



Article

# Holding Sustainability Promises in Politics: Trends in Ecosystem and Resource Management in Electoral Party Manifestos

Gonçalo Rodrigues Brás <sup>1,2,\*</sup>, Ana Isabel Lillebø <sup>3</sup> and Helena Vieira <sup>4</sup>

- <sup>1</sup> DINÂMIA'CET-Iscte, Iscte—Edifício 4, Av. das Forças Armadas, 1649-026 Lisbon, Portugal
- School of Management and Technology, Santarém Polytechnic University, Complexo Andaluz, 2001-904 Santarém, Portugal
- <sup>3</sup> ECOMARE, Centre for Environmental and Marine Studies, Department of Biology, Universidade de Aveiro, Campus Universitário de Santiago, 3810-193 Aveiro, Portugal; lillebo@ua.pt
- <sup>4</sup> Centre for Environmental and Marine Studies, Department of Environment and Planning, Universidade de Aveiro, Campus Universitário de Santiago, 3810-193 Aveiro, Portugal; helena.vieira@ua.pt
- \* Correspondence: goncalo.bras@iscte-iul.pt

#### **Abstract**

Achieving Sustainable Development Goals (SDGs) remains a critical global challenge. This study analyses the environmental priorities related to SDGs 12, 14, and 15—interlinked and focused on responsible production and consumption, life below water, and life on land respectively—reflected in political party manifestos from the 2019, 2022, and 2024 Portuguese general elections, assessing their alignment with the SDGs and broader European political ideologies. A content analysis reveals significant disparities in attention across these goals, with SDG 15 receiving greater prominence than SDGs 12 and 14. Findings highlight the influence of political ideology, showing left-wing parties emphasize all three SDGs more consistently than their right-wing counterparts. These results underscore the need for a more balanced and comprehensive political commitment to sustainability. By exploring the interplay between national and European political agendas, this research provides valuable insights for aligning environmental policies with the UN 2030 Agenda and fostering transformative change in sustainability governance.

Keywords: elections; SDG 12; SDG 14; SDG 15; sustainable policies; political agendas



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# 1. Introduction

The Millennium Development Goals (2000–2015) and their evolution into the Sustainable Development Goals (SDGs; 2015–2030) aim to address the world's most pressing challenges by 2030, covering economic, social, and environmental dimensions. Out of the 17 SDGs, SDG 6 (Clean Water and Sanitation), SDG 12 (Responsible Consumption and Production), SDG 14 (Life Below Water), and SDG 15 (Life on Land) share several commonalities, as they all focus on ensuring environmental sustainability and promoting the responsible use of natural resources [1]. However, we draw particular attention to those directly related to the sustainable management of ecosystems and natural resources: SDG 12 (responsible consumption and production), SDG 14 (life below water), and SDG 15 (life on land) [2]. According to Reid, et al. [3], 'Healthy Ecosystems (Goals 14–15), drawn on by responsible consumption and production (Goal 12), can lead to energy, food and water security as immediate outcomes'. Therefore, we aim to concentrate our specific focus on the SDGs themselves rather than their broader outcomes. This approach prevents

our analysis from becoming overly broad and losing focus on sustainable ecosystem and natural resource management, as exemplified by the inclusion of SDG 6.

SDGs 14 and 15 are interconnected and play a crucial role in promoting biodiversity conservation and the management of natural resources on our planet. Both these SDGs are foundational for a paradigm shift towards novel sustainable development models, such as the bioeconomy, underpinning the blue economy (SDG 14) and fostering a sustainable terrestrial bioeconomy (SDG 15). Additionally, the development of the bioeconomy in general greatly enhances other SDGs such as SDG 12 [4]. Cernev and Fenner [5] advocate that responsible consumption and production (SDG 12) can enhance resource efficiency by minimizing not only waste, through recycling, reusing materials, and promoting more efficient industrial processes, but also by supporting biodiversity (SDGs 14–15) as these are less exploited under this model. Thereby, whether SDG 12 influences or is influenced, it can be associated with the conservation and sustainable use goals of SDGs 14–15. In the end, they are connected through their emphasis on sustainable exploitation and management of natural resources.

However, holistic approaches to environmental sustainability that address both marine and terrestrial ecosystems together with their resources are scarce in the literature, possibly due to sectoral focus or the complexities of interactions and compromise between SDGs targets as they are intended to be complementary and not conflicting. That is why some authors claimed for more integrated approaches [6]. Either way, policy plays a pivotal role in setting a sustainable agenda that favours this holistic approach [7,8]. Various actors are involved in sustainable policy-making, including individual and collective entities like academia and civil society organizations, as well as key democratic institutions such as national governments [9] and national parliaments [10]. However, 'this field still lacks studies of political institutions exploring how the 2030 Agenda is brought into national policy-making processes' [11]. To bridge this gap, electoral manifestos offer valuable insights into the evolving agendas of environmental policies [12].

Portugal presents a compelling case study within the European sustainability landscape due to not only its singular geographical location between three continents (Europe, Africa, and the Americas) but also its unique combination of environmental achievements, persistent challenges, and distinctive natural resource governance structure. It possesses the largest maritime Exclusive Economic Zone (EEZ) in the European Union [13], placing sustainable ocean management (SDG 14) at the forefront of national resource governance. On the other hand, 86% of Portuguese forests are privately owned [14], unlike in many other countries where forests are typically state-owned or managed as public lands. Additionally, Firoiu, et al. [15] revealed that Portugal has a low achievement rate for SDG 12, facing significant challenges in fully adopting circular economy principles compared to some other European nations, particularly in the private sector [16]. Regarding the 2030 Agenda, Lafortune, et al. [17] have only identified SDGs 12, 14, and 15 as 'major challenges' in Portugal. While Portugal has developed comprehensive environmental policies, including its 2017 Circular Economy Action Plan and 2045 carbon neutrality targets, the country still faces difficulties in achieving SDG 12, as well as several challenges in fully meeting SDGs 14 and 15. Furthermore, limited research still remains on how these sustainability commitments are reflected in political agendas, and Portugal's recent political instability—with successive general elections in 2019, 2022, and 2024—offers a unique opportunity to examine diverse electoral manifestos and evolving environmental policies within a short timeframe.

In this context, the aim of this paper is to analyse the manifestos of the Portuguese political parties in the general elections to better understand their environmental policy agenda within the framework of SDG 12, SDG 14, and SDG 15. Given its reliability in comparing electoral manifestos [18,19], we conduct a content analysis of manifestos

from the Portuguese general elections in 2019, 2022, and 2024. The exploratory nature of this study, vital for advancing science [20], seeks to address specific research questions. Moreover, this study addresses the noted absence of research on how the 2030 Agenda is brought into national policy-making processes by political institutions [21], contributing essential insights into the political dimensions of sustainability transitions in a country that is facing persistent challenges in circular economy implementation [22] and marine [23] and terrestrial ecosystem management [15].

To summarise, we offer insights aimed at refining the environmental political agendas, categorised either by ideology on a spectrum from left to right or by their affiliations within the political groupings of the European Parliament. Subsequently, we reinforce that our contribution seeks to enhance the (weak) theoretical framework connecting political positions to the 2030 Agenda. This broadens knowledge across the left-to-right political spectrum and explores how European party affiliations address SDGs, providing valuable insights into pathways for achieving the 2030 Agenda.

#### 2. Theoretical Framework

#### 2.1. Portuguese Political Context and Partisanship

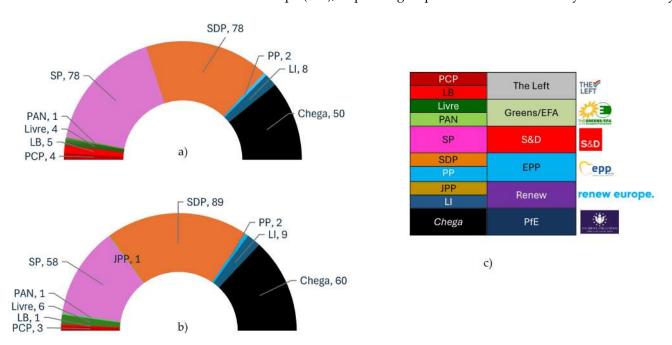
Portugal has undergone significant democratic development since the Carnation Revolution on 25 April 1974, which marked the beginning of the country's transition to democracy and its inclusion in the global "third wave" of democratization [24]. Portugal adopted a semi-presidential system with the 1976 constitution, specifically the 'president-parliamentary' type [25], which is characterized by three main branches: Government, Parliament, and the Presidency [26]. Within this system, the Government, accountable to both Parliament and the Presidency, plays a central role in policy formulation, with the Prime Minister being the key figure, along with their cabinet, in initiating policies across various sectors [27,28].

Portugal's political landscape features a diverse array of parties, yet their clearly defined ideological positions allow for a distinct separation between left and right-wing groups [29] (JPP (Juntos Pelo Povo) resists a strict left or right-wing label, its policy positions and affiliations suggest a centrist orientation with regionalist priorities. As a new entrant in the anticipated 2025 general elections, JPP falls outside the scope of this study (2019, 2022, and 2024 general elections). On the left wing, the Socialist Party (SP) stands out as a dominant force [30], alongside the Portuguese Communist Party (PCP), the Left Bloc (LB), and more recently, Livre [31] and the People-Animals-Nature (PAN) party (PAN does not strictly identify as either left wing or right wing, though various authors often associate it with the left [32-34]. On the right wing, the Social Democratic Party (SDP) and the CDS-People's Party (PP) have historically played significant roles [35], with the Liberal Initiative (LI) and the radical right party called Chega reaching the Parliament after the 2019 elections [36]. Since the establishment of Portuguese democracy, all Prime Ministers have come from either the SP or the SDP. The SP, commonly recognized as centerleft, emphasizes social welfare, public services, and redistributive policies, while the SDP, identified as center-right, focuses on economic growth, reducing state intervention, and promoting private sector development [37].

The SP has been in power for the last eight years under the leadership of António Costa, who became the fourth President of the European Council. However, the 2024 general election marked a shift, resulting in a right-wing coalition between the SDP and the PP. This trend was reinforced in the anticipated general elections of 18 May 2025, which also saw a significant rise in support for the far-right party *Chega*. In 2024, Luís Montenegro won the election and was once again appointed to form a minority government. In addition, Portugal has a President supported by both SDP and PP, and the Parliament's composition

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is illustrated in Figure 1 (from left to right-wing spectrum). Portuguese parties retain their affiliations with European parliamentary groups, as shown in Figure 1. PCP and LB are aligned with The Left group in the European Parliament (The Left), while *Livre* and PAN are associated with the Group of the Greens/European Free Alliance (Greens/EFA). SP relates to the Group of the Progressive Alliance of Socialists and Democrats in the European Parliament (S&D), and SDP and PP are part of the Group of the European People's Party (EPP). JPP and LI are affiliated with Renew Europe Group (Renew), and *Chega* is associated with Patriots for Europe (PfE), a splinter group from the former Identity and Democracy.



**Figure 1.** (a) The distribution of deputies (number) among the parties in the Portuguese Parliament in the 2024 general election, (b) the distribution of deputies (number) among the parties in the Portuguese Parliament in the 2025 general election, and (c) Portuguese parties and their European affiliations. Data source: General Secretariat of Internal Administration and European Parliament.

#### 2.2. Electoral Manifestos

Government Public policies and initiatives are outlined in the government programme, which is largely shaped by the electoral manifesto of the winning party or coalition [38]. As a key guide for a campaign and an essential tool in political science [39], an electoral manifesto can be seen as a promissory agenda of the winning party or coalition, designed to adapt to shifts in public concerns and to address unexpected events and new challenges as they arise [40]. Beyond external pressures, minority governments are generally more open to negotiating with other parties on additional policies for implementation [41]. As shown by Krauss and Thürk [42], minority governments that lack formal support agreements with non-cabinet parties face a significantly higher risk of early termination.

While opposition manifestos are important in any government setup, their role becomes particularly significant in a minority government as it can influence policy outcomes and the legislative process through negotiation, public advocacy, and strategic positioning [43]. In Portuguese general elections, Borghetto and Belchior [12] show 'that electoral agendas drive policymaking', while Belchior [44] argues that 'political parties tend to deliver on their campaign promises'. In this scenario, the compatibility of party goals and the specific conditions of partisan bargaining influence the government's negotiating power, as well as the incentives for non-cabinet parties to either cooperate or obstruct the process are crucial [45].

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Electoral manifestos, whether from opposition or ruling parties, are central to shaping policymaking across multiple domains [46,47]. This has been evident in studies examining the relationship between political commitment and environmental sustainability [48–50], as well as in the context of some specific SDGs: SDG 5 [51], SDG 7 [52], SDG 13 [53,54]. Considering this and recognizing that sustainable development has become an increasingly prominent topic [55], we aim to determine whether the manifestos indicate or not a positive evolution, leading us to the following research questions: [RQ1] What is the evolution of SDG 12, SDG 14, and SDG 15 as reflected in electoral manifestos? Moreover, [RQ2] Do electoral manifestos maintain a balance between SDG 12, SDG 14, and SDG 15?

SDGs exhibit complex synergies and trade-offs, as documented in foundational frameworks on SDG mapping and policy coherence [56,57].

On the one hand, SDGs 14 and 15 are crucial for biodiversity conservation and are interconnected through their emphasis on sustainable natural resources management [58]. These goals are foundational for promoting sustainable development models like the bioeconomy, with SDG 14 supporting the blue economy and SDG 15 fostering a sustainable green bioeconomy. The growth of the bioeconomy also enhances other SDGs, particularly SDG 12 [4]. According to Cernev and Fenner [5], responsible consumption and production (SDG 12) can boost resource efficiency by minimizing waste through recycling, reusing materials, and improving industrial processes, which in turn supports the conservation efforts of SDGs 14 and 15. Therefore, SDG 12 is both influenced by and contributes to the goals of SDGs 14 and 15, highlighting their interconnectedness in promoting the sustainable use of natural resources.

On the other hand, some authors contend that there is no correlation between SDG 14 and SDG 15 [59], or that only one target of SDG 14 (target 14.5) shows a positive correlation with SDG 15 [60]. Fonseca, Domingues and Dima [59] also suggest that SDG 12 is negatively correlated with SDG 14 or not correlated with SDG 15. Additionally, Pradhan, et al. [61] argue that both SDG 12 and SDG 15 function as trade-offs, where progress in both SDG 12 negatively impacts the progress of other SDGs or vice versa.

