbon”, “emission”, “emissions”, “energy”, “renewable”, “green”, “biodiversity”, “warming”, German: “klima”, “klimawandel”, “klimakrise”, “umwelt”, “nachhalt”, “co2”, “emission”, “emissionen”, “energie”, “erneuerbar”, “biodiversität”, “erwärmung”. “Energy”, “green”, and “energie” were excluded for the validation set because they produced false positive cases for the development sample.



Multi_label = False
Probability Threshold: .55

This setup was then tested on the $N = 50$ posts validation sample with very satisfactory results: *precision*: 0.922, *recall*: 0.904, *F1*: 0.913; mirroring the scores from the development sample.

5.3.2 Validation – CIDAPE National Experts

To assure the appropriateness of applying the above described NLI classifier setup for the dataset presented in this deliverable, we additionally validated it with the benchmark created by CIDAPE national experts.

Since this manual step was conducted in parallel with the above-described project, the country experts worked with a slightly different definition of what environment-related content is, namely defined via climate and environmental action measures (see Table 8). However, both are very similar in the sense that they take a broader approach, including not only climate action, but environmental measures, nature conservation and sustainability efforts.

TABLE 8: VARIABLE DEFINITION

“Climate Action” – Does the post mention climate action, environmental action, or nature conservation action?

(1 = Yes, 0 = No (or unclear))

- The post explicitly refers to actions taken to address **climate change, environmental issues, or nature conservation**, regardless of the stance (favourable, neutral, or critical).
- „Climate action” refers to **efforts taken to combat climate change and its impacts**. These efforts involve reducing greenhouse gas emissions (**climate mitigation**) and/or taking action to prepare for and adjust to both the current effects of climate change and the predicted impacts in the future (**climate adaptation**).“ (EUR-Lex Glossary, climate action). Climate action may refer to policies and economical, infrastructural, societal or behavioural changes in a variety of economic and societal sectors, such as industry, agriculture, transport, waste, construction and housing etc.
- **Examples for climate mitigation** action are a carbon tax, shifts from a particular fuel-based energy system to renewable energy or public subsidies on climate friendly mobility services, such as train rides (Klimaticket).
- **Examples for climate adaptation** action are natural disaster management or the reconstruction of cities and housing to make them more resilient against heat. Also general mentions of processes of change towards sustainability or decarbonisation, such as sustainable transition or industrial transformation are coded as climate action.
- The indicated action can also relate to the **goal of sustainability** more generally. General references to **sustainability** transitions, decarbonization, or **transformation** are considered climate action if linked to climate change.
- Terms such as "green" and "eco" may indicate climate action, particularly when linked to sustainability efforts.
- Verbs indicating action, such as "protecting," "banning," or "regulating," signal climate action when linked to environmental or climate-related policies.
- **General calls** to take action on climate-related issues (**“climate protection is crucial”, “our climate targets”**), even if no specific policy or measure is mentioned.
- **Environmental action includes references to** efforts to protect, preserve, or restore the natural environment more broadly. This includes environment policy, environment minister, or the environment ministry, as environment rather than climate change is further often used to talk about issues often linked/worsened by climate change without using a more loaded term like climate change and we want to include the discourse on it as well.
- **Nature conservation action includes references to** efforts to protect, preserve, or restore the nature more broadly. This is included as rather nature is often used to talk about issues often linked/worsened by climate change without using a more loaded term like climate change and we want to include the discourse on it as well.
- The codebook also included examples of (non-)climate action posts and edge cases from the data for clarification purposes.



Using the climate-action definition, CIDAPE experts coded 750 posts per language as either “environment-related” or “not environment-related.” We evaluated the setup developed by Ebner et al. (2026), applying the same hypothesis template, class descriptions, and probability threshold:

Hypothesis_template: “This social media post mentions { }”

Classes_verbalized: [“environment, or climate change, or sustainability”, “not environment, and not climate change, and not sustainability”]

Multi_label = False

Probability Threshold: .55

We focused on model performance across countries and on comparing results for texts in their original language versus their English translations. For the initial assessment, we used $N = 500$ posts per language. Holding out the remaining 250 posts per language allowed us to test alternative configurations and preserve a final validation set to reduce overfitting.

Table 9 reports model performance (*precision*, *recall*, *F1*) by country and compares original multilingual posts with their machine-translated English versions for the 500 posts per language. Focusing on *F1*, the model achieves an average of 0.63 on the original language and 0.65 on the translated posts. Because the multilingual performance is only slightly lower and given the cost savings from not machine-translating the full corpus of $N = 181,782$ posts, we conclude that running the model on the original multilingual texts is preferable and will yield meaningful results.

TABLE 9: VALIDATION OF ENV_BGE-M3_0.55 $N = 500$ POSTS PER COUNTRY, COMPARING ORIGINAL POSTS VS. MACHINE-TRANSLATED ENGLISH POSTS

Country	N Posts	Recall		Precision		F1	
		Original	EN_MT	Original	EN_MT	Original	EN_MT
Austria	500	0.652	0.792	0.839	0.838	0.734	0.814
Czechia	500	0.458	0.479	0.785	0.767	0.579	0.590
Estonia	500	0.636	0.682	0.718	0.682	0.675	0.682
France	500	0.822	0.822	0.552	0.529	0.661	0.643
Germany	500	0.58	0.64	0.690	0.696	0.630	0.667
Italy	500	0.491	0.542	0.744	0.762	0.592	0.634
Slovakia	500	0.6	0.55	0.522	0.5	0.558	0.524
Spain	500	0.52	0.52	0.867	0.867	0.65	0.65
Average	2000	.60	.63	.71	.70	.63	.65

Note: Original = classifier applied to posts in their original language; MT_EN = classifier applied to machine-translated English posts.

Applying the model to the held-out multilingual posts ($N = 250$ per language; see Table 10) yields the per-country and average performance scores (*precision*, *recall*, *F1*), with an overall *F1* of 0.692. We consider this a solid result, sufficient to proceed with this setup for the full dataset.



TABLE 10: VALIDATION OF ENV_BGE-M3_0.55 ON $N = 250$ POSTS PER COUNTRY

Country	N Posts	N relevant manual	N relevant NLI model	Precision	Recall	F1
Austria	250	36	28	0.786	0.611	0.688
Czechia	250	25	18	0.778	0.560	0.651
Estonia	250	23	27	0.704	0.826	0.760
France	250	25	38	0.500	0.760	0.603
Germany	250	25	26	0.731	0.760	0.745
Italy	250	30	24	0.833	0.667	0.741
Slovakia	250	10	12	0.667	0.800	0.727
Spain	250	25	18	0.778	0.560	0.651
Average	2000			0.707	0.678	0.692

Note: Classifier applied to posts in their original language.

5.4 Environmental Topics

For all posts classified as environment-related, we further measured what topic is actually addressed in the content. This variable represents an important narrative element that enables for fine-grained topical data analysis.

To classify topics, the CIDAPE Student Coders had the following general task description:

Which environment-related overarching topics are addressed? (multiple answers are possible).

Table 11 lists all topics. The topic classes are adapted from Schmid-Petri, et al. (2013). The codebook also included additional examples from the data to further clarify the descriptions, which are not displayed here due to data protection regulations.

TABLE 11: TOPICS AND DESCRIPTIONS

Topic	Description
Agriculture	Posts that refer, for example, to financial incentives and regulations for improved land management, maintaining soil carbon content, efficient use of fertilizers and irrigation, (stop of) intensive mass animal farming, (change of) eating behaviour (less meat, vegan, etc.), cultivation of other products, new breedings, new cultivation methods.
Biodiversity	Posts that refer, for example, to the saving species, trees, healthy non-toxic environments for humans/animals/plants, danger of extinction, destruction of landscapes, etc.
Disasters	Posts that refer, for example, to floods, heat waves, droughts, rising sea levels, etc.; and to changes in infrastructure (adaptation measures) to address natural disasters or extreme weather events (e.g., heat waves).
Economy	Posts where climate/environmental topics are discussed in the context of the economy or markets, of creating new jobs, of impacting the economy (positively/negatively). Posts are also included when the costs or savings of a climate action/measure are discussed. Posts are also relevant, when is mentions that/how climate change will economically affect people, stressing none or both positive (benefits, gains) and negative consequences (costs, losses) of tackling climate change.



Energy	Posts that refer, for example, to fossil fuels, light pollution, energy-inefficient technologies, etc. Posts that refer, for example, to saving energy; using green electricity; expanding renewable energy sources; expanding nuclear power; no construction of new coal-fired power plants; lower carbon consumption; reducing fossil-fuel subsidies; renewable energy obligations; and new energy infrastructure investments.
Transport	Posts that refer, for example, to emissions or pollution from cars or flying, infrastructure projects (new roads, tunnels), etc. Posts that refer, for example, to flying less, driving less, driving cars with low carbon emissions, speed limit on highways, CO2 standards for road transport, taxes on vehicle purchase, investment in attractive public transport facilities, biofuel, modal shifts from road to rail, non-motorized transport.
Waste	Examples include posts on plastic waste, food waste, or fast fashion; posts that mention waste minimization, recycling, or general appeals to reduce consumption are also relevant.

Note: CIDAPE Student Coders initially labelled a broader set of topics. Some topics (i.e., *Buildings* and *Emissions*) were ultimately excluded because they occurred too infrequently in the manually labelled benchmark, limiting the ability to reliably validate the automated measures. Other topics (e.g., *Activism* and *Political Events*) were excluded because, despite multiple rounds of coder training and refinement of the coding scheme, coders were unable to achieve satisfactory levels of intercoder reliability.

5.4.1 Computational Pipeline

To measure topics computationally, we used a transformer model tailored to political discourse, Political_DEBATE_base_v1.0 (Burnham et al., 2024)³. The model is based on NLI (Laurer et al., 2023) and further trained on PoNLI dataset, an English corpus of over 200,000 political documents with highly accurate labels across different classification tasks. One of these classification categories is topic classification. Because the model was developed on English texts, we applied it to the English versions of all posts classified as environment-related. We ran the model locally in zero-shot mode (i.e., without task-specific fine-tuning) using standardized instructions. To assess the model’s appropriateness for our data, we compared the automated predictions with the CIDAPE Student Coders benchmark dataset ($N = 632$ posts). See section “Validation Approach” for additional details on the creation of the benchmark sets.

The final setup of the classifier for topics was the following:

Hypothesis_template: “This social media post is about { }”

Classes_verbalized: [“agriculture or farming”, “biodiversity or wildlife conservation”, “natural disasters or extreme weather events”, “economy”, “energy”, “mobility or transport”, “waste or recycling”]

Multi_label = True

Probability Threshold: .90

5.4.2 Validation

Table 12 reports model performance (*precision, recall, F1*) by topic.

TABLE 12: VALIDATION OF POLITICAL_DEBATE_BASE_V1 FOR TOPIC CLASSIFICATION					
Variable	N relevant manual	N relevant DEBATE model	Precision	Recall	F1
Agriculture	66	65	.708	.697	.702
Biodiversity	100	178	.517	.920	.662
Disasters	42	50	.580	.690	.630

³ https://huggingface.co/mlburnham/Political_DEBATE_base_v1.0



Economy	94	95	.537	.543	.540
Energy	83	99	.677	.801	.735
Transport	45	32	.901	.644	.753
Waste	39	39	.692	.692	.692

Note: The metrics are based on 632 manually labelled posts, 451 of which are environment-related. The CIDAPE Student Coders initially labelled a broader set of topics. Some topics (i.e., *Buildings* and *Emissions*) were ultimately excluded because they occurred too infrequently in the manually labelled benchmark, limiting the ability to reliably validate the automated measures. Other topics (e.g., *Activism* and *Political Events*) were excluded because, despite multiple rounds of coder training and refinement of the coding scheme, coders were unable to achieve satisfactory levels of intercoder reliability.

5.5 Stance

We measure stance as another narrative element, focusing on whether a post expresses a positive, neutral/ambivalent, or negative position. Crucially, stance is classified not for the post overall but specifically toward one or more environmental solutions mentioned in the post. Accordingly, stance is recorded only when the “solution” filter variable is classified as 1 (Yes)⁴.

To classify stance, the coders had the following general task description:

What stance does the post express toward (the) environmental solution(s)?

In this step, consider all environmental solutions mentioned in the sentence provided. For each post with a climate solution, identify the stance: that is, the text’s expressed position or opinion regarding the solution. A sentence may contain multiple solutions. Consider in that case the stance towards all solutions on average. Select only one of the stance classes per post.

Stance is categorized into the three options described in Table 13. The codebook also included additional examples from the data to further clarify the descriptions, which are not displayed here due to data protection regulations.

TABLE 13: STANCE CODES AND DESCRIPTIONS

Stance	Description
Positive	The text expresses support for or a favourable view of the environmental solution (e.g., “I like my electric car”, “we should invest in solar energy”).
Neutral/Ambivalent	The text either simply mentions an environmental solution without expressing a clear positive or negative view, or the stance is ambiguous or difficult to determine from the context.
Negative	The text expresses opposition to or a negative view of the environmental solution (e.g., “climate protection through mobility is a bad idea”).

5.5.1 Computational Pipeline

To automate stance classification, we used a transformer model tailored to political discourse, Political_DEBATE_base_v1.0 (Burnham et al., 2024)⁵. Because the model was developed for and performs best on

⁴ The “solution” variable asks: Does the post describe a solution related to an environment-related problem? (1 = Yes, 0 = No). Coding “solution” depends on whether a solution is mentioned, not on its effectiveness or the post’s evaluation of it. By “solution,” we mean a response to environment-related problems (e.g., mitigation or adaptation measures, concrete policies, activism). This variable should be coded as 1 (Yes) regardless of whether the post supports or criticizes the solution.

⁵ https://huggingface.co/mlburnham/Political_DEBATE_base_v1.0



English texts, we applied it to the English versions of all posts classified as environment-related. We ran the model locally in zero-shot mode (i.e., without task-specific fine-tuning) using standardized instructions. The model produced class probabilities (0–1) for positive, neutral, and negative stance. We converted these probabilities to binary labels by selecting the max probability. In the rare cases where a post had high probabilities for both positive and negative stance (≥ 0.8), we recoded the stance as ambivalent/neutral.

5.5.2 Validation

To assess the model’s appropriateness for our data, we compared the automated predictions with the CIDAPE Student Coders benchmark dataset ($N = 632$ posts). See section “Validation Approach” for additional details on the creation of the benchmark sets.

The validation results are shown in Table 14

Classes	N Posts	N present manual	N present model	Precision	Recall	F1
negative	263	8	19	0.316	0.750	0.444
neutral	263	1	78	0.013	1.000	0.025
positive	263	254	166	0.994	0.650	0.786

Note: 632 manually labelled, of which 452 environment-related and 296 solution = present, 33 missing values for majority vote stance, leading to a final $N = 263$ for validation.

5.6 Climate Justice

We operationalize climate justice following Sedlatschek et al. (working paper), who identify five core dimensions grounded in climate justice theory: vulnerability, responsibility, adaptation, participation, and just transition. Accordingly, the climate justice concept is recorded in our dataset if a text mentions any of these dimensions. The resulting indicator is binary (1 = Yes, 0 = No). Table 15 provides the definitions and detailed descriptions of the climate justice variable.

TABLE 15: VARIABLE DEFINITION (FROM CODEBOOK, SUPPLEMENTARY MATERIAL IN SEDLATSCHKE ET AL. (WORKING PAPER).

“Climate Justice” – Does the text mention any of the following dimensions?

(1 = Yes, 0 = No)

- **Vulnerability:** Refers to unequal exposure to climate change impacts and related disasters, and differences in the capacity to cope across individuals, groups, regions, and generations. Includes geographic and social vulnerabilities, as well as economic and non-economic losses (e.g., livelihoods, displacement, cultural loss), and foregrounds those most affected.
- **Responsibility:** Refers to the fair and equitable distribution of responsibilities for addressing climate change, including international cooperation and burden-sharing among duty-bearers. Emphasizes unequal contributions to the climate crisis (e.g., historical responsibility, polluter-pays principle) and associated obligations to mitigate, as well as to support and compensate affected communities.
- **Adaptation:** Refers to strategies and actions aimed at preventing and limiting the negative impacts of climate change on human health and society, including harm reduction, preparedness, and resilience-building. It captures both institutional and community-led responses to climate related risks and extreme events, particularly in protecting vulnerable populations, regardless of responsibility attribution.
- **Participation:** Participation, representation, or contribution of citizens, minorities, or marginalized groups in formal, legal, or institutional decision-making and action processes on climate change, at local, national, regional, or international levels
- **Just Transition:** Transitioning to a more sustainable economy that is equitable and inclusive, ensuring that workers and communities who are affected by the shift away from fossil fuels are not left behind. It emphasizes creating new opportunities, providing support and retraining for workers, and addressing social and economic inequalities, while protecting the environment and promoting sustainable development.



5.6.1 Computational Pipeline and Validation

To measure climate justice in the posts at scale, we employ a supervised transformer-based text classification approach. The specific model used was developed and comprehensively validated by Sedlatschek et al. (working paper). More specifically, the authors have built a model to classify posts as climate justice related or not by fine-tuning DistilRoBERTa (Sanh et al., 2019), a computationally efficient variant of RoBERTa (Liu et al., 2019). The fine-tuning was performed on $N = 27,632$ manually annotated sentences. The model achieved mean precision of 0.775, recall of 0.783, and F1 of 0.776 for the climate justice class, indicating stable performance. As the model was developed and evaluated for English sentences only (parts of them translated from German), we employed the model to the English machine translated version of the social media posts in our dataset. Considering the token limit of the model and the way it was developed, we split the social media posts into sentences first using spacy (Honnibal et al., 2023), classifying each sentence and aggregating the result on post level.

5.7 Emotions

Moving beyond sentiment analysis, we opted to analyse discrete emotions as separate categories with diverging behavioural effects within political climate communication (Durnova et al., 2025; Myers et al., 2023). Conceptualizations of discrete emotions vary. However, most approaches include anger, fear, joy, disgust, and sadness as universal basic emotions, often referencing Paul Ekman's work (e.g., Ekman, 1992). The selection of an appropriate emotion classifier, and therefore, also the selection of a conceptual model, followed an extensive review of existing literature (e.g., Wang et al., 2022; Zhang et al., 2024).

