



## Anti- and pro-environmental disinformation.

### Fact-checking Spanish political parties' discourse.

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#### Abstract

Climate disinformation's studies focus mainly on denialism or false discourses justifying inaction. However, pro-environmental disinformation is also possible, exaggerating climate change consequences or green policies benefits. Anti- and pro-environmental disinformation can negatively influence citizens' political decision-making. The aim of this research is to analyze the disinformation coming from Spanish political actors, to check what issues they focus on and if there is an ideological bias in the dissemination of false information related to climate change and the environment. The investigation is based on verifications carried out by fact-checkers Newtral and Maldita on statements made by Spanish politicians. From a quantitative perspective, all fact-checks performed from October 2018 to March 2023 are analyzed (N = 1,415). The study covers a time frame of almost five years, which includes elections at European and national level. We classified each disinformation according to date, source, and topic, and we make a taxonomic proposal of environmental disinformation, be it anti- or pro-environmental action. We aim to find out what kind of environmental disinformation is used in Spain to cover the lack of studies in this field. Also to check the differences in the disinformation strategy of the parties, especially in the radical right. Results reveal for the first time the presence of pro-environmental disinformation. However, disinformation is mostly anti-environmental and occupies a low level within the disinformation strategy of the parties, which reflects the low interest in this issue. Findings show that denialism is on the decline. Instead, anti-environmentalism has become more pragmatic and prevails through inactivism. Conservative parties lead in environmental disinformation, although it is more frequent in the more moderate ones. There is also an increase in this type of disinformation before the European election, which suggests an instrumental use at the political level where the environment is perceived to be more relevant.

Keywords: Disinformation, climate change, fact-checking, pro-environmental, anti-environmental.

#### Introduction

Political issues subject to public debate are fundamental components of the electoral context, constituting the third step in the multistage process of vote causation (Anduiza & Bosch, 2004), following the social position and political values of the electorate. The knowledge and opinions that citizens hold about these

issues are among the various factors that determine voting decisions (Mazzoleni, 2010). However, disinformation distorts these individual opinions, thereby contaminating the content of public policy debates (Tucker et al., 2018).

Political elites can act as drivers of this process, both through the dissemination of original disinformation and the re-dissemination of disinformation generated by like-minded activists or pseudomedia (Freelon et al., 2020), either consciously or unconsciously (Tucker et al., 2018). Although political disinformation is not a recent phenomenon, its intensive use, which is central to populist strategy (Bergman, 2020; Waisbord, 2020), is a fundamental communicative feature of subversive campaigns. These campaigns coexist with scientific ones in the current fourth phase of political communication (Roemmele & Gibson, 2020).

Political disinformation usually focuses on policy issues (Lava-Santos et al., 2023), among which the environment and climate change have grown in relevance as contentious topics (Treen et al., 2020), becoming a problem with difficult solution (van der Linden et al., 2017).

This research analyzes the disinformation on the environment and climate change disseminated by Spanish political parties and their main leaders. The objectives are to determine the extent to which they spread disinformation on these issues, the type of anti-environmental or pro-environmental disinformation they employ, and whether there is an ideological bias in their dissemination. The work is based on the verification of politicians' statements published by the fact-checkers *Newtral* and *Maldita*, the only two Spanish media accredited by the International Fact-Checking Network with a specific section dedicated to this purpose. From a quantitative perspective, we analyze the 1,415 verifications that both media had published on the subject up to March 2023, when this research was conducted. The oldest verification dates back to October 2018, covering a period of almost five years, including elections at the European, national, regional, and local levels. We classify each instance of disinformation according to its source, subject, and type of climate disinformation, for which we propose a taxonomy.

## **Theoretical background**

### **Environmental disinformation**

Disinformation covers a wide range of issues, including topics related to environmental protection, such as green policies and the fight against climate change. The importance of this problem in academia is reflected in a large body of research devoted to analyzing different types of environmental disinformation, although mainly focused on the study of climate disinformation (Lewandowsky, 2021), so there is a noticeable lack of studies addressing other environmental issues (Björnberg et al., 2017).

When we talk about environmental disinformation, we can find different types of falsehoods, which go beyond climate disinformation (Treen et al., 2020). First, we find disinformation against taking environmental measures to fight climate change (López, 2022), in other words, anti-environmental disinformation. Within this category we can distinguish three types of disinformation strategies: denialism, inactivism, and greenwashing.

Many alternative words are used about anti-environmentalism and climate change denial: denialism, skepticism, contrarianism (Björnberg et al., 2017). Climate denial disinformation is based mainly on the assertion that global warming is not happening, humans are not causing climate change, climate impacts are not bad, and climate science or scientists are unreliable (Coan et al., 2021; Schaller & Carius, 2019).