The ongoing debate among academics regarding the synergies and trade-offs between SDGs raises the following research question: [RQ3] Is there any correlation between SDG 12, SDG 14, and SDG 15 as reflected in electoral manifestos?

Despite the importance of electoral manifestos as drivers of policy, the SDGs in general can be taken up as an element of tension in the political arena, with various stakeholders—such as activists, civic movements, industry groups, and environmental organizations—playing key roles in influencing sustainable policies [62–64].

#### 2.3. Partisanship and SDGs

Ideological orientation has long been recognized as a fundamental determinant of political behaviour, particularly regarding environmental and sustainability policy preferences [65]. In fact, parties' ideologies can have a role in the way and extent to which SDGs are achieved [66,67], while political partisanship significantly influences sustainable and environmental attitudes [68]. Table 1 synthesizes dominant scholarly perspectives on political ideological alignment with SDGs, highlighting unresolved tensions and empirical gaps.

Despite these insights, limited work examines how partisan ideologies translate into specific SDG 12/14/15 commitments in electoral manifestos—particularly in contexts as that of Portugal, where maritime/forest governance complexities intersect with recent political volatility.

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**Table 1.** Summary of literature on partisan differences in SDG prioritization and identified research gaps.

Political Orientation	Key Findings on SDG Engagement	Sources	Gaps/Contradictions
Left Wing	Higher commitment to SDGs; emphasis on social justice, environmental sustainability.	[48,69–73]	Limited studies on SDG 12/14/15 specificity in manifestos; regional focus (e.g., Spain/Italy).
Right Wing	Focus on tech-driven solutions, waste management, and private-sector partnerships; variable environmental concerns.	[74–77]	Understudied SDG 12/14/15 in manifestos; contradictions in climate attitudes.
Far Right	Historically climate sceptics; recent engagement via eco-nationalism but obstructive to EU agendas.	[78–83]	Minimal research on SDG integration in manifestos (esp. marine/terrestrial goals).
Cross-ideology	Mixed evidence: No left-right differences in local SDG implementation (Spain/Italy); position-dependent adjustments.	[84,85]	Contextual variability; lack of longitudinal manifesto analysis.

Some authors pointed out that left-wing parties tend to be more committed to SDGs compared to their right-wing counterparts [48,73]. This trend can be attributed to the left wing's general association with positive attitudes toward equality, redistribution, government intervention, social justice [86,87], and progress in gender equality [69]. Furthermore, individuals with a left-wing political orientation have been associated with more favourable attitudes toward environmental sustainability [71,72]. Recently, some academics reinforce this linkage: European left-wing and Green parties continue to frame climate action and sustainable development as core elements of their ideological identity [88]. At the local level, cities with left-wing leadership and a higher number of Green Party representatives on the city council are more likely to apply for the European Green Capital Award [89].

While right-wing parties may prioritize different aspects compared to left-wing parties, their policies and characteristics can still play a significant role in advancing certain SDGs. For example, in the environmental domain, individuals with right-wing orientations often express significant concern about the increasing amount of waste and its treatment processes [74]. Additionally, right-wing parties often promote the adoption of new technologies in various countries [75] and facilitate green innovation, as evidenced by a study covering OECD nations [76]. Right-wing parties, recognized for advocating private sector involvement and market dynamics, can support public–private partnerships and foster an enterprise ecosystem that enhances sustainable development, with implications in the management of water, energy, and food [77].

Despite these findings, some authors observed no differences between the political spectrum (left-right) in the implementation of SDG policies at the local level in Spain and Italy [84]. Other authors have argued that both political wings adjust their sustainability positions depending on whether they are in government or in opposition [85]. However, the manner in which these ideological commitments are translated into electoral discourse, particularly regarding SDGs 12, 14, and 15, remains underexplored in the Portuguese context. [RQ4] Do left-wing and right-wing electoral manifestos differ in their coverage of SDG 12, SDG 14, and SDG 15?

Different sustainability agendas exist across EU political groups. The approach to sustainability varies significantly depending on the ideological orientation of each political group [90]. General areas and topics to explore for relevant research on the differences in sustainability agendas across EU political groups include examining their strategic

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guidelines. As sustainable and environmental issues gain popularity [55], some authors have identified a relationship between populism and sustainable development in various countries [91]. In this context, although there is a well-documented ideological connection between the far right and the natural environment [92], environmental and sustainability issues have increasingly shifted to being inclusive themes championed by the left wing [93]. Consistent with the positions of some conservative parties [94,95], there is substantial evidence that far-right parties and their supporters often deny, or are skeptical of, the existence of anthropogenic climate change [78–80]. However, in recent years, far-right parties in Europe have started to engage with sustainability issues, defending eco-nationalism, eco-fascism, or far-right ecologism [81,82]. Despite this shift, they remain significant obstacles to the EU's sustainable development agenda [83]. Whether driven by opportunism or by party ideology (which may be more or less aligned with sustainability themes), the question remains: [RQ5] Do electoral manifestos differ based on the European party affiliation concerning SDG 12, SDG 14, and SDG 15?

#### 3. Materials and Methods

#### 3.1. Sample and Research Design

This study draws upon a purposive sample of 24 electoral manifestos published by Portuguese political parties during the 2019, 2022, and 2024 general elections. The inclusion criteria were restricted to parties that secured parliamentary representation and published a distinct electoral manifesto for at least one of the referenced election cycles. The total corpus encompasses approximately 4000 pages, with an average length of 164 pages per manifesto. Parties that did not meet these criteria, such as PEV and PP in particular years, were excluded from the analysis. In cases where coalitions were formed (e.g., PP's participation in a coalition led by SDP in 2024), the shared manifesto was evaluated in continuity with prior individual submissions. This dataset constitutes the empirical foundation for the subsequent content analysis of sustainability-related themes, particularly those linked to SDGs 12, 14, and 15.

The electoral manifestos were analysed through content analysis, a method still frequently employed to compare electoral manifestos across various domains [18,19,96]. Rather than conducting an inductive content analysis, a deductive approach is more suitable to test or validate existing theories, knowledge, or pre-established frameworks [97]. As the UN SDGs are based on existing knowledge and an established framework [98], the option falls on a deductive approach. This approach offers a clear structure and focus through predefined categories, promoting consistency in coding and interpretation by using established frameworks [99].

Given our focus on quantitative data analysis and research question answering, we employed a summative and latent content analysis strategy [100], diverging from the thematic analysis approach advocated by Nowell, et al. [101]. Figure 2 provides a visual representation of our deductive methodological framework, outlining the steps of summative and latent content analysis—i.e., a partial Latent Projective Content Analysis.

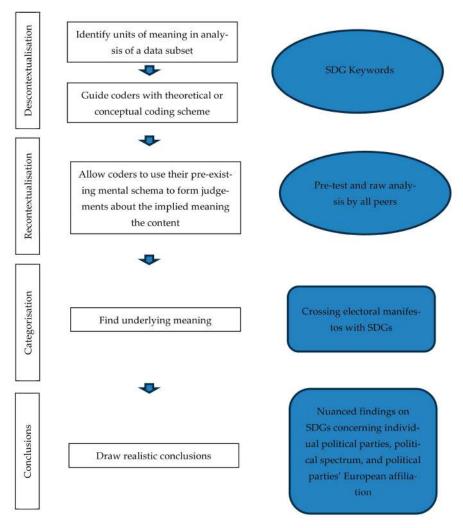


Figure 2. Latent Projective Content Analysis [102]. Source: Adapted from Kleinheksel, et al. [100].

# 3.2. Coding Scheme

In accordance with the methodology outlined by Villiger, et al. [103], the coding scheme was subjected to a pre-test using a sample of Portuguese electoral manifestos from four randomly chosen parties spanning three years. To guarantee the reliability and comprehensiveness of the analysis, peer review of the raw data was conducted in line with the suggestions of McDonald, et al. [104] and Neuendorf [105]. To ensure robustness, two trained coders independently applied the coding scheme to a randomly selected subset of five electoral manifestos (20.8% of the corpus). Inter-coder reliability was quantified using Cohen's kappa ( $\kappa$ ), yielding an average score of 0.843(3) ( $k = \frac{P_0 - P_e}{1 - P_a}$ , where  $P_0$  is the observed agreement, and  $P_e$  is the expected agreement by chance. Per-SDG values: SDG 12:  $\kappa = 0.83$ ; SDG 14:  $\kappa = 0.87$ ; SDG 15:  $\kappa = 0.83$ ) across all SDG categories, indicating 'almost perfect' agreement according to contemporary benchmarks [106]. Discrepancies were resolved through consensus discussion with adjudication by a third researcher when needed. The coding scheme to the content based on the keywords in the fields 'UoA Text-Mining Results (global publications)' AND 'UN SDG Targets and Indicators' provided by Wang, Kang and Mu [102] was applied for SDG 12, 14, and 15—see Appendix A (Tables A1-A3 Among other examples, terms such as 'Yellow River Delta' and 'Baltic Sea Action Plan' were excluded, as they are not applicable to the Portuguese context). In accordance with the guidelines of Erlingsson and Brysiewicz [107], a uniform coding scheme of up to short keywords per SDG was applied to each electoral manifesto to ensure consistency throughout the study.

#### 3.3. Data Analysis and Procedures

In comparing SDGs aggregated by political spectrum, the results were weighted according to the number of political parties at both the national level (left- or right-wing) and the European level (political groups in the European Parliament). To answer our research questions, we performed comparisons using parametric mean tests, Pearson correlations, and one-way analysis of variance (ANOVA). To validate the use of a parametric approach, we conducted several normality tests for the SDGs, assuming normal distribution of the data. Table A4 suggests that the data follow a univariate normal distribution, enabling the use of parametric procedures. Consistent with Krippendorff [108] application of basic statistical methods in content analysis, these procedures facilitate the systematic analysis of data, enabling the identification of patterns, trends, and differences within the content of electoral manifestos. The majority of the data was analysed using MAXQDA version 24, with additional support from SPSS version 29, R software version 4.2.1, and WordArt.com for specific tasks.

## 4. Results

#### 4.1. Aggregate Results

Regarding descriptives and univariate normality assessment, Table 2 shows the statistics by each SDG in the analysis according to the 24 electoral manifestos.

**Table 2.** Code frequency summary statistics for the evaluation of SDGs in Portuguese electoral manifestos (2019–2024).

SDGs	N	Mean	Minimum	Median	Maximum	SD	Skewness	Kurtosis
12	24	26.29	0	26.0	54	13.08	-0.078	-0.096
14	24	15.88	0	15.50	41	11.65	0.669	0.362
15	24	50.17	1	48.0	142	37.43	0.770	0.132

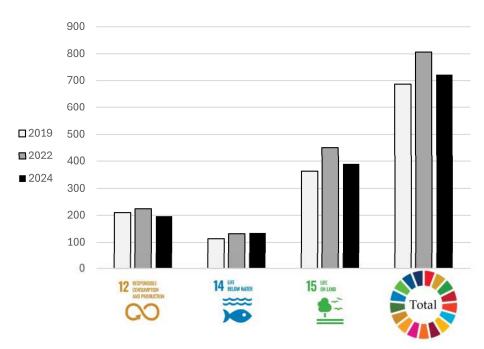
Frequency of coding has significantly more weight for SDG 15 compared to the other remaining SDGs, and more data dispersion across electoral manifestos (SD = 38.19). In summary, concerning the reference values established by George and Mallery [109], where |Sk| > 2 indicates marked asymmetry and |Ku| values > 2 indicate marked kurtosis, none of the variables significantly deviated from univariate normal distribution assumptions.

The data presented in Table A5 provides additional context for Figure 3, which illustrates that the quantity of SDG-related codes in electoral manifestos has remained relatively constant across the three election cycles examined. From a statistical standpoint, this is confirmed by a one-way ANOVA, which shows no statistically significant differences in all analysed SDGs across the electoral years: (F(2,21) = 0.123, p = 0.885 [SDG 12]; F(2,21) = 0.110, p = 0.897 [SDG 14]; F(2,21) = 0.134, p = 0.876 [SDG 15])—see Table A6.

Overall, Figure 3 illustrates a significant disparity, with SDG 15 having around 400 related codes, whereas the remaining SDGs have between 100 and 200 related codes, approximately. This highlights the substantial emphasis placed on SDG 15 in electoral manifestos.

In addition to the observed stagnation of SDGs in electoral manifestos over time, Pearson correlation can be used to understand the linkages between SDG topics covered by each electoral manifesto during the same period. Figure 4 shows a positive and statistically significant correlation between the analysed SDGs in electoral manifestos. According to the correlation strength classifications proposed by Schober, et al. [110], the analysis reveals positive strong associations (correlation coefficients between 0.70 and 0.89) linking SDG 12 with SDG 14, as well as SDG 12 with SDG 15. Additionally, a positive and moderate relationship (correlation coefficients between 0.40 and 0.69) is observed between SDG

14 and SDG 15. In summary, SDG 12, SDG 14, and SDG 15 exhibit moderate-to-strong correlations based on the number of SDG-related codes found in electoral manifestos.



**Figure 3.** Longitudinal analysis of SDGS in all Portuguese political electoral manifestos, regardless of party affiliation.

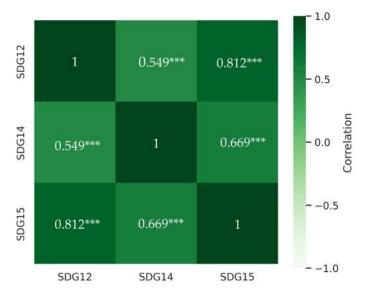
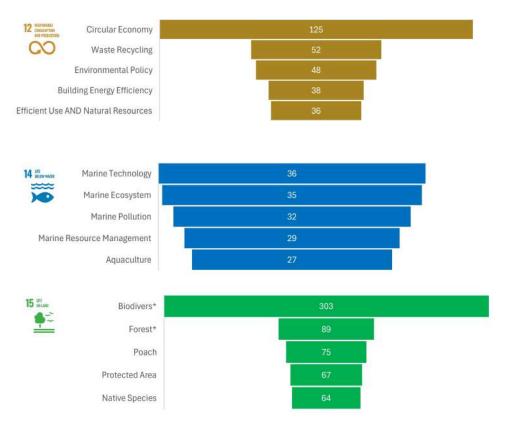


Figure 4. Correlation matrix between SDGs. Notes: \*\*\* indicates statistical significance at the 1% level.