The typology of basic emotions has been criticised, however, for neglecting depth and variations in positive emotions. Widmann and Wich (2023), for example, argue that positive emotions are important for political participation and turnout. They thus developed an approach for analysing emotions within political discourse extending the five basic emotions typology by adding enthusiasm, pride and hope. Hope, for instance, is, according to them, a future-oriented emotion which is often connected to political goals and of particular importance during election periods.

5.7.1 Computational Pipeline

For the automated classification of discrete emotions, we employed a local transformer-based model by Widmann and Wich (2023) named *pol_emo_mDeBERTa2* (available through github tweedmann/pol_emo_mDeBERTa2). This model is fine-tuned to predict eight discrete emotions in political sentences, i.e., *Anger*, *Fear*, *Disgust*, *Sadness*, *Joy*, *Enthusiasm*, *Pride*, and *Hope*. While the model was fine-tuned on German political texts, the authors stress its applicability to other languages, especially English, for which they also provide satisfactory *F1*-scores (all $> .65$).

Following Solovev et al. (2026), post descriptions (captions) were split into sentences for emotion classification and later aggregated back to post level. We used spacy "en_core_web_sm" on the machine translated English posts for sentence splitting. Subsequently, sentences were assigned a probability score for the presence of each of the eight emotions. Each sentence could, therefore, be classified with multiple emotions. We used the recommended threshold of .65 for binary classification of emotion presence (Widmann & Wich, 2023). An emotion was considered present at the post level if at least one sentence of the post exceeded the threshold for this emotion (otherwise = 0) (Solovev et al., 2026).

5.7.2 Validation

To assess the emotion model's appropriateness for our data, we compared the automated classification with the CIDAPE Student Coders benchmark dataset ($N = 632$ posts). See section "Validation Approach" for additional details on the creation of the benchmark sets. Since emotions, in particular, are very complex and highly subjective in perception, we opted for a majority vote principle. This means that all three coders coded all posts of the sample. Each coder was asked to assess all emotion variables on a binary scale of presence (1) or absence (0) of the described emotion. If at least two out of three coders perceived an emotion to be present, it was recorded as present (1), if one or none of the coders perceived an emotion to be present, it was recorded as not present (0).

For each emotion variable, the coders had the following general task description:



Does the post express [emotion]?

Think about the intention of the person posting. Did the person intend to communicate an emotion?

Table 16 shows an overview of the eight emotion variables and their respective description. Descriptions rely on the original codebook by Widmann & Wich (2023) and were only slightly adapted during the coder training process. The codebook also included additional examples from the data to further clarify the descriptions, which are not displayed here due to data protection regulations.

TABLE 16: DISCRETE EMOTION CODES AND DESCRIPTIONS (ADAPTED FROM WIDMANN & WICH, 2023)

Discrete Emotion	Description
Anger	Phrases associated with anger often express displeasure with something or someone, or dissatisfaction and disappointment. They may also contain insults or strong criticism towards a person or a group. For example: "Unbelievable: Murderer kills again, politics remains inactive! How much more stupid can this be? Why is the killer still at large?"
Fear	Sentences with fear express an oppressive, anxious feeling, a feeling of being threatened or insecure. For example: "Terrible terror in Berlin: The country, shaken by violence, murder and terror, simply does not come to rest. How safe are we still in Germany?"
Disgust	This emotion is often associated with 1) impurity, dirt, or disease 2) or it can also indicate disgusting behaviour (in a moral sense). – Ex. 1: "A crime that can hardly be surpassed in disgust: The man has bitten the victim bloody and infected him with hepatitis B." – Ex. 2: "These statements make us sick. These are sentences that show how corrupt and immoral the government has become in the meantime."
Sadness	This emotion can be expressed for example by great injustice, suffering, disappointment, failure, or death. For example: "The humanitarian catastrophe in Yemen is heartbreaking. It is an imperative of humanity that suffering, starvation and death finally come to an end."
Joy	Sentences expressing joy often emphasize joyful, beautiful things that please oneself or someone else. For example: "What a phenomenal result! Incredible! This is good for Germany, good for democracy and good for the whole country!"
Enthusiasm	Sentences with enthusiasm often describe an excitement for something, an exaggerated dynamism and vitality, or an extreme commitment to a cause. For example: "Those who are committed encourage others. Our society and democracy live on commitment. Thanks to all who participate! Keep up the good work!"
Pride	Sentences expressing pride often emphasize self-confidence and joy over a possession, a characteristic or a performance. For example: "The performance of our industry and economy is outstanding and admirable. We are a rich and strong country that impresses many!"
Hope	Sentences of hope express confidence in the future, emphasize confidence, optimism about what the future will bring. For example: "I wish everyone a happy, successful and healthy new year. May 2018 bring less war, but more confidence and helpfulness."

The validation results are shown in Table 17.

TABLE 17: VALIDATION OF POL_EMO_MDeBERTa2 EMOTION CLASSIFICATION MODEL

Emotion	N Posts	N present manual	N present model	Precision	Recall	F1
Anger	440	73	101	0.505	0.699	0.586
Fear	436	42	27	0.407	0.262	0.319
Disgust	447	3	1	0.000	0.000	0.000



Sadness	447	19	12	0.250	0.158	0.194
Joy	427	47	47	0.511	0.511	0.511
Enthusiasm	414	164	114	0.702	0.488	0.576
Pride	435	44	23	0.522	0.273	0.358
Hope	435	45	12	0.417	0.111	0.175

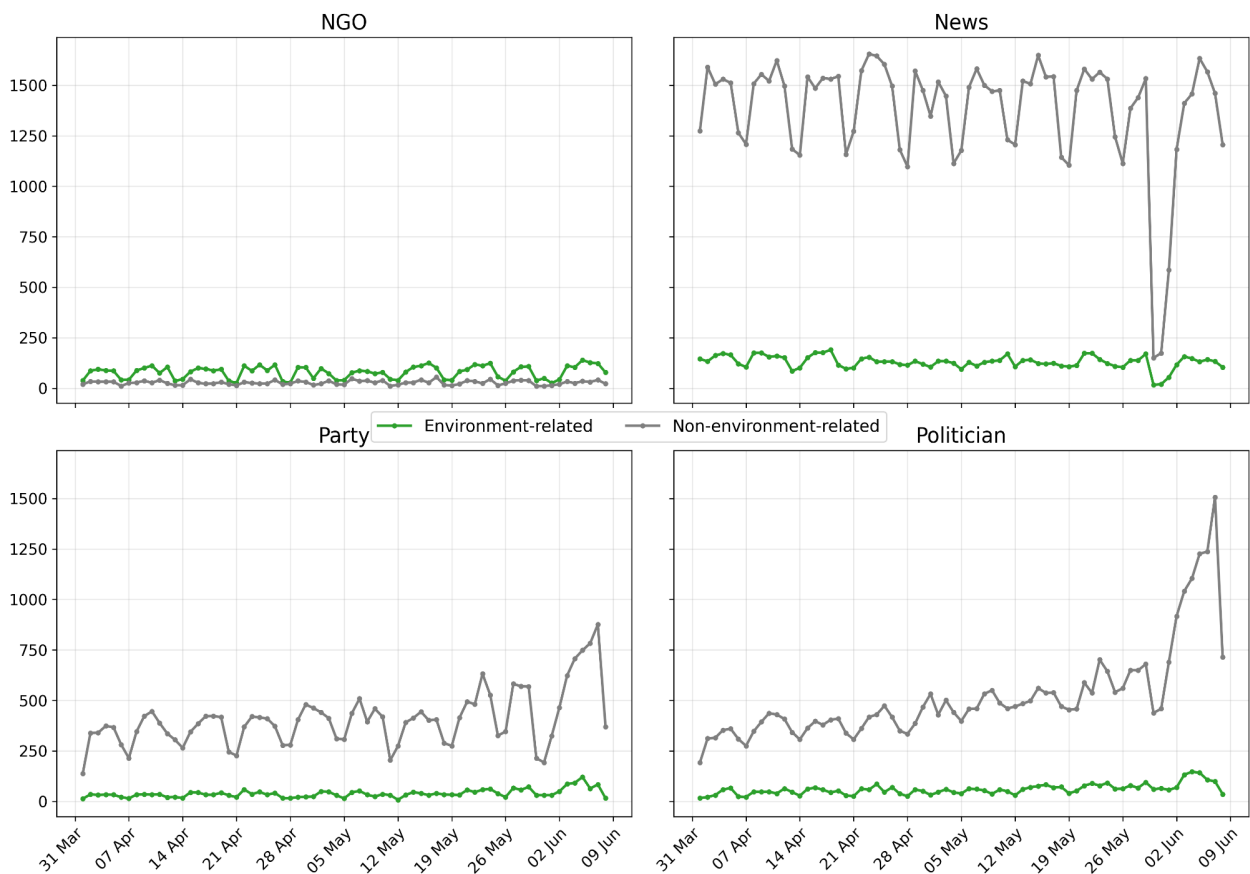
Note: Classifier applied to the English machine translated version of the posts. 632 manually labelled of which 452 environment-related, missing values where no majority vote could be derived were excluded.

6 Data

6.1 Descriptives

Figure 1 shows the distribution of posts over time, split by environment-related relevance with individual plots per actor type. We see that most posts in our data are from news outlets, who post less on Sundays. Environmental NGOs are the only actor type that have more posts which are environment-related than not. There is a spike in posting activity in the days leading up to the election, particularly for the group of politicians but also less pronounced for party accounts. The observed decline in posting activity at the end of May 2024 can be attributed to missing Facebook data (see Figure 2 as well).

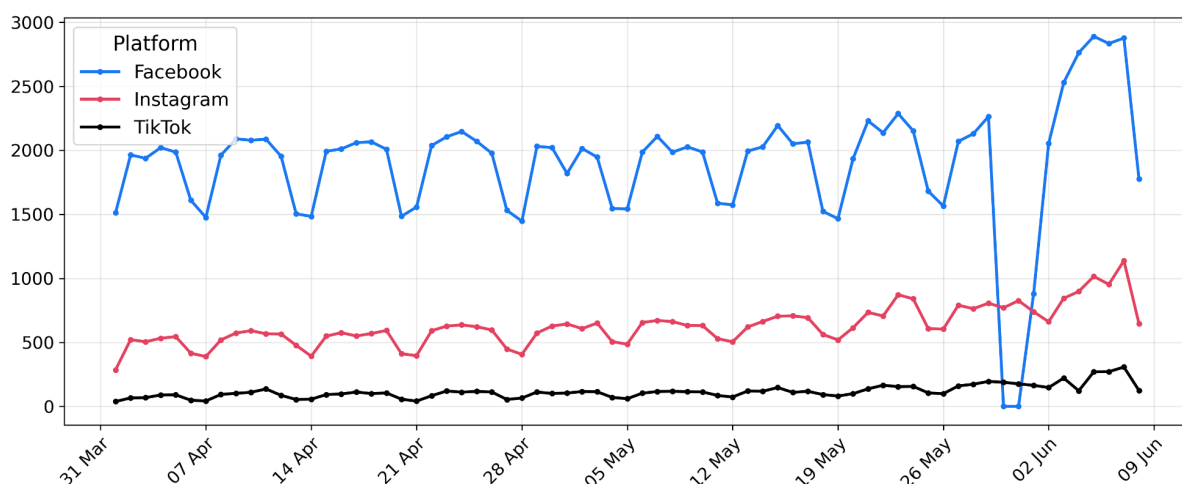
Figure 1 DAILY POSTS BY ACTOR TYPE AND ENVIRONMENT-RELATED RELEVANCE



Note: Due to a data collection issue, no Facebook data is included for May 30 and 31, 2024. Facebook post counts remained lower than average on June 1 before returning to stable levels on June 2.



Figure 2 DAILY POSTS BY PLATFORM



Note: Due to a data collection issue, no Facebook data is included for May 30 and 31, 2024. Facebook post counts remained lower than average on June 1 before returning to stable levels on June 2.

Table 18 provides an overview of the number of posts per country, platform and actor type group. For example, all politicians included in our data from Austria posted $N = 1745$ posts on Facebook, across all actor types the dataset includes a total of 8,365 Facebook posts from Austria. The overall dataset $N = 181,782$. To see how many accounts per group are responsible for posting these numbers of posts, consult Table 4.

TABLE 18: NUMBER OF POSTS PER COUNTRY, PLATFORM, AND ACTOR TYPE.

Country	Platform	Politician	Party	NGO	News	Total
Austria	Facebook	1745	823	427	5370	8365
Austria	Instagram	1924	524	353	2744	5545
Austria	TikTok	432	196	53	121	802
Austria	Total	4101	1543	833	8235	14712
Czechia	Facebook	1615	4578	503	1210	7906
Czechia	Instagram	1578	1804	164	218	3764
Czechia	TikTok	581	150	0	0	731
Czechia	Total	3774	6532	667	1428	12401
Estonia	Facebook	822	774	114	5327	7037
Estonia	Instagram	410	129	26	56	621
Estonia	TikTok	8	59	0	131	198
Estonia	Total	1240	962	140	5514	7856
France	Facebook	1291	2215	657	9275	13438
France	Instagram	1880	1199	394	1078	4551
France	TikTok	545	238	32	234	1049
France	Total	3716	3652	1083	10587	19038
Germany	Facebook	1350	1732	1043	9627	13752
Germany	Instagram	4035	1374	991	948	7348
Germany	TikTok	880	527	231	0	1638



Germany	Total	6265	3633	2265	10575	22738
Italy	Facebook	5571	2119	456	14408	22554
Italy	Instagram	8680	1498	309	1854	12341
Italy	TikTok	896	184	76	46	1202
Italy	Total	15147	3801	841	16308	36097
Slovakia	Facebook	1426	3593	176	9835	15030
Slovakia	Instagram	766	994	69	698	2527
Slovakia	TikTok	298	438	0	59	795
Slovakia	Total	2490	5025	245	10592	18352
Spain	Facebook	638	3932	790	15217	20577
Spain	Instagram	1964	736	398	694	3792
Spain	TikTok	395	821	116	0	1332
Spain	Total	2997	5489	1304	15911	25701
Transn.	Facebook	0	0	0	22046	22046
Transn.	Instagram	0	0	0	2628	2628
Transn.	TikTok	0	0	0	213	213
Trans.	Total	0	0	0	24887	24887
Total	Facebook	14458	19766	4166	92315	130705
Total	Instagram	21237	8258	2704	10918	43117
Total	TikTok	4035	2613	508	804	7960
Total	Total	39730	30637	7378	104037	181782

Note: Transn. = Transnational.



6.2 Salience of Environment-Related Posts

Table 19 shows the relative share of posts classified as environment-related per country, platform, and actor type as well as totals per country across platforms, and per platform across countries as well as the overall totals across countries AND platforms. Totals per country across platforms cannot be seen as the mean percentage but rather are weighted since the absolute number of posts per platform is not equally distributed. For example, 8.8% of Facebook posts by Austrian politicians were environment-related, 11.1% of their Instagram posts, and 19.2% of their TikTok posts. Yet, the share of environment-related posts by Austrian politicians across platforms is 10.9% since they posted more on Facebook and Instagram than TikTok.

First, comparing actor types, we see that overall posts by NGOs have the highest share of environment-related posts (74.3%), followed by politicians (10.3%), parties (8.8%), and news outlets (8.6%). Second, comparing countries, Germany (16.6%), Austria (14.2%), and France (13.9%) have the highest relative share of environment-related content. Third, comparing platforms, we find the highest share of environment-related content on TikTok (15.1%), followed by Instagram (13.9%), and lastly Facebook (10.8%). Across the whole dataset ($N = 181,782$), 11.7% were classified as environment-related (in absolute number $N = 21,250$).

TABLE 19: RELATIVE AND ABSOLUTE FREQUENCY OF ENVIRONMENT-RELATED POSTS PER COUNTRY, PLATFORM AND ACTOR TYPE.