Environmental inactivism disinformation might accept the existence of climate change, but justify inaction by focusing attention on the negative social and economical effects of green policies, casting doubts on climate solutions and using personalized hypocrisy or conspiracy theories to discredit climate movement (Coan et al., 2021; de Nadal, 2024; Forchtner & Lubarda, 2022; Gunster et al., 2018; López, 2022; Schaller & Carius, 2019). Inactivism may also blame immigration for national environmental degradation (Turner & Bailey, 2021) or argue that someone else should take action first and disruptive change is not necessary, pushing non-transformative solutions, such as advocating delaying environmental action by relying on future technologies and advocating fossil fuel solutionism (Lamb et al., 2020).

Another practice of anti-environmental disinformation is greenwashing, defined in the Oxford English Dictionary as: "To mislead (the public) or counter (public or media concerns) by falsely representing a person, company, product, etc., as being environmentally responsible". Applied to political environmental disinformation, greenwashing creates the impression of environmentally friendly activity (Naderer et al., 2017) when the opposite is the reality (López, 2022), allowing political actors to maintain external recognition while at the same time refrain from pro-environmental actions (Cislak et al., 2021).

The different types of environmental disinformation described above focus exclusively on disinformations perceived as opposing green policies and climate action. However, there is a gap in the literature on those who disinform with the intention of promoting stronger environmental action (Treen et al., 2020). Within this type of disinformation aimed at promoting pro-environmental policies, we should also find different types, as happens in anti-environmental disinformation: green alarmism, over-activism, and environmental screening.

Green alarmism is characterized as seeking to amplify climate change and environmental risks in order to influence green actions (Treen et al., 2020; Risbey, 2008). Alarmism could thus be defined as a disinformation strategy that serves the opposite function of denialism.

In the academic literature there is no study on over-activism as a disinformation strategy in favor of environmental action. However, if in the anti-environmental disinformation block inactivism justifies inaction by arguing that action should be taken by others (Lamb et al., 2020), it could be hypothesized that in the pro-environment block there is also over-activism disinformation. That is, when disinformation exaggerates the positive effects of green policies or measures implemented in other countries to justify the adoption of a greater number of actions to curb climate change or protect the environment.

The terms environmental screening (Schlegelmilch, 1997) or negative screening (de Colle & York, 2009) are used in the field of socially responsible investing to avoid investing in companies whose products and business practices are harmful to the environment in order to allow investors to reflect their personal values and ethics in their choices, and encourage companies to improve their environmental performance. Currently, there is no reference to this term in the field of disinformation studies either. Nevertheless, we consider that the presence of this type of disinformation should be investigated, as an example of false accusation of pro-environment "institutional hypocrisy" (Gunster et al., 2018). If greenwashing is used as a positive campaign strategy to simulate a false interest in the environment, we aim to find out whether false negative environmental screening also exists, as a negative campaign aimed at undermining the credibility of a given party's green policy management.

The presence of pro-environmental disinformation can be particularly damaging to the reputation of environmental policies, as it can serve as an argument for climate change denialist sectors, which often

accuse environmental policy advocates of green alarmism (Coan et al., 2021; Treen et al., 2020). Given the lack of research analyzing environmental disinformation in all its possible dimensions, we consider it pertinent to fill this gap and check its presence in the discourse of Spanish political parties.

RQ1: What kind of environmental disinformation is used in Spain, and are there differences between political parties?

In the realm of political communication, parties attempt to appropriate in public discourse the issues with which they are positively associated (Walgrave & de Swert, 2007), taking advantage of their supposed competence in solving certain problems (Petrocik, 1996). For example, right-wing parties are typically associated with issues such as economy, security, and migration. Left-wing parties are assumed to handle issues regarding social issues, civil rights, and environmental policies (Walgrave & de Swert, 2007).

The incorporation of new issues, such as climate change and environmental sustainability, generates a struggle among political actors over the role it should play in the public agenda. Traditionally, all political parties have maintained a favorable attitude towards environmental policies, differing only in the degree to which they emphasize them. However, the consolidation of radical right parties has opened a new scenario, where anti-environmental positions are openly defended, which challenges the view that the environment is a distinctively left-wing issue (Gemenis et al., 2012).