Figure 5 presents the top five most frequent SDG-related codes, representing 47.3% of all codes identified in SDG 12, 41.7% of all codes identified in SDG 14, and 49.7% of all codes identified in SDG 15. For SDG 12, Figure 5 highlights two codes associated with circular processes, two with efficiency, and one general code (Environmental Policy). For SDG 14, Figure 5 presents the top four items related to Integrated Marine Science and Management, with the fifth item focusing on the cultivation of marine life for economic purposes (Aquaculture). For SDG 15, Figure 5 indicates that all five items pertain to conservation efforts.



**Figure 5.** The top five most frequently used SDG-related codes. Note: \* denotes a truncation symbol used to capture all word variations starting with the root.

#### 4.2. Micro and Grouped Results

A more detailed analysis of the overall findings can be achieved by examining the electoral manifestos from three distinct perspectives: (i) individual political parties, (ii) position on the political spectrum (ranging from left wing to right wing), and (iii) Portuguese political parties' European affiliation. This approach allows for a more nuanced understanding of how different political entities and ideologies address the SDGs.

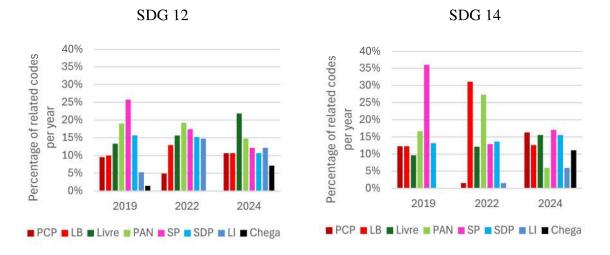
#### 4.2.1. Individual Political Parties

Figure 6 illustrates the fluctuation in the frequency of SDG-related codes (as a percentage of the total for each SDG) found in electoral manifestos throughout the analysed election cycles. An examination of the electoral manifestos reveals significant variations in both initial levels (baselines) and rates of change (slopes) across different parties. These disparities make it challenging to identify consistent trends or draw parallels between certain parties, which in turn increases the needed effort to establish clear patterns or group parties based on similarities in their SDG coverage. Despite the observed volatility in the data, several noteworthy patterns emerge from the analysis of electoral manifestos across the three election periods:

- Livre is the only party showing consistent growth in all SDG-related code frequency across all elections;
- Chega exhibited minimal or no SDG-related codes in 2019 and 2022 but showed an
  increase for SDG 15 and expressive increases for SDGs 12 and 14 in 2024, albeit still at
  relatively low frequencies;
- PAN, despite high SDG-related code frequencies (particularly for SDGs 12 and 15) in 2024, recorded fewer codes across all SDGs compared to 2019;

 SP showed a decrease in SDG-related codes from 2019 to 2024 across all SDGs, with a significant downward trend over the three election periods. However, it led in SDG 14 code frequency in 2024;

- SDP demonstrated the most stable frequency of codes across all SDGs, closely aligning with the average number of frequency codes;
- LB exhibited a concave trend, peaking in code frequency for all SDGs in 2022. A
  decreasing pattern was noted for SDG 12 in 2024, while SDGs 14 and 15 remained
  stable when comparing 2019 to 2024;
- LI is characterized by relatively high frequency coding in SDG 12, contrasting with low frequencies in SDGs 14 and 15, rather than showing a clear trend;
- PCP displayed a convex trend, with lower frequency codes across all SDGs in 2022, but recovered to or exceeded 2019 levels in 2024 (particularly for SDG 14).



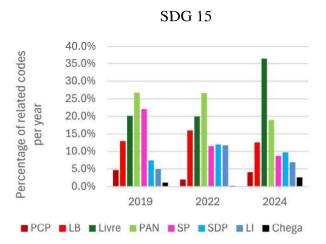
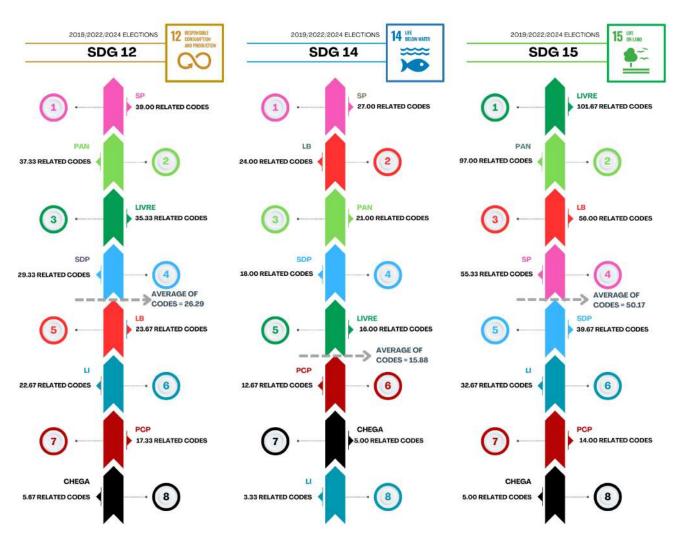


Figure 6. Annual percentage of related codes per SDG in Portuguese electoral manifestos.

#### 4.2.2. Position on the Political Spectrum

Beyond temporal trends, the mean frequency of SDG-related codes in electoral manifestos across the three election cycles provides a foundation for deeper analysis along political spectrum lines and European party affiliations. Figure 7 shows how each party's manifesto compares to the average code frequency for each SDG over the three election periods, highlighting those above and below the mean. Notably, across all SDGs under

examination, left-wing party manifestos consistently occupy the top three positions in terms of code frequency.



**Figure 7.** Average distribution of SDGs-related codes per party electoral manifestos for the three election periods (2019/2022/2024).

Analytically, a parametric approach was deemed appropriate for the analysis, given that the data met the necessary univariate normality assumptions. Consequently, we employed an independent sample t-test to investigate potential disparities between left-wing and right-wing electoral manifestos across the three election cycles. In addition, Levene's test confirmed homogeneity of variance between the two political wings for all SDGs in the analysis (t = 0.31, p = 0.58 [SDG 12]; t = 0.12, p = 0.73 [SDG 14]; t = 3.67, p = 0.069 [SDG 15]).

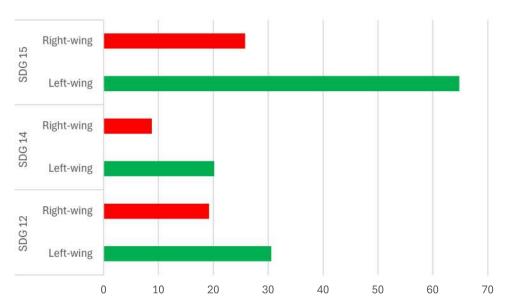
Table 3 reveals statistically significant differences between the two political wings for all SDGs in the analysis. Hence, for SDG 12, SDG 14 and SDG 15, we can conclude that the electoral manifestos of left-wing parties have a statistically significantly higher number of code frequency (30.53 codes  $\pm$  2.98 [SDG 12] 20.13 codes  $\pm$  2.93 [SDG 14]; 64.80 codes  $\pm$  9.89 [SDG 15]) compared to those of right-wing parties (26.33 codes  $\pm$  6.59 [SDG 12] 8.78 codes  $\pm$  2.86 [SDG 14]; 25.78 codes  $\pm$  6.55 [SDG 15]); t(22) = 2.220, p = 0.0185 [SDG 12], t(22) = 2.580, p = 0.0085 [SDG 14] and t(22) = 2.751, p = 0.0049 [SDG 15]. In other words, the data provides compelling statistical evidence that left-wing electoral manifestos consistently include a higher frequency of codes related to SDG 12, SDG 14, and SDG 15.

SDGs	N	Mean	Std. Error	Variances	T	df	Sig (One-Tailed)	Mean Diff.	Std. Error
SDG 12				SDG 12					
Left Wing	15	30.53	2.98	Hom. Variances	2.220	22	0.0185 **	11.361	5.799
Right Wing	9	19.22	4.33	Het. Variances	2.152	15.28	0.0239 **	11.361	5.863
SDG 14				SDG 14					
Left Wing	15	20.13	2.93	Hom. Variances	2.580	22	0.0085 ***	11.356	4.401
Right Wing	9	8.78	2.86	Het. Variances	2.771	20.63	0.0058 ***	11.356	4.098
SDG 15				SDG 15					
Left Wing	15	64.80	9.89	Hom. Variances	2.825	22	0.0049 ***	39.067	14.200
Right Wing	9	25.78	6.55	Het. Variances	3.291	21.68	0.0017 ***	39.067	12.138

Table 3. Independent sample t-tests by Portuguese political spectrum per SDG 13 target (2019–2024).

Notes: \*\*\* and \*\* indicate statistical significance at the 1% and 5% levels, respectively.

The evidence of higher code frequency in left-wing manifestos compared to right-wing ones is more prominent in SDGs 14 and 15 than in SDG 12, although statistical differences were observed across all SDGs between the political spectrums. These facts can be better visualised in Figure 8.



**Figure 8.** Average distribution of SDGs' codes frequency by Portuguese political spectrum (2019/2022/2024 elections).

A qualitative approach provides a solid foundation for a more detailed content analysis. This allows us to examine the specific topics emphasized by each political spectrum across all SDGs in the analysis. The raw data supporting this analysis can be found in Tables A7–A9, and is visually represented in Figures 9–11.

Considering Table A7 and Figure 9 for SDG 12, there is evidence that left-wing manifestos place greater emphasis on key environmental themes such as the Circular Economy, Efficient Use of Natural Resources, and Environmental Policy compared to their right-wing counterparts. In contrast, right-wing parties show a relatively higher focus on specific topics like Waste Management, Hazardous Waste Management, and Wastewater Treatment. Both political spectrums share a common interest in key areas like Building Energy Efficiency, Renewable Energy, and Waste Recycling, reflecting a mutual concern for sustainability, though the depth and focus of their approaches differ. In total, left-wing electoral manifestos address 60% of the keywords proposed by Wang, Kang and Mu [102], whereas right-wing electoral manifestos cover 46% of those keywords.

Right-wing partisanship

Left-wing partisanship

# Total keywords Total keywords covered covered WASTE MANAGEMENT BUILDING ENERGY EFFICIENCY EFFICIENT USE AND NATURAL RESOURCES 46 % POWER CONVERSION EFFICIENCY 60 % RESPONSIBLE CONSUMPTION Circular Economy Circular Economy Waste Recycling **Environmental Policy Environmental Policy** Waste Recycling Efficient Use AND Natural Resources **Building Energy Efficiency Building Energy Efficiency** Food Waste 6

Figure 9. Average distribution of the top five SDG 12 codes frequency and word cloud by Portuguese political spectrum (2019/2022/2024 elections).

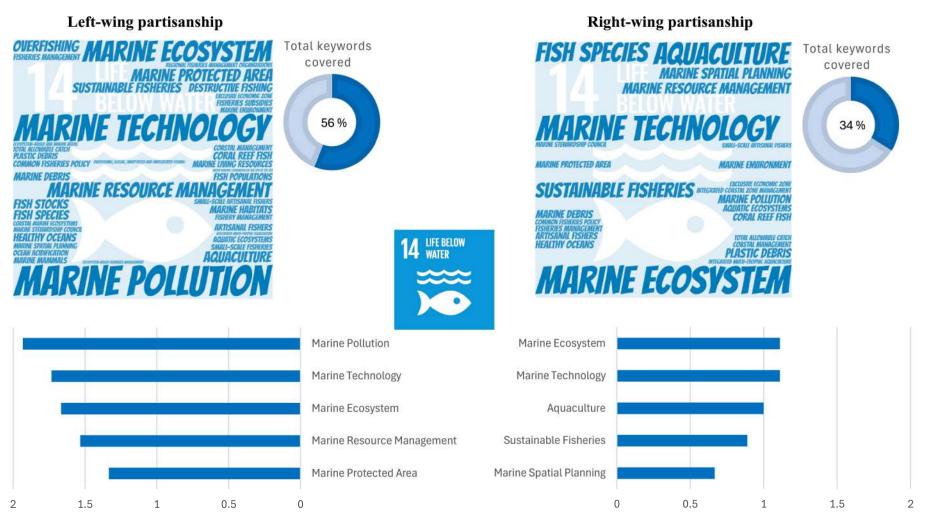
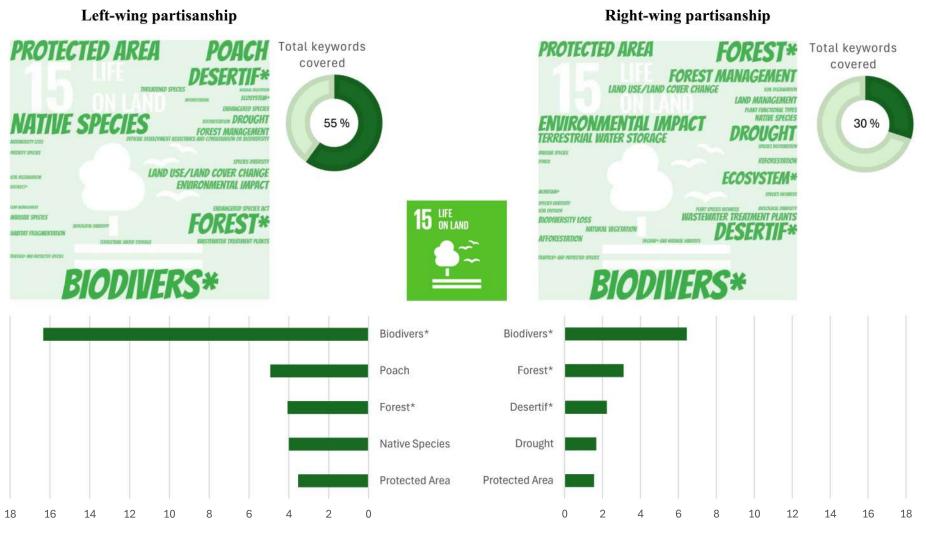


Figure 10. Average distribution of top five SDG 14 codes frequency and word cloud by Portuguese political spectrum (2019/2022/2024 elections).