Country	Platform	Politician			Party			NGO			News			Total		
		%	count	<i>N</i>	%	count	<i>N</i>	%	count	<i>N</i>	%	count	<i>N</i>	%	count	<i>N</i>
Austria	Facebook	8.8	153	1745	10.9	90	823	69.3	296	427	9.5	510	5370	12.5	1049	8365
Austria	Instagram	11.1	213	1924	13.4	70	524	70.0	247	353	11.9	327	2744	15.5	857	5545
Austria	TikTok	19.2	83	432	18.4	36	196	92.5	49	53	12.4	15	121	22.8	183	802
Austria	Total	10.9	449	4101	12.7	196	1543	71.1	592	833	10.3	852	8235	14.2	2089	14712
Czechia	Facebook	8.9	143	1615	7.8	358	4578	60.6	305	503	6.4	77	1210	11.2	883	7906
Czechia	Instagram	8.7	137	1578	9.0	162	1804	48.2	79	164	3.7	8	218	10.3	386	3764
Czechia	TikTok	11.4	66	581	26.7	40	150	-	-	-	-	-	-	14.5	106	731
Czechia	Total	9.2	346	3774	8.6	560	6532	57.6	384	667	6.0	85	1428	11.1	1375	12401
Estonia	Facebook	10.0	82	822	9.8	76	774	91.2	104	114	10.5	557	5327	11.6	819	7037
Estonia	Instagram	9.0	37	410	14.0	18	129	100.0	26	26	8.9	5	56	13.8	86	621
Estonia	TikTok	0.0	0	8	0.0	0	59	-	-	-	8.4	11	131	5.6	11	198



Estonia	Total	9.6	119	1240	9.8	94	962	92.9	130	140	10.4	573	5514	11.7	916	7856
France	Facebook	9.1	118	1291	12.5	277	2215	81.3	534	657	8.6	798	9275	12.9	1727	13438
France	Instagram	11.8	221	1880	12.4	149	1199	83.0	327	394	9.8	106	1078	17.6	803	4551
France	TikTok	10.3	56	545	8.8	21	238	75.0	24	32	7.3	17	234	11.2	118	1049
France	Total	10.6	395	3716	12.2	447	3652	81.7	885	1083	8.7	921	10587	13.9	2648	19038
Germany	Facebook	16.8	227	1350	11.4	197	1732	65.0	678	1043	8.6	828	9627	14.0	1930	13752
Germany	Instagram	12.8	515	4035	14.3	197	1374	67.9	673	991	10.4	99	948	20.2	1484	7348
Germany	TikTok	14.2	125	880	16.7	88	527	63.2	146	231	-	-	-	21.9	359	1638
Germany	Total	13.8	867	6265	13.3	482	3633	66.1	1497	2265	8.8	927	10575	16.6	3773	22738
Italy	Facebook	10.9	607	5571	9.8	208	2119	81.6	372	456	8.4	1212	14408	10.6	2399	22554
Italy	Instagram	9.7	839	8680	7.9	118	1498	78.6	243	309	8.4	156	1854	11.0	1356	12341
Italy	TikTok	10.3	92	896	6.0	11	184	63.2	48	76	10.9	5	46	13.0	156	1202
Italy	Total	10.2	1538	15147	8.9	337	3801	78.8	663	841	8.4	1373	16308	10.8	3911	36097
Slovakia	Facebook	5.0	72	1426	5.8	210	3593	88.6	156	176	9.1	893	9835	8.9	1331	15030
Slovakia	Instagram	6.9	53	766	4.7	47	994	91.3	63	69	5.6	39	698	8.0	202	2527
Slovakia	TikTok	11.7	35	298	6.6	29	438	-	-	-	10.2	6	59	8.8	70	795
Slovakia	Total	6.4	160	2490	5.7	286	5025	89.4	219	245	8.9	938	10592	8.7	1603	18352
Spain	Facebook	7.1	45	638	5.0	198	3932	87.6	692	790	6.9	1051	15217	9.7	1986	20577
Spain	Instagram	8.5	166	1964	5.7	42	736	87.2	347	398	5.6	39	694	15.7	594	3792
Spain	TikTok	6.6	26	395	6.0	49	821	62.9	73	116	-	-	-	11.1	148	1332
Spain	Total	7.9	237	2997	5.3	289	5489	85.3	1112	1304	6.9	1090	15911	10.6	2728	25701
Transn.	Facebook	-	-	-	-	-	-	-	-	-	8.8	1936	22046	8.8	1936	22046
Transn.	Instagram	-	-	-	-	-	-	-	-	-	8.5	224	2628	8.5	224	2628



Transn.	TikTok	-	-	-	-	-	-	-	-	-	22.1	47	213	22.1	47	213
Transn.	Total	-	-	-	-	-	-	-	-	-	8.9	2207	24887	8.9	2207	24887
Total	Facebook	10.0	1447	14458	8.2	1614	19766	75.3	3137	4166	8.5	7862	92315	10.8	14060	130705
Total	Instagram	10.3	2181	21237	9.7	803	8258	74.1	2005	2704	9.2	1003	10918	13.9	5992	43117
Total	TikTok	12.0	483	4035	10.5	274	2613	66.9	340	508	12.6	101	804	15.1	1198	7960
Total	Total	10.3	4111	39730	8.8	2691	30637	74.3	5482	7378	8.6	8966	104037	11.7	21250	181782

Note: Groups where no data has been collected have a “-” in their cell. This is different from groups where data has been collected, but no posts were classified as environment-related, e.g., TikTok posts by politicians or parties from Estonia (0). Transn. = Transnational.

6.3 Environmental Topics

Across all environment-related posts in the dataset ($N = 21,250$), economy was the most frequently appearing topic (23.3%), followed by agriculture (20.2%), disasters (15.5%), biodiversity (12.3%), transport (11.1%), and waste (10.0%). The following Tables 20-26 provide an overview of the relative and absolute frequencies for each topic per country-platform-actor-type-group.

TABLE 20: FREQUENCY OF AGRICULTURE TOPIC PER COUNTRY, PLATFORM AND ACTOR TYPE WITHIN ENVIRONMENT-RELATED POSTS ($N = 21,250$)

Country	Platform	Politician			Party			NGO			News			Total		
		%	count	N	%	count	N	%	count	N	%	count	N	%	count	N
Austria	Facebook	26.1	40	153	14.4	13	90	24.0	71	296	18.2	93	510	20.7	217	1049
Austria	Instagram	18.8	40	213	12.9	9	70	23.9	59	247	13.8	45	327	17.9	153	857
Austria	TikTok	15.7	13	83	13.9	5	36	22.4	11	49	26.7	4	15	18.0	33	183
Austria	Total	20.7	93	449	13.8	27	196	23.8	141	592	16.7	142	852	19.3	403	2089
Czechia	Facebook	30.8	44	143	29.1	104	358	20.3	62	305	26.0	20	77	26.0	230	883
Czechia	Instagram	27.0	37	137	25.9	42	162	19.0	15	79	25.0	2	8	24.9	96	386
Czechia	TikTok	43.9	29	66	17.5	7	40	-	-	-	-	-	-	34.0	36	106
Czechia	Total	31.8	110	346	27.3	153	560	20.1	77	384	25.9	22	85	26.3	362	1375



Estonia	Facebook	20.7	17	82	15.8	12	76	22.1	23	104	19.4	108	557	19.5	160	819
Estonia	Instagram	21.6	8	37	33.3	6	18	15.4	4	26	0.0	0	5	20.9	18	86
Estonia	TikTok	-	-	-	-	-	-	-	-	-	9.1	1	11	9.1	1	11
Estonia	Total	21.0	25	119	19.1	18	94	20.8	27	130	19.0	109	573	19.5	179	916
France	Facebook	19.5	23	118	14.1	39	277	19.3	103	534	17.8	142	798	17.8	307	1727
France	Instagram	18.6	41	221	18.1	27	149	19.0	62	327	19.8	21	106	18.8	151	803
France	TikTok	30.4	17	56	23.8	5	21	20.8	5	24	23.5	4	17	26.3	31	118
France	Total	20.5	81	395	15.9	71	447	19.2	170	885	18.1	167	921	18.5	489	2648
Germany	Facebook	22.0	50	227	25.9	51	197	16.7	113	678	19.4	161	828	19.4	375	1930
Germany	Instagram	21.4	110	515	28.4	56	197	18.9	127	673	14.1	14	99	20.7	307	1484
Germany	TikTok	19.2	24	125	21.6	19	88	21.2	31	146	-	-	-	20.6	74	359
Germany	Total	21.2	184	867	26.1	126	482	18.1	271	1497	18.9	175	927	20.0	756	3773
Italy	Facebook	20.6	125	607	22.6	47	208	18.3	68	372	17.9	217	1212	19.0	457	2399
Italy	Instagram	21.2	178	839	22.0	26	118	21.8	53	243	14.1	22	156	20.6	279	1356
Italy	TikTok	26.1	24	92	9.1	1	11	14.6	7	48	40.0	2	5	21.8	34	156
Italy	Total	21.3	327	1538	22.0	74	337	19.3	128	663	17.6	241	1373	19.7	770	3911
Slovakia	Facebook	20.8	15	72	20.5	43	210	21.2	33	156	18.4	164	893	19.2	255	1331
Slovakia	Instagram	24.5	13	53	23.4	11	47	17.5	11	63	17.9	7	39	20.8	42	202
Slovakia	TikTok	17.1	6	35	34.5	10	29	-	-	-	0.0	0	6	22.9	16	70
Slovakia	Total	21.2	34	160	22.4	64	286	20.1	44	219	18.2	171	938	19.5	313	1603
Spain	Facebook	22.2	10	45	21.2	42	198	20.1	139	692	16.2	170	1051	18.2	361	1986
Spain	Instagram	17.5	29	166	21.4	9	42	26.5	92	347	10.3	4	39	22.6	134	594
Spain	TikTok	23.1	6	26	20.4	10	49	23.3	17	73	-	-	-	22.3	33	148
Spain	Total	19.0	45	237	21.1	61	289	22.3	248	1112	16.0	174	1090	19.4	528	2728



Transn.	Facebook	-	-	-	-	-	-	-	-	-	22.7	439	1936	22.7	439	1936
Transn.	Instagram	-	-	-	-	-	-	-	-	-	18.8	42	224	18.8	42	224
Transn.	TikTok	-	-	-	-	-	-	-	-	-	40.4	19	47	40.4	19	47
Transn.	Total	-	-	-	-	-	-	-	-	-	22.7	500	2207	22.7	500	2207
Total	Facebook	22.4	324	1447	21.7	351	1614	19.5	612	3137	19.3	1514	7862	19.9	2801	14060
Total	Instagram	20.9	456	2181	23.2	186	803	21.1	423	2005	15.7	157	1003	20.4	1222	5992
Total	TikTok	24.6	119	483	20.8	57	274	20.9	71	340	29.7	30	101	23.1	277	1198
Total	Total	21.9	899	4111	22.1	594	2691	20.2	1106	5482	19.0	1701	8966	20.2	4300	21250

Note: Groups where no data has been collected or has been classified as environment-related have a “-” in their cell. This is different from groups where environment-related posts exist in the data, but no posts were classified with the agriculture topic, e.g., TikTok posts by news outlets from Slovakia (0). Transn. = Transnational.

TABLE 21: FREQUENCY OF BIODIVERSITY TOPIC PER COUNTRY, PLATFORM AND ACTOR TYPE WITHIN ENVIRONMENT-RELATED POSTS (N = 21,250)

Country	Platform	Politician			Party			NGO			News			Total		
		%	count	N	%	count	N	%	count	N	%	count	N	%	count	N
Austria	Facebook	6.5	10	153	13.3	12	90	13.5	40	296	11.6	59	510	11.5	121	1049
Austria	Instagram	10.8	23	213	11.4	8	70	9.7	24	247	12.2	40	327	11.1	95	857
Austria	TikTok	12.0	10	83	5.6	2	36	8.2	4	49	0.0	0	15	8.7	16	183
Austria	Total	9.6	43	449	11.2	22	196	11.5	68	592	11.6	99	852	11.1	232	2089
Czechia	Facebook	14.0	20	143	12.6	45	358	15.7	48	305	6.5	5	77	13.4	118	883
Czechia	Instagram	13.9	19	137	10.5	17	162	21.5	17	79	25.0	2	8	14.2	55	386
Czechia	TikTok	3.0	2	66	5.0	2	40	-	-	-	-	-	-	3.8	4	106
Czechia	Total	11.8	41	346	11.4	64	560	16.9	65	384	8.2	7	85	12.9	177	1375
Estonia	Facebook	7.3	6	82	11.8	9	76	7.7	8	104	11.0	61	557	10.3	84	819



Estonia	Instagram	13.5	5	37	5.6	1	18	11.5	3	26	40.0	2	5	12.8	11	86
Estonia	TikTok	-	-	-	-	-	-	-	-	-	0.0	0	11	0.0	0	11
Estonia	Total	9.2	11	119	10.6	10	94	8.5	11	130	11.0	63	573	10.4	95	916
France	Facebook	16.1	19	118	19.1	53	277	12.5	67	534	10.3	82	798	12.8	221	1727
France	Instagram	14.9	33	221	12.8	19	149	15.3	50	327	7.5	8	106	13.7	110	803
France	TikTok	14.3	8	56	9.5	2	21	8.3	2	24	5.9	1	17	11.0	13	118
France	Total	15.2	60	395	16.6	74	447	13.4	119	885	9.9	91	921	13.0	344	2648
Germany	Facebook	16.7	38	227	19.3	38	197	13.0	88	678	9.2	76	828	12.4	240	1930
Germany	Instagram	15.5	80	515	12.2	24	197	14.6	98	673	10.1	10	99	14.3	212	1484
Germany	TikTok	11.2	14	125	10.2	9	88	9.6	14	146	-	-	-	10.3	37	359
Germany	Total	15.2	132	867	14.7	71	482	13.4	200	1497	9.3	86	927	13.0	489	3773
Italy	Facebook	17.0	103	607	9.6	20	208	11.3	42	372	10.6	129	1212	12.3	294	2399
Italy	Instagram	15.1	127	839	10.2	12	118	9.9	24	243	17.3	27	156	14.0	190	1356
Italy	TikTok	19.6	18	92	27.3	3	11	2.1	1	48	0.0	0	5	14.1	22	156
Italy	Total	16.1	248	1538	10.4	35	337	10.1	67	663	11.4	156	1373	12.9	506	3911
Slovakia	Facebook	12.5	9	72	11.0	23	210	13.5	21	156	11.4	102	893	11.6	155	1331
Slovakia	Instagram	13.2	7	53	8.5	4	47	15.9	10	63	5.1	2	39	11.4	23	202
Slovakia	TikTok	8.6	3	35	13.8	4	29	-	-	-	0.0	0	6	10.0	7	70
Slovakia	Total	11.9	19	160	10.8	31	286	14.2	31	219	11.1	104	938	11.5	185	1603
Spain	Facebook	22.2	10	45	18.7	37	198	12.4	86	692	8.5	89	1051	11.2	222	1986
Spain	Instagram	15.1	25	166	9.5	4	42	15.6	54	347	15.4	6	39	15.0	89	594
Spain	TikTok	11.5	3	26	14.3	7	49	11.0	8	73	-	-	-	12.2	18	148



Spain	Total	16.0	38	237	16.6	48	289	13.3	148	1112	8.7	95	1090	12.1	329	2728
Transn.	Facebook	-	-	-	-	-	-	-	-	-	11.1	214	1936	11.1	214	1936
Transn.	Instagram	-	-	-	-	-	-	-	-	-	13.4	30	224	13.4	30	224
Transn.	TikTok	-	-	-	-	-	-	-	-	-	8.5	4	47	8.5	4	47
Transn.	Total	-	-	-	-	-	-	-	-	-	11.2	248	2207	11.2	248	2207
Total	Facebook	14.9	215	1447	14.7	237	1614	12.8	400	3137	10.4	817	7862	11.9	1669	14060
Total	Instagram	14.6	319	2181	11.1	89	803	14.0	280	2005	12.7	127	1003	13.6	815	5992
Total	TikTok	12.0	58	483	10.6	29	274	8.5	29	340	5.0	5	101	10.1	121	1198
Total	Total	14.4	592	4111	13.2	355	2691	12.9	709	5482	10.6	949	8966	12.3	2605	21250

Note: Groups where no data has been collected or has been classified as environment-related have a “-” in their cell. This is different from groups where environment-related posts exist in the data, but no posts were classified with the biodiversity topic, e.g., TikTok posts by news outlets from Austria (0). Transn. = Transnational.

TABLE 22: FREQUENCY OF DISASTERS TOPIC PER COUNTRY, PLATFORM AND ACTOR TYPE WITHIN ENVIRONMENT-RELATED POSTS (N = 21,250)

Country	Platform	Politician			Party			NGO			News			Total		
		%	count	N	%	count	N	%	count	N	%	count	N	%	count	N
Austria	Facebook	17.0	26	153	14.4	13	90	10.8	32	296	14.5	74	510	13.8	145	1049
Austria	Instagram	14.1	30	213	15.7	11	70	19.0	47	247	14.4	47	327	15.8	135	857
Austria	TikTok	10.8	9	83	8.3	3	36	22.4	11	49	6.7	1	15	13.1	24	183
Austria	Total	14.5	65	449	13.8	27	196	15.2	90	592	14.3	122	852	14.6	304	2089
Czechia	Facebook	21.7	31	143	20.9	75	358	13.8	42	305	13.0	10	77	17.9	158	883
Czechia	Instagram	17.5	24	137	22.8	37	162	13.9	11	79	25.0	2	8	19.2	74	386
Czechia	TikTok	15.2	10	66	2.5	1	40	-	-	-	-	-	-	10.4	11	106
Czechia	Total	18.8	65	346	20.2	113	560	13.8	53	384	14.1	12	85	17.7	243	1375



Estonia	Facebook	17.1	14	82	19.7	15	76	13.5	14	104	12.4	69	557	13.7	112	819
Estonia	Instagram	21.6	8	37	0.0	0	18	11.5	3	26	0.0	0	5	12.8	11	86
Estonia	TikTok	-	-	-	-	-	-	-	-	-	0.0	0	11	0.0	0	11
Estonia	Total	18.5	22	119	16.0	15	94	13.1	17	130	12.0	69	573	13.4	123	916
France	Facebook	16.1	19	118	11.6	32	277	13.1	70	534	12.2	97	798	12.6	218	1727
France	Instagram	15.8	35	221	10.7	16	149	20.2	66	327	14.2	15	106	16.4	132	803
France	TikTok	17.9	10	56	4.8	1	21	4.2	1	24	0.0	0	17	10.2	12	118
France	Total	16.2	64	395	11.0	49	447	15.5	137	885	12.2	112	921	13.7	362	2648
Germany	Facebook	22.9	52	227	21.8	43	197	15.2	103	678	12.2	101	828	15.5	299	1930
Germany	Instagram	16.7	86	515	21.8	43	197	14.4	97	673	16.2	16	99	16.3	242	1484
Germany	TikTok	12.8	16	125	10.2	9	88	11.0	16	146	-	-	-	11.4	41	359
Germany	Total	17.8	154	867	19.7	95	482	14.4	216	1497	12.6	117	927	15.4	582	3773
Italy	Facebook	17.5	106	607	15.4	32	208	18.0	67	372	13.1	159	1212	15.2	364	2399
Italy	Instagram	18.4	154	839	11.0	13	118	19.8	48	243	15.4	24	156	17.6	239	1356
Italy	TikTok	19.6	18	92	36.4	4	11	0.0	0	48	0.0	0	5	14.1	22	156
Italy	Total	18.1	278	1538	14.5	49	337	17.3	115	663	13.3	183	1373	16.0	625	3911
Slovakia	Facebook	13.9	10	72	16.2	34	210	19.9	31	156	14.7	131	893	15.5	206	1331
Slovakia	Instagram	22.6	12	53	21.3	10	47	20.6	13	63	5.1	2	39	18.3	37	202
Slovakia	TikTok	34.3	12	35	20.7	6	29	-	-	-	16.7	1	6	27.1	19	70
Slovakia	Total	21.2	34	160	17.5	50	286	20.1	44	219	14.3	134	938	16.3	262	1603
Spain	Facebook	11.1	5	45	27.3	54	198	18.1	125	692	13.5	142	1051	16.4	326	1986
Spain	Instagram	15.1	25	166	14.3	6	42	20.5	71	347	10.3	4	39	17.8	106	594
Spain	TikTok	7.7	2	26	6.1	3	49	9.6	7	73	-	-	-	8.1	12	148
Spain	Total	13.5	32	237	21.8	63	289	18.3	203	1112	13.4	146	1090	16.3	444	2728



Transn.	Facebook	-	-	-	-	-	-	-	-	-	15.6	302	1936	15.6	302	1936
Transn.	Instagram	-	-	-	-	-	-	-	-	-	20.5	46	224	20.5	46	224
Transn.	TikTok	-	-	-	-	-	-	-	-	-	23.4	11	47	23.4	11	47
Transn.	Total	-	-	-	-	-	-	-	-	-	16.3	359	2207	16.3	359	2207
Total	Facebook	18.2	263	1447	18.5	298	1614	15.4	484	3137	13.8	1085	7862	15.1	2130	14060
Total	Instagram	17.1	374	2181	16.9	136	803	17.8	356	2005	15.6	156	1003	17.1	1022	5992
Total	TikTok	15.9	77	483	9.9	27	274	10.3	35	340	12.9	13	101	12.7	152	1198
Total	Total	17.4	714	4111	17.1	461	2691	16.0	875	5482	14.0	1254	8966	15.5	3304	21250

Note: Groups where no data has been collected or has been classified as environment-related have a “-” in their cell. This is different from groups where environment-related posts exist in the data, but no posts were classified with the disaster topic, e.g., TikTok posts by news outlets from Estonia (0). Transn. = Transnational.

