Ecosystemic politics: Analyzing the consequences of speaking for adjacent nature on the global stage

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A B S T R A C T

This article introduces a conceptual framework for analysing and comparing the broader or unintended effects of cooperation anchored in border-crossing ecosystems. The importance of addressing this lacuna in our scholarship on such sub-global cooperation is underscored by research in political geography that has demonstrated how the creation of scale is an important expression of power relations and how interaction with the materiality of different kinds of spaces necessitates distinct political technologies (and thus may have distinct effects). The article introduces three key analytical angles central to policy field studies in international sociology and demonstrates their utility through a case of the Arctic/Arctic Council. These analytical angles – networks (what are the relationships shaping the field?), hierarchies (who leads and how does leadership work?), and norms for political behavior – capture key consequences and dynamics of ecosystemic politics in a concise fashion that lends itself to cross-case comparison. The Arctic case focuses on the changing network positions and roles of non-Arctic actors over time, as an initial exploration of the broader ordering effects of such forms of cooperation. The findings suggest that most non-Arctic actors have experienced a decline in their centrality in Arctic cooperation, even as the Arctic has received intensified global interest and the number of participants in Arctic Council work has increased. Further comparative work along these lines would leave us better equipped to assess whether states speaking for their own immediate environs is better – and if so, in which ways – than seeking common solutions to global challenges.

1. Introduction

When the Amazon was burning in the fall of 2019, there was a global outcry, including far afield in Scandinavia, about Bolsonaro's nationalistic representation of (and lack of support for) the vast rainforest ecosystem. A few months later, a key Norwegian Arctic commentator reacted to Germany's newly released Arctic strategy, which included Germany's perspectives, priorities, and values about what should be done to protect the rapidly changing Arctic environment. The concern was linked to both the strong conservation-oriented approach in the German strategy and the challenge of Germany – as outside the 'family of Arctic states' – seeking to be heard regarding questions of Arctic economic development (Holm, 2019, for additional reflections on Norway's reactions to EU Arctic engagement, see; Wegge, 2012). Likewise,

the exchange of diplomatic barbs between the USA and China about China's claimed status as a 'near Arctic' state in 2019, highlighted how actively adjacency to the Arctic is utilized in framing order and shaping premises for who should have a say and how in Arctic governance.[1] While neither the Arctic nor the Amazon make up the most substantive organizing geopolitical narrative for the states in question (arguably, for example, the East/West political divide is more longstanding as a geopolitical narrative for the 'Arctic' states than circumpolar cooperation), these highly symbolic environments and the geopolitical framings that privilege adjacent states are still defended vociferously.

These moments presented above are anecdotes, but they raise the question: What are the broader consequences of actors identifying and speaking collectively for their adjacent yet globally prominent 'ecosystems'? This article argues for a systematic and comparative exploration

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[1] A recent statement from the Chinese Ministry of Foreign Affairs, issued in response to then US Secretary of State Pompeo's rejection of China's characterization of itself as a 'near Arctic state,' is illustrative: 'Mr Pompeo is not bad at calculating distance. Since he has figured out that China is 900 miles from the Arctic Circle … The South China Sea is more than 8300 miles away from the continental United States, or 5800 miles away from Hawaii. Despite such distance, the US side has repeatedly sent warships and aircraft to the South China Sea for all kinds of military drills and close-in reconnaissance, without a break all year round' (Hua Chunying in Langley, 2021).

of governance practices anchored in geopolitical narratives of cooperation around border-crossing ecosystems – however defined or construed by the actors involved – as an ordering strategy for global politics. I argue that scale creation by 'speaking for ecosystems' is usefully approached as distinct from efforts at regional scale creation premised in different geopolitical logics and may have quite consequences specific to this kind of cooperation. The article proposes utilizing and expanding beyond the regional cooperation and environmental governance lenses that have predominated in fields of sub-global politics thus far. Using an Arctic case study, this article outlines and operationalizes a set of analytical tools that would allow for systematic comparison of disparate examples of such cooperation, anchored in narratives of shared, border-crossing ecosystems.