Radical right political actors are accused of spreading disinformation (Bennett & Livingston, 2018; Marwick & Lewis, 2017), especially about climate change (Forchtner & Lubarda, 2022; Forchtner et al., 2018; Hameleers, 2020; de Nadal, 2024). Their environmental discourse ranges from climate change denial to "green patriotism" (Schaller & Carius, 2019), a type of inactivism that strongly supports environmental conservation, but rejects international climate agreements as a globalist agenda (de Nadal, 2024). These parties also use identitarian and exclusionary narratives that connects negative climate disinformation with attacks on elites (Marquardt et al., 2022), refers to the knowledge of the ordinary people to disregard expert knowledge on climate change (Hameleers, 2020), and casts immigration control as environmental protection (ecobordering) (Turner & Bailey, 2021). At the European level, Schaller and Carius (2019) note that a large number of the radical right parties are denialist or skeptical, although there is also a majority of such parties that are cautious and either have no position on climate change or attach little importance to environmentalism. The Spanish radical right party Vox (Seth et al., 2022) might be classified in the latter group according to its recent manifesto (Schwörer & Fernández-García, 2023)

The study of far-right actors' disinformation strategies is important because they might collectively generate an entire stock of vocabulary that is employed to condition how this issue is portrayed and, ultimately, acted on (Knüpfer & Hoffmann, 2024). In this sense, Lockwood and Lockwood (2022) found evidence for a significant negative effect of radical right parties in power on climate policy. Thus, we want to find out whether Vox uses more environmental disinformation as is usual in radical right parties or is consistent with its manifesto and refuse to address the issue:

RQ2: Does Vox use more environmental disinformation than other parties?

### **Climate change and environment in Spain**

Climate change (1.8%) and the environment (1.5%) occupy the last positions in the concerns of Spaniards, with a very low percentage of respondents considering these issues to be among the three main problems that exist in Spain (CIS, 2023). The low interest of citizens in environmental problems may be related to the scarce attention paid by the media to this issue (Fernández-Reyes, 2010; Fernández-Reyes et al., 2015; León, 2013; Teso & Lozano, 2022) or to the attitude of politicians (Heras et al., 2016). The lack of relevance of this topic is also reflected in the scarcity of academic studies on environmental verification in Spain, which are mainly focused on the subject matter and format of disinformation and reveal that the overall volume of environmental disinformation accounts for 16% of all fact-checks (Gallardo-Camacho et al., 2024).

From the parties' perspective, it seems that the use of environmental issues in their political communication may be counterproductive, as studies on the engagement of political parties' followers in social media reveal that publications with environmental information receive significantly less interaction from users, which restricts their digital visibility (Bene et al., 2022). De Lara et al. (2022) have shown that the official Facebook accounts of skeptical politicians opt for silence on climate change even during the celebration of events that directly concern them, such as the Madrid climate summit that marked the temporal object of their study. However, we did not find a corpus of conclusive studies in the field of environmental disinformation, which would help us to understand the relevance of this issue in the political discourse. Therefore, we pose the following research question:

RQ3: What is the volume of environmental disinformation in the political discourse?

Some authors warn of the ineffectiveness of both European and Spanish electoral legislation, which is obsolete to deal with digital disinformation campaigns (Corredoira, 2020; Sánchez Muñoz, 2020). There is also concern in the European Parliament about the impact of disinformation and foreign interference in electoral processes (López, 2021). Recent studies note the increase in disinformation in election periods (Allcott & Gentzkow, 2017; Magallón, 2019; Mateos, 2023), although they do not provide specific information on environmental disinformation. Nevertheless, we have indications to suspect that this type of disinformation will follow the same pattern, especially in the European Parliament election. If at the national level climate change and environmental problems occupy a low level in the concerns of Spaniards, this percentage changes radically in the European surveys, where it reaches 21%. According to Eurobarometer, Spaniards consider climate change to be the third most important problem facing the European Union, just behind immigration and the economic situation (European Commission, 2019). This great difference in the importance of environmental problems, depending on the geographical area of action, may be influenced by media coverage, which usually contextualizes these problems outside Spain, especially in Europe (Abejón et al., 2020; León, 2014).

Public concern about the environment is correlated with the saliency of climate issues in radical right parties' manifesto (Schwörer & Fernández-García, 2023). The interest of potential voters in environmental issues encourages some politicians to introduce this topic in the political and media agenda, especially at the European level (Abejón et al., 2020) and in international political events (Ahchong & Dodds, 2012; Weingart et al 2000). Thus, within the nearly five years analyzed in the study, we expect environmental disinformation to be most prevalent during the 2019 European Parliament election campaign:

H1: Environmental disinformation is more frequent in the 2019 European Parliament election campaign

Therefore, three important elements converge to make research on this subject relevant. On the one hand, there is a shortage of studies that extend their subject to environmental issues not strictly focused on climate change, as well as a lack of analysis of actors and strategies of green alarmism, over-activism and environmental screening as disinformative formulas for counterattack. On the other hand, it is worth checking whether the findings reflected in the scientific literature for the international sphere that have been described above are also true in Spain. Finally, the environment in all its breadth is particularly interesting in relation to the dissemination of environmental disinformation from the political elites in a country where citizens' concern about this problem varies considerably whether it is viewed from a national or from a European policy perspective.