TABLE 23: FREQUENCY OF ECONOMY TOPIC PER COUNTRY, PLATFORM AND ACTOR TYPE WITHIN ENVIRONMENT-RELATED POSTS (N = 21,250)

		Politician			Party			NGO			News			Total		
Country	Platform	%	count	N	%	count	N	%	count	N	%	count	N	%	count	N
Austria	Facebook	22.2	34	153	17.8	16	90	31.4	93	296	21.8	111	510	24.2	254	1049
Austria	Instagram	22.5	48	213	12.9	9	70	33.2	82	247	23.9	78	327	25.3	217	857
Austria	TikTok	9.6	8	83	11.1	4	36	26.5	13	49	26.7	4	15	15.8	29	183
Austria	Total	20.0	90	449	14.8	29	196	31.8	188	592	22.7	193	852	23.9	500	2089
Czechia	Facebook	18.9	27	143	22.1	79	358	26.9	82	305	16.9	13	77	22.8	201	883
Czechia	Instagram	22.6	31	137	26.5	43	162	24.1	19	79	0.0	0	8	24.1	93	386
Czechia	TikTok	27.3	18	66	27.5	11	40	-	-	-	-	-	-	27.4	29	106
Czechia	Total	22.0	76	346	23.8	133	560	26.3	101	384	15.3	13	85	23.5	323	1375
Estonia	Facebook	17.1	14	82	18.4	14	76	37.5	39	104	23.2	129	557	23.9	196	819
Estonia	Instagram	21.6	8	37	11.1	2	18	19.2	5	26	40.0	2	5	19.8	17	86



Estonia	TikTok	-	-	-	-	-	-	-	-	-	18.2	2	11	18.2	2	11
Estonia	Total	18.5	22	119	17.0	16	94	33.8	44	130	23.2	133	573	23.5	215	916
France	Facebook	24.6	29	118	23.1	64	277	31.5	168	534	21.8	174	798	25.2	435	1727
France	Instagram	20.4	45	221	16.8	25	149	30.9	101	327	15.1	16	106	23.3	187	803
France	TikTok	14.3	8	56	23.8	5	21	45.8	11	24	17.6	3	17	22.9	27	118
France	Total	20.8	82	395	21.0	94	447	31.6	280	885	21.0	193	921	24.5	649	2648
Germany	Facebook	28.2	64	227	23.9	47	197	22.7	154	678	20.5	170	828	22.5	435	1930
Germany	Instagram	20.8	107	515	27.4	54	197	19.3	130	673	21.2	21	99	21.0	312	1484
Germany	TikTok	16.8	21	125	19.3	17	88	29.5	43	146	-	-	-	22.6	81	359
Germany	Total	22.1	192	867	24.5	118	482	21.8	327	1497	20.6	191	927	21.9	828	3773
Italy	Facebook	21.3	129	607	23.1	48	208	25.5	95	372	20.8	252	1212	21.8	524	2399
Italy	Instagram	21.8	183	839	20.3	24	118	25.5	62	243	11.5	18	156	21.2	287	1356
Italy	TikTok	13.0	12	92	9.1	1	11	64.6	31	48	0.0	0	5	28.2	44	156
Italy	Total	21.1	324	1538	21.7	73	337	28.4	188	663	19.7	270	1373	21.9	855	3911
Slovakia	Facebook	22.2	16	72	21.4	45	210	35.3	55	156	23.6	211	893	24.6	327	1331
Slovakia	Instagram	22.6	12	53	23.4	11	47	34.9	22	63	17.9	7	39	25.7	52	202
Slovakia	TikTok	25.7	9	35	17.2	5	29	-	-	-	0.0	0	6	20.0	14	70
Slovakia	Total	23.1	37	160	21.3	61	286	35.2	77	219	23.2	218	938	24.5	393	1603
Spain	Facebook	22.2	10	45	21.2	42	198	26.2	181	692	18.7	197	1051	21.7	430	1986
Spain	Instagram	25.3	42	166	31.0	13	42	29.7	103	347	12.8	5	39	27.4	163	594
Spain	TikTok	11.5	3	26	32.7	16	49	49.3	36	73	-	-	-	37.2	55	148
Spain	Total	23.2	55	237	24.6	71	289	28.8	320	1112	18.5	202	1090	23.8	648	2728
Transn.	Facebook	-	-	-	-	-	-	-	-	-	24.9	483	1936	24.9	483	1936



Transn.	Instagram	-	-	-	-	-	-	-	-	-	21.0	47	224	21.0	47	224
Transn.	TikTok	-	-	-	-	-	-	-	-	-	4.3	2	47	4.3	2	47
Transn.	Total	-	-	-	-	-	-	-	-	-	24.1	532	2207	24.1	532	2207
Total	Facebook	22.3	323	1447	22.0	355	1614	27.6	867	3137	22.1	1740	7862	23.4	3285	14060
Total	Instagram	21.8	476	2181	22.5	181	803	26.1	524	2005	19.3	194	1003	22.9	1375	5992
Total	TikTok	16.4	79	483	21.5	59	274	39.4	134	340	10.9	11	101	23.6	283	1198
Total	Total	21.4	878	4111	22.1	595	2691	27.8	1525	5482	21.7	1945	8966	23.3	4943	21250

Note: Groups where no data has been collected or has been classified as environment-related have a “-” in their cell. This is different from groups where environment-related posts exist in the data, but no posts were classified with the economy topic, e.g., TikTok posts by news outlets from Czechia (0). Transn. = Transnational.

TABLE 24: FREQUENCY OF ENERGY TOPIC PER COUNTRY, PLATFORM AND ACTOR TYPE WITHIN ENVIRONMENT-RELATED POSTS (N = 21,250)

Country	Platform	Politician			Party			NGO			News			Total		
		%	count	N	%	count	N	%	count	N	%	count	N	%	count	N
Austria	Facebook	13.1	20	153	8.9	8	90	10.8	32	296	11.6	59	510	11.3	119	1049
Austria	Instagram	14.6	31	213	4.3	3	70	10.9	27	247	12.2	40	327	11.8	101	857
Austria	TikTok	12.0	10	83	8.3	3	36	10.2	5	49	26.7	4	15	12.0	22	183
Austria	Total	13.6	61	449	7.1	14	196	10.8	64	592	12.1	103	852	11.6	242	2089
Czechia	Facebook	9.8	14	143	14.5	52	358	20.3	62	305	18.2	14	77	16.1	142	883
Czechia	Instagram	13.1	18	137	17.9	29	162	12.7	10	79	0.0	0	8	14.8	57	386
Czechia	TikTok	31.8	21	66	10.0	4	40	-	-	-	-	-	-	23.6	25	106
Czechia	Total	15.3	53	346	15.2	85	560	18.8	72	384	16.5	14	85	16.3	224	1375
Estonia	Facebook	19.5	16	82	6.6	5	76	13.5	14	104	9.5	53	557	10.7	88	819
Estonia	Instagram	21.6	8	37	16.7	3	18	15.4	4	26	0.0	0	5	17.4	15	86
Estonia	TikTok	-	-	-	-	-	-	-	-	-	27.3	3	11	27.3	3	11



Estonia	Total	20.2	24	119	8.5	8	94	13.8	18	130	9.8	56	573	11.6	106	916
France	Facebook	12.7	15	118	10.1	28	277	13.3	71	534	11.8	94	798	12.0	208	1727
France	Instagram	18.1	40	221	16.8	25	149	11.0	36	327	10.4	11	106	13.9	112	803
France	TikTok	16.1	9	56	14.3	3	21	33.3	8	24	11.8	2	17	18.6	22	118
France	Total	16.2	64	395	12.5	56	447	13.0	115	885	11.6	107	921	12.9	342	2648
Germany	Facebook	18.5	42	227	13.7	27	197	15.5	105	678	11.6	96	828	14.0	270	1930
Germany	Instagram	18.3	94	515	15.2	30	197	12.9	87	673	12.1	12	99	15.0	223	1484
Germany	TikTok	13.6	17	125	14.8	13	88	13.0	19	146	-	-	-	13.6	49	359
Germany	Total	17.6	153	867	14.5	70	482	14.1	211	1497	11.7	108	927	14.4	542	3773
Italy	Facebook	15.0	91	607	8.7	18	208	14.8	55	372	11.9	144	1212	12.8	308	2399
Italy	Instagram	16.3	137	839	12.7	15	118	10.3	25	243	11.5	18	156	14.4	195	1356
Italy	TikTok	23.9	22	92	9.1	1	11	14.6	7	48	20.0	1	5	19.9	31	156
Italy	Total	16.3	250	1538	10.1	34	337	13.1	87	663	11.9	163	1373	13.7	534	3911
Slovakia	Facebook	8.3	6	72	8.1	17	210	16.7	26	156	14.1	126	893	13.1	175	1331
Slovakia	Instagram	7.5	4	53	2.1	1	47	20.6	13	63	20.5	8	39	12.9	26	202
Slovakia	TikTok	22.9	8	35	13.8	4	29	-	-	-	16.7	1	6	18.6	13	70
Slovakia	Total	11.2	18	160	7.7	22	286	17.8	39	219	14.4	135	938	13.3	214	1603
Spain	Facebook	4.4	2	45	10.1	20	198	15.8	109	692	12.6	132	1051	13.2	263	1986
Spain	Instagram	15.1	25	166	19.0	8	42	11.2	39	347	10.3	4	39	12.8	76	594
Spain	TikTok	7.7	2	26	12.2	6	49	12.3	9	73	-	-	-	11.5	17	148
Spain	Total	12.2	29	237	11.8	34	289	14.1	157	1112	12.5	136	1090	13.0	356	2728
Transn.	Facebook	-	-	-	-	-	-	-	-	-	13.1	254	1936	13.1	254	1936
Transn.	Instagram	-	-	-	-	-	-	-	-	-	12.5	28	224	12.5	28	224
Transn.	TikTok	-	-	-	-	-	-	-	-	-	21.3	10	47	21.3	10	47



Transn.	Total	-	-	-	-	-	-	-	-	-	13.2	292	2207	13.2	292	2207
Total	Facebook	14.2	206	1447	10.8	175	1614	15.1	474	3137	12.4	972	7862	13.0	1827	14060
Total	Instagram	16.4	357	2181	14.2	114	803	12.0	241	2005	12.1	121	1003	13.9	833	5992
Total	TikTok	18.4	89	483	12.4	34	274	14.1	48	340	20.8	21	101	16.0	192	1198
Total	Total	15.9	652	4111	12.0	323	2691	13.9	763	5482	12.4	1114	8966	13.4	2852	21250

Note: Groups where no data has been collected or has been classified as environment-related have a “-” in their cell. This is different from groups where environment-related posts exist in the data, but no posts were classified with the energy topic, e.g., Instagram posts by news outlets from Czechia (0). Transn. = Transnational.

TABLE 25: FREQUENCY OF TRANSPORT TOPIC PER COUNTRY, PLATFORM AND ACTOR TYPE WITHIN ENVIRONMENT-RELATED POSTS (N = 21,250)

Country	Platform	Politician			Party			NGO			News			Total		
		%	count	N	%	count	N	%	count	N	%	count	N	%	count	N
Austria	Facebook	18.3	28	153	5.6	5	90	11.5	34	296	13.5	69	510	13.0	136	1049
Austria	Instagram	9.9	21	213	5.7	4	70	9.7	24	247	10.1	33	327	9.6	82	857
Austria	TikTok	12.0	10	83	2.8	1	36	14.3	7	49	6.7	1	15	10.4	19	183
Austria	Total	13.1	59	449	5.1	10	196	11.0	65	592	12.1	103	852	11.3	237	2089
Czechia	Facebook	18.9	27	143	14.0	50	358	12.5	38	305	6.5	5	77	13.6	120	883
Czechia	Instagram	11.7	16	137	12.3	20	162	8.9	7	79	12.5	1	8	11.4	44	386
Czechia	TikTok	6.1	4	66	17.5	7	40	-	-	-	-	-	-	10.4	11	106
Czechia	Total	13.6	47	346	13.8	77	560	11.7	45	384	7.1	6	85	12.7	175	1375
Estonia	Facebook	11.0	9	82	15.8	12	76	4.8	5	104	9.0	50	557	9.3	76	819
Estonia	Instagram	21.6	8	37	0.0	0	18	11.5	3	26	0.0	0	5	12.8	11	86
Estonia	TikTok	-	-	-	-	-	-	-	-	-	0.0	0	11	0.0	0	11
Estonia	Total	14.3	17	119	12.8	12	94	6.2	8	130	8.7	50	573	9.5	87	916
France	Facebook	7.6	9	118	10.1	28	277	11.6	62	534	9.4	75	798	10.1	174	1727



France	Instagram	6.3	14	221	9.4	14	149	10.4	34	327	6.6	7	106	8.6	69	803
France	TikTok	5.4	3	56	9.5	2	21	0.0	0	24	5.9	1	17	5.1	6	118
France	Total	6.6	26	395	9.8	44	447	10.8	96	885	9.0	83	921	9.4	249	2648
Germany	Facebook	11.9	27	227	12.7	25	197	11.7	79	678	11.8	98	828	11.9	229	1930
Germany	Instagram	12.8	66	515	11.7	23	197	10.7	72	673	6.1	6	99	11.3	167	1484
Germany	TikTok	10.4	13	125	6.8	6	88	4.8	7	146	-	-	-	7.2	26	359
Germany	Total	12.2	106	867	11.2	54	482	10.6	158	1497	11.2	104	927	11.2	422	3773
Italy	Facebook	12.5	76	607	11.1	23	208	8.6	32	372	12.5	151	1212	11.8	282	2399
Italy	Instagram	14.4	121	839	11.0	13	118	8.2	20	243	16.7	26	156	13.3	180	1356
Italy	TikTok	13.0	12	92	0.0	0	11	6.2	3	48	0.0	0	5	9.6	15	156
Italy	Total	13.6	209	1538	10.7	36	337	8.3	55	663	12.9	177	1373	12.2	477	3911
Slovakia	Facebook	15.3	11	72	9.5	20	210	14.7	23	156	9.5	85	893	10.4	139	1331
Slovakia	Instagram	5.7	3	53	8.5	4	47	12.7	8	63	15.4	6	39	10.4	21	202
Slovakia	TikTok	14.3	5	35	10.3	3	29	-	-	-	0.0	0	6	11.4	8	70
Slovakia	Total	11.9	19	160	9.4	27	286	14.2	31	219	9.7	91	938	10.5	168	1603
Spain	Facebook	15.6	7	45	8.6	17	198	12.3	85	692	10.0	105	1051	10.8	214	1986
Spain	Instagram	11.4	19	166	19.0	8	42	13.3	46	347	12.8	5	39	13.1	78	594
Spain	TikTok	19.2	5	26	12.2	6	49	5.5	4	73	-	-	-	10.1	15	148
Spain	Total	13.1	31	237	10.7	31	289	12.1	135	1112	10.1	110	1090	11.3	307	2728
Transn.	Facebook	-	-	-	-	-	-	-	-	-	11.1	215	1936	11.1	215	1936
Transn.	Instagram	-	-	-	-	-	-	-	-	-	10.3	23	224	10.3	23	224
Transn.	TikTok	-	-	-	-	-	-	-	-	-	4.3	2	47	4.3	2	47
Transn.	Total	-	-	-	-	-	-	-	-	-	10.9	240	2207	10.9	240	2207
Total	Facebook	13.4	194	1447	11.2	180	1614	11.4	358	3137	10.8	853	7862	11.3	1585	14060



Total	Instagram	12.3	268	2181	10.7	86	803	10.7	214	2005	10.7	107	1003	11.3	675	5992
Total	TikTok	10.8	52	483	9.1	25	274	6.2	21	340	4.0	4	101	8.5	102	1198
Total	Total	12.5	514	4111	10.8	291	2691	10.8	593	5482	10.8	964	8966	11.1	2362	21250

Note: Groups where no data has been collected or has been classified as environment-related have a “-” in their cell. This is different from groups where environment-related posts exist in the data, but no posts were classified with the transport topic, e.g., Instagram posts by news outlets from Estonia (0). Transn. = Transnational.