**Figure 11.** Average distribution of top five SDG 15 codes frequency and word cloud by Portuguese political spectrum (2019/2022/2024 elections). Note: \* denotes a truncation symbol used to capture all word variations starting with the root.

According to Table A8 and Figure 10 for SDG 14, both left-wing and right-wing electoral manifestos in Portugal emphasize Marine Ecosystems, Sustainable Fisheries, and Marine Technology, indicating shared concern for ocean health and sustainable use of marine resources. However, left-wing manifestos generally show higher frequencies across most keywords, suggesting more comprehensive coverage of SDG 14 issues. Left-wing electoral manifestos cover 56% of the keywords proposed by Wang, Kang and Mu [102], while right-wing electoral manifestos address 34% of these keywords. Notable differences include left-wing manifestos' greater focus on Marine Pollution, Marine Protected areas, and Marine Resource Management, while right-wing manifestos give relatively more attention to Integrated Coastal Zone Management and Marine Spatial Planning. Interestingly, Destructive Fishing and Overfishing are exclusively mentioned in left-wing manifestos, potentially indicating differing priorities in fisheries management approaches.

Based on Table A9 and Figure 11 for SDG 15, the analysis shows that both left-wing and right-wing Portuguese electoral manifestos prioritize the keywords Biodivers\*, Forest\*, and Protected Area. However, while right-wing manifestos rank desertification and drought among their top five concerns, left-wing manifestos place poaching and native species in this top rank, reflecting a stronger emphasis on conservation. Left-wing electoral manifestos prioritize the protection of biodiversity through a strong focus on Threatened and Endangered Species, Habitat Fragmentation, the Endangered Species Act, and Combating Invasive Species, highlighting their commitment to conservation over the more resource-focused approach of right-wing parties. In fact, right-wing parties adopt a more utilitarian perspective, concentrating on Land Management and Terrestrial Water Storage. Overall, left-wing manifestos address 55% of the keywords identified by Wang, Kang and Mu [102], while right-wing manifestos cover 30%, highlighting a contrast between conservation-focused approaches and resource management strategies.

#### 4.2.3. Portuguese Political Parties' European Affiliation

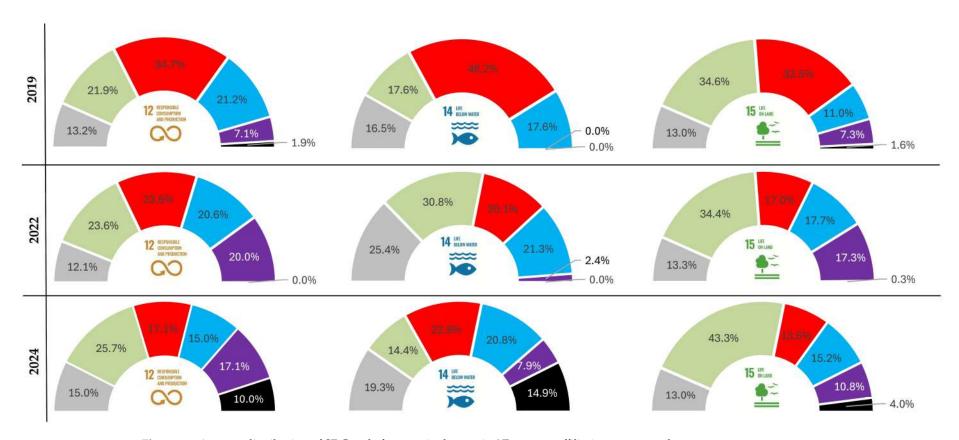
Looking at the number of codes in party manifestos, there were statistically significant differences between parties' European affiliation for all SDGs as determined by one-way ANOVA: (F(5,18) = 7.30, p = 0.0007 [SDG 12]; F(5,18) = 2.53, p = 0.0666 [SDG 14]; F(5,18) = 9.50, p = 0.0001 [SDG 15]). Table 4 presents the results of a one-way ANOVA, indicating significant differences in the approaches to SDGs among party manifestos based on their European affiliations. In summary, party manifestos show significant differences in their approach to SDGs based on European affiliation for the three election periods (2019/2022/2024).

**Table 4.** One-way analysis of variance (ANOVA) by SDGs considering the factor of Portuguese political parties' European affiliation.

SDGs	Groups	Sum of Squares	Df	Mean Square	F	P	Eta Squared
	Between groups	2634.13	5	526.83	7.30	0.0007 ***	0.670
12	Within groups	1298.83	18	72.16			
	Total	3932.96	23				
	Between groups	1289.13	5	257.83	2.53	0.0666 *	0.413
14	Within groups	1833.50	18	101.86			
	Total	3122.63	23				
	Between groups	23,334.00	5	4666.80	9.50	0.0001 ***	0.709
15	Within groups	8843.33	18	491.30			
	Total	32,177.33	23				

Notes: \*\*\* and \* indicate statistical significance at the 1% and 10% levels, respectively.

The statistically observed volatile patterns across the three election periods are graphically depicted in Figure 12. It indicates that in 2024, the volatility for all SDGs across electoral manifestos is less pronounced compared to the previous year.



**Figure 12.** Average distribution of SDG code frequencies by parties' European affiliations, expressed as percentages.

# 5. Discussion

Whether through private sector initiatives [111] or public policies [112], SDGs are receiving growing attention regarding their implementation. In the EU, several significant initiatives have been launched that impact SDG 12, SDG 14, and SDG 15, including the Green Deal (in December 2019), the Communication on a new approach for a sustainable blue economy in the EU (in May 2021), the Sustainable Products Initiative (in March 2022), the EU Action Plan: Protecting and Restoring Marine Ecosystems for Sustainable and Resilient Fisheries (in February 2023), the EU Nature Restoration Law (in July 2023), or the EU Biotechnology and Biomanufacturing Initiative (March 2024) among others.

However, there is still a gap in the literature and research on how the 2030 Agenda is brought into national policy-making processes by political institutions [21]. Therefore, this study aimed to analyse the interplay between policy intents and the UN Agenda 2030 sustainable development goals by looking at manifestos of the Portuguese political parties in the general elections to better understand their environmental policy agenda within the framework of SDG 12, SDG 14, and SDG 15. This research was built around five Research Questions (RQ), and this discussion is framed within these RQ.

[RQ1] What is the evolution of SDG 12, SDG 14, and SDG 15 as reflected in electoral manifestos? Contrary to the expanding EU sustainability agenda, Portuguese electoral manifestos showed limited to stagnant attention to SDGs 12, 14, and 15 across the 2019–2024 elections. The persistent stagnation in SDG 12, 14, and 15 coverage across all Portuguese electoral manifestos—despite ambitious EU sustainability initiatives—can reflect structural and contextual constraints, as reported by Mourato and Bussler [113] or by Amaral, et al. [114] in several situations, transcending individual governments. On the other hand, recurring political volatility (2019–2024 elections) [30] truncated policy continuity, with parties prioritizing immediate voter concerns (e.g., economic recovery post-pandemic, inflation) over complex environmental transitions [21]. In addition, Portugal's compartmentalized governance—marked by weak coordination among agencies responsible for SDGs 12, 14, and 15, even within shared policy frameworks [115]—can undermine policy implementation and constrain the comprehensive integration of SDGs in political manifestos.

[RQ2] Do electoral manifestos maintain a balance between SDG 12, SDG 14, and SDG 15? Hence, a balance between SDG 12, SDG 14, and SDG 15 is not evident in electoral manifestos, as there is significantly more emphasis on SDG 15. The disproportionate focus on SDG 15 in electoral manifestos is nearly equivalent to the combined attention given to SDG 12 and SDG 14. This is even more surprising given the overwhelming maritime dimension of Portugal versus its smaller forest and land area. The path dependency resulting from the traumatic 2017 wildfires [116–118] has entrenched public and political focus on terrestrial ecosystems, thereby diminishing attention to ocean sustainability and conservation, which continues to suffer from comparatively low public interest [119]. Furthermore, combined with limited public interest, the low number of projects related to SDG 14 in Portugal [120] may contribute to its reduced prominence in party manifestos, reflecting a strategic retreat from what are perceived as high-risk, low-reward commitments. In addition to the multiple mega-fires that occurred in October 2017, influenced by Hurricane Ophelia [117], the response from authorities was inadequate, and it made evident a lack of prior planning [118]. The severe social, economic, and ecological impacts of these devastating wildfires [121] may explain the significant emphasis on SDG 15 in recent electoral manifestos. Additionally, whenever nature or environmental issues are mentioned, the majority of worldviews on these topics are anthropocentric and linked to habitats where humans are more present (e.g., land-based) [122], and this choice can also entail an attempt to reach additional voters. Regardless of this fact, despite Portugal having one of the largest EEZ in the EU, and a proposal for a remarkably large extended continental shelf (reaching four million

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km²) that could turn it into the largest maritime nation in Europe and one of the largest in the world, SDG 14 is notably absent from the priorities of political agendas. This is a significant concern, especially since SDG 14 was identified as a 'major challenge' for Portugal [17] and it would be empirically relevant for a maritime nation like this. Even though some authors suggest that Portugal's strategy aligns with the Atlantic Action Plan and adheres to the EU Integrated Maritime Policy [123], these observations attain little to alleviate general ocean-related concerns and even less to promote a sustainable and sustained ocean economy.

[RQ3] Is there any correlation between SDG 12, SDG 14, and SDG 15 as reflected in electoral manifestos? SDG 12, SDG 14, and SDG 15 show a moderate to strong correlation in electoral manifestos. To safeguard the environment and public health, decision-makers in the twenty-first century must confront novel and progressively complicated environmental issues. Environmental issues develop across extended temporal scales, occur at various spatial extents, and may have worldwide ramifications. The need for comprehensive, interdisciplinary approaches arises from the possibility that addressing one component could uncover, create, or exacerbate other issues [124]. The findings in this study may indicate a holistic approach from Portuguese parties to environmental sustainability that encompasses both marine and terrestrial ecosystems, along with their resources. The moderate-to-strong correlation suggests parties recognize the interdependence of these goals (e.g., SDG 12's resource efficiency reduces pressure on marine/terrestrial ecosystems). However, the imbalance in emphasis suggests a fragmented policy approach, potentially driven by sectoral lobbying, voter priorities, or the bundling of themes rather than integrated policy design [125]. This interpretation should be approached with caution, as different measures within the same SDG and across SDGs may involve various types of interactions, both negative and positive, [6,61].

[RQ4] Do left-wing and right-wing electoral manifestos differ in their coverage of SDG 12, SDG 14, and SDG 15? Both quantitative and qualitative analyses provide evidence that left-wing electoral manifestos offer more extensive coverage of SDG 12, SDG 14, and SDG 15 compared to their right-wing counterparts. From a quantitative perspective on SDGs, whether addressing resource efficiency for environmental sustainability (SDG 12), marine (SDG 14), or terrestrial ecosystem (SDG 15) issues, our findings indicate that left-wing electoral manifestos place a significantly stronger emphasis on these topics compared to their right-wing counterparts. These results align with previous findings that associate left-wing parties with a stronger emphasis on sustainable development compared to their right-wing counterparts [86,87].

From a qualitative standpoint, the analysis of SDGs in Portuguese electoral manifestos reveals distinct priorities across the political spectrum. On SDG 12, left-wing manifestos prioritize broader environmental themes like the circular economy and efficient use of natural resources, working around natural values and resources, while right-wing parties focus more on waste and hazardous waste management from a more operational and managerial perspective. Both political spectrums share an interest in circular processes, efficiency topics, and environmental policy, but left-wing manifestos address a larger proportion of SDG 12-related keywords. The qualitative analysis of SDG 14 in Portuguese electoral manifestos reveals distinct priorities across the political spectrum. Left-wing manifestos place a stronger emphasis on sustainable marine management [126], indicating a more holistic approach to ocean conservation and sustainable use of marine resources. This focus likely encompasses aspects such as marine protected areas, ecosystem health, and pollution control [127] as reflected in the current National Ocean Strategy 2030, elaborated and approved during the SP government of 2019–2022. In contrast, right-wing manifestos tend to prioritize marine resource management and spatial planning, suggesting a more

utilitarian perspective that may focus on the economic aspects of marine resources, such as fisheries management and resource extraction [128,129]. Similarly, a qualitative analysis of Portuguese manifestos for SDG 15 shows notable differences in left- vs. right-wing approaches. On the one side, left-wing electoral manifestos tend to focus more on natural values and resources and values once again, in particular in biodiversity conservation and protection, including efforts to preserve biodiversity, prevent poaching, sustainably manage forests, protect native species, and maintain protected areas [130]. On the other side, right-wing electoral manifestos highlight sustainable land management and conservation, encompassing the protection and restoration of biodiversity, sustainable forest management, combating desertification and drought, and the establishment and maintenance of protected areas [131,132].

In summary, left-wing manifestos emphasized systemic change, consistent with ideological commitments to collective responsibility, state intervention, and environmental justice [86,87]. The right-wing focus on technical efficiency [74,76] may denote instrumental sustainability, highlighting tensions between symbolic positioning and substantive action [48].

[RQ5] Do electoral manifestos differ based on the European party affiliation concerning SDG 12, SDG 14, and SDG 15? Differences in all the SDGs analysed in electoral manifestos based on the European affiliations of Portuguese political parties were identified. From the European perspective, Portuguese parties align with their respective European party families, given that approaches to sustainability differ significantly based on the ideological stance of each European party family [90]. These differences are shaped by four key factors found within the manifestos: (i) the significant emphasis of the Greens/EFA across all SDGs, in line with the left-wing parties manifestos in Portugal (ii) the leading position of the S&D in all SDGs during the 2019 elections, coinciding with the Green Deal launching by the EU (iii) the absence or limited agenda of the Renew Group for SDG 14, and (iv) the lack of an agenda from PfE in the 2019 and 2022 elections for all SDGs. This last party group's focus on sustainable development in the 2024 elections mirrors a broader trend among far-right parties becoming, apparently, more eco-friendly. Some authors suggest that these parties are embracing ideologies like eco-nationalism, eco-fascism, or far-right ecologism [81–83], also in line with the observations for the Portuguese far-right party Chega. Having a populist radical right agenda [133], this likely represents strategic opportunism rather than ideological shift, responding to rising public concern about climate extremes.