In other words, while we have a rich literature on the processes, successes, and failures of environmental cooperation at the global and regional levels, there is a gap in the scholarship when it comes to exploring the consequences for global politics of anchoring cooperation in what actors choose to acknowledge – in political gambit through to establishment of institutional settings – as shared, border-crossing ecosystems. A thriving strand of political geography has highlighted how the governance of different sorts of material spaces or resources relies upon and results in highly specific practices. The focus on logic and narrative of speaking for ecosystems, rather than (only) regional institution-building efforts, allows for consideration of cases of speaking for ecosystems as a geopolitical strategy. Put another way, such 'ecosystemic politics' may be more about creating a particular diplomatic 'atmosphere' to structure field-specific practices (see, for a discussion, Dittmer, 2017 and Jones, 2020) than about actively pursuing environmental (or other specific) policy outcomes or building effective regional institutions. Such narrative strategy – and associated practices and relational effects – are at the core of the program of research on ecosystemic politics proposed and explored in this article.

Critical geopolitics – which has adeptly illustrated how particular geopolitical narratives and associated practices structure global politics – is taken as a starting point in this exploration of the broader consequences of Arctic governance. As the article discusses in its preliminary review of the potential universe of 'ecosystemically anchored' regional governance, there are many examples of political organization rooted in self-proclaimed/ideationally conceived and/or natural science-determined large-scale ecosystems. The Arctic is chosen as the main case study as there is a strong scholarly baseline on Arctic diplomacy and governance that shows how a perception of and reference to an interlinked natural environment was decisive in initiating and continuously shapes circumpolar governance. The Arctic case study presented below operates with an additional delimitation that serve to bring the broader effects of Arctic ecosystemic politics into high relief: a focus on if the consolidation of cooperation around the Arctic has resulted in a marginalization of non-Arctic actors in one key forum, the Arctic Council.

Specifically, this article suggests that, by combining insights from critical geopolitics with methods for policy field analysis from international relations, we can generate a wider comparative approach to grasping how speaking for ecosystems operates as a geopolitical framing and strategy in global politics. A comparative framework for analyzing the broader consequences of political narratives anchored in ecosystems requires lines of analysis and associated methods that are schematic yet rigorous. This article argues that a set of three analytical angles that are dominant in global governance policy fields function to capture broader consequences and dynamics of ecosystemic politics in a concise fashion that lends itself to cross-case comparison. These foci are: *hierarchies* (who leads and how does leadership work?), *networks* (who participates and what are the relationships shaping the field?), and *norms* (what is considered acceptable political behavior?).

The case study presented uses network analysis of relationships within the Arctic Council and discourse analysis of Arctic Council debates relating to participation. The focus on the changing dynamics

between Arctic and non-Arctic actors – one of several conjectures about ecosystemic politics that could have been explored – was chosen as it provides a good indication of how such cooperation can shape global order, power relations, and the scope for diplomatic action. The article's emphasis on developing a comparative conceptual framework picks up on an exhortation by several scholars within political geography. These contributions have pointed to the need for an intensified focus in geographical research on the generation of conceptual frameworks that can connect the rich and abundant analyses of particular settings and case studies which characterize the discipline and too often remain disconnected.

The article begins with a discussion of the literature that provides a framework for approaching ecosystemic politics. The breadth of the phenomenon at hand – political cooperation anchored in ecosystems – is then considered, including a discussion of how ecosystems can be defined and how they are understood in this article. The ecosystemic politics approach leads with actors' definitions and discourses about natural, geographically contiguous interlinkages necessitating political cooperation rather than an externally imposed measure of what is considered an ecosystem (or ecoregion and so on). The review shows that organization around border-crossing natural features is a widespread, but not ubiquitous or inevitable, political strategy. Subsequently, we turn to the Arctic case study to apply the methods distilled from the studies of global policy fields to explore the extent to which the network position and role of non-Arctic actors has changed over time. This case serves as an initial exploration of the broader ordering effects of such narratives and practices of cooperation anchored in an ecosystem logic and operationalizes the analytical approaches and methods tools that lend themselves to a broader comparative effort. The Arctic case findings suggest that most non-Arctic actors have experienced a decline in their degree of centrality in Arctic cooperation, even as the Arctic has experienced intensified global interest.