TABLE 26: FREQUENCY OF WASTE TOPIC PER COUNTRY, PLATFORM AND ACTOR TYPE WITHIN ENVIRONMENT-RELATED POSTS (N = 21,250)

Country	Platform	Politician			Party			NGO			News			Total		
		%	count	N	%	count	N	%	count	N	%	count	N	%	count	N
Austria	Facebook	9.2	14	153	11.1	10	90	9.5	28	296	11.2	57	510	10.4	109	1049
Austria	Instagram	10.3	22	213	5.7	4	70	4.5	11	247	10.7	35	327	8.4	72	857
Austria	TikTok	8.4	7	83	19.4	7	36	22.4	11	49	6.7	1	15	14.2	26	183
Austria	Total	9.6	43	449	10.7	21	196	8.4	50	592	10.9	93	852	9.9	207	2089
Czechia	Facebook	16.8	24	143	14.5	52	358	12.5	38	305	13.0	10	77	14.0	124	883
Czechia	Instagram	14.6	20	137	11.7	19	162	11.4	9	79	12.5	1	8	12.7	49	386
Czechia	TikTok	12.1	8	66	12.5	5	40	-	-	-	-	-	-	12.3	13	106
Czechia	Total	15.0	52	346	13.6	76	560	12.2	47	384	12.9	11	85	13.5	186	1375
Estonia	Facebook	11.0	9	82	6.6	5	76	2.9	3	104	7.9	44	557	7.4	61	819
Estonia	Instagram	10.8	4	37	0.0	0	18	0.0	0	26	20.0	1	5	5.8	5	86
Estonia	TikTok	-	-	-	-	-	-	-	-	-	9.1	1	11	9.1	1	11
Estonia	Total	10.9	13	119	5.3	5	94	2.3	3	130	8.0	46	573	7.3	67	916
France	Facebook	7.6	9	118	8.7	24	277	9.4	50	534	8.9	71	798	8.9	154	1727



France	Instagram	9.0	20	221	6.7	10	149	8.6	28	327	5.7	6	106	8.0	64	803
France	TikTok	14.3	8	56	19.0	4	21	4.2	1	24	29.4	5	17	15.3	18	118
France	Total	9.4	37	395	8.5	38	447	8.9	79	885	8.9	82	921	8.9	236	2648
Germany	Facebook	7.5	17	227	10.2	20	197	10.3	70	678	10.7	89	828	10.2	196	1930
Germany	Instagram	13.6	70	515	15.2	30	197	8.9	60	673	9.1	9	99	11.4	169	1484
Germany	TikTok	4.8	6	125	3.4	3	88	8.2	12	146	-	-	-	5.8	21	359
Germany	Total	10.7	93	867	11.0	53	482	9.5	142	1497	10.6	98	927	10.2	386	3773
Italy	Facebook	10.2	62	607	11.1	23	208	11.8	44	372	10.1	122	1212	10.5	251	2399
Italy	Instagram	11.7	98	839	8.5	10	118	6.2	15	243	7.7	12	156	10.0	135	1356
Italy	TikTok	7.6	7	92	9.1	1	11	2.1	1	48	40.0	2	5	7.1	11	156
Italy	Total	10.9	167	1538	10.1	34	337	9.0	60	663	9.9	136	1373	10.2	397	3911
Slovakia	Facebook	12.5	9	72	11.4	24	210	11.5	18	156	8.0	71	893	9.2	122	1331
Slovakia	Instagram	11.3	6	53	8.5	4	47	11.1	7	63	10.3	4	39	10.4	21	202
Slovakia	TikTok	11.4	4	35	3.4	1	29	-	-	-	0.0	0	6	7.1	5	70
Slovakia	Total	11.9	19	160	10.1	29	286	11.4	25	219	8.0	75	938	9.2	148	1603
Spain	Facebook	6.7	3	45	14.6	29	198	9.8	68	692	9.1	96	1051	9.9	196	1986
Spain	Instagram	9.6	16	166	9.5	4	42	11.8	41	347	2.6	1	39	10.4	62	594
Spain	TikTok	11.5	3	26	8.2	4	49	6.8	5	73	-	-	-	8.1	12	148
Spain	Total	9.3	22	237	12.8	37	289	10.3	114	1112	8.9	97	1090	9.9	270	2728
Transn.	Facebook	-	-	-	-	-	-	-	-	-	10.8	210	1936	10.8	210	1936
Transn.	Instagram	-	-	-	-	-	-	-	-	-	8.5	19	224	8.5	19	224
Transn.	TikTok	-	-	-	-	-	-	-	-	-	4.3	2	47	4.3	2	47



Transn.	Total	-	-	-	-	-	-	-	-	-	10.5	231	2207	10.5	231	2207
Total	Facebook	10.2	147	1447	11.6	187	1614	10.2	319	3137	9.8	770	7862	10.1	1423	14060
Total	Instagram	11.7	256	2181	10.1	81	803	8.5	171	2005	8.8	88	1003	9.9	596	5992
Total	TikTok	8.9	43	483	9.1	25	274	8.8	30	340	10.9	11	101	9.1	109	1198
Total	Total	10.8	446	4111	10.9	293	2691	9.5	520	5482	9.7	869	8966	10.0	2128	21250

Note: Groups where no data has been collected or has been classified as environment-related have a “-” in their cell. This is different from groups where environment-related posts exist in the data, but no posts were classified with the waste topic, e.g., Instagram posts by parties from Estonia (0). Transn. = Transnational.

6.4 Stance

Basis $N = 21,250$ environment-related posts.

6.4.1 Negative

Negative stance (Table 27) is relatively more common among environment-related posts by politicians (11.6%) and parties (12.3%), rather than news outlets (4.3%) or NGOs (2.8%). It is also relatively more prominent among environment-related TikTok posts (9.8%) than Facebook (6.3%) or Instagram (6.0%). Overall, negative stance was not very frequently classified with only 6.4% of all environment-related posts within this dataset. Yet, there are country differences, for example, 16.7% of Czech environment-related posts were classified with a negative stance, while this is only true for 4.8% of Spanish posts.

TABLE 27: FREQUENCY OF NEGATIVE STANCE PER COUNTRY, PLATFORM AND ACTOR TYPE WITHIN ENVIRONMENT-RELATED POSTS $N = 21,250$

Country	Platform	Politician			Party			NGO			News			Total		
		%	count	N	%	count	N	%	count	N	%	count	N	%	count	N
Austria	Facebook	15.7	24	153	10.0	9	90	2.4	7	296	3.9	20	510	5.7	60	1049
Austria	Instagram	21.6	46	213	8.6	6	70	0.8	2	247	3.4	11	327	7.6	65	857
Austria	TikTok	2.4	2	83	8.3	3	36	8.2	4	49	6.7	1	15	5.5	10	183
Austria	Total	16.0	72	449	9.2	18	196	2.2	13	592	3.8	32	852	6.5	135	2089
Czechia	Facebook	44.1	63	143	23.5	84	358	3.0	9	305	3.9	3	77	18.0	159	883



Czechia	Instagram	16.1	22	137	5.6	9	162	0.0	0	79	0.0	0	8	8.0	31	386
Czechia	TikTok	53.0	35	66	12.5	5	40	-	-	-	-	-	-	37.7	40	106
Czechia	Total	34.7	120	346	17.5	98	560	2.3	9	384	3.5	3	85	16.7	230	1375
Estonia	Facebook	23.2	19	82	13.2	10	76	2.9	3	104	5.4	30	557	7.6	62	819
Estonia	Instagram	2.7	1	37	0.0	0	18	0.0	0	26	0.0	0	5	1.2	1	86
Estonia	TikTok	-	-	-	-	-	-	-	-	-	0.0	0	11	0.0	0	11
Estonia	Total	16.8	20	119	10.6	10	94	2.3	3	130	5.2	30	573	6.9	63	916
France	Facebook	16.1	19	118	7.9	22	277	4.1	22	534	5.4	43	798	6.1	106	1727
France	Instagram	4.1	9	221	4.0	6	149	3.4	11	327	6.6	7	106	4.1	33	803
France	TikTok	10.7	6	56	14.3	3	21	4.2	1	24	5.9	1	17	9.3	11	118
France	Total	8.6	34	395	6.9	31	447	3.8	34	885	5.5	51	921	5.7	150	2648
Germany	Facebook	6.6	15	227	16.8	33	197	3.4	23	678	6.0	50	828	6.3	121	1930
Germany	Instagram	4.1	21	515	11.7	23	197	2.2	15	673	3.0	3	99	4.2	62	1484
Germany	TikTok	3.2	4	125	1.1	1	88	3.4	5	146	-	-	-	2.8	10	359
Germany	Total	4.6	40	867	11.8	57	482	2.9	43	1497	5.7	53	927	5.1	193	3773
Italy	Facebook	5.4	33	607	5.8	12	208	1.1	4	372	2.1	26	1212	3.1	75	2399
Italy	Instagram	11.8	99	839	10.2	12	118	2.1	5	243	1.3	2	156	8.7	118	1356
Italy	TikTok	18.5	17	92	18.2	2	11	0.0	0	48	0.0	0	5	12.2	19	156
Italy	Total	9.7	149	1538	7.7	26	337	1.4	9	663	2.0	28	1373	5.4	212	3911
Slovakia	Facebook	18.1	13	72	17.1	36	210	6.4	10	156	7.1	63	893	9.2	122	1331
Slovakia	Instagram	11.3	6	53	17.0	8	47	4.8	3	63	0.0	0	39	8.4	17	202
Slovakia	TikTok	25.7	9	35	17.2	5	29	-	-	-	0.0	0	6	20.0	14	70
Slovakia	Total	17.5	28	160	17.1	49	286	5.9	13	219	6.7	63	938	9.5	153	1603



Spain	Facebook	8.9	4	45	13.6	27	198	3.3	23	692	4.0	42	1051	4.8	96	1986
Spain	Instagram	3.6	6	166	23.8	10	42	1.7	6	347	0.0	0	39	3.7	22	594
Spain	TikTok	19.2	5	26	12.2	6	49	2.7	2	73	-	-	-	8.8	13	148
Spain	Total	6.3	15	237	14.9	43	289	2.8	31	1112	3.9	42	1090	4.8	131	2728
Transn.	Facebook	-	-	-	-	-	-	-	-	-	4.0	78	1936	4.0	78	1936
Transn.	Instagram	-	-	-	-	-	-	-	-	-	3.6	8	224	3.6	8	224
Transn.	TikTok	-	-	-	-	-	-	-	-	-	2.1	1	47	2.1	1	47
Transn.	Total	-	-	-	-	-	-	-	-	-	3.9	87	2207	3.9	87	2207
Total	Facebook	13.1	190	1447	14.4	233	1614	3.2	101	3137	4.5	355	7862	6.3	879	14060
Total	Instagram	9.6	210	2181	9.2	74	803	2.1	42	2005	3.1	31	1003	6.0	357	5992
Total	TikTok	16.1	78	483	9.1	25	274	3.5	12	340	3.0	3	101	9.8	118	1198
Total	Total	11.6	478	4111	12.3	332	2691	2.8	155	5482	4.3	389	8966	6.4	1354	21250

Note: Groups where no data has been collected or has been classified as environment-related have a “-” in their cell. This is different from groups where environment-related posts exist in the data, but no posts were classified as having a negative stance, e.g., Instagram posts by NGOs from Czechia (0). Transn. = Transnational.

6.4.2 Neutral

News outlets have the highest share of environment-related posts with a neutral stance (89.1%), followed by NGOs (48.6%), politicians (38.9%), and parties (32.6%). Overall, 61.8% of all environment-related posts were classified with a neutral stance. See Table 28 for the details.

TABLE 28: FREQUENCY OF NEUTRAL STANCE PER COUNTRY, PLATFORM AND ACTOR TYPE WITHIN ENVIRONMENT-RELATED POSTS $N = 21,250$

Country	Platform	Politician			Party			NGO			News			Total		
		%	count	<i>N</i>	%	count	<i>N</i>	%	count	<i>N</i>	%	count	<i>N</i>	%	count	<i>N</i>
Austria	Facebook	30.7	47	153	30.0	27	90	66.9	198	296	90.6	462	510	70.0	734	1049
Austria	Instagram	24.4	52	213	15.7	11	70	66.0	163	247	91.1	298	327	61.1	524	857
Austria	TikTok	31.3	26	83	27.8	10	36	55.1	27	49	86.7	13	15	41.5	76	183



Austria	Total	27.8	125	449	24.5	48	196	65.5	388	592	90.7	773	852	63.9	1334	2089
Czechia	Facebook	28.0	40	143	36.3	130	358	53.8	164	305	93.5	72	77	46.0	406	883
Czechia	Instagram	38.7	53	137	34.6	56	162	40.5	32	79	87.5	7	8	38.3	148	386
Czechia	TikTok	30.3	20	66	17.5	7	40	-	-	-	-	-	-	25.5	27	106
Czechia	Total	32.7	113	346	34.5	193	560	51.0	196	384	92.9	79	85	42.3	581	1375
Estonia	Facebook	45.1	37	82	48.7	37	76	62.5	65	104	89.9	501	557	78.1	640	819
Estonia	Instagram	70.3	26	37	55.6	10	18	34.6	9	26	60.0	3	5	55.8	48	86
Estonia	TikTok	-	-	-	-	-	-	-	-	-	100.0	11	11	100.0	11	11
Estonia	Total	52.9	63	119	50.0	47	94	56.9	74	130	89.9	515	573	76.3	699	916
France	Facebook	25.4	30	118	24.9	69	277	60.5	323	534	83.3	665	798	62.9	1087	1727
France	Instagram	29.4	65	221	16.8	25	149	56.9	186	327	88.7	94	106	46.1	370	803
France	TikTok	39.3	22	56	38.1	8	21	37.5	9	24	94.1	16	17	46.6	55	118
France	Total	29.6	117	395	22.8	102	447	58.5	518	885	84.1	775	921	57.1	1512	2648
Germany	Facebook	44.9	102	227	31.0	61	197	44.1	299	678	86.4	715	828	61.0	1177	1930
Germany	Instagram	38.8	200	515	36.0	71	197	31.6	213	673	94.9	94	99	38.9	578	1484
Germany	TikTok	23.2	29	125	18.2	16	88	24.0	35	146	-	-	-	22.3	80	359
Germany	Total	38.2	331	867	30.7	148	482	36.5	547	1497	87.3	809	927	48.6	1835	3773
Italy	Facebook	44.2	268	607	28.4	59	208	54.6	203	372	93.4	1132	1212	69.3	1662	2399
Italy	Instagram	46.2	388	839	22.0	26	118	28.8	70	243	91.0	142	156	46.2	626	1356
Italy	TikTok	31.5	29	92	45.5	5	11	64.6	31	48	100.0	5	5	44.9	70	156
Italy	Total	44.5	685	1538	26.7	90	337	45.9	304	663	93.2	1279	1373	60.3	2358	3911
Slovakia	Facebook	56.9	41	72	51.0	107	210	57.7	90	156	88.9	794	893	77.5	1032	1331
Slovakia	Instagram	35.8	19	53	29.8	14	47	57.1	36	63	92.3	36	39	52.0	105	202



Slovakia	TikTok	40.0	14	35	48.3	14	29	-	-	-	100.0	6	6	48.6	34	70
Slovakia	Total	46.2	74	160	47.2	135	286	57.5	126	219	89.1	836	938	73.1	1171	1603
Spain	Facebook	33.3	15	45	43.4	86	198	51.3	355	692	90.7	953	1051	70.9	1409	1986
Spain	Instagram	40.4	67	166	23.8	10	42	37.2	129	347	94.9	37	39	40.9	243	594
Spain	TikTok	42.3	11	26	38.8	19	49	39.7	29	73	-	-	-	39.9	59	148
Spain	Total	39.2	93	237	39.8	115	289	46.1	513	1112	90.8	990	1090	62.7	1711	2728
Transn.	Facebook	-	-	-	-	-	-	-	-	-	87.3	1691	1936	87.3	1691	1936
Transn.	Instagram	-	-	-	-	-	-	-	-	-	87.5	196	224	87.5	196	224
Transn.	TikTok	-	-	-	-	-	-	-	-	-	93.6	44	47	93.6	44	47
Transn.	Total	-	-	-	-	-	-	-	-	-	87.5	1931	2207	87.5	1931	2207
Total	Facebook	40.1	580	1447	35.7	576	1614	54.1	1697	3137	88.8	6985	7862	70.0	9838	14060
Total	Instagram	39.9	870	2181	27.8	223	803	41.8	838	2005	90.4	907	1003	47.4	2838	5992
Total	TikTok	31.3	151	483	28.8	79	274	38.5	131	340	94.1	95	101	38.1	456	1198
Total	Total	38.9	1601	4111	32.6	878	2691	48.6	2666	5482	89.1	7987	8966	61.8	13132	21250

Note. Groups where no data has been collected or has been classified as environment-related have a “-” in their cell. This is different from groups where environment-related posts exist in the data, but no posts were classified as having a neutral stance. Transn. = Transnational.

6.4.3 Positive

Parties have the highest relative share of environment-related posts with a positive stance (55.0%), followed by politicians (49.4%), NGOs (48.5%), and news outlets (6.6%). Environment-related posts from Germany have the highest relative share of posts with a positive stance (46.2%). Overall, 31.8% of all environment-related posts were classified with a positive stance. Table 29 depicts all frequencies.

