

Climate Ambition of the Conference of Parties, a Content Analysis

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ABSTRACT

After 28 years since the first Conference of Parties (COP) and numerous policies adopted in the context of the United Nations Framework Convention on Climate Change (UNFCCC), it is an interesting fact that greenhouse gas emissions persist on an ascending path. The following research paper is trying to answer the question: “To what extent have parties evolved in terms of ambition from 1995 to 2022?” This question will be approached both quantitatively and qualitatively, through content analysis of the Conference of Parties reports on decisions. This work aims to contribute to future research on the “hows” and “whens” of climate science reflected in policy-making, what ambition means for policy intensity and other questions on the climate nexus.

Introduction

The topic of Climate Change has ascended to a paramount position for the international community (United Nations, 2023). In recent years, there have been many efforts by international organisations to coordinate their forces, the most profound being the United Nations Framework Convention on Climate Change (UNFCCC). The convention sets as the supreme decision-making body the Conference of Parties (COP) (Conference of the Parties, n.d.), where all the United Nations member countries assemble once a year to negotiate climate action. Despite the 27 years that have transpired since the first COP¹, global greenhouse gas emissions persist on an upward trajectory. Trying to explore whether these scientific alerts are being reflected in the output documents of the COP, this research paper aims to answer the following question: To what extent have the parties evolved regarding climate ambition from 1995 to 2022?

The working hypotheses are as follows:

- H0 Ambition does not change from year to year.
- H1 Ambition has steadily increased throughout the time frame.
- H2 Ambition has steadily decreased throughout the time frame.
- H3 Ambition has fluctuated in a nonlinear way through the time frame.

As the passage of time brings more and more detailed scientific knowledge about the urgency to combat the climate crisis (IPCC, 2022), one would expect that this knowledge would be readily incorporated into policy as well (Edler et al., 2022). The link between the advancement of scientific knowledge and political actions in the field of climate policy is a broad topic of deep academic interest. Climate ambition in COP output documents is researched in this paper, to explore whether ambition is evolving in the official decisions. This could be a first reflection of the science notices in the specific policy texts. This picture would be more complete if we connected the specific scientific reports (of the IPCC for example), with the results of the present research but this concerns future research.

¹ At Berlin in 1995.

It is essential at this point to emphasize that the term ambition is not solely tethered to the global temperature goal but also extends to encompass climate justice. These principles, originating from the UNFCCC itself, specifically the precautionary principle of "Common but Differentiated Responsibilities," categorize UN countries into Developed and Developing. Developed countries take the lead in providing climate finance to Developing countries, guided by this precautionary principle. This categorization underlines that climate justice is an integral aspect of climate action. Consequently, climate ambition is defined here based on a dual axis, encompassing both the global temperature goal and the principles of climate justice.

This specific project therefore delves into the specific decisions of the Parties through the lens of ambition, using content analysis. The examination involves questioning whether each successive decision is more ambitious than its predecessor, a distinction often expressed in numerical targets, such as the contrast between a 2-degree reduction and a 1.5-degree reduction. However, complexity arises when dealing with linguistic markers in COP output documents, where phrases such as "the parties must take the lead", "have the right" and "take into account" must be evaluated on an intensity scale as proxies of ambition.

The paper is not exploring the mere presence of the word "ambition" but its nuanced expressions. The use of specific words in these very formal texts is never accidental. For example, it is one thing for a state to "adopt" a policy, and another to "encourage" a policy. Detecting these specific "tones" in words can help us understand the deeper meanings underlying a policy. Questions regarding the application of decided policies, the speed of scientific absorption into policy, and the influence of the Paris Agreement can be fruitfully explored, building on the insights gained from this exploratory research. In the following text, an overview of the existing literature will be presented first. Then the methodology used will be analysed. Finally, the results from this content analysis and their possible interpretations that could be further developed in future research will be discussed before a concluding section summarising the main points.