2. Situating ecosystemic politics

Considering and comparing political efforts anchored in ecosystems as a distinct part of global architecture and spatialization – potentially different from other forms of regional cooperation – is well-justified in the literature in a broader sense. Geographers have richly illustrated how politics anchored in the natural world is shaped by material and non-human forms of agency. These studies argue that there are specific political techniques needed to interact with and govern different kinds of spaces, including air, ocean, extraplanetary, ice, subsurface, and artificial (see, among others, Bridge, 2014, 2009; Steinberg & Peters, 2015; Elden; Peters, Steinberg, and Stratford, 2018; Dodds & Nuttall, 2016) or when governing/acting at a planetary scale (Dalby, 2020; Lehman, 2020).

This supports our argument that speaking for ecosystems (however construed) may indeed have effects that are specific to such ecosystemic politics (for a similar approach to the political geography of natural resources, see Bridge, 2014). In a parallel disciplinary conversation that offers scope for collaboration across political geography and international relation (IR), understanding cooperation around ecosystems as a potentially distinct form of global ordering joins a burgeoning effort in IR to better account for the complexity and diversity of how global politics works in practice, thereby moving beyond ideal-typical theorizations of global politics (Chowdhury, 2017; Huysmans & Pontes Nogueira, 2016; Jeffrey, McConnell, & Wilson; Phillips & Sharman, 2015; Reus-Smit, 2017).

The importance of exploring the consequences of adjacent states organizing collectively around shared, border-crossing ecosystems is supported by a vibrant strand of research in political geography that has demonstrated how the creation and maintenance of scale – for example, local, national, or global – is an important, and frequently overlooked, expression of power relations (Fraser, 2010; Gruby and Campbell, 2013; Beck, Esguerra, & Goerg, 2017; Bulkeley, 2005; Benjaminsen, Buhaug,

McConnell, Sharp, & Steinberg; Beery; Hakli & Pauliina Kallio, 2014; Green). This supplements the literature on regional cooperation and regional environmental governance, which provides a strong baseline of the range, characteristics, and internal dynamics of regional cooperative efforts (Balsiger, 2011; Balsiger & Prys, 2016; Balsiger and VanDeveer, 2012; Church, 2020; Duina & Lenz, 2016; Jetschke & Lenz, 2013; Willi et al., 2018), yet often overlooks the initial question of scaling to the regional level. This is an understandable focus given the predominant interest in understanding how regional institutions function and are structured internally. However, this choice necessarily neglects how the definition of an issue area and/or space as regional – rather than national/local/global – has consequences for who is allowed to participate in the newly defined regional political space (and how). In combination with the point made above about the role of materiality in requiring/fostering/facilitating context-specific governance practices, greater attention to the diversity of scales that can be activated - in the case of this article, by approaching ecosystemic politics as a phenomenon of organization distinct from regional cooperation more generally – seems justified.

Importantly for the conceptual framework proposed in this article and its emphasis on the broader ordering effects of sub-global cooperation, scholarship on regional politics from political geography and environmental politics has frequently noted various additional effects that result from regional cooperation that are beyond stated policy aims. These wider consequences include building communities of experts (Balsiger & VanDeveer, 2010; Byers, 2017), changing regional conflict dynamics (Barquet, 2015; Barquet, Lujala, and Rød, 2014; Dinar et al., 2018; Wilson Rowe, 2018), creating new regional identities (Depledge, 2018; Medby, 2018), and increasing foreign policy visibility (Gruby, 2017; Gruby & Basurto, 2013). This literature provides additional support for systematic exploration of the broader effects of cooperation around ecosystems.