## 6. Practical Implications

The findings of this study carry relevant implications for policymakers, party strategists, and civil society actors engaged in sustainability governance in Portugal and Europe.

For policymakers, the findings highlight the need to address the imbalance in attention given to SDGs 12, 14, and 15 within political discourse. Policymakers should prioritize the integration of responsible consumption and production (SDG 12) into legislative frameworks and public policy, ensuring that circular economy principles are not sidelined. Additionally, greater policy coherence is needed to bridge marine (SDG 14) and terrestrial (SDG 15) ecosystem management, promoting cross-sectoral strategies that reflect the interconnectedness of these goals. Policymakers should pursue integrated strategies that align terrestrial, marine, and resource efficiency goals, particularly within the same policy frameworks, avoiding siloed institutional responses. Based on our main findings, the current right-wing Portuguese minority government is positioned to enhance policy effectiveness by fostering cross-party collaboration with left-wing counterparts in the domains of SDGs implementation. Such cooperation could facilitate more comprehensive and balanced approaches to sustainable development challenges in Portugal.

For party strategists, this analysis reveals that left-wing parties are more consistent in addressing all three SDGs, while right-wing parties tend to focus selectively, often prioritizing SDG 15. To broaden electoral appeal and demonstrate leadership on sustainability, parties across the ideological spectrum should develop more comprehensive manifestos that address the full range of environmental SDGs and articulate clear, measurable commitments. Additionally, a more balanced representation of SDGs may improve alignment with long-term national and EU sustainability objectives, while also responding to increasing public concern over environmental degradation and climate impacts. The inclusion of SDG 14, in particular, is essential given Portugal's maritime potential and the existing policy lag in this domain.

For civil society organizations, the results underscore the importance of advocacy and public engagement to hold political actors accountable for sustainability promises. Civil society can leverage these findings to push for greater transparency in party commitments, foster public debate on underrepresented SDGs, and facilitate dialogue between political actors and the communities most affected by environmental policy decisions. By holding parties accountable for the coherence of their environmental platforms, they can elevate neglected issues to a more prominent position in political debates and electoral campaigns.

# 7. Concluding Remarks

This study demonstrates that several Portuguese electoral manifestos from 2019 to 2024 exhibit a stagnant intent on UN SDGs 12, 14, and 15, with a pronounced emphasis on SDG 15, largely driven by heightened awareness of terrestrial issues such as wildfires. Conversely, the marginal attention to SDG 14 stands in stark contrast to Portugal's maritime dimension and its potential leadership in ocean sustainability.

The results also reveal that left-wing parties consistently offer more comprehensive coverage of SDGs 12, 14, and 15 than their right-wing counterparts. This ideological divergence reflects broader normative commitments: left-wing platforms tend to frame sustainability through the lens of social equity and systemic transformation, while right-wing parties emphasize technical efficiency and resource management.

Despite moderate to strong correlations among the three SDGs in manifestos—indicating some recognition of their interdependencies—the overall imbalance suggests a fragmented policy approach. European party affiliations further influence national positioning, with Greens/EFA and S&D-aligned parties exhibiting stronger alignment with the 2030 Agenda compared to their conservative or far-right counterparts.

In light of these findings, the study highlights the urgency of fostering integrated, cross-sectoral strategies that promote marine, terrestrial, and consumption-related goals simultaneously. Strengthening political commitment and expanding the presence of SDGs across party manifestos is crucial to advance Portugal's sustainability agenda and fulfil its obligations under the UN 2030 framework.

A key limitation of this study is the potential for subjectivity in content analysis, which could affect the reliability of findings. Another limitation stems from the study's temporal scope (2019, 2022, and 2024 Portuguese general elections), which does not encompass recent institutional developments (2025 Portuguese general election). Although core policy orientations remained stable, evolving parliamentary configurations may shape future dynamics beyond the period analysed.

Future research could benefit from employing automated text analysis or more than two coders to improve objectivity. Moreover, expanding the study to include a comparative analysis of how political parties in different countries address these SDGs could offer valuable insights into broader trends and international influences on sustainability discourse. Larger longitudinal studies could also bridge the gap between manifesto rhetoric and

actual policy implementation, enriching the understanding of how political commitments translate into effective sustainability actions.

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#### Abbreviations

The following abbreviations are used in this manuscript:

SDG(s)	Sustainable Development Goal(s)
SDG 12	Sustainable Development Goal 12 of the United Nations 2030 Agenda, titled "Ensure
3DG 12	sustainable consumption and production patterns."
SDG 14	Sustainable Development Goal 14 of the United Nations 2030 Agenda, titled "Conserve
3DG 14	and sustainably use the oceans, seas and marine resources for sustainable development."
	Sustainable Development Goal 15 of the United Nations 2030 Agenda, titled "Protect,
SDG 15	restore and promote sustainable use of terrestrial ecosystems, sustainably manage
3DG 13	forests, combat desertification, and halt and reverse land degradation and halt
	biodiversity loss."

# Appendix A

Table A1. SDG 12 keywords adapted from Wang, Kang and Mu [102].

SDG 12 Keywords	UOA Text-Mining Results (Global Publications)	UN SDG Targets and Indicators
Building Energy Efficiency	Y	
Circular Economy	Y	
Combined Heat and Power	Y	
Education for Sustainable Development	Y	
Energy Efficiency Buildings	Y	
Energy Saving	Y	
Environmental Impact Assessment	Y	
Environmental Impact Categories	Y	
Environmental Life Cycle Assessment	Y	
Environmental Policy	Y	
Environmental Technology	Y	

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 Table A1. Cont.

SDG 12 Keywords	UOA Text-Mining Results (Global Publications)	UN SDG Targets and Indicators
Food Waste	Y	Y
Green Supply Chain Management	Y	
Hazardous Chemicals	Y	
Hazardous Waste	Y	Y
Hazardous Waste Management	Y	
Heavy Metal AND Pollut*	Y	
Heavy Metal Pollution	Ÿ	
Household Food Waste	Ý	
Hydraulic Retention Time	Y	
Industrial Waste	Y	
Integrated Solid Waste Management	Y	
ě .	Y	
Life Cycle Energy Analysis	Y	
Life Cycle Impact Assessment	Y	
Low-Carbon Economy		
Low-Carbon Economy	Y	
Material Flow Analysis	Y	
Municipal Solid Waste	Y	
Municipal Solid Waste	Y	
Municipal Solid Waste Generation	Y	
Municipal Solid Waste Incineration	Y	
Municipal Solid Waste Management	Y	
Municipal Wastewater Treatment	Y	
Municipal Wastewater Treatment Plant	Y	
Organic Fraction of Municipal Solid Waste	Y	
Persistent Organic Pollutants	Y	
Phase Change Materials	Y	
Potential Environmental Impacts	Y	
Power Conversion Efficiency	Y	
Renewable Energy Technologies	Y	
Sewage Sludge	Y	
Solid Waste	Y	
Solid Waste Disposal	Y	
Solid Waste Generation	Y	
Solid Waste Incineration	Y	
Solid Waste Management	Ÿ	
Solid Waste Management System	Y	
Sustainable AND (Production AND Consumption)	Y	
Sustainable Consumption	Y	Y
Sustainable Consumption Production	Y	1
Sustainable Consumption Production	Y	Y
	Y	1
Sustainable Supply Chain Sustainable Tourism		Y
	Y	1
Sustainable Tourism Development	Y	
The Resource Conservation Recovery Act	Y	
Volatile Fatty Acid	Y	
Waste Management	Y	
Waste Management System	Y	
Waste Recycling	Y	
Waste Treatment	Y	
Wastewater Treatment	Y	
Wastewater Treatment Plant	Y	
Water Pollutants AND Chemical	Y	
Domestic Material Consumption		Y

Table A1. Cont.

SDG 12 Keywords	UOA Text-Mining Results (Global Publications)	UN SDG Targets and Indicators
Efficient Use AND Natural Resources		Y
Food Loss Index		Y
Food Waste Index		Y
Fossil-Fuel Subsidies		Y
Global Citizenship Education		Y
Global Food Waste		Y
Hazardous Waste AND Treatment		Y
Material Footprint		Y
Multilateral Environmental Agreements		Y
National Recycling Rate		Y
Post-Harvest Losses		Y
Public Procurement AND Sustainable		Y
Renewable Energy-Generating		Y
Sustainable Consumption Patterns		Y
Sustainable Development AND Education		Y
Sustainable Production Patterns		Y
Sustainable Public Procurement Policies		Y
The 10-Year Framework of Programmes on Sustainable		<b>Y</b>
Consumption and Production Patterns		Y
Waste Generation		Y

Note: \* denotes a truncation symbol used to capture all word variations starting with the root.

 $\textbf{Table A2.} \ \mathsf{SDG} \ 14 \ \mathsf{keywords} \ \mathsf{adapted} \ \mathsf{from} \ \mathsf{Wang, Kang} \ \mathsf{and} \ \mathsf{Mu} \ [102].$ 

SDG 14 Keywords	UoA Text-Mining Results (Global Publications)	UN SDG Targets and Indicators
Aquatic Ecosystems	Y	
Aquatic Food Webs	Y	
Coastal Environment	Y	
Coastal Habitat	Y	
Coastal Management	Y	
Coastal Marine Ecosystems	Y	
Common Fisheries Policy	Y	
Convention for The Conservation of Antarctic Marine Living Resources	Y	
Coral Bleach	Y	
Coral Reef	Y	
Coral Reef Ecosystem	Y	
Coral Reef Fish	Y	
Ecosystem-Based Fisheries Management	Y	
Exclusive Economic Zone	Y	
Fish Populations	Y	
Fish Species	Y	
Fish Stocks	Y	
Fisheries Management	Y	
Fishery Management	Y	
Fishing Effort	Y	
Fishing Pressure	Y	
Great Barrier Reef	Y	
Harmful Algal Bloom	Y	
Integrated Coastal Zone Management	Y	
Integrated Multi-Trophic Aquaculture	Y	

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 Table A2. Cont.

SDG 14 Keywords	UoA Text-Mining Results (Global Publications)	UN SDG Targets and Indicators
Large Marine Ecosystem	Y	
Marine	Y	
Marine Ecosystem	Y	
Marine Environment	Y	
Marine Fish	Y	
Marine Food Web	Y	
Marine Habitats	Y	
Marine Life	Y	
Marine Mammals	Y	
Marine Organisms	Y	
Marine Protected Area	Ŷ	
Marine Protected Area	Ŷ	
Marine Resource Management	Ŷ	
Marine Spatial Planning	Ŷ	
Marine Species	Y	
Marine Stewardship Council	Y	
No-Take Marine Protected Area	Y	
No-Take Marine Reserve	Y	
	Y	Y
Ocean Acidification		ĭ
Plastic Debris	Y	
Regional Fisheries Management Organizations	Y	
Seagrass Bed	Y	
Species Richness	Y	
The Marine Strategy Framework Directive	Y	
Total Allowable Catch	Y	
United Nations Convention on The Law of The Sea	Y	Y
Aquaculture		Y
Artisanal Fishers		Y
Coastal Areas		Y
Coastal Eutrophication		Y
Destructive Fishing		Y
Ecosystem-Based AND Marine Areas		Y
Fisheries Subsidies		Y
Healthy Oceans		Y
Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology		Y
Marine Acidity		Y
Marine Debris		Y
Marine Pollution		Y
Marine Technology		Y
Nutrient Pollution		Y
Overfishing		Y
Overfishing, Illegal, Unreported, and Unregulated Fishing		Y
Plastic Density Debris		Y
Productive Oceans		Y
Small-Scale Artisanal Fishers		Y
Small-Scale Fisheries		Y
Sustainable Fisheries		Y

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 $\textbf{Table A3.} \ SDG \ 15 \ keywords \ adapted \ from \ Wang, \ Kang \ and \ Mu \ [102].$ 

SDG 15 Keywords	UoA Text-Mining Results (Global Publications)	UN SDG Targets and Indicators
Biodivers*	Y	Y
Biodiversity Loss	Y	
Biological Diversity	Y	
Corine Land Cover	Y	
Deforest*	Y	Y
Desertif*	Y	Y
Dry Season	Y	-
Dryland*	Y	Y
Earth System Model	Y	1
Ecosystem Function	Y	
Ecosystem Service	Y	
Ecosystem*	Y	Y
	Y	I
Endangered Species		
Endangered Species Act	Y	
Enhanced Vegetation Index	Y	
Environmental Change	Y	
Environmental Factor	Y	
Environmental Impact	Y	
EU Water Framework Directive	Y	
Fire-Fallow Cultivation	Y	
Forest Cover	Y	
Forest Degradation	Y	
Forest Ecosystem	Y	
Forest Management	Y	
Gross Primary Production	Y	
Habitat Fragmentation	Y	
Invasive Species	Y	
IUCN Red List	Y	
Land Cover Change	Y	
Land Cover Type	Y	
Land Data Assimilation System	Y	
Land Degradation (	Y	
Land Degradation Neutrality	Y	
Land Management	Y	
Land Use and Land Cover	Y	
Land Use/Land Cover Change	Ý	
Leaf Area Index	Y	
Low Impact Development	Y	
Mountain*	Y	Y
Native Species	Y	1
	Y	
Natural Vegetation	Y	
Net Ecosystem Exchange		
Net Ecosystem Productivity	Y	
Normalized Difference Vegetation Index	Y	
Palmer Drought Severity Index	Y	
Plant Functional Types	Y	
Plant Species	Y	
Plant Species Richness	Y	
Protected Area	Y	
Revised Universal Soil Loss Equation	Y	
Soil and Water Assessment Tool	Y	
Soil and Water Assessment Tool	Y	

Table A3. Cont.