Literature Review

The relevant literature is limited because the concept of climate ambition is rather new to politics. For this reason, the following literature review will examine the surrounding issues of climate policy analysis. First, a background of the broader subject area will be given to provide an overview of the scope and organization of this review. Secondly, I will proceed with a brief historical overview. Next, the literature will be approached in terms of Themes-Trends and methodologies approaches. Lastly, gaps and limitations will be discussed.

The concept of climate action began to emerge in the 1980s with the discovery of the ozone hole. The United Nations recognized the need for collective action following scientific warnings, and the emergence of related social movements. However, the focus was initially on identifying the issue rather than setting specific ambitious targets. The political momentum at the United Nations led to the Kyoto Protocol and the establishment of the UNFCCC (Jackson, 2007). Ambition began to be quantified through emissions reduction targets for developed countries. After the 2000, developing nations started to push for a fairer distribution of responsibilities. The debate has expanded to include issues of climate justice and equity, influencing the definition and expectations of climate ambition (Cléménçon, 2023). However, it was only after the 2015 Paris Agreement that ambition became an official term in the UNFCCC (Rajamani, 2016). The intersection of policy developments and discourse analysis provides a comprehensive view of how the trajectory of climate ambitions has evolved.

In the academic sector, the term climate ambition has not been studied directly. Nevertheless, different methodologies have been used to evaluate climate policies and their effect on climate and society. Starting with cost-benefit analysis, maybe the most well-known quantitative method in the field, the cost and benefits of environmental policies are assessed. This method has been inspired by public economics and measures the costs and benefits of a climate policy in monetary terms. Another key method has been that of Environmental Impact Assessment (EIA), a systematic process that assesses the potential environmental consequences of proposed policies. This method also takes into account qualitative characteristics such as environmental and social factors, as analyzed by Greenberg in his book

'Environmental Policy Analysis and Practice' (Greenberg, 2008). Finally in conducting discourse analysis, as Leipold et al. mention in their work on discourse analysis of environmental policy (2019b), there are various theoretical approaches but there is limited cross-fertilization, few attempts at meta-analysis, and subtle reports on logical effects without an overarching framework in place (Leipold et al., 2019b). While cost-benefit analysis provides quantitative assessments of policy impacts, discourse analysis contributes to a qualitative understanding of the discursive elements that shape the environmental policy landscape. Combining discourse analysis and Environmental Impact Assessment provides a more comprehensive and nuanced analysis of environmental policies.

In terms of methodologies applied to this field, content and discourse analysis in climate policy have been approached academically from various perspectives. Both have been applied to scrutinize climate change in the media, exploring how climate issues are presented to the public (Painter, 2018). In addition, content analysis has been applied to official documents in various contexts for example, loss and damage (Calliari, 2014), examining the language and narratives surrounding the impacts of climate change on vulnerable communities. Ideological dimensions are also a focus for researchers, as content and discourse analysis seek to reveal the underlying beliefs and values that shape climate policy debates (Wang & Huan, 2023a).

After thorough research in scientific publication bases and libraries, one easily concludes that ambition in climate policy is a recent topic. In the coming years, and especially after the implementation of the Paris Agreement², the sector is likely to experience greater growth. Future research could focus on ambition as a word in political narratives, on ambition as a benchmark between climate policies, on the role of ambition in the importance of the Paris Agreement, and on case studies on the discourse of sustainable development.

To conclude, the existing literature covers such issues/topics as the construction of climate change itself, how it is approached by political rhetoric (Wang & Huan, 2023a), how the media covers the issue (Painter, 2018), and ideological colours behind the speech (Wang & Huan, 2023a). A map of relevant literature for this project would include the relevant history of climate ambition, trends and perspectives in climate studies, methods used in environmental policy analysis, and discourse analysis in policy documents. This project aims to contribute to the existing literature by conducting a climate ambition content analysis, drawing a first line on climate ambition in climate policy.

Methodology

The documents of the Conference of Parties concern both the proceedings of the conference and specific negotiation topics such as adaptation, finance, etc. However, all the decisions from the various sessions are reflected in the final document entitled: "Report of the Conference of the Parties", which is chosen as the main unit of analysis for the present project. The reason behind this choice is that the Reports are the only consistent document appearing every time and they give a broad understanding of the sessions including the decisions adopted.

