Moving mountains: Common policy goals among landlocked, mountainous countries may serve as a basis for UNFCCC coalition-building

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Abstract

Landlocked, mountainous countries, although scattered around the globe, share a unifying set of geographical features and are impacted by climate change in similar ways. Yet the concerns of mountain countries find relatively little international recognition, including in international environmental and climate change negotiations, owing in part to the small size and relatively negligible power of most of these states. A potential solution to this problem is coalition-building. This paper investigates the question: To what extent do policy similarities exist between mountainous, landlocked countries under the United Nations Framework Convention on Climate Change that could serve as a basis for coalition-building? To answer this question, I employ discourse analysis based on three original datasets of party submissions under the UNFCCC regime, surrounding Conference of Parties 27 (Sharm el-Sheik) and COP 21 (Paris); NDCs; and COP 27 high-level speeches and statements. I find that many landlocked, mountainous countries do, in fact, seem to share the same policy priorities but that these preferences are not reflected in the UNFCCC process. Based on this, I suggest that conditions may be conducive for effective coalition-building among these parties.

[1] This paper was produced over the duration of an academic quarter as the capstone research project for my international studies major at Northwestern University through the course "Intl_St 395: International Climate Change Politics and Policy," taught by Diana Elhard, PhD Candidate.

Introduction

Over the decades, coalitions have crystallized as an important way for smaller and less-represented countries to make their voices heard and push for policy priorities under the UNFCCC. As evidenced by the large number of coalitions under the UNFCCC, states perceive the tradeoff of giving up some degree of sovereignty – in this case, the ability to independently make decisions – for the power that comes with negotiating as a cohesive bloc. While there are large negotiation groups like the G77+China, previous experience and research have shown that at least partly, these coalitions can be issue-specific and/or focused on particular geographic areas (Genovese, McAlexander, and Urpelainen 2023).

This paper sets out to answer the question of to what extent policy similarities exist between mountainous, landlocked countries under the UNFCCC framework that could serve as a basis for coalition-building.

Mountainous, landlocked countries face a unique set of challenges stemming from climate change which has been emphasized by many of their governments and COP delegations (Bhandary 2017). Yet prior attempts at forming a coalition around the identity of being landlocked and mountainous have failed before the coalition had the chance to test itself at UNFCCC negotiations (ibid.). Therefore, finding empirically the areas of primary concern and policy priorities that overlap between members of this as-of-yet unstructured group of countries could allow their relevant political decision-makers to restart a push to coordinate, do so on a more solid basis and have a higher chance of lasting success.

It appears there is at least a possibility for success. Existing research suggests that mountainous, landlocked countries are facing many of the same challenges (yet ones unique to their geography) and that national governments individually have been pushing for comparable policy to address them. In short, there appears to be a significant overlap in priorities. This would suggest that coalition-building under the UNFCCC around the issues affecting specifically mountainous, landlocked countries ought to be a possibility. The next section will take a closer look at why this is.

Literature review

Little scholarly work has been done specifically on the international relations dimension of mountainous landlocked countries' experiences with global climate change. Most of the literature dealing specifically with roughly the subset of countries discussed in this article is not academic in nature but rather the product of conferences, multilateral meetings and government efforts at factfinding and formulating policies for domestic and international consumption. As for academic works, research published so far deals with relevant adjacent topics, broadly falling into three main categories: Coalition formation, impacts of climate change on mountainous areas, and environmental policies of individual states.

The formation of coalitions

The first relevant field of research looks at the formation of coalitions under the UNFCCC and other international

frameworks more broadly. An important work in this regard is that by Genovese et. al. which investigates dynamics that lead to the formation and cohesion of coalitions at UNFCCC negotiations (Genovese, McAlexander, and Urpelainen 2023). They find that "statements of countries from more homogeneous groups … are consistently more similar" (Genovese, McAlexander, and Urpelainen 2023, 347). They find that on average, wealthy countries' positions align more – reflected also in the similarity of statements sticking largely to annex groupings (ibid.). However, relevantly for the paper at hand, the authors also show that climate vulnerability only has a significant impact on statement similarity in non-Annex 1 country pairs, i.e., less wealthy countries (Genovese, McAlexander, and Urpelainen 2023, 350).