While the literature on critical geopolitics brings the narratives and imagery that spatialize and scale politics into sharp focus and inspires the proposed approach to ecosystemic politics, it does not yet provide a common methods toolkit to support a comparative case study-based framework on the broader consequences of cooperation anchored in ecosystems. Seeking to develop such a broader, comparative framework picks up on an exhortation within political geography for increased attention on the generation of conceptual/comparative frameworks in geographical scholarship (see Bridge, 2014; Castree, 2008; McCarthy, 2019; Megoran & Dalby, 2018). This article argues for borrowing from international relations and international sociology scholars who have conceptualized and analyzed global politics as a set of interconnected policy fields and have developed a methods toolkit useful for identifying political norms and changing dynamics in a schematic way. In their work, inspired by Bourdieu, policy fields are envisioned as bound together by, at a minimum, an agreement amongst those involved about the need to govern a space or an issue (see Nexon & Neumann, 2018 for an extensive discussion).

Importantly, policy fields are considered sites where the resources needed to achieve preferred outcomes are unevenly distributed and as a consequence there is an emphasis on tracking relations of power and how they change (Pouliot, 2010, p. 34; Adler-Nissen and Pouliot, 2014). These policy field studies have illustrated how the results of successful performances in a policy field matter not just for one political outcome or generally shaping the cumulative layers of norms governing the field, but also affect an actor's position, centrality (importance or ability to perform certain functions, like gatekeeping), and relationships in a networked hierarchy of actors within that field (and beyond) (Goddard, 2018; MacDonald, 2018; Mattern & Zarakol, 2016; Musgrave & Nexon, 2018; Seabrooke and Henriksen, 2017). Taken together, three of the central concepts in studying global governance fields – hierarchies, networks, and norms – are adapted as a methods toolkit for the analytical approach to the Arctic case study below.

3. Considering the universe of potential cases

The term ecosystem is used by actors in vastly different ways, from a small pond ecosystem to an ecoregion or a biome-level ecosystem, like the Patagonian Steppe or the Amazon or the Arctic (see for an updated discussion of ecosystems in policy interpretation, Keith, Ferrer-Paris, & Nicholson, 2020, p. 192). For example, the Ecological Land Units (ELU) Map – a large, cooperative project between the American Association of Geographers, ArcGIS, and the USGS – used satellite data and other landscape data to create a world map of terrestrial ecosystems with an emphasis on large-scale ecosystems, resulting in 39,234 units (USGS n. d).

Of interest for this article, though, is not really whether cooperation around an ecosystem is authentic – that the ecosystem is 'real' or the cooperation is meeting stated goals. Rather, the aim is to understand better what are the consequences of states (or other actors) seeking to anchor their cooperation in what they identify to be an ecosystem. Thinking politically with ecosystemic logic is certainly not a new phenomenon. Ecosystems have been a factor in political, often imperial, strategy and geographical thinking for over a century (Beck, Esguerra, & Goerg, 2017; Bocking; Cameron & Earley; Cameron & Earley, Cameron & Earley; Greer; Greer & Cameron). Therefore, it is not surprising that there are a number of flagship cooperative efforts anchored in border-crossing ecosystems – from the Arctic, to the Amazon and long-standing cooperation around river basins, to Antarctica. In a useful study, Church (2020) identified 97 political efforts as 'ecoregional' cooperation – having an inter-state dimension, a focus on environmental politics, and large, recognizable fixed geographical elements (including the Alps, the Danube River, and the Patagonian Steppe) – and analyzed them according to their institutional features.