The preliminary phase of my research entailed the acquisition of all 27 Reports of the Conferences of the Parties, easily accessible via the UNFCCC website. This activity has a dual role, firstly to build a corpus of sources, and secondly to develop a familiarity with the texts. COPs reports are distinguished in two parts. The first part is on the "Proceedings" of the conference and therefore is not relevant to my research question. Hence, I have focused on the second part "Action taken by the Conference of the Parties". This part includes all the Decisions adopted by the Conference of the Parties in a certain session.

Starting the analytical process, a meticulous examination of the texts was undertaken. Forty-five verbs and adverbs, recurrent in frequency, were discerned and subsequently categorised based on their perceived level of ambition. Five distinct groups were created, each assigned a corresponding weighting factor (see Table 1). The cumulative occurrences of these identified linguistic elements within each report were tallied and then multiplied by their respective group coefficients, yielding a quantifiable score for each COP report³. The ensuing comparative analysis between

² The Paris Agreement, adopted in 2011, is a legal binding international treaty on climate change.

³ Then the following scores are calculated:

conferences, was based upon these derived scores⁴. Of course, this assertion allows us only relative comparisons between the texts of the different conferences. Outside of this context, they would have no meaning since the validity of the analysis rests on the consistency that exists in the rating scale of each verb (or adverb).

An evaluative critique that could be made here is why the scores were not normalized to percentages based on the length of the report. The answer lies in the fact that a brief report in itself suggests a lower degree of ambition than a more extensive one. Another potential critique centres on the methodology of word collection. To be clear here, I must emphasize that the words were collected according to the contextual framework in which these terms were situated. For instance, verbs denoting procedural aspects, such as issues relevant to the secretariat were not included. The reason is, that this aspect would give us a glance at the bureaucracy of COPs but it was considered of non added value for this research.

A second categorization was evaluated for implementation and subsequently employed, is the one of the subjects of the sentences. The subjects were divided into two groups: 1) Political, and 2) Scientific/Technical, as I explain in the table below. This procedural step facilitated the derivation of conclusions about the extent to which these reports are technical or political texts. A third category would also be used but with the limitations of space and resources of this work, it was not created. This category would be about quantifiable climate goals. Its thematic focus would revolve around numerical delimitations of climate targets, bringing an essential dimension not represented in this paper, and thus suggesting a possible avenue for future research within this project.

The tables below depict the two above-mentioned categorizations. In Table 1, the selected verbs and adverbs are presented, alongside the allotted score for climate ambition, from 0 indicating a ‘very low’ level of ambition, to 4 indicating a ‘very high’ level of ambition. In Table 2, The categorization of the objects is depicted. For the reasons explained above, verbs associated with the object of the secretariat did not receive any points.

Table 1. Linguistic indicators as proxis for climate ambition

| Ambition Characterization & Points () | Linguistic Indicator |
|--|----------------------|
| | Objects |
| | Verbs/ Adverbs |
| Very Low Ambition (0) | Express |
| | (Take) note |
| | Acknowledge |
| | Consider |
| | Project |
| | Seek |
| | Liaise |
| | Would |
| | Recall |
| Low Ambition (1) | Encourage |
| | Request |

SUM BY CATEGORY: Sum of all the entries of each category/ COP session

SUM: The Sum of Sums of all the categories/ COP session

SCORE BY CATEGORY: Entries by ambition classification (*0 for very low, *1 for low, *2 for medium ambition, 3*High ambition, 4* Very High ambition)

SUM SCORE: Sum of the Scores by categories, is the score of the Conference.