TABLE 29: FREQUENCY OF POSITIVE STANCE PER COUNTRY, PLATFORM AND ACTOR TYPE WITHIN ENVIRONMENT-RELATED POSTS $N = 21,250$

Country	Platform	Politician			Party			NGO			News			Total		
		%	count	<i>N</i>	%	count	<i>N</i>	%	count	<i>N</i>	%	count	<i>N</i>	%	count	<i>N</i>
Austria	Facebook	53.6	82	153	60.0	54	90	30.7	91	296	5.5	28	510	24.3	255	1049



Austria	Instagram	54.0	115	213	75.7	53	70	33.2	82	247	5.5	18	327	31.3	268	857
Austria	TikTok	66.3	55	83	63.9	23	36	36.7	18	49	6.7	1	15	53.0	97	183
Austria	Total	56.1	252	449	66.3	130	196	32.3	191	592	5.5	47	852	29.7	620	2089
Czechia	Facebook	28.0	40	143	40.2	144	358	43.3	132	305	2.6	2	77	36.0	318	883
Czechia	Instagram	45.3	62	137	59.9	97	162	59.5	47	79	12.5	1	8	53.6	207	386
Czechia	TikTok	16.7	11	66	70.0	28	40	-	-	-	-	-	-	36.8	39	106
Czechia	Total	32.7	113	346	48.0	269	560	46.6	179	384	3.5	3	85	41.0	564	1375
Estonia	Facebook	31.7	26	82	38.2	29	76	34.6	36	104	4.7	26	557	14.3	117	819
Estonia	Instagram	27.0	10	37	44.4	8	18	65.4	17	26	40.0	2	5	43.0	37	86
Estonia	TikTok	-	-	-	-	-	-	-	-	-	0.0	0	11	0.0	0	11
Estonia	Total	30.3	36	119	39.4	37	94	40.8	53	130	4.9	28	573	16.8	154	916
France	Facebook	58.5	69	118	67.1	186	277	35.4	189	534	11.3	90	798	30.9	534	1727
France	Instagram	66.5	147	221	79.2	118	149	39.8	130	327	4.7	5	106	49.8	400	803
France	TikTok	50.0	28	56	47.6	10	21	58.3	14	24	0.0	0	17	44.1	52	118
France	Total	61.8	244	395	70.2	314	447	37.6	333	885	10.3	95	921	37.2	986	2648
Germany	Facebook	48.5	110	227	52.3	103	197	52.5	356	678	7.6	63	828	32.7	632	1930
Germany	Instagram	57.1	294	515	52.3	103	197	66.1	445	673	2.0	2	99	56.9	844	1484
Germany	TikTok	73.6	92	125	80.7	71	88	72.6	106	146	-	-	-	74.9	269	359
Germany	Total	57.2	496	867	57.5	277	482	60.6	907	1497	7.0	65	927	46.2	1745	3773
Italy	Facebook	50.4	306	607	65.9	137	208	44.4	165	372	4.5	54	1212	27.6	662	2399
Italy	Instagram	42.0	352	839	67.8	80	118	69.1	168	243	7.7	12	156	45.1	612	1356
Italy	TikTok	50.0	46	92	36.4	4	11	35.4	17	48	0.0	0	5	42.9	67	156
Italy	Total	45.8	704	1538	65.6	221	337	52.8	350	663	4.8	66	1373	34.3	1341	3911



Slovakia	Facebook	25.0	18	72	31.9	67	210	35.9	56	156	4.0	36	893	13.3	177	1331
Slovakia	Instagram	52.8	28	53	53.2	25	47	38.1	24	63	7.7	3	39	39.6	80	202
Slovakia	TikTok	34.3	12	35	34.5	10	29	-	-	-	0.0	0	6	31.4	22	70
Slovakia	Total	36.2	58	160	35.7	102	286	36.5	80	219	4.2	39	938	17.4	279	1603
Spain	Facebook	57.8	26	45	42.9	85	198	45.4	314	692	5.3	56	1051	24.2	481	1986
Spain	Instagram	56.0	93	166	52.4	22	42	61.1	212	347	5.1	2	39	55.4	329	594
Spain	TikTok	38.5	10	26	49.0	24	49	57.5	42	73	-	-	-	51.4	76	148
Spain	Total	54.4	129	237	45.3	131	289	51.1	568	1112	5.3	58	1090	32.5	886	2728
Transn.	Facebook	-	-	-	-	-	-	-	-	-	8.6	167	1936	8.6	167	1936
Transn.	Instagram	-	-	-	-	-	-	-	-	-	8.9	20	224	8.9	20	224
Transn.	TikTok	-	-	-	-	-	-	-	-	-	4.3	2	47	4.3	2	47
Transn.	Total	-	-	-	-	-	-	-	-	-	8.6	189	2207	8.6	189	2207
Total	Facebook	46.8	677	1447	49.9	805	1614	42.7	1339	3137	6.6	522	7862	23.8	3343	14060
Total	Instagram	50.5	1101	2181	63.0	506	803	56.1	1125	2005	6.5	65	1003	46.7	2797	5992
Total	TikTok	52.6	254	483	62.0	170	274	57.9	197	340	3.0	3	101	52.1	624	1198
Total	Total	49.4	2032	4111	55.0	1481	2691	48.5	2661	5482	6.6	590	8966	31.8	6764	21250

Note. Groups where no data has been collected or has been classified as environment-related have a “-” in their cell. This is different from groups where environment-related posts exist in the data, but no posts were classified as having a positive stance, e.g., TikTok posts by news outlets from Italy (0). Transn. = Transnational.

6.5 Climate Justice

Basis $N = 21,250$ environment-related posts.

Transnational media outlets are the group with the highest share of posts mentioning climate justice (29.6% across platforms) among posts that are environment-related. Overall, 11.1% of environment-related posts were classified as mentioning climate justice (see Table 30).



TABLE 30: FREQUENCY OF CLIMATE JUSTICE PER COUNTRY, PLATFORM AND ACTOR TYPE WITHIN ENVIRONMENT-RELATED POSTS $N = 21,250$

Country	Platform	Politician			Party			NGO			News			Total		
		%	count	N	%	count	N	%	count	N	%	count	N	%	count	N
Austria	Facebook	7.8	12	153	5.6	5	90	2.7	8	296	14.5	74	510	9.4	99	1049
Austria	Instagram	9.9	21	213	15.7	11	70	4.5	11	247	12.5	41	327	9.8	84	857
Austria	TikTok	7.2	6	83	8.3	3	36	0.0	0	49	13.3	2	15	6.0	11	183
Austria	Total	8.7	39	449	9.7	19	196	3.2	19	592	13.7	117	852	9.3	194	2089
Czechia	Facebook	3.5	5	143	4.5	16	358	6.2	19	305	7.8	6	77	5.2	46	883
Czechia	Instagram	3.6	5	137	5.6	9	162	10.1	8	79	0.0	0	8	5.7	22	386
Czechia	TikTok	4.5	3	66	2.5	1	40	-	-	-	-	-	-	3.8	4	106
Czechia	Total	3.8	13	346	4.6	26	560	7.0	27	384	7.1	6	85	5.2	72	1375
Estonia	Facebook	3.7	3	82	10.5	8	76	10.6	11	104	6.8	38	557	7.3	60	819
Estonia	Instagram	2.7	1	37	5.6	1	18	3.8	1	26	20.0	1	5	4.7	4	86
Estonia	TikTok	-	-	-	-	-	-	-	-	-	0.0	0	11	0.0	0	11
Estonia	Total	3.4	4	119	9.6	9	94	9.2	12	130	6.8	39	573	7.0	64	916
France	Facebook	6.8	8	118	4.7	13	277	5.1	27	534	13.8	110	798	9.1	158	1727
France	Instagram	7.2	16	221	3.4	5	149	4.9	16	327	9.4	10	106	5.9	47	803
France	TikTok	0.0	0	56	4.8	1	21	0.0	0	24	17.6	3	17	3.4	4	118
France	Total	6.1	24	395	4.3	19	447	4.9	43	885	13.4	123	921	7.9	209	2648
Germany	Facebook	10.6	24	227	13.7	27	197	8.0	54	678	14.9	123	828	11.8	228	1930
Germany	Instagram	9.9	51	515	10.2	20	197	9.8	66	673	15.2	15	99	10.2	152	1484
Germany	TikTok	12.8	16	125	14.8	13	88	4.1	6	146	-	-	-	9.7	35	359
Germany	Total	10.5	91	867	12.4	60	482	8.4	126	1497	14.9	138	927	11.0	415	3773



Italy	Facebook	10.4	63	607	15.4	32	208	12.6	47	372	9.4	114	1212	10.7	256	2399
Italy	Instagram	7.4	62	839	8.5	10	118	16.5	40	243	3.8	6	156	8.7	118	1356
Italy	TikTok	9.8	9	92	18.2	2	11	2.1	1	48	20.0	1	5	8.3	13	156
Italy	Total	8.7	134	1538	13.1	44	337	13.3	88	663	8.8	121	1373	9.9	387	3911
Slovakia	Facebook	0.0	0	72	2.9	6	210	7.1	11	156	11.6	104	893	9.1	121	1331
Slovakia	Instagram	7.5	4	53	0.0	0	47	1.6	1	63	7.7	3	39	4.0	8	202
Slovakia	TikTok	2.9	1	35	6.9	2	29	-	-	-	0.0	0	6	4.3	3	70
Slovakia	Total	3.1	5	160	2.8	8	286	5.5	12	219	11.4	107	938	8.2	132	1603
Spain	Facebook	13.3	6	45	3.5	7	198	9.2	64	692	9.2	97	1051	8.8	174	1986
Spain	Instagram	7.2	12	166	0.0	0	42	10.4	36	347	10.3	4	39	8.8	52	594
Spain	TikTok	7.7	2	26	0.0	0	49	8.2	6	73	-	-	-	5.4	8	148
Spain	Total	8.4	20	237	2.4	7	289	9.5	106	1112	9.3	101	1090	8.6	234	2728
Transn.	Facebook	-	-	-	-	-	-	-	-	-	29.1	563	1936	29.1	563	1936
Transn.	Instagram	-	-	-	-	-	-	-	-	-	33.0	74	224	33.0	74	224
Transn.	TikTok	-	-	-	-	-	-	-	-	-	36.2	17	47	36.2	17	47
Transn.	Total	-	-	-	-	-	-	-	-	-	29.6	654	2207	29.6	654	2207
Total	Facebook	8.4	121	1447	7.1	114	1614	7.7	241	3137	15.6	1229	7862	12.1	1705	14060
Total	Instagram	7.9	172	2181	7.0	56	803	8.9	179	2005	15.4	154	1003	9.4	561	5992
Total	TikTok	7.7	37	483	8.0	22	274	3.8	13	340	22.8	23	101	7.9	95	1198
Total	Total	8.0	330	4111	7.1	192	2691	7.9	433	5482	15.7	1406	8966	11.1	2361	21250

Note. Groups where no data has been collected or has been classified as environment-related have a “-” in their cell. This is different from groups where environment-related posts exist in the data, but no posts were classified as mentioning climate justice, e.g., TikTok posts by news outlets from Estonia (0). Transn. = Transnational.



6.6 Emotions

Within all environment-related posts ($N = 21,250$) anger was the most frequently expressed emotion with 18.4%, followed by enthusiasm 16.6%, joy (8.5%), and fear (8.2%). Very infrequently, posts expressed sadness (3.3%), pride (2.9%), hope (1.6%), or disgust (0.7%). See Tables 31-38 for an overview.

6.6.1 Anger

TABLE 31: FREQUENCY OF POSTS WITH ANGER PER COUNTRY, PLATFORM AND ACTOR TYPE WITHIN ENVIRONMENT-RELATED POSTS $N = 21,250$

Country	Platform	Politician			Party			NGO			News			Total		
		%	count	<i>N</i>	%	count	<i>N</i>	%	count	<i>N</i>	%	count	<i>N</i>	%	count	<i>N</i>
Austria	Facebook	23.5	36	153	23.3	21	90	21.3	63	296	7.8	40	510	15.3	160	1049
Austria	Instagram	24.4	52	213	20.0	14	70	22.3	55	247	13.1	43	327	19.1	164	857
Austria	TikTok	10.8	9	83	5.6	2	36	26.5	13	49	0.0	0	15	13.1	24	183
Austria	Total	21.6	97	449	18.9	37	196	22.1	131	592	9.7	83	852	16.7	348	2089
Czechia	Facebook	47.6	68	143	36.9	132	358	16.4	50	305	14.3	11	77	29.6	261	883
Czechia	Instagram	23.4	32	137	21.6	35	162	10.1	8	79	12.5	1	8	19.7	76	386
Czechia	TikTok	60.6	40	66	32.5	13	40	-	-	-	-	-	-	50.0	53	106
Czechia	Total	40.5	140	346	32.1	180	560	15.1	58	384	14.1	12	85	28.4	390	1375
Estonia	Facebook	37.8	31	82	21.1	16	76	15.4	16	104	14.0	78	557	17.2	141	819
Estonia	Instagram	5.4	2	37	11.1	2	18	3.8	1	26	20.0	1	5	7.0	6	86
Estonia	TikTok	-	-	-	-	-	-	-	-	-	0.0	0	11	0.0	0	11
Estonia	Total	27.7	33	119	19.1	18	94	13.1	17	130	13.8	79	573	16.0	147	916
France	Facebook	27.1	32	118	21.3	59	277	21.5	115	534	9.3	74	798	16.2	280	1727
France	Instagram	18.1	40	221	16.1	24	149	29.1	95	327	19.8	21	106	22.4	180	803
France	TikTok	30.4	17	56	28.6	6	21	12.5	3	24	0.0	0	17	22.0	26	118



France	Total	22.5	89	395	19.9	89	447	24.1	213	885	10.3	95	921	18.4	486	2648
Germany	Facebook	20.7	47	227	49.2	97	197	27.3	185	678	12.8	106	828	22.5	435	1930
Germany	Instagram	22.7	117	515	41.6	82	197	30.8	207	673	9.1	9	99	28.0	415	1484
Germany	TikTok	21.6	27	125	19.3	17	88	34.9	51	146	-	-	-	26.5	95	359
Germany	Total	22.0	191	867	40.7	196	482	29.6	443	1497	12.4	115	927	25.0	945	3773
Italy	Facebook	24.7	150	607	40.9	85	208	18.0	67	372	9.7	117	1212	17.5	419	2399
Italy	Instagram	26.5	222	839	37.3	44	118	30.5	74	243	22.4	35	156	27.7	375	1356
Italy	TikTok	30.4	28	92	54.5	6	11	10.4	5	48	0.0	0	5	25.0	39	156
Italy	Total	26.0	400	1538	40.1	135	337	22.0	146	663	11.1	152	1373	21.3	833	3911
Slovakia	Facebook	38.9	28	72	29.0	61	210	12.2	19	156	12.0	107	893	16.2	215	1331
Slovakia	Instagram	37.7	20	53	38.3	18	47	7.9	5	63	15.4	6	39	24.3	49	202
Slovakia	TikTok	31.4	11	35	24.1	7	29	-	-	-	16.7	1	6	27.1	19	70
Slovakia	Total	36.9	59	160	30.1	86	286	11.0	24	219	12.2	114	938	17.7	283	1603
Spain	Facebook	24.4	11	45	17.7	35	198	12.6	87	692	9.6	101	1051	11.8	234	1986
Spain	Instagram	9.0	15	166	21.4	9	42	20.5	71	347	5.1	2	39	16.3	97	594
Spain	TikTok	19.2	5	26	18.4	9	49	21.9	16	73	-	-	-	20.3	30	148
Spain	Total	13.1	31	237	18.3	53	289	15.6	174	1112	9.4	103	1090	13.2	361	2728
Transn.	Facebook	-	-	-	-	-	-	-	-	-	4.9	95	1936	4.9	95	1936
Transn.	Instagram	-	-	-	-	-	-	-	-	-	9.8	22	224	9.8	22	224
Transn.	TikTok	-	-	-	-	-	-	-	-	-	2.1	1	47	2.1	1	47
Transn.	Total	-	-	-	-	-	-	-	-	-	5.3	118	2207	5.3	118	2207
Total	Facebook	27.9	403	1447	31.4	506	1614	19.2	602	3137	9.3	729	7862	15.9	2240	14060
Total	Instagram	22.9	500	2181	28.4	228	803	25.7	516	2005	14.0	140	1003	23.1	1384	5992



Total	TikTok	28.4	137	483	21.9	60	274	25.9	88	340	2.0	2	101	24.0	287	1198
Total	Total	25.3	1040	4111	29.5	794	2691	22.0	1206	5482	9.7	871	8966	18.4	3911	21250

Note. Groups where no data has been collected or has been classified as environment-related have a “-” in their cell. This is different from groups where environment-related posts exist in the data, but no posts were classified as mentioning the emotion, e.g., TikTok posts by news outlets from Austria (0).

Transn. = Transnational.