In Spain, only two fact-checkers have a special section dedicated exclusively to false information coming from political actors: Newtral and Maldita. Newtral.es is a startup founded in January 2018 by journalist Ana Pastor, its sole shareholder. Data verification is one of its three business areas, along with audiovisual production and innovation and research based on artificial intelligence protocols. It does not receive subsidies. For its part, Maldita.es is a non-profit foundation created in 2019 by Clara Jiménez Cruz, Julio Montes Moreno and the Maldita Association against disinformation: journalism, education, research and data in new formats. It is financed through donations from individuals and specific collaboration agreements with companies and institutions. Both fact-checkers are affiliated to the International Fact-Checking Network (IFCN) and the European Fact-Checking Standards Network (EFCSN).

## Methodology

To test these hypotheses, we analyze all fact-checks performed on Spanish political actors by Newtral Fact-Checks (<https://www.newtral.es/zona-verificacion/fact-check/>) and Maldito Dato (<https://maldita.es/malditodato/>). In total 1418 fact-checks were analyzed, 954 by Newtral Fact-Checks and 464 by Maldito Dato. We analyzed all disinformation verified from October 2018, first month from which the stored disinformation dates back, to March 2023, when this study began.

If the same disinformation appears verified more than once, only the first verification is kept, and all repetitions are removed. The coding was carried out by the three authors of the research.

The results of the reliability test show a good level of agreement among the coders (Lacy et al., 2015), all the variables obtain a Krippendorff's Alpha coefficient above .80.

To check if there are differences in the type of environmental disinformation used (RQ1), we classified the falsehoods according to whether they are in favor (pro-environment) or against (anti-environment) applying environmental measures and fighting climate change.

Fact-checks in which green alarmism, over-activism, or negative environmental screening is present are classified as pro-environmental disinformation. Fact-checks containing climate denialism, inactivism, or greenwashing are coded as anti-environmental disinformation.

In order to verify the ideological differences in the disinformation strategy of the political parties (RQ2), we classified the affiliation of the politicians who disseminate disinformation.

In the study we coded the political parties that obtained political representation in the November 2019 general election, since the resulting political configuration in the Congress of Deputies covers practically the entire period analyzed: Partido Socialista Obrero Español (PSOE, Spanish Socialist Workers' Party), Partido Popular (PP, People's Party), Vox, Unidas Podemos (UP, United We Can), Ciudadanos (Cs, Citizens), Esquerra Republicana de Catalunya (ERC, Republican Left of Catalonia), Junst per Catalunya (JxCAT, Together for Catalonia), Más País (Más País, More Country), Partido Nacionalista Vasco (PNV, Basque Nationalist Party), Euskal Herria Bildu (EH Bildu, Basque Country Gather), Candidatura d'Unitat Popular (CUP, Popular Unity Candidacy), Compromís (Compromís, Commitment), Coalición Canaria (CC, Canarian Coalition), Bloque Nacionalista Galego (BNG, Galician Nationalist Bloc), and Partido Regionalista de Cantabria (PRC, Regionalist Party of Cantabria).

Table 1 provides the ideological characteristics of the parties, as well as the number of disinformations they starred in and the percentage of the vote they obtained in the November 2019 General election. The Ideology and Green columns are based on information provided by Seth et al. (2022) in the Chapel Hill Expert Survey Europe (CHES Europe). Ideology data are from the Left-Right Ideology in Spain 2019 variable and Green from the Green party's category of the Party Families variable. The Radical column comes from The Populist Spain country report (Rooduijn et al., 2024), which is based on March's (2011) and Mudde's (2007) definitions of radical left and radical right parties, respectively.

Table 1: Ideological classification, voting percentage and frequency of fact-checks.

Party	Ideology	Radical	Green	Vote %	Environmental fact-checks (%)	Total fact-checks (%)
PSOE	Left			28.00	9 (13.4)	332 (23.4)
PP	Right			20.81	32 (47.8)	517 (36.5)
Vox	Right	x		15.08	9 (13.4)	177 (12.5)
UP	Left	x		12.97	3 (4.5)	131 (9.2)
Cs	Right			6.80	10 (14.9)	127 (9.0)
ERC	Left			3.61	1 (1.5)	48 (3.4)
JxCAT	Right			2.19	0 (0)	43 (3.0)
Más País	Left		x	1.68	2 (6)	14 (1.0)
PNV	Right			1.56	0 (0)	1 (0.1)
EH Bildu	Left	x		1.14	0 (0)	8 (0.6)
CUP	Left	x		1.02	1 (1.5)	8 (0.6)
Compromís	Left		x	0.73	0 (0)	1 (0.1)
CC	Right			0.51	0 (0)	6 (0.4)
BNG	Left	x		0.5	0 (0)	1 (0.1)
PRC	Left			0.28	0 (0)	4 (0.3)