⁴ The table with the scores can be found at ANNEX.

| | |
|---------------------------|------------|
| | Recommend |
| | Describe |
| | Invite |
| | Prepare |
| | Compile |
| | Could |
| Medium Ambition (2) | Place |
| | Provide |
| | Recognize |
| | Synthesize |
| | Elaborate |
| | Examine |
| | Review |
| | Require |
| Contribute | |
| High Ambition (3) | Shall |
| | Deal |
| | Oversee |
| | Propose |
| | Urge |
| | Evaluate |
| | Make |
| | Facilitate |
| | Guide |
| Very High Ambition (4) | Must |
| | Decide |
| | Establish |
| | Authorize |
| | Will |
| | Promote |
| | Adopt |
| | Ensure |
| Have the right to | |

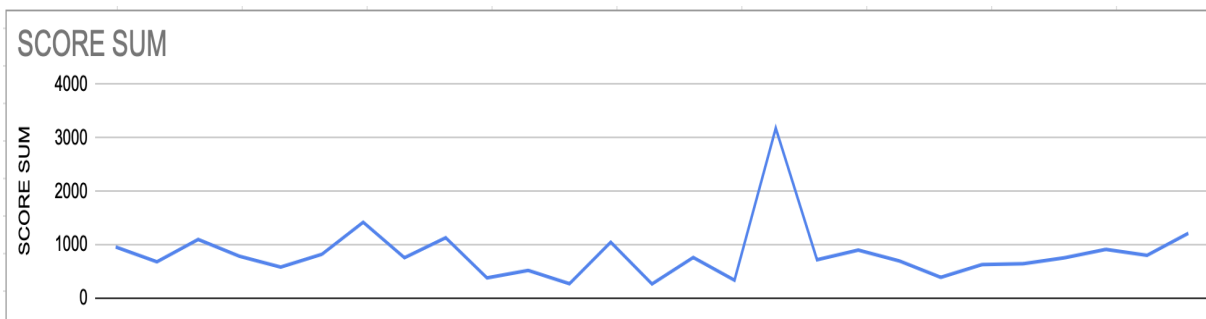
Table 2. Objects of the sentences examined

| Objects | | |
|---------------------------|------------|----------------|
| Political | Scientific | Administrative |
| The Conference of Parties | SBI | Secretariat |
| Parties | SBSTA | |
| Annex I Parties | IPCC | |

| | | |
|---|-----------------------|--|
| Annex II Parties or non-Annex I Parties | WMO | |
| Secretary-General | Ad Hoc working groups | |
| Executive Secretary | | |
| General Assembly | | |
| COP Presidency | | |
| Head of the Convention | | |

Data Analysis

As indicated above, the second part of COP documents was examined for occurrences of a selection of verbs assigned different scores based on level of ambition. Analysis of these occurrences suggests that there are fluctuations on the SCORE SUM indicator, a general fall between COPs 8 and 16. A significant surge at COP 17, and then a fall until COP 20. A slow surge at the COPs after that followed. Building upon the intricate analysis of verb occurrences and their assigned scores based on ambition levels in the second part of COP documents, these fluctuations in the SCORE SUM indicator not only signify the nuanced evolution of linguistic expressions but also offer valuable insights into the contextual shifts and priorities shaping climate discourse across various COPs.



(The horizontal axis concerns the time.)

Figure 1.

As depicted in Figure 1, there is a clear verification of the third working hypothesis which indicates the presence of a discernible non-linear correlation between time and ambition. Nonetheless, a noteworthy observation emerges in the form of an apparent "ceiling" at a score of 1000 that is rarely exceeded. The maximum is observed at COP 17, a very critical conference with the longest output document. COP 17 was a critical meeting that shaped the international climate change agenda, addressing key issues such as the future of the Kyoto Protocol. The decisions made at COP 17, particularly the Durban Platform⁵, set the stage for subsequent conferences, including COP 21 in

⁵ At the COP in Durban, held on 2011, parties pledged to reach a treaty for reducing their emissions by 2015. This way, the Durban Platform set the way to Paris Agreement in a sense.

Paris in 2015. COP 21 resulted in the historic Paris Agreement, which outlined a global framework for limiting global warming and addressing the impacts of climate change.