I can expand on this research thanks to prior work on the formation of issue-specific coalitions under the UNFCCC by Bhandary (2017). Bhandary chose to investigate the processes of coalition formation looking specifically at mountain-related coalitions. Bhandary describes two attempts at creating mountain-issue coalitions under the UNFCCC. The first was spearheaded by the Nepali government around COP 15 in 2009 (Bhandary 2017, 182). The second, the "Mountainous Landlocked Developing Countries model," (Bhandary 2017, 184), has considerable relevance to the group of countries at hand. This initiative was spearheaded by Afghanistan, Armenia, Kyrgyzstan and Tajikistan (ibid.) – all central Asian countries – and particularly "heavily emphasized the vulnerability of its members to glacial retreat [and] topography that does not allow habitat migration" (ibid.). Another key early player was Armenia (Bhandary 2017, 185). The author analyzes the former coalition as having reached the third, "coalescence," stage of his model (Bhandary 2017, 184) while the MLDC model remained "stuck at the anchoring stage." (Bhandary 2017, 186). The findings from this research are useful in that they both provide additional insight into the formation of issue-specific coalitions and, by effectively providing two case studies based on interviews with people involved in the negotiations, insights into the peculiarities of mountain country coalitions specifically. It does not, however, examine the parties' individual positions for similarities that might provide a basis for new coalitions, which this paper hopes to fill in.

Ecological and climatological background

Research on the extent of climate change in mountains and its environmental and ecological impacts has, understandably, primarily focused on individual countries or regions.

Although some authors suggest that mountainous areas are warming faster than flatlands (Ceppi et al. 2012), others point to the shortcomings of existing research and the need for more data (Rangwala and Miller 2012). More agreement seems to exist on some of climate change's primary impacts in mountainous regions, first and foremost relating to glacial retreat, which some researchers have found to be occurring at a significantly higher pace in mountains than even at the polar caps (Thompson et al. 2021). The Alps, Himalayas and Andes have been particularly comprehensively studied. Common themes include observed and

expected changes in weather patterns (Beniston 2006), the availability of water (Beniston 2012), changes in vegetation patterns (Theurillat and Guisan 2001) and, sometimes by extension, economic activities (Beniston 2012), particularly tourism (Koenig and Abegg 1997) and (Amrusch and Wirl 2018).

The scientific literature on the Anthropocene's changing environment can and often does serve as background for the formulation of national policy priorities that are represented in the positions parties take publicly under the UNFCCC. However, what is a priority for scientists may not be a priority for a particular administration and vice versa, or governments may pick and choose scientific studies to match their particular policy agendas, whether they represent the broad scientific consensus or not (Grundmann 2007).

Environmental policies by individual states

Substantial efforts have been made to analyze national-level policies in response to climate change and environmental degradation. I primarily focused on finding research relating to the Austrian government's policies[2], operating under the assumptions that a) research on Austria is likely comparatively extensive, as it is a wealthy country with a strong climate agency (the Zentralanstalt für Meteorologie und Geophysik, ZAMG) and b) approaches to analyzing national policy of other mountainous countries would likely be similar, where they exist.

When it comes to national policy, a recent synopsis report of Austrian climate change actions can give us an idea of some primary areas for research: Acceding to international policy and its implementation in national and regional law, domestic policy and government initiatives, legal challenges and decisions and impacts of changing governing coalitions (among surely other areas, too) (Septimus (Bratrschovsky) 2019). Of course, a large field is also the effectiveness of national climate change-related legislation, although this is less directly relevant to this paper than is the creation and formulation of national policy priorities.

Previous attempts at mountain coalitions

Advocating for mountain issues in the international environmental policy sphere is comparatively rare but certainly not unheard of. Some of the champions of mountain issues are Nepal, Kyrgyzstan and Tajikistan (Bhandary 2017, 174).

In 1992, the Agenda 21 Document[3] was a major breakthrough, as the entire 13th chapter was dedicated to discussing sustainable mountain development. According to Bhandry, this was the work primarily of a coalition of civil society actors ranging from the Integrated Center for International Mountain Development to the United Nations University in collaboration with countries such as Switzerland, Canada, Nepal and Ethiopia (Bhandary 2017, 174).

Two attempts at forming mountain-focused coalitions in the UNFCCC are the aptly

[2] Due to my own proximity to the matter as an Austrian national.

[3] A PDF of which can be found online here: https://sustainabledevelopment.un.org/outcomedocuments/agenda21

named "mountain initiative," which was spearheaded by Nepal in 2009 as a "broad-based coalition to support mountain issues in the UN climate negotiations" (Bhandary 2017, 182). While this coalition initially appeared to be promising, it ultimately failed due to a combination of domestic political factors and loss of leadership when Nepal assumed the chair of the Least Developing Countries Group in 2012 (Bhandary 2017, 182).