<b>Total</b>					<b>67</b>	<b>1418</b>
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Source: Elaborated by authors based on CHES Europe (Seth et al., 2022) and PopuList (Rooduijn et al., 2024)

To test the volume of environmental disinformation in the political discourse (RQ3), we coded the fact-checks that are related to climate change and the environment. Concern about environmental issues has remained below 2% in the polls for almost five years analyzed (CIS, 2019, 2020, 2021, 2022, 2023): 0.8%, 1.3%, 0.7%, 1.9% and 1.5%. Thus, we consider the mean of these values ( $M = 1.5\%$ ) as the reference to assess the importance of this issue in the public and compare it with the presence of this issue in the disinformation discourse of Spanish political parties.

The fact-checks are also sorted by their date of publication, in order to determine whether the volume of disinformation is higher during the weeks leading up to the European Parliament election (H1), held on May 26, 2019.

## Results

Table 2 shows the frequency of disinformation according to party and type (RQ1). The Chi-square test reveals that there is a statistically significant association between party ideology and the type of climate disinformation used [ $\chi^2(24, N = 67) = 55.19 p < .001$ ]. Nonetheless, the results should be interpreted with caution because there is a high number of cells with a value of 0.

Table 2: Number of environmental disinformation by party and type.

	Party										Total					
	Left regionalist		Más País		UP		PSOE		Cs				PP		Vox	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%		
Inactivism	0	0	0	0	0	0	2	22	6	60	17	53%	8	89	33	49
Screening	2	100	2	100	2	67	1	11	4	40	3	9	0	0	14	21
Greenwashing	0	0	0	0	0	0	4	44	0	0	9	28	0	0	13	19
Denialism	0	0	0	0	0	0	0	0	0	0	3	9	1	11	4	6
Over-activism	0	0	0	0	1	33	2	22	0	0	0	0	0	0	3	4,5
Alarmism	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	2	100	2	100	3	100	9	100	10	100	32	100	9	100	67	100

Parties are ordered from left wing to right wing regarding their ideological stance (Seth et al., 2022). The types of environmental disinformation are listed in order of highest to lowest frequency. Source: Elaborated by authors.

The results reveal that almost three quarters of the disinformation is anti-environmental (74.7%). The most common type of environmental disinformation is the use of falsehoods to promote climate inactivism, present in almost half of the fact-checks. The case above, where the negative consequences of green policies are criticized (Newtral, 09/01/2022), is a good example of this type of anti-climate disinformation.

It is followed by negative environmental screening, with one-fifth of the disinformation focused on attacking the opponent's green reputation, such as statements by UP politicians falsely accusing conservative parties of going against environmental laws (Newtral, 26/07/2022).

With a similar percentage, we find greenwashing, with disinformation aimed at improving the green reputation of the parties, such as the claims of PSOE (Newtral, 20/05/2022) and PP (Newtral, 11/09/2019) to be pioneers in taking environmental measures.