SDG 15 Keywords	UoA Text-Mining Results (Global Publications)	UN SDG Targets and Indicators
Soil Degradation	Y	
Soil Erosion	Y	
Soil Quality	Y	
Soil Quality Index	Y	
Soil Water Content	Y	
Species Distribution	Y	
Species Diversity	Y	
Species Richness	Y	
Terrestrial Ecosystem	Y	
Terrestrial Water Storage	Ÿ	
Threatened Species	Ŷ	Y
Topographic Wetness Index	Ŷ	•
Trophic Web	Ŷ	
Tropical Forests	Ŷ	
Tropical Rainfall Measuring Mission	Y	
Universal Soil Loss Equation	Y	
	Y	
Vegetation Types Wastewater Treatment Plants	Y	
Wastewater Treatment Flants Wetland	Y	Y
		ĭ
Wetland Ecosystem	Y	<b>V</b>
Wetland*	Y	Y
Wetlands	Y	Y
Afforestation		Y
Aichi Biodiversity Target 2		Y
Degrad* AND Natural Habitats		Y
Degraded Forests		Y
Degraded Land		Y
Degraded Soil		Y
Drought		Y
Freshwater Biodiversity		Y
Genetic Resources		Y
Illegal Wildlife Products		Y
Inland Freshwater Ecosystems		Y
Invasive Alien Species		Y
Mountain Biodiversity		Y
Mountain Ecosystems		Y
Mountain Green Cover Index		Y
Official Development Assistance AND Conservation OR		3/
Biodiversity		Y
Poach*		Y
Poach* AND Protected Species		Y
Priority Species 1		Y
Red List Index		Y
Reforestation		Y
Strategic Plan for Biodiversity 2011–2020		Ŷ
System of Environmental-Economic Accounting		Ϋ́
Terrestrial Biodiversity		Y
Terrestrial Freshwater Ecosystems		Y
Traffick* AND Protected Species		Y

Note: \* denotes a truncation symbol used to capture all word variations starting with the root.

Table A4. Normality tests.

SDGs	Doornik–Hansen Test	Shapiro–Wilk Test	Lilliefors Test	Jarque–Bera Test
SDG 12	0.318	0.984	0.107	0.122
3DG 12	(p -value = 0.853)	(p -value = 0.957)	(p -value = 0.670)	(p-value = 0.941)
SDG 14	2.094	0.913	0.145	1.574
SDG 14	(p -value = 0.351)	(p-value = 0.041)	(p-value = 0.200)	(p -value = 0.455)
CDC 15	3.156	0.940	0.126	2.096
SDG 15	(p -value = 0.206)	(p -value = 0.165)	(p-value = 0.410)	(p -value = 0.351)

Table A5. Annual code frequency in Portuguese political parties' manifestos per SDGs.

Left-Wing Parties <> Right-Wing Parties									
SDGs per Year	PCP	LB	Livre	PAN	SP	SDP	LI	Chega	<b>Grand Total</b>
2019	51	82	112	156	175	75	29	7	687
SDG 12	20	21	28	40	54	33	11	3	210
SDG 14	14	14	11	19	41	15	0	0	114
SDG 15	17	47	73	97	80	27	18	4	363
2022	22	142	141	199	108	106	88	1	807
SDG 12	11	29	35	43	39	34	33	0	224
SDG 14	2	41	16	36	17	18	2	0	132
SDG 15	9	72	90	120	52	54	53	1	451
2024	59	87	206	111	81	80	59	39	722
SDG 12	21	21	43	29	24	21	24	14	197
SDG 14	22	17	21	8	23	21	8	15	135
SDG 15	16	49	142	74	34	38	27	10	390
Grand Total	132	311	459	466	364	261	176	47	2216

**Table A6.** One-way analysis of variance (ANOVA) by SDGs during the three election periods (2019/2022/2024).

SDGs	Groups	Sum of Squares	df	Mean Square	F	p	Eta Squared
	Between groups	45.583	2	22.792	0.123	0.8848	0.012
SDG 12	Within groups	3887.375	21	185.113			
	Total	3932.958	23				
	Between groups	32.250	2	16.125	0.110	0.8967	0.010
SDG 14	Within groups	3090.375	21	147.161			
	Total	3122.625	23				
	Between groups	508.083	2	254.042	0.168	0.8460	0.016
SDG 15	Within groups	31,717.25	21	1510.345			
	Total	32,225.33	23				

**Table A7.** Average distribution of SDG 12 codes across Portuguese electoral manifestos by political spectrum.

SDG 12 Keywords	Left Wing	Right Wing
Building Energy Efficiency	1.533333	1.444444
Circular Economy	5.66667	4.44444
Domestic Material Consumption	0.066667	0
Education for Sustainable Development	0.4	0
Efficient Use AND Natural Resources	1.933333	0.77778
Energy Efficiency Buildings	0.133333	0

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Table A7. Cont.

SDG 12 Keywords	Left Wing	Right Wing
Energy Saving	0.666667	0.55556
Environmental Impact Assessment	0.333333	0.222222
Environmental Policy	2.266667	1.555556
Environmental Technology	0.2	0
Food Waste	0.733333	0.88889
Global Citizenship Education	0.2	0
Green Supply Chain Management	0.066667	0
Hazardous Waste AND Treatment	0.4	0.22222
Hazardous Waste Management	0.2	0.66667
Heavy Metal Pollution	0	0.111111
Industrial Waste	0.733333	0.333333
Life Cycle Impact Assessment	0.4	0.333333
Low-Carbon Economy	1.133333	0.666667
Material Footprint	0.466667	0.111111
Multilateral Environmental Agreements	0.6	0.111111
Municipal Solid Waste	0.066667	0.111111
Municipal Solid Waste Management	0.133333	0.111111
1	0.13333	0.111111
Municipal Wastewater Treatment		0.111111
Municipal Wastewater Treatment Plant	0	
National Recycling Rate	0.4	0
Organic Fraction of Municipal Solid Waste	0.6	0
Persistent Organic Pollutants	0.066667	0
Phase Change Materials	0.866667	0.111111
Post-Harvest Losses	0.066667	0
Potential Environmental Impacts	0.2	0.111111
Power Conversion Efficiency	1.066667	0.333333
Public Procurement AND Sustainable	0.533333	0.222222
Renewable Energy Technologies	0.8	0.333333
Renewable Energy-Generating	0.933333	0.55556
Solid Waste Disposal	0.066667	0
Solid Waste Incineration	0.46667	0.22222
Solid Waste Management	0.066667	0.22222
Solid Waste Management System	0.066667	0.111111
Sustainable AND (Production AND Consumption)	0.6	0.222222
Sustainable Consumption	0.066667	0.111111
Sustainable Consumption Patterns	0.46667	0
Sustainable Consumption Production	0.066667	0.111111
Sustainable Development AND Education	0.066667	0
Sustainable Production	1.066667	0.77778
Sustainable Public Procurement Policies	0	0.222222
Sustainable Supply Chain	0.2	0.222222
Sustainable Tourism	0.2	0.111111
Waste Management	0.266667	0.55556
Waste Management System	0.066667	0
Waste Recycling	2.533333	1.55556
Waste Treatment	0.2	0
Wastewater Treatment	0.133333	0.222222
THOUSE THE STREET		

**Table A8.** Average distribution of SDG 14 codes across Portuguese electoral manifestos by political spectrum.

SDG 14 Keywords	Left Wing	Right Wing
Aquaculture	1.200000	1.000000
Aquatic Ecosystems	0.266667	0.111111

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Table A8. Cont.

SDG 14 Keywords	Left Wing	Right Wing
Artisanal Fishers	0.200000	0.111111
Coastal Management	0.266667	0.111111
Coastal Marine Ecosystems	0.333333	0
Common Fisheries Policy	0.46667	0.111111
Coral Reef Fish	0.133333	0.111111
Destructive Fishing	0.733333	0
Ecosystem-Based AND Marine Areas	0.066667	0
Ecosystem-Based Fisheries Management	0.066667	0
Exclusive Economic Zone	0.066667	0.111111
Fish Populations	0.266667	0
Fish Species	0.333333	0.333333
Fish Stocks	0.133333	0
Fisheries Management	0.333333	0.111111
Fisheries Subsidies	0.133333	0
Fishery Management	0.333333	0
Healthy Oceans	0.400000	0.111111
Integrated Coastal Zone Management	0	0.333333
Integrated Multi-Trophic Aquaculture	0.066667	0.222222
Marine Debris	0.133333	0.111111
Marine Ecosystem	1.666667	1.111111
Marine Environment	0.066667	0.222222
Marine Habitats	0.600000	0
Marine Living Resources	0.733333	0
Marine Mammals	0.133333	0
Marine Pollution	1.933333	0.333333
Marine Protected Area	1.333333	0.222222
Marine Resource Management	1.533333	0.66667
Marine Spatial Planning	0.333333	0.66667
Marine Stewardship Council	0.133333	0.222222
Marine Technology	1.733333	1.111111
Ocean Acidification	0.266667	0
Overfishing	0.46667	0
Overfishing, Illegal, Unreported, and Unregulated Fishing	0.266667	0
Plastic Debris	0.133333	0.222222
Regional Fisheries Management Organizations	0.400000	0
Small-Scale Artisanal Fishers	0.666667	0.111111
Small-Scale Fisheries	0.400000	0
Sustainable Fisheries	1.133333	0.888889
Total Allowable Catch	0.200000	0.111111
United Nations Convention on The Law of The Sea	0.066667	0

**Table A9.** Average distribution of SDG 15 codes across Portuguese electoral manifestos by political spectrum.

SDG 15 Keywords	Left Wing	Right Wing
Afforestation	0.53333	0.444444
Biodivers*	16.3333	6.444444
Biodiversity Loss	0.73333	0.444444
Biological Diversity	0.66667	0.1111111
Deforest*	0.46667	0
Degrad* AND Natural Habitats	0	0.1111111
Desertif*	2.6	2.222222
Drought	2.4	1.6666667

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Table A9. Cont.

SDG 15 Keywords	Left Wing	Right Wing
Earth System Model	0.26667	0
Ecosystem Function	0.26667	0
Ecosystem*	1.26667	1.2222222
Endangered Species	1.2	0
Endangered Species Act	1.06667	0
Environmental Impact	2.26667	1.555556
Forest Cover	0.2	0
Forest Ecosystem	0.06667	0
Forest Management	2	1.3333333
Forest*	4.06667	3.1111111
Freshwater Biodiversity	0.06667	0
Genetic Resources	0.06667	0
Habitat Fragmentation	1.13333	0
Invasive Alien Species	0.06667	0
Invasive Species	1.06667	0.1111111
IUCN Red List	0.06667	0
Land Degradation	0.13333	0
Land Management	0.33333	0.555556
Land Use/Land Cover Change	2.6	0.6666667
Mountain*	0	0.1111111
Native Species	4	0.444444
Natural Vegetation	0.33333	0.3333333
Official Development Assistance AND Conservation OR	0.02222	0
Biodiversity	0.93333	0
Plant Functional Types	0.13333	0.222222
Plant Species	0.06667	0
Plant Species Richness	0.33333	0.1111111
Poach	4.93333	0.1111111
Poach AND Protected Species*	0.06667	0
Priority Species	0.73333	0
Protected Area	3.53333	1.555556
Red List Index	0.2	0
Reforestation	0.73333	0.3333333
Soil Degradation	0.66667	0.1111111
Soil Erosion	0.06667	0.1111111
Soil Water Content	0.06667	0
Species Distribution	0.06667	0.1111111
Species Diversity	0.93333	0.1111111
Species Richness	0.2	0.1111111
Strategic Plan for Biodiversity 2011–2020	0.13333	0
Terrestrial Biodiversity	0.06667	0
Terrestrial Ecosystem	0.13333	0
Terrestrial Freshwater Ecosystems	0.2	0
Terrestrial Water Storage	0.73333	1.2222222
Threatened Species	1.4	0
Traffick* AND Protected Species	0.6	0.1111111
Tropical Forests	0.2	0
Wastewater Treatment Plants	1.2	0.6666667
Wetland	0.2	0

Note:  $^{\star}$  denotes a truncation symbol used to capture all word variations starting with the root.

# References

1. Katila, P.; Colfer, C.J.P.; De Jong, W.; Galloway, G.; Pacheco, P.; Winkel, G. *Sustainable Development Goals*; Cambridge University Press: Cambridge, UK, 2019.

Sustainability **2025**, 17, 6749 34 of 38

2. Merino-Saum, A.; Baldi, M.G.; Gunderson, I.; Oberle, B. Articulating natural resources and sustainable development goals through green economy indicators: A systematic analysis. *Resour. Conserv. Recycl.* **2018**, *139*, 90–103. [CrossRef]

- 3. Reid, A.J.; Brooks, J.L.; Dolgova, L.; Laurich, B.; Sullivan, B.G.; Szekeres, P.; Wood, S.L.R.; Bennett, J.R.; Cooke, S.J. Post-2015 Sustainable Development Goals still neglecting their environmental roots in the Anthropocene. *Environ. Sci. Policy* **2017**, 77, 179–184. [CrossRef]
- 4. Calicioglu, Ö.; Bogdanski, A. Linking the bioeconomy to the 2030 sustainable development agenda: Can SDG indicators be used to monitor progress towards a sustainable bioeconomy? *New Biotechnol.* **2021**, *61*, 40–49. [CrossRef] [PubMed]
- 5. Cernev, T.; Fenner, R. The importance of achieving foundational Sustainable Development Goals in reducing global risk. *Futures* **2020**, *115*, 102492. [CrossRef]
- 6. Nilsson, M.; Griggs, D.; Visbeck, M. Policy: Map the interactions between Sustainable Development Goals. *Nature* **2016**, *534*, 320–322. [CrossRef] [PubMed]
- 7. Nill, J.; Kemp, R. Evolutionary approaches for sustainable innovation policies: From niche to paradigm? *Res. Policy* **2009**, *38*, 668–680. [CrossRef]
- 8. Howlett, M. The criteria for effective policy design: Character and context in policy instrument choice. *J. Asian Public Policy* **2018**, 11, 245–266. [CrossRef]
- 9. Owen, A.L.; Videras, J. Trust, cooperation, and implementation of sustainability programs: The case of Local Agenda 21. *Ecol. Econ.* **2008**, *68*, 259–272. [CrossRef]
- 10. Karlsson-Vinkhuyzen, S.I.; Groff, M.; Tamás, P.A.; Dahl, A.L.; Harder, M.; Hassall, G. Entry into force and then? The Paris agreement and state accountability. *Clim. Policy* **2018**, *18*, 593–599. [CrossRef]
- 11. Bexell, M.; Jönsson, K. Realizing the 2030 Agenda for sustainable development—Engaging national parliaments? *Policy Stud.* **2022**, *43*, 621–639. [CrossRef]
- 12. Borghetto, E.; Belchior, A.M. Party Manifestos, Opposition and Media as Determinants of the Cabinet Agenda. *Political Stud.* **2019**, *68*, 37–53. [CrossRef]
- 13. Silva, P.M.; Pita, C.; Teixeira, C.M. Two realities in the Portuguese tuna fishery: What happens in the largest EEZ of European Union? *Reg. Stud. Mar. Sci.* **2024**, *77*, 103719. [CrossRef]
- 14. Almeida, M.A. The use of rural areas in Portugal: Historical perspective and the new trends. *Rev. Galega Econ.* **2020**, 29, 1–17. [CrossRef]
- 15. Firoiu, D.; Ionescu, G.H.; Pîrvu, R.; Bădîrcea, R.; Patrichi, I.C. Achievement of the sustainable development goals (SDG) in Portugal and forecast of key indicators until 2030. *Technol. Econ. Dev. Econ.* **2022**, *28*, 1649–1683. [CrossRef]
- 16. Marino, A.; Pariso, P. Comparing European countries' performances in the transition towards the Circular Economy. *Sci. Total Environ.* **2020**, 729, 138142. [CrossRef] [PubMed]
- 17. Lafortune, G.; Fuller, G.; Kloke-Lesch, A.; Koundouri, P.; Riccaboni, A. *Europe Sustainable Development Report* 2023/2024; Dublin University Press: Dublin, Ireland, 2024.
- 18. Huber, L.M. Beyond Policy: The Use of Social Group Appeals in Party Communication. *Political Commun.* **2022**, *39*, 293–310. [CrossRef]
- 19. Schwörer, J.; Fernández-García, B. Religion on the rise again? A longitudinal analysis of religious dimensions in election manifestos of Western European parties. *Party Politics* **2020**, 27, 1160–1171. [CrossRef]
- Swedberg, R. Exploratory research. In The Production of Knowledge: Enhancing Progress in Social Science; Elman, C., Gerring, J., Mahoney, J., Eds.; Cambridge University Press: Cambridge, UK, 2020; pp. 17