Regarding the dichotomy between political and scientific/technical, fluctuations can be discerned too (Figure 2). However, merging Figures 1 & 2 (Figure 3), one can see that these fluctuations are, a first glance, not important. Nevertheless, if we multiply these percentages by 100, to bring the graph to a comparable form⁶ (Figure 4) these percentages move in the same way, in many cases, as the ambition score. This is the first indication that the more technical the text, the more ambitious it is climatically. Going back to Figure 2, it is indicated that ambition is presented politically with a significant difference. These percentages are fluctuating between 8%-50%. A last point that should be mentioned is that in COP 17, where ambition reaches a peak, its text has also the highest percentage of scientific/technical mentions. Again that is not a conclusion on the relation between science and climate politics, but a very important starting point for future research.

It is imperative to acknowledge that the available data, while providing initial insights, remain insufficient for conclusive inferences regarding the intricate construct of climate ambition, given its multifaceted determinants. These results show us that systematic analysis of the expression of climate ambition would be of research interest for investigating climate ambition, as represented in the COPs. An extension of this methodology that could enhance the results is the examination of non-linguistic factors. The climate goals could be better counted in numbers, for example, the 2 degrees Celsius goal needs to be reflected here. Moreover, the examination of key agreements like the Kyoto Protocol and the Paris Agreement would add another piece to the puzzle. Finally, a secondary layer of analysis, these results could be related to the participants of the conference, for example, an exploration of the influence of representatives from the oil sector on overall ambition levels.

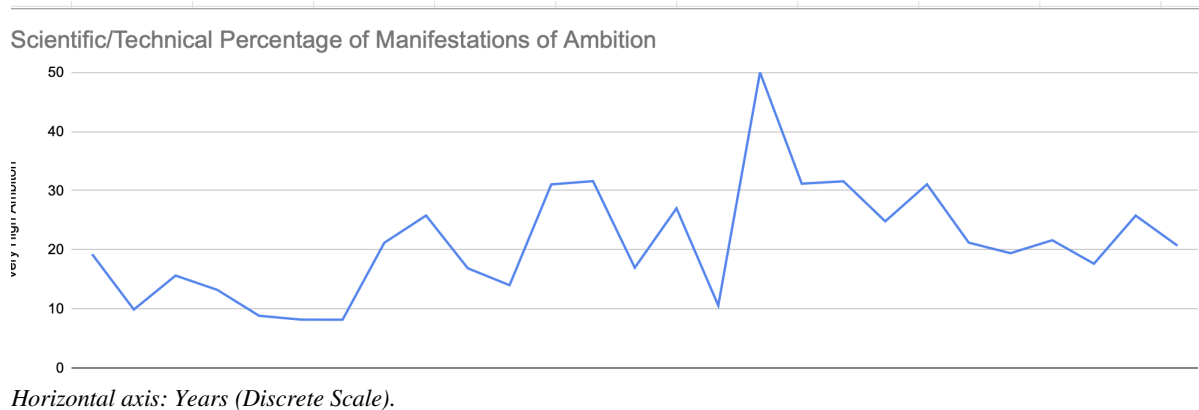
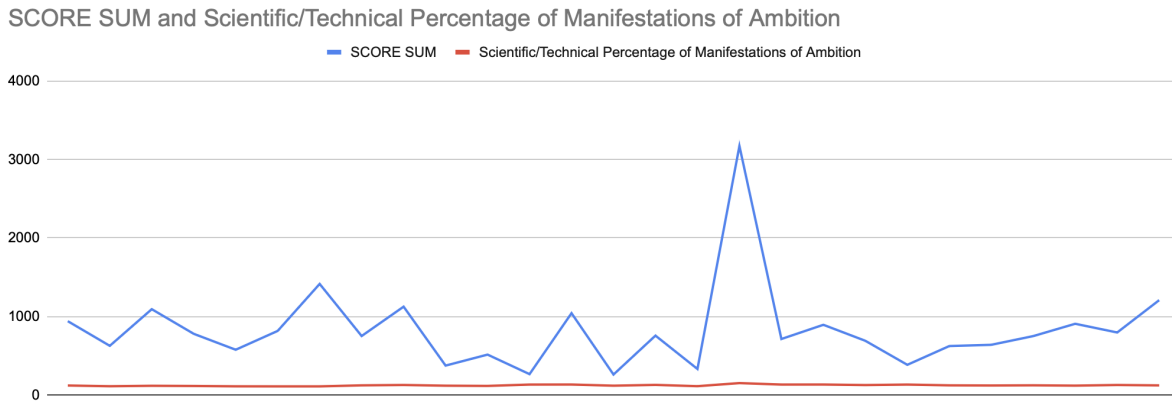