The other noteworthy attempt at a mountain coalition was the "Mountainous Landlocked Developing Countries model" brought forward by Afghanistan, Armenia, Kyrgyzstan and Tajikistan around 2011 (Bhandary 2017, 184). The MLDC heavily emphasized glacial questions as well as awareness for the unique topography of their member states which would not allow for habitat migration (ibid.). The members also placed major emphasis on the specific feature of being landlocked (Bhandary 2017, 185). Despite promising similarities, this coalition never really took off, perhaps also due to the government of Nepal's aversion to the idea (ibid.).

The hypothesis

The existing literature and domestic policy actions seem to suggest that a considerable degree of overlap might exist among many of these countries, particularly when it comes to questions of glaciers, water supply, agriculture and tourism. An overlap in other areas also seems possible. Because these countries face similar geographic and (often) climactic challenges, it seems reasonable to assume that the policy priorities articulated by their governments under the framework of the UNFCCC would share common themes. This tendency is evident in various regional and otherwise geographically determined coalitions that exist or existed at past COPs. The similarities of mountain countries, in turn, could conceivably serve as a basis for closer cooperation all the way to coalition-building among these parties.

Method and Data

I employ a combination of discourse analysis and tangential narrative policy analysis (as inspired by Blaxekjær and Nielsen 2015) based on three original datasets of relevant party submissions to the UNFCCC.

Of course, there is the question of selecting which countries' submissions to include. The category of "landlocked" is straightforward to define, although this definition – countries that lack an oceanic coastline – also excludes Bosnia and Herzegovina from the dataset, which would otherwise be a perfect candidate for a mountainous, landlocked country were it not for a 20-kilometer stretch of Mediterranean shore. Defining what is a "mountainous" country is more difficult. As a starting point, I used a map created by GRID-Arendal (Ashkar 2016) and included all landlocked countries that were coded as being at least 20% mountainous. I then manually checked a list of all landlocked countries and topographic maps to include a couple of outliers that were not marked on the original map but seemed reasonable to include, such as Jordan.

The first dataset was made up of documents submitted through the UNFCCC's document submission portal surrounding COPs 27 (Sharm el-Sheik) and COP 21 (Paris). For COP 27, submissions related to the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA) 4 are also included in the original dataset to provide a larger sample of documents and in the hope that some parties that did not submit to the COP meetings may have submitted their documents for the CMA. The CMA 4 meeting happened concurrently with COP 27 in Sharm el-Sheikh.

These two COPs were selected because took place seven years apart – long enough to provide some insight into enduring policy preferences but without being so far separated that the underlying scientific understanding of climate change would have evolved dramatically in between them. Additionally, by selecting two COPs, there is a higher chance of having more party submissions, as many parties' document submissions tend to be left blank on the UNFCCC portal.

I downloaded the documents from the subset of parties that are of relevance to this study from the UNFCCC submission portal.[4] The articles were read and the count of mentions of policy areas for the individual parties within each of the COPs were tallied. The hope was that this would allow me to compare the relative priority that different governments afforded various topics and allow a comparison between parties as to which topics are consistently important and which ones are of concern only to a small subset of parties analyzed.

Most of the submissions on the UNFCCC portal are submitted on behalf of coalitions. Therefore, I included in my dataset all the submissions by coalitions that included at least one of the countries of interest.[5]

Of the documents collected for the first dataset of COP 27 (plus CMA 4) and COP 21, one pair was an exact duplicate. One copy of the duplicates was discarded. Additionally, one document, submitted by Saudi Arabia on behalf of the Arab Group, was entirely in Arabic. To avoid any translation issues, this document, too, was excluded from the dataset. After these omissions, the complete set of relevant party submissions downloaded from the UNFCCC portal numbered 39.

A second dataset was created out of high-level speeches and statements by parties of interest (where digitally available) surrounding COP 27, obtained through the UNFCCC's website.[6] All relevant documents were in English, meaning that none had to be discarded. This resulted in a total of 14 documents of speeches. They were then analyzed in the same manner as the previous dataset.

A third dataset was created out of the most recent nationally determined contribution

[4] A complete list of parties deemed mountainous states can be found in Appendix I.