  –41.
- 21. OECD. Environmental Performance Reviews: Portugal 2023; OECD Publishing: Paris, France, 2023; pp. 1–112. [CrossRef]
- 22. Henriques, J.; Ferrão, P.; Iten, M. Policies and Strategic Incentives for Circular Economy and Industrial Symbiosis in Portugal: A Future Perspective. *Sustainability* **2022**, *14*, 6888. [CrossRef]
- 23. Almeida, M.; Corticeiro, S.; Oliveira, B.R.F.; Laranjeiro, D.; Lillebø, A.; Vieira, H. The needs and challenges of the Blue Economy sector in Portugal: Bridging national and European strategies with the perceptions of the stakeholders. *J. Environ. Manag.* 2025, 384, 125468. [CrossRef] [PubMed]
- 24. Huntington, S.P. The third wave. In *Classes and Elites in Democracy and Democratization*; Halevy, E.E., Ed.; Routledge: New York, NY, USA, 1991; Volume 199, pp. 285–292.
- 25. Feijó, R.G. Presidents and Governments in Portugal: Variations on a Constitutional Theme (2008–2022). In *Portugal Since the 2008 Economic Crisis*; Pinto, A.C., Ed.; Routledge: London, UK, 2023; pp. 90–109.
- 26. Martins, A. Presidential Elements in Government The Portuguese Semi-Presidential System: About Law in the Books and Law in Action. *Eur. Const. Law Rev.* **2006**, *2*, 81–100. [CrossRef]
- 27. Pinto, A.C.; de Almeida, P.T. Portugal: The primacy of 'independents'. In *The Selection of Ministers in Europe*; Dowding, K., Dumont, P., Eds.; Routledge: London, UK, 2008; pp. 147–158.
- 28. Goes, E.; Leston-Bandeira, C. The role of the Portuguese parliament. In *The Oxford Handbook of Portuguese Politics*; Fernandes, J.M., Magalhães, P., Pinto, A.C., Eds.; Oxford University Press: Oxford, UK, 2022; pp. 136–148.

Sustainability **2025**, 17, 6749 35 of 38

29. Freire, A. The centre-left and the radical left in Portuguese democracy, 1974–2021. In *The Oxford Handbook of Portuguese Politics*; Fernandes, J.M., Magalhães, P.C., Pinto, A.C., Eds.; Oxford University Press: Oxford, UK, 2022; pp. 88–101.

- 30. Lopes, H.F. An unexpected Socialist majority: The 2022 Portuguese general elections. *West Eur. Politics* **2022**, 46, 437–450. [CrossRef]
- 31. Fernandes, J.M.; Magalhães, P.C. The 2019 Portuguese general elections. West Eur. Politics 2020, 43, 1038–1050. [CrossRef]
- 32. Eduardo, M.C.; Santos, M.H.; Teixeira, A.L. Gender and Politics: A Descriptive and Comparative Analysis of the Statutes of Brazilian and Portuguese Political Parties. *Soc. Sci.* **2023**, *12*, 434. [CrossRef]
- 33. Campos, R.; Jatowt, A.; Jorge, A. Text Mining and Visualization of Political Party Programs Using Keyword Extraction Methods: The Case of Portuguese Legislative Elections. In *Information for a Better World: Normality, Virtuality, Physicality, Inclusivity*; Sserwanga, I., Goulding, A., Moulaison-Sandy, H., Du, J.T., Soares, A.L., Hessami, V., Frank, R.D., Eds.; Springer Nature: Cham, Switzerland, 2023; pp. 340–349.
- 34. Santana-Pereira, J.; De Giorgi, E. 'Your Luck is Our Luck': Covid-19, the Radical Right and Low Polarisation in the 2022 Portuguese Elections. *South Eur. Soc. Politics* **2022**, *27*, 305–327. [CrossRef]
- 35. Lisi, M.; Freire, A. The selection of party leaders in Portugal. In *The Selection of Political Party Leaders in Contemporary Parliamentary Democracies*; Pilet, J.-B., Cross, W., Eds.; Routledge: London, UK, 2014; pp. 144–160.
- 36. Marchi, R.; Alves, A.A. The right and far-right in the Portuguese democracy (1974–2022). In *The Oxford Handbook of Portuguese Politics*; Fernandes, J.M., Magalhães, P.C., Pinto, A.C., Eds.; Oxford University Press: Oxford, UK, 2022; pp. 102–118.
- 37. Lobo, M.C. Parties and Leader Effects: Impact of Leaders in the Vote for Different Types of Parties. *Party Politics* **2008**, *14*, 281–298. [CrossRef]
- 38. Holroyd, C. Technological innovation and building a 'super smart' society: Japan's vision of society 5.0. *J. Asian Public Policy* **2022**, 15, 18–31. [CrossRef]
- 39. Eder, N.; Jenny, M.; Müller, W.C. Manifesto functions: How party candidates view and use their party's central policy document. *Elect. Stud.* **2017**, *45*, 75–87. [CrossRef]
- 40. Froio, C.; Bevan, S.; Jennings, W. Party mandates and the politics of attention: Party platforms, public priorities and the policy agenda in Britain. *Party Politics* **2016**, 23, 692–703. [CrossRef]
- 41. Anghel, V.; Thürk, M. Under the Influence: Pay-Offs to Legislative Support Parties under Minority Governments. *Gov. Oppos.* **2021**, *56*, 121–140. [CrossRef]
- 42. Krauss, S.; Thürk, M. Stability of minority governments and the role of support agreements. *West Eur. Politics* **2022**, *45*, 767–792. [CrossRef]
- 43. Moury, C.; Fernandes, J.M. Minority Governments and Pledge Fulfilment: Evidence from Portugal. *Gov. Oppos.* **2018**, *53*, 335–355. [CrossRef]
- 44. Belchior, A.M. The effects of party identification on perceptions of pledge fulfilment: Evidence from Portugal. *Int. Political Sci. Rev.* **2018**, 40, 627–642. [CrossRef]
- 45. Field, B.N. Minority Government Performance and Comparative Lessons. In *Why Minority Governments Work: Multilevel Territorial Politics in Spain*; Field, B.N., Ed.; Palgrave Macmillan: New York, NY, USA, 2016; pp. 209–219.
- 46. Thomson, R. Parties' Election Manifestos and Public Policies. In *The Oxford Handbook of Political Representation in Liberal Democracies*; Rohrschneider, R., Thomassen, J., Eds.; Oxford University Press: Oxford, UK, 2020; pp. 340–356.
- 47. Brouard, S.; Grossman, E.; Guinaudeau, I.; Persico, S.; Froio, C. Do Party Manifestos Matter in Policy-Making? Capacities, Incentives and Outcomes of Electoral Programmes in France. *Political Stud.* **2018**, *66*, 903–921. [CrossRef]
- 48. Carter, N. Greening the mainstream: Party politics and the environment. Environ. Politics 2013, 22, 73–94. [CrossRef]
- 49. Lundquist, S. Do Parties Matter for Environmental Policy Stringency? Exploring the Program-to-Policy Link for Environmental Issues in 28 Countries 1990–2015. *Political Stud.* **2022**, 72, 612–633. [CrossRef]
- 50. Nunes, W.; Anand, S. Paradox of Sustainable Development: Agenda of Political Parties. In *Sustainable Development and India: Convergence of Law, Economics, Science, and Politics*; Oxford University Press: Oxford, UK, 2018; pp. 116–133.
- 51. Rakolobe, M. An Analysis of Gender Equality Provisions in Political Parties' Manifestos for Lesotho's 2022 General Elections. *Afr. J. Gend. Soc. Dev.* **2024**, *13*, 181–203.
- 52. Schmid, N. A comparative and dynamic analysis of political party positions on energy technologies. *Environ. Innov. Soc. Transit.* **2021**, *39*, 206–228. [CrossRef]
- 53. Farstad, F.M. What explains variation in parties' climate change salience? Party Politics 2018, 24, 698–707. [CrossRef]
- 54. Carter, N.; Ladrech, R.; Little, C.; Tsagkroni, V. Political parties and climate policy: A new approach to measuring parties' climate policy preferences. *Party Politics* **2017**, 24, 731–742. [CrossRef] [PubMed]
- 55. Bendell, J. Replacing Sustainable Development: Potential Frameworks for International Cooperation in an Era of Increasing Crises and Disasters. *Sustainability* **2022**, *14*, 8185. [CrossRef]
- 56. Kroll, C.; Warchold, A.; Pradhan, P. Sustainable Development Goals (SDGs): Are we successful in turning trade-offs into synergies? Palgrave Commun. 2019, 5, 140. [CrossRef]

Sustainability **2025**, 17, 6749 36 of 38

57. Moyer, J.D.; Hedden, S. Are we on the right path to achieve the sustainable development goals? *World Dev.* **2020**, 127, 104749. [CrossRef]

- 58. Obersteiner, M.; Walsh, B.; Frank, S.; Havlík, P.; Cantele, M.; Liu, J.; Palazzo, A.; Herrero, M.; Lu, Y.; Mosnier, A.; et al. Assessing the land resource–food price nexus of the Sustainable Development Goals. *Sci. Adv.* **2016**, 2, e1501499. [CrossRef] [PubMed]
- 59. Fonseca, L.M.; Domingues, J.P.; Dima, A.M. Mapping the Sustainable Development Goals Relationships. *Sustainability* **2020**, 12, 3359. [CrossRef]
- 60. Virto, L.R. A preliminary assessment of the indicators for Sustainable Development Goal (SDG) 14 "Conserve and sustainably use the oceans, seas and marine resources for sustainable development". *Mar. Policy* **2018**, *98*, 47–57. [CrossRef]
- 61. Pradhan, P.; Costa, L.; Rybski, D.; Lucht, W.; Kropp, J.P. A Systematic Study of Sustainable Development Goal (SDG) Interactions. *Earth's Future* **2017**, *5*, 1169–1179. [CrossRef]
- 62. Sénit, C.-A. Leaving no one behind? The influence of civil society participation on the Sustainable Development Goals. *Environ. Plan. C Politics Space* **2019**, *38*, 693–712. [CrossRef]
- 63. Gabizon, S. Women's movements' engagement in the SDGs: Lessons learned from the Women's Major Group. *Gend. Dev.* **2016**, 24, 99–110. [CrossRef]
- 64. Hassan, M.M.; Lee, K.E.; Mokhtar, M. Mainstreaming, Institutionalizing and Translating Sustainable Development Goals into Non-governmental Organization's Programs. In *Concepts and Approaches for Sustainability Management*; Lee, K.E., Ed.; Springer International Publishing: Cham, Switzerland, 2020; pp. 93–118.
- 65. Harring, N.; Sohlberg, J. The varying effects of left–right ideology on support for the environment: Evidence from a Swedish survey experiment. *Environ. Politics* **2017**, *26*, 278–300. [CrossRef]
- 66. Martínez-Córdoba, P.-J.; Amor-Esteban, V.; Benito, B.; García-Sánchez, I.-M. The Commitment of Spanish Local Governments to Sustainable Development Goal 11 from a Multivariate Perspective. *Sustainability* **2021**, *13*, 1222. [CrossRef]
- 67. Bick, N.; Keele, D. Sustainability and climate change: Understanding the political use of environmental terms in municipal governments. *Curr. Res. Environ. Sustain.* **2022**, *4*, 100145. [CrossRef]
- 68. DeNicola, E.; Subramaniam, P.R. Environmental attitudes and political partisanship. *Public Health* **2014**, *128*, 404–409. [CrossRef] [PubMed]
- 69. Blofield, M.; Ewig, C.; Piscopo, J.M. The Reactive Left: Gender Equality and the Latin American Pink Tide. *Soc. Politics Int. Stud. Gend. State Soc.* **2017**, 24, 345–369. [CrossRef]
- 70. Noël, A.; Thérien, J.-P. Left and Right in Global Politics; Cambridge University Press: Cambridge, UK, 2008.
- 71. Harring, N.; Jagers, S.C. Should We Trust in Values? Explaining Public Support for Pro-Environmental Taxes. *Sustainability* **2013**, 5, 210–227. [CrossRef]
- 72. Ejelöv, E.; Nilsson, A. Individual Factors Influencing Acceptability for Environmental Policies: A Review and Research Agenda. *Sustainability* **2020**, *12*, 2404. [CrossRef]
- 73. McCright, A.M.; Dunlap, R.E.; Marquart-Pyatt, S.T. Political ideology and views about climate change in the European Union. *Environ. Politics* **2016**, *25*, 338–358. [CrossRef]
- 74. Lalot, F.; Büttner, C.M.; Özkeçeci, H.; Abrams, D. Right and left-wing views: A story of disagreement on environmental issues but agreement on solutions. *Transl. Issues Psychol. Sci.* **2022**, *8*, 503–517. [CrossRef]
- 75. Wang, Q.-J.; Feng, G.-F.; Chen, Y.E.; Wen, J.; Chang, C.-P. The impacts of government ideology on innovation: What are the main implications? *Res. Policy* **2019**, *48*, 1232–1247. [CrossRef]
- 76. Tawiah, V.; Zakari, A. Government political ideology and green innovation: Evidence from OECD countries. *Econ. Change Restruct.* **2024**, *57*, 125. [CrossRef]
- 77. Mohtar, R.H. The role of the private sector in sustainable development. Water Int. 2022, 47, 1023–1031. [CrossRef]
- 78. Küppers, A. 'Climate-Soviets,' 'Alarmism,' and 'Eco-Dictatorship': The Framing of Climate Change Scepticism by the Populist Radical Right Alternative for Germany. *Ger. Politics* **2024**, *33*, 1–21. [CrossRef]
- 79. Lockwood, M. Right-wing populism and the climate change agenda: Exploring the linkages. *Environ. Politics* **2018**, 27, 712–732. [CrossRef]
- 80. Forchtner, B. Climate change and the far right. WIREs Clim. Change 2019, 10, e604. [CrossRef]
- 81. Bulli, G. Environmental Politics on the Italian Far Right: Not a party issue? In *The Far Right and the Environment*; Forchtner, B., Ed.; Routledge: London, UK, 2019; pp. 88–103.
- 82. Vicenova, R.; Oravcova, V.; Mišík, M. What Do Far-Right Parties Talk About When They Talk About Green Issues? L'SNS in 2016–2020 Parliamentary Debates. *Sociológia* 2022, 54, 569–594. [CrossRef]
- 83. Ungureanu, C.; Sanjaume-Calvet, M. The blurred lines between center-right and far-right: "Reverse contamination" and the People's Party's environmentalism in Spain. *Party Politics* **2024**, *31*, 646–659. [CrossRef]
- 84. Bisogno, M.; Cuadrado-Ballesteros, B.; Rossi, F.M.; Peña-Miguel, N. Sustainable development goals in public administrations: Enabling conditions in local governments. *Int. Rev. Adm. Sci.* 2023, 89, 1223–1242. [CrossRef]