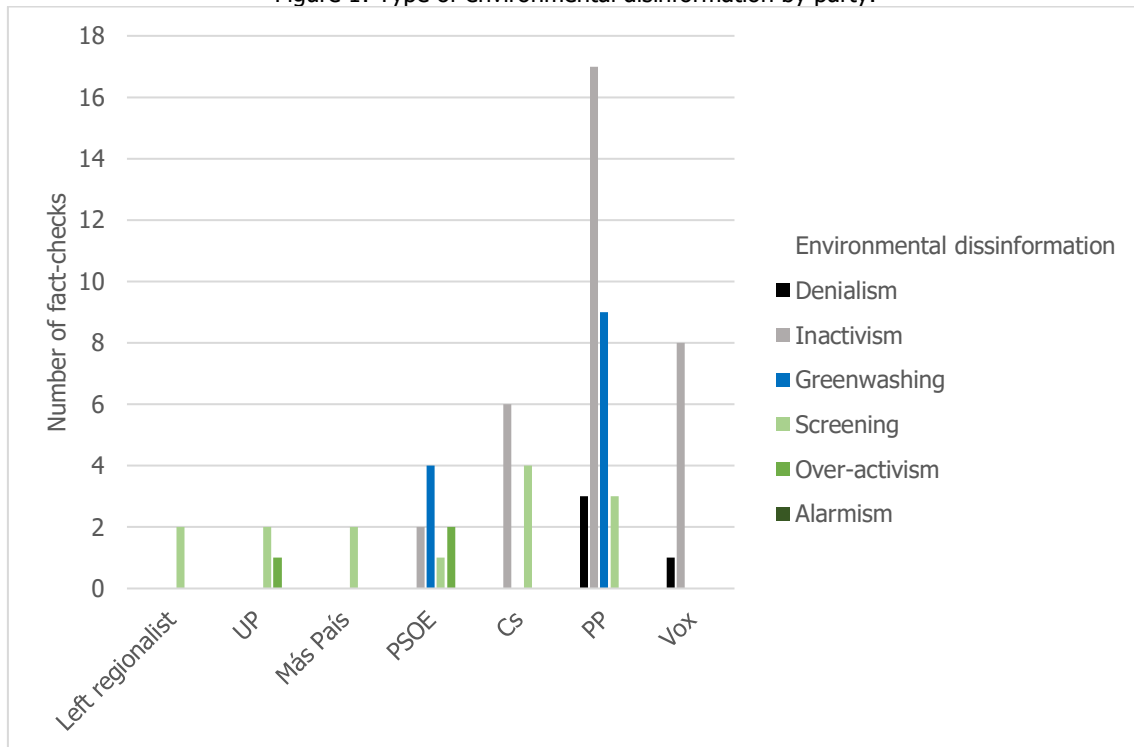
Denialism appears only in a residual form and represents only 6% of environmental disinformation, such as statements by PP politicians denying the harmful effects of pollution (Maldita, 03/01/2020) or accusing climate experts of being alarmists (Maldita, 08/12/2021).

Over-activism is a type of pro-environmental disinformation that is hardly used. These are false information in which politicians of the incumbent PSOE claim that other European countries are ahead in green actions (Newtral, 21/11/2018, 03/11/2020) and are used as an argument to justify the need to implement more ambitious policies. Finally, it should be noted that no alarmist disinformation exaggerating the consequences of climate change or environmental degradation has been detected in the study.

If we focus on the differences between parties, we observe a marked ideological bias (Figure 1). The three conservative parties are the leaders in environmental disinformation, with almost two thirds of fact-checks. From right to left, Vox is characterized by using exclusively anti-environmental disinformation, such as denialism and inactivism. The PP leads the ranking and is the party that uses the most different types, especially inactivism, greenwashing and denialism, although it also attacks left-wing adversaries in power with negative environmental screening (Maldita, 17/07/2019), in order to degrade their reputation as green policy managers. Thus, its disinformation strategy includes elements both against and in favor of environmental policies.

The liberal Cs also uses a hybrid strategy, in which it combines falsehoods about the negative effect of the green policies implemented and about environmental mismanagement. The incumbent PSOE focuses its strategy on disguising its environmental reputation through greenwashing and environmental inactivism disinformation, as when it justifies not prioritizing the implementation of bicycles as an alternative to the problems of sustainable mobility in big cities (Newtral, 07/06/2022). However, he also incorporates pro-environmental disinformation, where he criticizes the low environmental commitment in the territories where he is in opposition (Newtral, 03/18/2022) or exaggerates green measures implemented in other administrations to justify his actions when in government (Newtral, 11/21/2018).

Figure 1: Type of environmental disinformation by party.



Note: Parties are ordered from left wing to right wing regarding their ideological stance (Seth et al., 2022).  
Source: Elaborated by authors.

In the rest of the parties further to the left, with a stronger commitment to environmentalism, we find a low volume of environmental disinformation, which in all cases is favorable to increasing green measures. The scarce disinformation of these parties is focused on criticizing through falsehoods the inaction in environmental policies of political adversaries (Newtral, 28/12/2022), the blocking of green policies of the Spanish State (Maldita, 04/11/2019), as well as exaggerating the measures put in place in other administrations in terms of renewable energies (Newtral, 11/04/2022).

Table 3 shows the frequency of fact-checks according to the party involved in the disinformation and the topic. The results reveal that climate disinformation occupies a marginal place in the disinformation strategy of Spanish political parties (RQ3). Only 4.7% of the disinformation analyzed focused on falsehoods related to the environment or climate change. Although this is a low percentage, it is worth noting that the interest in this topic in Spanish society is even lower, barely 1.5% (CIS, 2019-2023). Also note that the overall percentage of climate disinformation (beyond that disseminated by political actors) is 16% (Gallardo-Camacho et al., 2024).