[5] Appendix II contains a complete list of coalitions whose submissions were included in this dataset.

[6] The repository can be found here: https://unfccc.int/cop27/high-level#List-of-Speakers-for-the-First-Part-of-the-High-Level-Segment-for-Heads-of-State-and-Government.

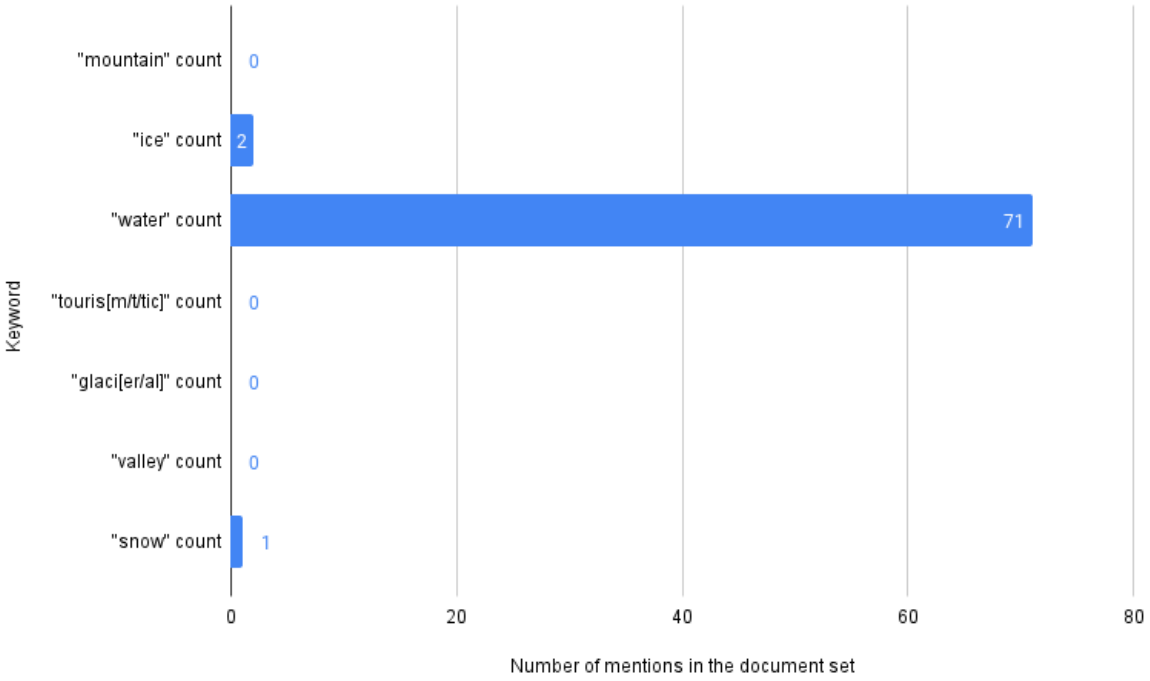

Figure 1: The number of times different keywords were mentioned in the documents submitted through the UNFCCC's online document portal surrounding COP 27 (including CMA 4) and COP 21.

documents, where available in English. Not all parties submitted their NDCs at the same time, meaning that there is a spread of six years between these documents. The earliest were submitted in 2015 and the most recent ones in late 2021. After discarding two documents – Andorra's, which was in Catalan; and Burundi's, which was written in French – this yielded a total of 24 NDC documents. The documents were obtained through the UNFCCC's website,[7] where the Secretariat makes them available to the public as required by the treaty text. They were analyzed in the same manner as the previous dataset.

I conducted a count of relevant keywords in the documents comprising the three datasets. The number of instances of the keywords "mountain[ous]," "ice," "water," "touris[t/m/tic]," "glaci[er/al]," "valley" and "snow" were tallied up for each of the articles individually. The keywords were selected to represent likely areas of interest to landlocked, mountainous countries as based on the review of existing literature conducted above.

In sum, 77 documents were analyzed, which resulted in 1,027 individual data points.

Findings

To gain an overview of whether and to what extent mountain issues were being discussed in the submitted documents surrounding the two COPs (the first dataset), I conducted a count of the determined keywords. The results can be seen in Figure 1.

[7] The NDC registry can be found at https://unfccc.int/NDCREG.