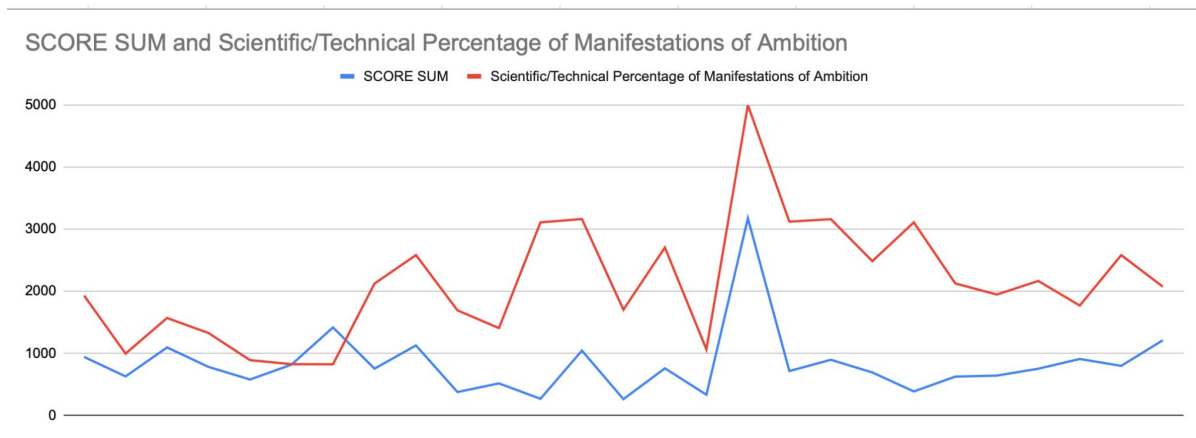
Figure 2.

⁶ We are allowed to do this here because in this case we don't compare absolute numbers but rather their changes which are not changed in percentages by multiplying them symmetrically.



Scientific/Technical Percentage of Manifestation of Ambition is presented as an almost flat line here because the percentages are between 8-50%, while the SCORE SUM is between 279-3472. Horizontal axis: Years (Discrete Scale).

Figure 3.



The graph in this form is useful only for comparing the fluctuations between the lines but any intersection points are of no interest. The points of analysis are min, max and any fluctuations in %. Horizontal axis: Years (Discrete Scale).

Figure 4.

Dismissing the first assumptions implies that there is no continuous progress or decline in climate ambition, at least as far as you express it in language. Total scores in the second phase can be the dependent variable in a regression with explanatory variables such as location, lobbies, scientific reports, and others. The most remarkable finding is probably the correlation of how much scientific actors contributed to the text and how much politicians. Looking at the big picture, this observation may open new avenues in the relationship between science and climate policy making.

Conclusions

In this paper, a content analysis was conducted to compare the ambition as its expressed at the Conference of Parties output documents. The main observations are the fluctuations per year both in the levels of ambition and in the degrees of technical character of the texts. An additional significant finding is that at COP 17, where ambition reaches its peak, the text also exhibits the highest percentage of scientific/technical mentions. While not providing a conclusive understanding of the relationship between science and climate politics, this observation serves as a valuable starting point

for future research. The intriguing connection between heightened ambition levels and an increased presence of scientific and technical content at COP 17 raises questions about the potential interdependence of scientific discourse and climate policy. Further exploration of this phenomenon is warranted to unravel the complexities of this relationship and its implications for shaping climate-related policies in the future.

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