The Chi-square test confirms that the differences between political parties are statistically significant [ $\chi^2(6, N = 1418) = 15.37, p < .05$ ]. In general, environmental disinformation is higher in conservative parties and lower in progressive parties. However, the frequency is significantly stronger in the main opposition party, the conservative PP, which is the source of almost half of all disinformation focused on the environment. While the incumbent party, the socialist PSOE, is the one that presents a significantly lower frequency of climate disinformation. Therefore, we can affirm that Vox uses environmental disinformation in its discourse (5.1% of its fact-checks), although to a lesser extent than the other right-wing parties (RQ2).

Table 3: Number of fact-checks by party and topic.

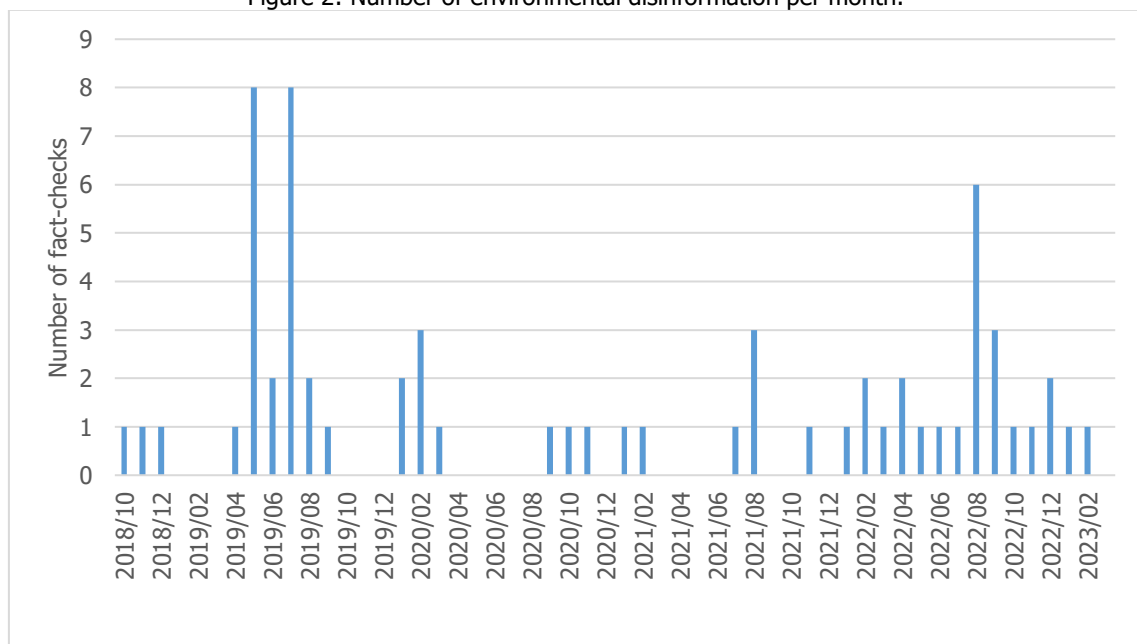
	Party												Total			
	Left regionalist		UP		Más País		PSOE		Cs		PP				Vox	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Environment	2	2%	3	2	2	14	9	3	10	8	32*	6	9	5	67	5
Other topics	118	98%	129	98	12	86	322*	97	117	92	485	94	168	95	1351	95
Total	120	100	132	100	14	100	331	100	127	100	517	100	177	100	1418	100

\*  $p < .05$ . Parties are ordered from left wing to right wing regarding their ideological stance (Seth et al., 2022). Source: Elaborated by authors.

Figure 2 reports the number of fact-checks on environmental disinformation during the 36 months analyzed. H1 is also confirmed: it is clearly observed that the highest peak is generated in May 2019, during the European election campaign, where parties such as the liberal Cs criticize with falsehoods the mismanagement of green policies of ecologist parties (Maldita, 24/5/2019), an example of environmental screening.

Peaks are also evident during the failed investiture session in July 2019 and, to a lesser extent, in the autonomic electoral processes. Another moment when the number of climate disinformation intensifies is during the summer of 2022, when the three center-right parties begin to spread false information regarding the measures adopted in August by the PSOE-UP coalition government to counteract the consequences of the energy crisis caused by the invasion of Ukraine in February of that year. In this context, Vox uses false information to criticize the closure of nuclear power plants during the energy crisis (Newtral, 09/01/2022), an obvious example of climate inactivism disinformation, where disinformation is used to highlight the negative effects of environmental measures.

Figure 2: Number of environmental disinformation per month.



Source: Elaborated by authors.