Despite all of the submissions analyzed being made either by coalitions containing landlocked, mountainous countries or by these countries individually, the data shows that mountain issues continue to be significantly underrepresented. In fact, "mountain" as a term – and all iterations, such as "mountainous" – is completely absent from the dataset, as is any mention of valley, tourism (a key concern to many mountainous states (Steiger et al. 2022, 2)) and even mentions of glaciers. Snow is mentioned exactly once across the 39 documents, in a COP 21 submission by South Africa on behalf of the G77+China.

However, this distribution looks quite a bit different in the second dataset, depicted below in Figure 2.

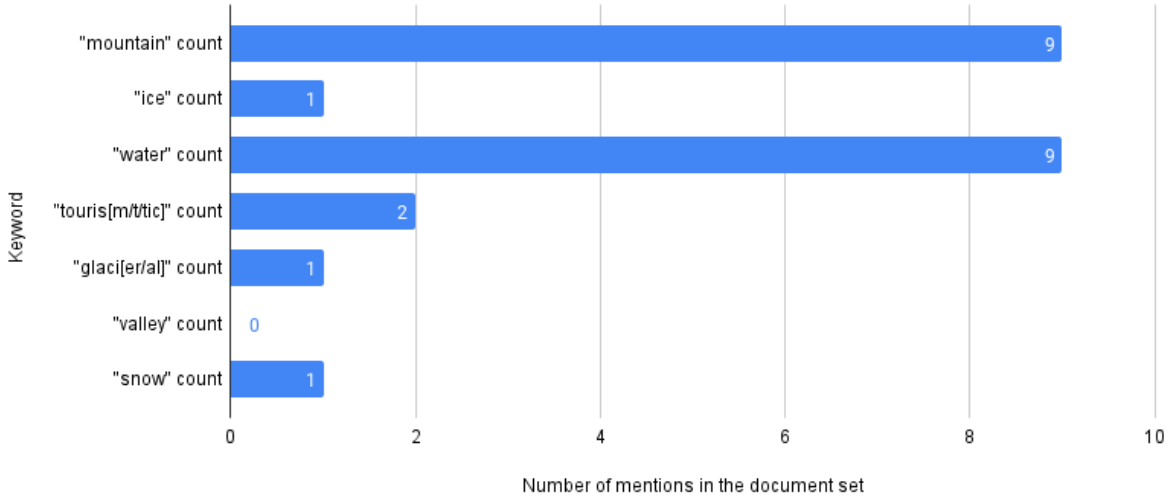

Figure 2: The number of times different keywords were mentioned in the high-level speeches surrounding COP 27.

These speeches, delivered either by heads of state or ministers (and equivalent positions), tend to be rather short (usually about one A4 page) and are used to emphasize the continued need for international action, highlight national contributions and occasionally throw diplomatic shade at other countries (as is the case between the two landlocked, mountainous countries of Armenia and Azerbaijan). Unlike most of the documents submitted to the UNFCC, however, they also often have a distinct national flair. This appears to be represented in the data collected: Despite the smaller number of documents and their short length, the keywords searched for (with the exception of water) came up much more frequently.

Quite notably, the keywords for water and mountains were equally frequently mentioned (whereas in dataset one, mountains had not been mentioned at all and water had received 71 mentions). This suggests that the importance that mountains often play to national identity (as empirically found by (Brunnbauer and Pichler 2002) and (Kotnik 2007), among others) is making its way into the speeches of national heads of state and ministers. It underscores the apparent influence of this geographical feature on key national policymakers: Mountains aren't just a pretty landscape feature to rally domestic

unity around and mention in national anthems (Csepeli and Örkeny 1998), but continue to shape leader's thinking as to what they deem priorities in an international setting.

Other topics, including ice, tourism and glaciers, which were not mentioned in COP submitted documents, also found their way into some national speeches.

The discrepancy between the first dataset, which is more representative of the process and outcome of negotiations, and the second dataset, which represents more of what national leaders deem to be important, is interesting. It suggests that stated national priorities of the landlocked, mountainous countries aren't able to make themselves heard in the UNFCCC process – a finding that aligns well with the aforementioned research on the utility (and necessity, for small states) of entering coalitions. As the (landlocked) mountain countries have no effective coalition, their voices can't make themselves be heard in the first dataset – their concerns aren't on the agenda.