6.6.2 Fear

TABLE 32: FREQUENCY OF POSTS WITH FEAR PER COUNTRY, PLATFORM AND ACTOR TYPE WITHIN ENVIRONMENT-RELATED POSTS $N = 21,250$

		Politician			Party			NGO			News			Total		
Country	Platform	%	count	N	%	count	N	%	count	N	%	count	N	%	count	N
Austria	Facebook	7.8	12	153	5.6	5	90	11.1	33	296	10.6	54	510	9.9	104	1049
Austria	Instagram	6.6	14	213	7.1	5	70	8.9	22	247	12.2	40	327	9.5	81	857
Austria	TikTok	1.2	1	83	0.0	0	36	2.0	1	49	0.0	0	15	1.1	2	183
Austria	Total	6.0	27	449	5.1	10	196	9.5	56	592	11.0	94	852	9.0	187	2089
Czechia	Facebook	11.2	16	143	5.6	20	358	5.9	18	305	20.8	16	77	7.9	70	883
Czechia	Instagram	5.8	8	137	3.7	6	162	3.8	3	79	0.0	0	8	4.4	17	386
Czechia	TikTok	13.6	9	66	7.5	3	40	-	-	-	-	-	-	11.3	12	106
Czechia	Total	9.5	33	346	5.2	29	560	5.5	21	384	18.8	16	85	7.2	99	1375
Estonia	Facebook	1.2	1	82	6.6	5	76	4.8	5	104	7.7	43	557	6.6	54	819
Estonia	Instagram	0.0	0	37	5.6	1	18	3.8	1	26	0.0	0	5	2.3	2	86
Estonia	TikTok	-	-	-	-	-	-	-	-	-	0.0	0	11	0.0	0	11
Estonia	Total	0.8	1	119	6.4	6	94	4.6	6	130	7.5	43	573	6.1	56	916
France	Facebook	5.9	7	118	5.8	16	277	5.4	29	534	7.0	56	798	6.3	108	1727
France	Instagram	4.5	10	221	5.4	8	149	8.0	26	327	8.5	9	106	6.6	53	803



France	TikTok	1.8	1	56	0.0	0	21	12.5	3	24	5.9	1	17	4.2	5	118
France	Total	4.6	18	395	5.4	24	447	6.6	58	885	7.2	66	921	6.3	166	2648
Germany	Facebook	8.4	19	227	9.6	19	197	10.2	69	678	10.5	87	828	10.1	194	1930
Germany	Instagram	8.7	45	515	8.1	16	197	12.3	83	673	12.1	12	99	10.5	156	1484
Germany	TikTok	4.8	6	125	2.3	2	88	10.3	15	146	-	-	-	6.4	23	359
Germany	Total	8.1	70	867	7.7	37	482	11.2	167	1497	10.7	99	927	9.9	373	3773
Italy	Facebook	4.0	24	607	8.7	18	208	8.1	30	372	11.0	133	1212	8.5	205	2399
Italy	Instagram	3.8	32	839	5.9	7	118	14.4	35	243	13.5	21	156	7.0	95	1356
Italy	TikTok	3.3	3	92	0.0	0	11	0.0	0	48	0.0	0	5	1.9	3	156
Italy	Total	3.8	59	1538	7.4	25	337	9.8	65	663	11.2	154	1373	7.7	303	3911
Slovakia	Facebook	4.2	3	72	3.8	8	210	4.5	7	156	19.8	177	893	14.7	195	1331
Slovakia	Instagram	9.4	5	53	10.6	5	47	9.5	6	63	2.6	1	39	8.4	17	202
Slovakia	TikTok	8.6	3	35	6.9	2	29	-	-	-	16.7	1	6	8.6	6	70
Slovakia	Total	6.9	11	160	5.2	15	286	5.9	13	219	19.1	179	938	13.6	218	1603
Spain	Facebook	2.2	1	45	2.0	4	198	4.5	31	692	7.9	83	1051	6.0	119	1986
Spain	Instagram	3.6	6	166	2.4	1	42	6.9	24	347	7.7	3	39	5.7	34	594
Spain	TikTok	0.0	0	26	0.0	0	49	2.7	2	73	-	-	-	1.4	2	148
Spain	Total	3.0	7	237	1.7	5	289	5.1	57	1112	7.9	86	1090	5.7	155	2728
Transn.	Facebook	-	-	-	-	-	-	-	-	-	8.3	161	1936	8.3	161	1936
Transn.	Instagram	-	-	-	-	-	-	-	-	-	12.1	27	224	12.1	27	224
Transn.	TikTok	-	-	-	-	-	-	-	-	-	12.8	6	47	12.8	6	47
Transn.	Total	-	-	-	-	-	-	-	-	-	8.8	194	2207	8.8	194	2207
Total	Facebook	5.7	83	1447	5.9	95	1614	7.1	222	3137	10.3	810	7862	8.6	1210	14060



Total	Instagram	5.5	120	2181	6.1	49	803	10.0	200	2005	11.3	113	1003	8.0	482	5992
Total	TikTok	4.8	23	483	2.6	7	274	6.2	21	340	7.9	8	101	4.9	59	1198
Total	Total	5.5	226	4111	5.6	151	2691	8.1	443	5482	10.4	931	8966	8.2	1751	21250

Note. Groups where no data has been collected or has been classified as environment-related have a “-” in their cell. This is different from groups where environment-related posts exist in the data, but no posts were classified as mentioning the emotion, e.g., TikTok posts by news outlets from Austria (0).

Transn. = Transnational.

6.6.3 Disgust

TABLE 33: FREQUENCY OF POSTS WITH DISGUST PER COUNTRY, PLATFORM AND ACTOR TYPE WITHIN ENVIRONMENT-RELATED POSTS $N = 21,250$

Country	Platform	Politician			Party			NGO			News			Total		
		%	count	<i>N</i>	%	count	<i>N</i>	%	count	<i>N</i>	%	count	<i>N</i>	%	count	<i>N</i>
Austria	Facebook	0.0	0	153	0.0	0	90	1.7	5	296	1.0	5	510	1.0	10	1049
Austria	Instagram	0.5	1	213	1.4	1	70	2.0	5	247	0.9	3	327	1.2	10	857
Austria	TikTok	0.0	0	83	0.0	0	36	0.0	0	49	0.0	0	15	0.0	0	183
Austria	Total	0.2	1	449	0.5	1	196	1.7	10	592	0.9	8	852	1.0	20	2089
Czechia	Facebook	0.7	1	143	0.6	2	358	0.3	1	305	6.5	5	77	1.0	9	883
Czechia	Instagram	0.0	0	137	1.2	2	162	2.5	2	79	12.5	1	8	1.3	5	386
Czechia	TikTok	0.0	0	66	0.0	0	40	-	-	-	-	-	-	0.0	0	106
Czechia	Total	0.3	1	346	0.7	4	560	0.8	3	384	7.1	6	85	1.0	14	1375
Estonia	Facebook	0.0	0	82	0.0	0	76	0.0	0	104	1.3	7	557	0.9	7	819
Estonia	Instagram	0.0	0	37	0.0	0	18	0.0	0	26	0.0	0	5	0.0	0	86
Estonia	TikTok	-	-	-	-	-	-	-	-	-	0.0	0	11	0.0	0	11
Estonia	Total	0.0	0	119	0.0	0	94	0.0	0	130	1.2	7	573	0.8	7	916
France	Facebook	0.0	0	118	0.0	0	277	0.9	5	534	0.4	3	798	0.5	8	1727



France	Instagram	0.0	0	221	0.0	0	149	1.8	6	327	3.8	4	106	1.2	10	803
France	TikTok	0.0	0	56	0.0	0	21	0.0	0	24	0.0	0	17	0.0	0	118
France	Total	0.0	0	395	0.0	0	447	1.2	11	885	0.8	7	921	0.7	18	2648
Germany	Facebook	0.4	1	227	1.0	2	197	0.0	0	678	0.7	6	828	0.5	9	1930
Germany	Instagram	0.6	3	515	1.0	2	197	0.4	3	673	1.0	1	99	0.6	9	1484
Germany	TikTok	0.0	0	125	1.1	1	88	1.4	2	146	-	-	-	0.8	3	359
Germany	Total	0.5	4	867	1.0	5	482	0.3	5	1497	0.8	7	927	0.6	21	3773
Italy	Facebook	1.5	9	607	1.0	2	208	0.0	0	372	0.8	10	1212	0.9	21	2399
Italy	Instagram	0.7	6	839	0.0	0	118	0.4	1	243	0.6	1	156	0.6	8	1356
Italy	TikTok	0.0	0	92	9.1	1	11	0.0	0	48	0.0	0	5	0.6	1	156
Italy	Total	1.0	15	1538	0.9	3	337	0.2	1	663	0.8	11	1373	0.8	30	3911
Slovakia	Facebook	1.4	1	72	0.5	1	210	0.0	0	156	2.8	25	893	2.0	27	1331
Slovakia	Instagram	1.9	1	53	2.1	1	47	0.0	0	63	0.0	0	39	1.0	2	202
Slovakia	TikTok	0.0	0	35	0.0	0	29	-	-	-	0.0	0	6	0.0	0	70
Slovakia	Total	1.2	2	160	0.7	2	286	0.0	0	219	2.7	25	938	1.8	29	1603
Spain	Facebook	0.0	0	45	0.5	1	198	0.1	1	692	0.7	7	1051	0.5	9	1986
Spain	Instagram	0.0	0	166	0.0	0	42	0.0	0	347	2.6	1	39	0.2	1	594
Spain	TikTok	0.0	0	26	2.0	1	49	0.0	0	73	-	-	-	0.7	1	148
Spain	Total	0.0	0	237	0.7	2	289	0.1	1	1112	0.7	8	1090	0.4	11	2728
Transn.	Facebook	-	-	-	-	-	-	-	-	-	0.2	3	1936	0.2	3	1936
Transn.	Instagram	-	-	-	-	-	-	-	-	-	0.0	0	224	0.0	0	224
Transn.	TikTok	-	-	-	-	-	-	-	-	-	0.0	0	47	0.0	0	47
Transn.	Total	-	-	-	-	-	-	-	-	-	0.1	3	2207	0.1	3	2207



Total	Facebook	0.8	12	1447	0.5	8	1614	0.4	12	3137	0.9	71	7862	0.7	103	14060
Total	Instagram	0.5	11	2181	0.7	6	803	0.8	17	2005	1.1	11	1003	0.8	45	5992
Total	TikTok	0.0	0	483	1.1	3	274	0.6	2	340	0.0	0	101	0.4	5	1198
Total	Total	0.6	23	4111	0.6	17	2691	0.6	31	5482	0.9	82	8966	0.7	153	21250

Note. Groups where no data has been collected or has been classified as environment-related have a “-” in their cell. This is different from groups where environment-related posts exist in the data, but no posts were classified as mentioning the emotion, e.g., TikTok posts by news outlets from Austria (0).

Transn. = Transnational.

6.6.4 Sadness

TABLE 34: FREQUENCY OF POSTS WITH SADNESS PER COUNTRY, PLATFORM AND ACTOR TYPE WITHIN ENVIRONMENT-RELATED POSTS $N = 21,250$

		Politician			Party			NGO			News			Total		
Country	Platform	%	count	N	%	count	N	%	count	N	%	count	N	%	count	N
Austria	Facebook	0.7	1	153	0.0	0	90	7.4	22	296	5.1	26	510	4.7	49	1049
Austria	Instagram	0.5	1	213	0.0	0	70	12.1	30	247	9.2	30	327	7.1	61	857
Austria	TikTok	0.0	0	83	0.0	0	36	0.0	0	49	0.0	0	15	0.0	0	183
Austria	Total	0.4	2	449	0.0	0	196	8.8	52	592	6.6	56	852	5.3	110	2089
Czechia	Facebook	0.7	1	143	1.1	4	358	2.0	6	305	5.2	4	77	1.7	15	883
Czechia	Instagram	1.5	2	137	3.1	5	162	2.5	2	79	0.0	0	8	2.3	9	386
Czechia	TikTok	0.0	0	66	0.0	0	40	-	-	-	-	-	-	0.0	0	106
Czechia	Total	0.9	3	346	1.6	9	560	2.1	8	384	4.7	4	85	1.7	24	1375
Estonia	Facebook	0.0	0	82	0.0	0	76	1.9	2	104	3.2	18	557	2.4	20	819
Estonia	Instagram	0.0	0	37	5.6	1	18	0.0	0	26	0.0	0	5	1.2	1	86
Estonia	TikTok	-	-	-	-	-	-	-	-	-	0.0	0	11	0.0	0	11
Estonia	Total	0.0	0	119	1.1	1	94	1.5	2	130	3.1	18	573	2.3	21	916



France	Facebook	2.5	3	118	0.4	1	277	3.2	17	534	2.3	18	798	2.3	39	1727
France	Instagram	0.5	1	221	0.0	0	149	4.6	15	327	6.6	7	106	2.9	23	803
France	TikTok	1.8	1	56	0.0	0	21	0.0	0	24	0.0	0	17	0.8	1	118
France	Total	1.3	5	395	0.2	1	447	3.6	32	885	2.7	25	921	2.4	63	2648
Germany	Facebook	4.4	10	227	7.6	15	197	5.0	34	678	5.4	45	828	5.4	104	1930
Germany	Instagram	2.5	13	515	8.1	16	197	3.9	26	673	5.1	5	99	4.0	60	1484
Germany	TikTok	3.2	4	125	1.1	1	88	5.5	8	146	-	-	-	3.6	13	359
Germany	Total	3.1	27	867	6.6	32	482	4.5	68	1497	5.4	50	927	4.7	177	3773
Italy	Facebook	3.3	20	607	3.4	7	208	3.0	11	372	5.3	64	1212	4.3	102	2399
Italy	Instagram	2.5	21	839	1.7	2	118	3.7	9	243	11.5	18	156	3.7	50	1356
Italy	TikTok	1.1	1	92	0.0	0	11	2.1	1	48	0.0	0	5	1.3	2	156
Italy	Total	2.7	42	1538	2.7	9	337	3.2	21	663	6.0	82	1373	3.9	154	3911
Slovakia	Facebook	2.8	2	72	1.9	4	210	3.2	5	156	4.7	42	893	4.0	53	1331
Slovakia	Instagram	7.5	4	53	2.1	1	47	1.6	1	63	0.0	0	39	3.0	6	202
Slovakia	TikTok	0.0	0	35	0.0	0	29	-	-	-	0.0	0	6	0.0	0	70
Slovakia	Total	3.8	6	160	1.7	5	286	2.7	6	219	4.5	42	938	3.7	59	1603
Spain	Facebook	0.0	0	45	0.5	1	198	0.7	5	692	2.9	31	1051	1.9	37	1986
Spain	Instagram	1.2	2	166	0.0	0	42	1.2	4	347	7.7	3	39	1.5	9	594
Spain	TikTok	3.8	1	26	0.0	0	49	0.0	0	73	-	-	-	0.7	1	148
Spain	Total	1.3	3	237	0.3	1	289	0.8	9	1112	3.1	34	1090	1.7	47	2728
Transn.	Facebook	-	-	-	-	-	-	-	-	-	1.8	35	1936	1.8	35	1936
Transn.	Instagram	-	-	-	-	-	-	-	-	-	4.5	10	224	4.5	10	224
Transn.	TikTok	-	-	-	-	-	-	-	-	-	6.4	3	47	6.4	3	47



Transn.	Total	-	-	-	-	-	-	-	-	-	2.2	48	2207	2.2	48	2207
Total	Facebook	2.6	37	1447	2.0	32	1614	3.3	102	3137	3.6	283	7862	3.2	454	14060
Total	Instagram	2.0	44	2181	3.1	25	803	4.3	87	2005	7.3	73	1003	3.8	229	5992
Total	TikTok	1.4	7	483	0.4	1	274	2.6	9	340	3.0	3	101	1.7	20	1198
Total	Total	2.1	88	4111	2.2	58	2691	3.6	198	5482	4.0	359	8966	3.3	703	21250

Note. Groups where no data has been collected or has been classified as environment-related have a “-” in their cell. This is different from groups where environment-related posts exist in the data, but no posts were classified as mentioning the emotion, e.g., TikTok posts by news outlets from Austria (0).

Transn. = Transnational.

6.6.5 Joy

TABLE 35: FREQUENCY OF POSTS WITH JOY PER COUNTRY, PLATFORM AND ACTOR TYPE WITHIN ENVIRONMENT-RELATED POSTS $N = 21,250$

		Politician			Party			NGO			News			Total		
Country	Platform	%	count	N	%	count	N	%	count	N	%	count	N	%	count	N
Austria	Facebook	18.3	28	153	10.0	9	90	19.9	59	296	1.0	5	510	9.6	101	1049
Austria	Instagram	23.0	49	213	12.9	9	70	21.5	53	247	4.0	13	327	14.5	124	857
Austria	TikTok	12.0	10	83	5.6	2	36	2.0	1	49	0.0	0	15	7.1	13	183
Austria	Total	19.4	87	449	10.2	20	196	19.1	113	592	2.1	18	852	11.4	238	2089
Czechia	Facebook	17.5	25	143	11.5	41	358	19.3	59	305	2.6	2	77	14.4	127	883
Czechia	Instagram	39.4	54	137	26.5	43	162	11.4	9	79	37.5	3	8	28.2	109	386
Czechia	TikTok	0.0	0	66	15.0	6	40	-	-	-	-	-	-	5.7	6	106
Czechia	Total	22.8	79	346	16.1	90	560	17.7	68	384	5.9	5	85	17.6	242	1375
Estonia	Facebook	8.5	7	82	11.8	9	76	18.3	19	104	3.6	20	557	6.7	55	819
Estonia	Instagram	16.2	6	37	27.8	5	18	19.2	5	26	0.0	0	5	18.6	16	86
Estonia	TikTok	-	-	-	-	-	-	-	-	-	0.0	0	11	0.0	0	11



Estonia	Total	10.9	13	119	14.9	14	94	18.5	24	130	3.5	20	573	7.8	71	916
France	Facebook	9.3	11	118	5.1	14	277	8.2	44	534	1.8	14	798	4.8	83	1727
France	Instagram	16.7	37	221	9.4	14	149	10.1	33	327	3.8	4	106	11.0	88	803
France	TikTok	7.1	4	56	4.8	1	21	0.0	0	24	5.9	1	17	5.1	6	118
France	Total	13.2	52	395	6.5	29	447	8.7	77	885	2.1	19	921	6.7	177	2648
Germany	Facebook	19.4	44	227	7.6	15	197	9.7	66	678	1.3	11	828	7.0	136	1930
Germany	Instagram	27.4	141	515	9.6	19	197	11.7	79	673	2.0	2	99	16.2	241	1484
Germany	TikTok	8.0	10	125	10.2	9	88	8.2	12	146	-	-	-	8.6	31	359
Germany	Total	22.5	195	867	8.9	43	482	10.5	157	1497	1.4	13	927	10.8	408	3773
Italy	Facebook	16.5	100	607	5.8	12	208	7.0	26	372	1.7	20	1212	6.6	158	2399
Italy	Instagram	17.9	150	839	7.6	9	118	6.2	15	243	5.1	8	156	13.4	182	1356
Italy	TikTok	4.3	4	92	0.0	0	11	0.0	0	48	0.0	0	5	2.6	4	156
Italy	Total	16.5	254	1538	6.2	21	337	6.2	41	663	2.0	28	1373	8.8	344	3911
Slovakia	Facebook	19.4	14	72	10.0	21	210	30.1	47	156	2.0	18	893	7.5	100	1331
Slovakia	Instagram	24.5	13	53	10.6	5	47	30.2	19	63	0.0	0	39	18.3	37	202
Slovakia	TikTok	14.3	5	35	0.0	0	29	-	-	-	33.3	2	6	10.0	7	70
Slovakia	Total	20.0	32	160	9.1	26	286	30.1	66	219	2.1	20	938	9.0	144	1603
Spain	Facebook	6.7	3	45	2.5	5	198	8.1	56	692	1.4	15	1051	4.0	79	1986
Spain	Instagram	21.7	36	166	4.8	2	42	10.7	37	347	0.0	0	39	12.6	75	594
Spain	TikTok	3.8	1	26	0.0	0	49	8.2	6	73	-	-	-	4.7	7	148
Spain	Total	16.9	40	237	2.4	7	289	8.9	99	1112	1.4	15	1090	5.9	161	2728
Transn.	Facebook	-	-	-	-	-	-	-	-	-	0.5	10	1936	0.5	10	1936
Transn.	Instagram	-	-	-	-	-	-	-	-	-	2.2	5	224	2.2	5	224



Transn.	TikTok	-	-	-	-	-	-	-	-	-	0.0	0	47	0.0	0	47
Transn.	Total	-	-	-	-	-	-	-	-	-	0.7	15	2207	0.7	15	2207
Total	Facebook	16.0	232	1447	7.8	126	1614	12.0	376	3137	1.5	115	7862	6.0	849	14060
Total	Instagram	22.3	486	2181	13.2	106	803	12.5	250	2005	3.5	35	1003	14.6	877	5992
Total	TikTok	7.0	34	483	6.6	18	274	5.6	19	340	3.0	3	101	6.2	74	1198
Total	Total	18.3	752	4111	9.3	250	2691	11.8	645	5482	1.7	153	8966	8.5	1800	21250

Note. Groups where no data has been collected or has been classified as environment-related have a “-” in their cell. This is different from groups where environment-related posts exist in the data, but no posts were classified as mentioning the emotion, e.g., TikTok posts by news outlets from Austria (0).