**Conclusion**

The main finding of this study is the presence of pro-environmental disinformation in the discourse of Spanish political parties (RQ1). Although it only represents a quarter of all environmental disinformation, the presence of negative environmental screening and over-activism can be counterproductive. A major argument within climate change deniers is that environmental activists are “hysterical alarmists” (Coan et al., 2021; Treen et al., 2020) and “doom-mongers” (López, 2022). This claims often veer into conspiracy theories (de Nadal, 2024). Thus, the presence of false information in the pro-environment discourse of left-wing political parties may provide ammunition to fuel these suspicions. If the aim is to foster greater awareness of the desirability of implementing environmental measures, the focus should be on combating all types of disinformation, especially the pro-environmental one.

However, most disinformation is anti-environmental in nature, with false information to justify inaction by criticizing the negative effects of environmental policies (inactivism) and to boast a false commitment to environmental issues and sustainability goals (greenwashing). The study also reveals a positive result: there is no green alarmist disinformation at all, and climate denialism is hardly used. In line with other studies (Coan et al., 2021; de Nadal, 2024; Forchtner & Lubarda, 2022), it seems that evidence denialism is on the wane. Instead, anti-environmentalism has become more pragmatic and prevails via inactivism.

Findings also show a higher volume of environmental disinformation in the right-wing bloc, led by the main opposition party, the conservative PP. This is in line with studies that indicate that climate change denial and skepticism are much more widespread amongst right-wing parties (Björnberg et al., 2017). In the parties located at the ideological extremes, the valence of disinformation is aligned with the type of party, with exclusively pro-environmental disinformation in the parties further to the left and anti-environmental disinformation on the far right. In the moderate parties, an ambivalent strategy is observed, which combines anti- and pro-environmental disinformation according to the institutional position of the party: when they are in opposition, they criticize the negative effects of green policies and when they are in government, they make up their environmental performance.

Regarding the role of the radical right in environmental disinformation (RQ2), the results reveal the presence of this type of disinformation in Vox, although it is the party within the right-wing sphere that least disinform about the environment. Although several studies note the presence of anti-environmental disinformation in the discourse of these parties (Forchtner et al., 2018; Hameleers, 2020), the results point to Vox being among the European radical right parties that maintain a disengaged or cautious attitude on climate change (Schaller & Carius, 2019; Schwörer & Fernández-García, 2023). This attitude might be linked to the lack of interest in environmentalism in Spain (CIS, 2023) or to a cautious strategy in which environmental disinformation is not disseminated directly by the party itself but by an alternative influence network orbiting Vox (Applebaum, 2019; de Nadal, 2024).

Our analysis illustrates that environmental disinformation occupies a marginal position in the strategy of Spanish political parties (RQ3), with a rate of occurrence lower than the overall flow of environmental disinformation verified by fact-checkers (Gallardo-Camacho et al., 2024). This seems to be a positive result, since politicians are suspected of being leaders in the spread of environmental disinformation (Hassan et al., 2023). The low volume of environmental disinformation can help to face climate challenges in a context free of lies and falsehoods. Nevertheless, if we consider that the volume of disinformation on an issue reflects its relevance in the public debate, the results reveal the low interest of Spanish political parties in tackling this problem. This is consistent with the low interest in environmental issues of the citizenry (CIS,

2023) and the media (Fernández-Reyes, 2010; Fernández-Reyes et al., 2015; León, 2013; Teso & Lozano, 2022).

In this sense, political parties seem to link the importance of environmental issues to the European political sphere, if we take into consideration the increase in environmental disinformation during the 2019 European Parliament election campaign (H1). Political competitors may incorporate the concerns of the public at European level, increasing the visibility of environmental issues in their discourses and thus forcing radical right parties to address the issue (Schwörer & Fernández-García, 2023). Green policies are perceived as a task to be faced by the European Union, both by Spanish citizens and by Spanish parties. It seems that the environmental disinformation strategy is adapted to the electoral context, but it also serves an instrumental function when environmentalism enters the public agenda.

### **Limitations**

The main limitation of this research is that the analysis is based on fact-checks carried out by two fact-checkers who follow journalistic rather than academic criteria. Thus, the results of the study may reflect the bias that may have occurred when prioritizing their resources in the selection of topics and the protagonists of the misinformation. Moreover, the analysis focuses on a single country; an international perspective would provide more solid and extrapolable conclusions. Despite these limitations, we consider that the results provide an overview of the environmental disinformation landscape, covering a period of almost five years. Future studies should delve deeper into the scope of these disinformations, analyzing the capacity of amplification of the disinformation poured by each political faction. It is possible that the followers of each party amplify disinformation through social networks or other media (Freelon et al., 2020) in a way that is not necessarily proportional, in line with Rao et al. (2022), who claim that the highly polarized users of the most extremist parties are the perfect allies to amplify disinformation messages. In this way, extremist political actors could reach a larger number of target audiences. Future studies should also include the testimony of the fact-checkers, in order to enrich the analysis with their experience regarding the issue addressed.

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