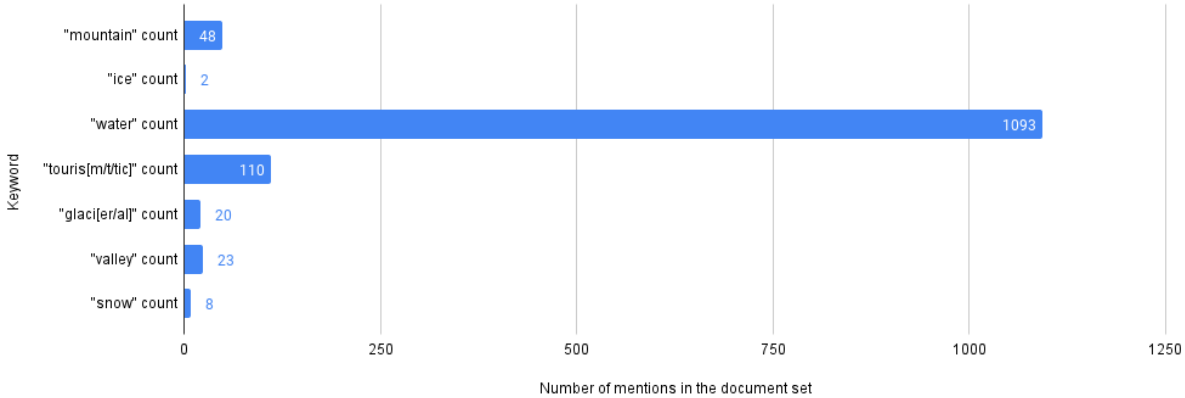

Figure 3: Counts of keywords in the third data set, consisting of the most recent English-language NDC documents of landlocked mountainous countries.

Figure 3 shows the counts of keywords in the third dataset, which was made up of the most recent NDCs of each of the landlocked, mountainous countries. This dataset was the most complete, with almost all of the landlocked, mountainous countries represented. In this dataset, we see a return of the key importance of water, by far trumping all other mentions with over 1,000 individual cases. Interestingly, tourism is the second-most mentioned key phrase in this set of documents. In part, this may be attributed to the fact that the word "tourism" shows up once in one of the category descriptions of the template that a lot of the submitting countries used to organize their NDC submissions in compliance with the Paris Accord. Nonetheless, this alone does not explain the high number of mentions of tourism, which can instead be attributed to the central role that it is found to play in many landlocked, mountainous countries' NDC plans.

Mountains themselves are mentioned as the third-most frequent keyword of the ones analyzed, at 48 mentions across the 24 documents. The sister geographical feature, valleys, is mentioned 23 times (although some of these are in relation to named geographic features, such as the Jordan River Valley), while glaciers are mentioned 20 times. Snow is mentioned eight times,

primarily by countries in more temperate parts of the globe.

It is worth noting that in the case of this third dataset, the EU submitted one document as a bloc, which includes Austria and Slovakia. In the second dataset, made up of the high-level segment speeches, EU countries spoke individually on their own behalf. Furthermore, in the first dataset, the majority of submissions (35 of 40) were submitted on behalf of coalitions (all of which contained at least one mountainous, landlocked country) while only five submissions were made directly by state parties on their own behalf.

The differences between the counts of these three datasets, then, provide us some insight into both the priorities of landlocked, mountainous countries under the UNFCCC and insight into the possibilities and merits of coalition-building around this geographic identity.

First, the data suggests that the more international and divorced from national policy priorities the documents analyzed are, the less the topics of interest to landlocked, mountainous countries are mentioned. While mountains at a topic were tied for the most important keyword in the high-level speeches, they were mentioned not once in the documents that came out of the COP proceedings analyzed in dataset one. They did make a comeback in the NDCs, where national governments have (by design and definition) greater leeway to determine their own priorities, but only as the secondary priority a long way after water, which was shown by dataset one to be the COPs' priority. With the exception of the mentions of ice, which stayed fairly consistent across the three datasets, the other keywords that appeared to be of importance to landlocked, mountainous countries fared equally poorly: They were, by and large, not mentioned in the COP documents and only reintroduced, as lesser priorities (as determined by the counts) in the NDC documents.

Conclusions, shortcomings and implications for further research

This paper's findings suggest that there both exist policy similarities shared among landlocked, mountainous countries and that there is a need for coalition-building should these countries truly wish to advance their specific issues on the international level.

The data shows that mountain issues are almost entirely lost in the process at the UNFCCC, meaning that their concerns don't find expression in the international regime. This aligns with the literature on coalition-building, which comes as a way for individual states that may not yield much influence on their own to unite in hopes of having a stronger bargaining position. One of the best examples of this is the unity of the G77, which is very effective at maintaining a commitment to "common but differentiated responsibilities," CBDR despite wealthy (and powerful) northern countries' objections.