Sustainability **2025**, 17, 6749 37 of 38

85. Moilanen, M.; Østbye, S. Doublespeak? Sustainability in the Arctic—A Text Mining Analysis of Norwegian Parliamentary Speeches. *Sustainability* **2021**, *13*, 9397. [CrossRef]

- 86. Rieiro-García, M.; Aibar-Guzmán, C.; Aibar-Guzmán, B. The 2030 Agenda in Spanish local entities: Does the government's ideological color matter? *Politics Policy* **2023**, *51*, 800–829. [CrossRef]
- 87. Spoon, J.-J.; Hobolt, S.B.; de Vries, C.E. Going green: Explaining issue competition on the environment. *Eur. J. Political Res.* **2014**, 53, 363–380. [CrossRef]
- 88. Brás, G.R.; Lillebø, A.; Vieira, H. Current climate action trends in party-political manifestos: A content analysis provides hints to move forward. *Sustain. Dev.* **2025**, 33, 1948–1967. [CrossRef]
- 89. Sümeghy, D.; Schmeller, D. Giving the green light to sustainability: Key political factors behind the European Green Capital Award applications. *J. Urban Aff.* **2023**, 47, 1599–1619. [CrossRef]
- 90. Jordan, A.; Gravey, V. Environmental Policy in the EU: Actors, Institutions and Processes, 4th ed.; Routledge: London, UK, 2021.
- 91. Kroll, C.; Zipperer, V. Sustainable Development and Populism. Ecol. Econ. 2020, 176, 106723. [CrossRef]
- 92. Forchtner, B. The Far Right and the Environment: Politics, Discourse and Communication; Routledge: Abingdon, UK, 2019.
- 93. Forchtner, B.; Lubarda, B. Scepticisms and beyond? A comprehensive portrait of climate change communication by the far right in the European Parliament. *Environ. Politics* **2023**, *32*, 43–68. [CrossRef]
- 94. Krange, O.; Kaltenborn, B.P.; Hultman, M. Cool dudes in Norway: Climate change denial among conservative Norwegian men. *Environ. Sociol.* **2019**, *5*, 1–11. [CrossRef]
- 95. Painter, J.; Gavin, N.T. Climate Skepticism in British Newspapers, 2007–2011. Environ. Commun. 2016, 10, 432–452. [CrossRef]
- 96. Orellana, S.; Bisgin, H. Using Natural Language Processing to Analyze Political Party Manifestos from New Zealand. *Information* **2023**, *14*, 152. [CrossRef]
- 97. Mayring, P. Qualitative Content Analysis: Theoretical Background and Procedures. In *Approaches to Qualitative Research in Mathematics Education: Examples of Methodology and Methods*; Bikner-Ahsbahs, A., Knipping, C., Presmeg, N., Eds.; Springer: Dordrecht, The Netherlands, 2015; pp. 365–380.
- 98. Kørnøv, L.; Lyhne, I.; Davila, J.G. Linking the UN SDGs and environmental assessment: Towards a conceptual framework. Environ. Impact Assess. Rev. 2020, 85, 106463. [CrossRef]
- 99. Bass, L.; Semetko, H.A. Content Analysis: On the Rise. In *Research Methods in the Social Sciences: An A-Z of Key Concepts*; Morin, J.-F., Olsson, C., Atikcan, E.Ö., Eds.; Oxford University Press: Oxford, UK, 2021; pp. 56–61.
- 100. Kleinheksel, A.J.; Rockich-Winston, N.; Tawfik, H.; Wyatt, T.R. Demystifying Content Analysis. *Am. J. Pharm. Educ.* **2020**, *84*, 7113. [CrossRef] [PubMed]
- 101. Nowell, L.S.; Norris, J.M.; White, D.E.; Moules, N.J. Thematic Analysis: Striving to Meet the Trustworthiness Criteria. *Int. J. Qual. Methods* **2017**, *16*, 1609406917733847. [CrossRef]
- 102. Wang, W.; Kang, W.; Mu, J. Mapping research to the Sustainable Development Goals (SDGs). Res. Sq. 2023. [CrossRef]
- 103. Villiger, J.; Schweiger, S.A.; Baldauf, A. Making the Invisible Visible: Guidelines for the Coding Process in Meta-Analyses. *Organ. Res. Methods* **2021**, *25*, 716–740. [CrossRef]
- 104. McDonald, N.; Schoenebeck, S.; Forte, A. Reliability and Inter-rater Reliability in Qualitative Research: Norms and Guidelines for CSCW and HCI Practice. *Proc. ACM Hum.-Comput. Interact.* **2019**, *3*, 1–23. [CrossRef]
- 105. Neuendorf, K.A. Content analysis and thematic analysis. In *Advanced Research Methods for Applied Psychology*; Brough, P., Ed.; Routledge: London, UK, 2018; pp. 211–223.
- 106. McHugh, M.L. Interrater reliability: The kappa statistic. Biochem. Medica 2012, 22, 276–282. [CrossRef]
- 107. Erlingsson, C.; Brysiewicz, P. A hands-on guide to doing content analysis. Afr. J. Emerg. Med. 2017, 7, 93–99. [CrossRef] [PubMed]
- 108. Krippendorff, K. Content Analysis: An Introduction to Its Methodology, 4th ed.; Sage Publications: Thousand Oaks, CA, USA, 2019.
- 109. George, D.; Mallery, P. SPSS for Windows Step by Step: A Simple Guide and Reference, 17.0 update; Pearson: Boston, MA, USA, 2010.
- 110. Schober, P.; Boer, C.; Schwarte, L.A. Correlation Coefficients: Appropriate Use and Interpretation. *Anesth. Analg.* **2018**, 126, 1763–1768. [CrossRef] [PubMed]
- 111. Taglialatela, J.; Pirazzi Maffiola, K.; Barontini, R.; Testa, F. Board of Directors' characteristics and environmental SDGs adoption: An international study. *Corp. Soc. Responsib. Environ. Manag.* **2023**, *30*, 2490–2506. [CrossRef]
- 112. Meuleman, L. Public Administration and Governance for the SDGs: Navigating between Change and Stability. *Sustainability* **2021**, *13*, 5914. [CrossRef]
- 113. Mourato, J.; Bussler, A. Community-based initiatives and the politicization gap in socio-ecological transitions: Lessons from Portugal. *Environ. Innov. Soc. Transit.* **2019**, *33*, 268–281. [CrossRef]
- 114. Amaral, A.R.; Rodrigues, E.; Gaspar, A.R.; Gomes, Á. How organizational constraints undermine sustainability actions in a university's campuses: A case study. *J. Clean. Prod.* **2023**, 411, 137270. [CrossRef]
- 115. Medeiros, E. Portugal 2020: An Effective Policy Platform to Promote Sustainable Territorial Development? *Sustainability* **2020**, 12, 1126. [CrossRef]

Sustainability **2025**, 17, 6749 38 of 38

116. Castellnou, M.; Guiomar, N.; Rego, F.; Fernandes, P. Fire growth patterns in the 2017 mega fire episode of October 15, central Portugal. In *Advances in Forest Fire Research*; Viegas, X., Ed.; ADAI/CEIF University of Coimbra: Coimbra, Portugal, 2018; pp. 447–453.

- 117. Campos, C.; Couto, F.T.; Filippi, J.-B.; Baggio, R.; Salgado, R. Modelling pyro-convection phenomenon during a mega-fire event in Portugal. *Atmos. Res.* **2023**, 290, 106776. [CrossRef]
- 118. Camargo, J.; Castro, P. Portugal em Chamas—Como Resgatar as Florestas; Bertrand: Lisbon, Portugal, 2018.
- 119. Pinto, B.; Costa, J.L.; Cabral, H. What news from the sea? Assessing the presence of marine issues in the Portuguese quality press. *Ocean Coast. Manag.* **2020**, *185*, 105068. [CrossRef]
- 120. Almeida, F. The Contribution of Local Agents and Citizens to Sustainable Development: The Portuguese Experience. *Sustainability* **2022**, *14*, 12696. [CrossRef]
- 121. Ramos, A.M.; Russo, A.; DaCamara, C.C.; Nunes, S.; Sousa, P.; Soares, P.M.M.; Lima, M.M.; Hurduc, A.; Trigo, R.M. The compound event that triggered the destructive fires of October 2017 in Portugal. *iScience* 2023, 26, 1–19. [CrossRef] [PubMed]
- 122. Pascual, U.; Balvanera, P.; Anderson, C.B.; Chaplin-Kramer, R.; Christie, M.; González-Jiménez, D.; Martin, A.; Raymond, C.M.; Termansen, M.; Vatn, A.; et al. Diverse values of nature for sustainability. *Nature* 2023, 620, 813–823. [CrossRef] [PubMed]
- 123. da Silva Marques, I.; Santos, C.; Guerreiro, J. Comparative analysis of National Ocean Strategies of the Atlantic Basin countries. *Front. Mar. Sci.* **2022**, *9*, 1001181. [CrossRef]
- 124. Burke Thomas, A.; Cascio Wayne, E.; Costa Daniel, L.; Deener, K.; Fontaine Thomas, D.; Fulk Florence, A.; Jackson Laura, E.; Munns Wayne, R.; Orme-Zavaleta, J.; Slimak Michael, W.; et al. Rethinking Environmental Protection: Meeting the Challenges of a Changing World. *Environ. Health Perspect.* 2017, 125, A43–A49. [PubMed]
- 125. Lencucha, R.; Kulenova, A.; Thow, A.M. Framing policy objectives in the sustainable development goals: Hierarchy, balance, or transformation? *Glob. Health* **2023**, *19*, 5. [CrossRef] [PubMed]
- 126. McKinley, E.; Acott, T.; Yates, K.L. Marine social sciences: Looking towards a sustainable future. *Environ. Sci. Policy* **2020**, *108*, 85–92. [CrossRef]
- 127. Partelow, S.; von Wehrden, H.; Horn, O. Pollution exposure on marine protected areas: A global assessment. *Mar. Pollut. Bull.* **2015**, *100*, 352–358. [CrossRef] [PubMed]
- 128. Gustavsson, M.; Morrissey, K. A typology of different perspectives on the spatial economic impacts of marine spatial planning. *J. Environ. Policy Plan.* **2019**, 21, 841–853. [CrossRef]
- 129. Aswani, S.; Basurto, X.; Ferse, S.; Glaser, M.; Campbell, L.; Cinner, J.E.; Dalton, T.; Jenkins, L.D.; Miller, M.L.; Pollnac, R.; et al. Marine resource management and conservation in the Anthropocene. *Environ. Conserv.* 2018, 45, 192–202. [CrossRef]
- 130. Hoffmann, S. Challenges and opportunities of area-based conservation in reaching biodiversity and sustainability goals. *Biodivers. Conserv.* **2022**, *31*, 325–352. [CrossRef]
- 131. Schwilch, G.; Liniger, H.P.; Hurni, H. Sustainable Land Management (SLM) Practices in Drylands: How Do They Address Desertification Threats? *Environ. Manag.* **2014**, *54*, 983–1004. [CrossRef] [PubMed]
- 132. Morgera, E. SDG 15: Protect, Restore and Promote Sustainable Use of Terrestrial Ecosystems, Sustainably Manage Forests, Combat Desertification, and Halt and Reverse Land Degradation and Halt Biodiversity Loss. In *The Cambridge Handbook of the Sustainable Development Goals and International Law*; Ebbesson, J., Hey, E., Eds.; Cambridge University Press: Cambridge, UK, 2022; pp. 376–398.
- 133. Mendes, M.S. 'Enough' of What? An Analysis of Chega's Populist Radical Right Agenda. *South Eur. Soc. Politics* **2021**, *26*, 329–353. [CrossRef]

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