Transn. = Transnational.

6.6.6 Enthusiasm

TABLE 36: FREQUENCY OF POSTS WITH ENTHUSIASM PER COUNTRY, PLATFORM AND ACTOR TYPE WITHIN ENVIRONMENT-RELATED POSTS $N = 21,250$

Country	Platform	Politician			Party			NGO			News			Total		
		%	count	<i>N</i>	%	count	<i>N</i>	%	count	<i>N</i>	%	count	<i>N</i>	%	count	<i>N</i>
Austria	Facebook	30.1	46	153	38.9	35	90	23.6	70	296	0.4	2	510	14.6	153	1049
Austria	Instagram	36.2	77	213	48.6	34	70	34.0	84	247	0.9	3	327	23.1	198	857
Austria	TikTok	24.1	20	83	33.3	12	36	10.2	5	49	0.0	0	15	20.2	37	183
Austria	Total	31.8	143	449	41.3	81	196	26.9	159	592	0.6	5	852	18.6	388	2089
Czechia	Facebook	30.8	44	143	28.5	102	358	18.7	57	305	0.0	0	77	23.0	203	883
Czechia	Instagram	21.2	29	137	30.9	50	162	22.8	18	79	0.0	0	8	25.1	97	386
Czechia	TikTok	34.8	23	66	42.5	17	40	-	-	-	-	-	-	37.7	40	106
Czechia	Total	27.7	96	346	30.2	169	560	19.5	75	384	0.0	0	85	24.7	340	1375
Estonia	Facebook	12.2	10	82	15.8	12	76	10.6	11	104	0.5	3	557	4.4	36	819
Estonia	Instagram	10.8	4	37	33.3	6	18	19.2	5	26	0.0	0	5	17.4	15	86



Estonia	TikTok	-	-	-	-	-	-	-	-	-	0.0	0	11	0.0	0	11
Estonia	Total	11.8	14	119	19.1	18	94	12.3	16	130	0.5	3	573	5.6	51	916
France	Facebook	33.1	39	118	48.7	135	277	16.7	89	534	0.3	2	798	15.3	265	1727
France	Instagram	40.3	89	221	54.4	81	149	22.0	72	327	2.8	3	106	30.5	245	803
France	TikTok	32.1	18	56	23.8	5	21	25.0	6	24	0.0	0	17	24.6	29	118
France	Total	37.0	146	395	49.4	221	447	18.9	167	885	0.5	5	921	20.4	539	2648
Germany	Facebook	27.3	62	227	51.8	102	197	30.4	206	678	0.6	5	828	19.4	375	1930
Germany	Instagram	30.9	159	515	55.3	109	197	41.6	280	673	0.0	0	99	36.9	548	1484
Germany	TikTok	35.2	44	125	42.0	37	88	49.3	72	146	-	-	-	42.6	153	359
Germany	Total	30.6	265	867	51.5	248	482	37.3	558	1497	0.5	5	927	28.5	1076	3773
Italy	Facebook	24.7	150	607	40.4	84	208	25.0	93	372	0.5	6	1212	13.9	333	2399
Italy	Instagram	23.1	194	839	42.4	50	118	38.7	94	243	2.6	4	156	25.2	342	1356
Italy	TikTok	32.6	30	92	18.2	2	11	14.6	7	48	0.0	0	5	25.0	39	156
Italy	Total	24.3	374	1538	40.4	136	337	29.3	194	663	0.7	10	1373	18.3	714	3911
Slovakia	Facebook	16.7	12	72	15.7	33	210	14.1	22	156	0.9	8	893	5.6	75	1331
Slovakia	Instagram	30.2	16	53	23.4	11	47	17.5	11	63	0.0	0	39	18.8	38	202
Slovakia	TikTok	11.4	4	35	6.9	2	29	-	-	-	0.0	0	6	8.6	6	70
Slovakia	Total	20.0	32	160	16.1	46	286	15.1	33	219	0.9	8	938	7.4	119	1603
Spain	Facebook	33.3	15	45	17.2	34	198	13.6	94	692	0.2	2	1051	7.3	145	1986
Spain	Instagram	18.1	30	166	40.5	17	42	23.6	82	347	0.0	0	39	21.7	129	594
Spain	TikTok	26.9	7	26	10.2	5	49	24.7	18	73	-	-	-	20.3	30	148
Spain	Total	21.9	52	237	19.4	56	289	17.4	194	1112	0.2	2	1090	11.1	304	2728
Transn.	Facebook	-	-	-	-	-	-	-	-	-	0.2	3	1936	0.2	3	1936



Transn.	Instagram	-	-	-	-	-	-	-	-	-	0.4	1	224	0.4	1	224
Transn.	TikTok	-	-	-	-	-	-	-	-	-	0.0	0	47	0.0	0	47
Transn.	Total	-	-	-	-	-	-	-	-	-	0.2	4	2207	0.2	4	2207
Total	Facebook	26.1	378	1447	33.3	537	1614	20.5	642	3137	0.4	31	7862	11.3	1588	14060
Total	Instagram	27.4	598	2181	44.6	358	803	32.2	646	2005	1.1	11	1003	26.9	1613	5992
Total	TikTok	30.2	146	483	29.2	80	274	31.8	108	340	0.0	0	101	27.9	334	1198
Total	Total	27.3	1122	4111	36.2	975	2691	25.5	1396	5482	0.5	42	8966	16.6	3535	21250

Note. Groups where no data has been collected or has been classified as environment-related have a “-” in their cell. This is different from groups where environment-related posts exist in the data, but no posts were classified as mentioning the emotion, e.g., TikTok posts by news outlets from Austria (0).

Transn. = Transnational.

6.6.7 Pride

TABLE 37: FREQUENCY OF POSTS WITH PRIDE PER COUNTRY, PLATFORM AND ACTOR TYPE WITHIN ENVIRONMENT-RELATED POSTS $N = 21,250$

Country	Platform	Politician			Party			NGO			News			Total		
		%	count	<i>N</i>	%	count	<i>N</i>	%	count	<i>N</i>	%	count	<i>N</i>	%	count	<i>N</i>
Austria	Facebook	11.1	17	153	3.3	3	90	4.4	13	296	0.6	3	510	3.4	36	1049
Austria	Instagram	8.9	19	213	4.3	3	70	3.6	9	247	0.3	1	327	3.7	32	857
Austria	TikTok	2.4	2	83	0.0	0	36	4.1	2	49	0.0	0	15	2.2	4	183
Austria	Total	8.5	38	449	3.1	6	196	4.1	24	592	0.5	4	852	3.4	72	2089
Czechia	Facebook	1.4	2	143	4.7	17	358	5.9	18	305	0.0	0	77	4.2	37	883
Czechia	Instagram	6.6	9	137	11.1	18	162	3.8	3	79	0.0	0	8	7.8	30	386
Czechia	TikTok	0.0	0	66	2.5	1	40	-	-	-	-	-	-	0.9	1	106
Czechia	Total	3.2	11	346	6.4	36	560	5.5	21	384	0.0	0	85	4.9	68	1375
Estonia	Facebook	3.7	3	82	5.3	4	76	4.8	5	104	0.5	3	557	1.8	15	819



Estonia	Instagram	2.7	1	37	0.0	0	18	3.8	1	26	0.0	0	5	2.3	2	86
Estonia	TikTok	-	-	-	-	-	-	-	-	-	0.0	0	11	0.0	0	11
Estonia	Total	3.4	4	119	4.3	4	94	4.6	6	130	0.5	3	573	1.9	17	916
France	Facebook	7.6	9	118	2.9	8	277	0.9	5	534	0.1	1	798	1.3	23	1727
France	Instagram	7.7	17	221	6.0	9	149	2.8	9	327	0.9	1	106	4.5	36	803
France	TikTok	0.0	0	56	0.0	0	21	0.0	0	24	0.0	0	17	0.0	0	118
France	Total	6.6	26	395	3.8	17	447	1.6	14	885	0.2	2	921	2.2	59	2648
Germany	Facebook	5.7	13	227	2.5	5	197	2.8	19	678	1.0	8	828	2.3	45	1930
Germany	Instagram	8.2	42	515	5.6	11	197	2.4	16	673	2.0	2	99	4.8	71	1484
Germany	TikTok	8.8	11	125	4.5	4	88	0.7	1	146	-	-	-	4.5	16	359
Germany	Total	7.6	66	867	4.1	20	482	2.4	36	1497	1.1	10	927	3.5	132	3773
Italy	Facebook	7.7	47	607	5.8	12	208	3.5	13	372	0.7	8	1212	3.3	80	2399
Italy	Instagram	8.6	72	839	4.2	5	118	3.7	9	243	1.9	3	156	6.6	89	1356
Italy	TikTok	1.1	1	92	0.0	0	11	2.1	1	48	0.0	0	5	1.3	2	156
Italy	Total	7.8	120	1538	5.0	17	337	3.5	23	663	0.8	11	1373	4.4	171	3911
Slovakia	Facebook	9.7	7	72	4.8	10	210	9.0	14	156	0.6	5	893	2.7	36	1331
Slovakia	Instagram	15.1	8	53	6.4	3	47	14.3	9	63	0.0	0	39	9.9	20	202
Slovakia	TikTok	8.6	3	35	3.4	1	29	-	-	-	16.7	1	6	7.1	5	70
Slovakia	Total	11.2	18	160	4.9	14	286	10.5	23	219	0.6	6	938	3.8	61	1603
Spain	Facebook	0.0	0	45	1.5	3	198	1.7	12	692	0.3	3	1051	0.9	18	1986
Spain	Instagram	3.6	6	166	0.0	0	42	2.6	9	347	2.6	1	39	2.7	16	594
Spain	TikTok	0.0	0	26	0.0	0	49	1.4	1	73	-	-	-	0.7	1	148
Spain	Total	2.5	6	237	1.0	3	289	2.0	22	1112	0.4	4	1090	1.3	35	2728



Transn.	Facebook	-	-	-	-	-	-	-	-	-	0.3	5	1936	0.3	5	1936
Transn.	Instagram	-	-	-	-	-	-	-	-	-	0.0	0	224	0.0	0	224
Transn.	TikTok	-	-	-	-	-	-	-	-	-	0.0	0	47	0.0	0	47
Transn.	Total	-	-	-	-	-	-	-	-	-	0.2	5	2207	0.2	5	2207
Total	Facebook	6.8	98	1447	3.8	62	1614	3.2	99	3137	0.5	36	7862	2.1	295	14060
Total	Instagram	8.0	174	2181	6.1	49	803	3.2	65	2005	0.8	8	1003	4.9	296	5992
Total	TikTok	3.5	17	483	2.2	6	274	1.5	5	340	1.0	1	101	2.4	29	1198
Total	Total	7.0	289	4111	4.3	117	2691	3.1	169	5482	0.5	45	8966	2.9	620	21250

Note. Groups where no data has been collected or has been classified as environment-related have a “-” in their cell. This is different from groups where environment-related posts exist in the data, but no posts were classified as mentioning the emotion, e.g., TikTok posts by news outlets from Austria (0).

Transn. = Transnational.

6.6.8 Hope

TABLE 38: FREQUENCY OF POSTS WITH HOPE PER COUNTRY, PLATFORM AND ACTOR TYPE WITHIN ENVIRONMENT-RELATED POSTS $N = 21,250$

Country	Platform	Politician			Party			NGO			News			Total		
		%	count	<i>N</i>	%	count	<i>N</i>	%	count	<i>N</i>	%	count	<i>N</i>	%	count	<i>N</i>
Austria	Facebook	4.6	7	153	2.2	2	90	2.4	7	296	0.2	1	510	1.6	17	1049
Austria	Instagram	4.2	9	213	5.7	4	70	2.0	5	247	0.9	3	327	2.5	21	857
Austria	TikTok	0.0	0	83	2.8	1	36	0.0	0	49	0.0	0	15	0.5	1	183
Austria	Total	3.6	16	449	3.6	7	196	2.0	12	592	0.5	4	852	1.9	39	2089
Czechia	Facebook	0.7	1	143	3.4	12	358	2.3	7	305	0.0	0	77	2.3	20	883
Czechia	Instagram	5.1	7	137	6.8	11	162	3.8	3	79	0.0	0	8	5.4	21	386
Czechia	TikTok	0.0	0	66	5.0	2	40	-	-	-	-	-	-	1.9	2	106
Czechia	Total	2.3	8	346	4.5	25	560	2.6	10	384	0.0	0	85	3.1	43	1375



Estonia	Facebook	3.7	3	82	3.9	3	76	2.9	3	104	0.7	4	557	1.6	13	819
Estonia	Instagram	0.0	0	37	0.0	0	18	0.0	0	26	0.0	0	5	0.0	0	86
Estonia	TikTok	-	-	-	-	-	-	-	-	-	0.0	0	11	0.0	0	11
Estonia	Total	2.5	3	119	3.2	3	94	2.3	3	130	0.7	4	573	1.4	13	916
France	Facebook	2.5	3	118	2.5	7	277	0.9	5	534	0.0	0	798	0.9	15	1727
France	Instagram	0.5	1	221	0.0	0	149	0.6	2	327	0.0	0	106	0.4	3	803
France	TikTok	1.8	1	56	0.0	0	21	0.0	0	24	0.0	0	17	0.8	1	118
France	Total	1.3	5	395	1.6	7	447	0.8	7	885	0.0	0	921	0.7	19	2648
Germany	Facebook	4.0	9	227	6.6	13	197	1.6	11	678	0.1	1	828	1.8	34	1930
Germany	Instagram	3.7	19	515	7.1	14	197	1.6	11	673	2.0	2	99	3.1	46	1484
Germany	TikTok	4.8	6	125	3.4	3	88	4.1	6	146	-	-	-	4.2	15	359
Germany	Total	3.9	34	867	6.2	30	482	1.9	28	1497	0.3	3	927	2.5	95	3773
Italy	Facebook	3.1	19	607	6.2	13	208	0.8	3	372	0.5	6	1212	1.7	41	2399
Italy	Instagram	2.3	19	839	4.2	5	118	1.6	4	243	1.9	3	156	2.3	31	1356
Italy	TikTok	1.1	1	92	9.1	1	11	0.0	0	48	0.0	0	5	1.3	2	156
Italy	Total	2.5	39	1538	5.6	19	337	1.1	7	663	0.7	9	1373	1.9	74	3911
Slovakia	Facebook	2.8	2	72	3.8	8	210	3.2	5	156	0.3	3	893	1.4	18	1331
Slovakia	Instagram	0.0	0	53	2.1	1	47	3.2	2	63	0.0	0	39	1.5	3	202
Slovakia	TikTok	0.0	0	35	0.0	0	29	-	-	-	0.0	0	6	0.0	0	70
Slovakia	Total	1.2	2	160	3.1	9	286	3.2	7	219	0.3	3	938	1.3	21	1603
Spain	Facebook	0.0	0	45	1.0	2	198	1.2	8	692	0.2	2	1051	0.6	12	1986
Spain	Instagram	3.0	5	166	2.4	1	42	1.2	4	347	0.0	0	39	1.7	10	594
Spain	TikTok	0.0	0	26	4.1	2	49	0.0	0	73	-	-	-	1.4	2	148



Spain	Total	2.1	5	237	1.7	5	289	1.1	12	1112	0.2	2	1090	0.9	24	2728
Transn.	Facebook	-	-	-	-	-	-	-	-	-	0.1	2	1936	0.1	2	1936
Transn.	Instagram	-	-	-	-	-	-	-	-	-	0.4	1	224	0.4	1	224
Transn.	TikTok	-	-	-	-	-	-	-	-	-	0.0	0	47	0.0	0	47
Transn.	Total	-	-	-	-	-	-	-	-	-	0.1	3	2207	0.1	3	2207
Total	Facebook	3.0	44	1447	3.7	60	1614	1.6	49	3137	0.2	19	7862	1.2	172	14060
Total	Instagram	2.8	60	2181	4.5	36	803	1.5	31	2005	0.9	9	1003	2.3	136	5992
Total	TikTok	1.7	8	483	3.3	9	274	1.8	6	340	0.0	0	101	1.9	23	1198
Total	Total	2.7	112	4111	3.9	105	2691	1.6	86	5482	0.3	28	8966	1.6	331	21250

Note. Groups where no data has been collected or has been classified as environment-related have a “-” in their cell. This is different from groups where environment-related posts exist in the data, but no posts were classified as mentioning the emotion, e.g., TikTok posts by news outlets from Austria (0).

Transn. = Transnational.



Acknowledgements

We are grateful to Robin Dyck, Jakob-Moritz Eberl, Patrik Gažo, Ladislav Németh, Alisa Sej, Susanna Soosaar, Marlon J. Steuer, Romy van Gysel, Xenia Wilke, and Dominik Zelinsky for their contribution to data collection and manual coding.

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