Coincidentally, however, this same insistence of less-developed countries on keeping the CBDR principle and of northern countries to move beyond it could prove a significant stumbling block in the process of coalition-building.

However, examples of bilateral, multilateral and regional action on environmental issues can also offer cause

for hope. Cross-border collaboration on issue-specific topics such as ecological conservation has succeeded even in cases where political climates were otherwise frosty. An example of this is the establishment of Europe's first cross-border national park between Austria and Hungary, the first steps of which were taken across the Iron Curtain at the height of the Cold War in the 70s (UNESCO n.d.). It seems reasonable to hope, then, that a geography- and issue-specific coalition of mountainous, landlocked states may be able to cooperate on a subset of topics they share while "agreeing to disagree" on things such as specifics of fair shares of climate finance, financial mechanisms, and CBDR – typical sticking points between the global North and South.

Further, an important avenue for advancing mountain states' objectives could be working together with the UNFCCC's constituency groups and the organizations within them. A number of mountain issue organizations exist (for instance, the International Climbing and Mountaineering Federation, which also represents the various national Alpine Clubs), condemned to the more publicly facing but less influential Green Zone at COP summits while the national delegations meet in the Blue Zone. These organizations can provide valuable scientific information that may not have been specifically highlighted by the Intergovernmental Panel on Climate Change's reports, can provide valuable publicity work and help bring to the attention of decisionmakers within and outside of COP the challenges, approaches and priorities of landlocked, mountainous states.

Further research

There are several avenues for further research in the direction that this paper has ventured. For one, the datasets used for this paper were far from perfect. Some countries did not submit any documents at all, many had submissions of some types but not others. Overall, the dataset was far from complete, and some countries were represented in some of the datasets but not others. Therefore, an ambitious researcher with better access into the UNFCCC system could attempt to re-do this research with a more complete and representative dataset.

Resources permitting, it would also be interesting to expand the scope of this study to include further keywords, a more sophisticated analysis of texts (for example by using machine learning as done by (Blaxekjær and Nielsen 2015)), and by creating datasets for countries that are *not* landlocked and mountainous to provide a counterfactual. Unfortunately, with the time and resources on hand, this will have to be left to future researchers to be taken on.

The representativity of the datasets may also be called into question because most of the submissions were made on behalf of coalitions that simply contained one or more of the countries being studied. Due to dynamics within coalitions and mountainous, landlocked countries' typically pretty weak negotiating position, it is possible that the documents submitted by coalitions do not reflect their thoughts and priorities exactly. Limiting the dataset just to countries' individual submissions might be a remedy (and dataset three, based on the NDCs, shows that this might be a promising avenue for research), but using other national documents rather than

coalition-submitted documents might be an avenue to either support or refute the findings of this paper with more sound evidence.

Further, it would be interesting to see whether there is any difference between landlocked, mountainous countries and mountainous countries as a whole – it seems at least plausible that this distinction does not have a significant impact on policy priorities, although it also seems feasible that ocean access is more significant than a mountainous interior in shaping positions.

Finally, a closer look could be taken at why previous attempts at mountain coalitions have failed. This has been touched on with some prior research in the literature review portion of this paper but there remains room for the use of new research methods and more up-to-date datasets. This could provide valuable context to the findings of the paper at hand.

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Appendix I

List of countries deemed landlocked, mountainous countries for the purpose of this study:

- Afghanistan
- Andorra
- Armenia
- Austria
- Azerbaijan
- Bhutan
- Bolivia
- Burundi
- eSwatini
- Ethiopia
- Jordan
- Kyrgyzstan
- Laos
- Lesotho
- Liechtenstein
- Malawi
- Mongolia
- Nepal
- North Macedonia
- Rwanda
- San Marino
- Serbia
- Slovakia
- Switzerland
- Tajikistan

- Zambia
- Zimbabwe

Appendix II

A complete list of coalitions whose submissions were included in this study's dataset due to their inclusion of at least one landlocked, mountainous country.

- AGN (African Group of Nations)
- ALBA (Bolivarian Alliance for the Peoples of Our America)
- Arab Group
- EIG (Environmental Integrity Group)
- G77 + China
- LDC (Least Developed Countries)
- LMDC (Like-Minded Developing Countries)