However, to understand the consequences of why states elect to anchor cooperation in what they acknowledge to be a border-crossing ecosystem, it is necessary to look beyond ecosystem/ecoregion visibility in public consciousness or explicitly environmental cooperative institutions. Consequently, and despite the emphasis on actors' own definitions in the ecosystemic politics framework, it is worth considering first whether the practice of anchoring cooperation in ecosystems is a relatively widespread or infrequent approach. This underlines the potential scope and significance of an eventual comparative study. Starting with a natural science-based set of ecosystems of a certain physical scale and inter-state nature – rather than with extant cooperative institutions – also gives greater latitude to consider the presence or absence of cooperation around ecosystems.

In generating a database to examine the scope of the ecosystemic politics phenomenon (for an expanded discussion of this ongoing research, see Maglia and Rowe, in progress), meta-scale ecosystems identified by the WWF were used (Olson et al., 2001; Spalding et al., 2007). All the entries from the WWF list of marine and terrestrial ecosystems/ecoregions (867 terrestrial ecosystems, 232 marine ecosystems, 62 larger marine provinces) were sorted and coded for number of adjacent countries and geographical position of the ecosystem. As a further delimitation for the database, qualitative data gathering focused on ecosystems that had four or more adjacent countries. The 105 terrestrial ecoregions, 27 marine provinces, and 27 marine ecoregions with more than four adjacent countries were then researched and coded for their political organization via extensive keyword searches (specific to the ecosystem) and general searches in databases of treaties and global organizations (see Table 1). The aim of this second step was to explore the extent to which these ecosystems generated political cooperation specific to the ecosystem and/or the extent to which the ecosystem was subjected to broader cooperative efforts.

The database findings showed that, while most of the terrestrial ecosystems with four or more adjacent countries are covered by some form of broader regional initiative or treaty cooperation on specific issues, only 37 of the ecoregions had comprehensive political initiatives anchored in the ecosystem itself (Type 1.2, see Table 1). In terms of large

Table 1

Table of coding scheme for political cooperation around ecosystems, with examples of political bodies falling into each category.

		Geographical Scope	
		Specific to ecosystem	*Broader than ecosystem*
Focus	*Issue/ resource specific*	Type 1.1 (Sahel drought control cooperation)	Type 2.1 (European Green Belt)
	Multi-issue	Type 1.2 (Arctic Council, Gulf Cooperation Council, Amazon Treaty Cooperation Organization, Sahel and Sahara Observatory)	Type 2.2 (Economic Community of Central African States)

marine ecosystems, 17 were covered by multi-issue cooperative efforts focused on or justified by the ecosystem itself, while 11 smaller marine ecosystems had cooperative efforts anchored in the specific ecosystem. As with the terrestrial ecosystems, most of the remaining marine ecosystems had some form of cooperation at a broader regional level or on relevant single-issue treaties.

The dataset shows that the practice of anchoring multi-issue cooperative initiatives in ecosystems is a reasonably widespread one (Type 1.2), but it is by no means an ubiquitous or inevitable outcome of managing border-crossing ecosystems. It is indeed politically and practically possible to seek to manage cross-border issues in other ways, as is evidenced by the different forms of political response from single-issue treaties to tackling these issues in available regional governance structures with broader membership. This narrower set of cases that have cooperation anchored directly in what is acknowledged to be a shared ecosystem are even more analytically interesting. The choice that has been made – to govern with ecosystemic politics – is only one option amongst several available options. It is worth considering, to take one example, that Arctic cooperation could have been anchored in the United Nations or the World Meteorological Organization rather than in circumpolar-only political settings. The dataset shows that we need to question why states or other adjacent actors opt for such a form of sub-global governance and what the particular political technologies and distinct effects may be. As an initial illustration of the potential importance of analyzing ecosystemic politics as a distinct form of cooperation, we now turn to the exploration of a single significant case study: the Arctic and the Arctic Council.

4. Speaking for the Arctic – hierarchies, networks, and norms

Having operated with a natural science-driven definition to gain an appreciation of the scope and reach of ecosystemic politics in the ecosystemic governance database in the previous section, we now return to a more fluid conceptualization of policy fields for the Arctic case study. A sense of 'where' and 'what' the Arctic is has certainly been the object of political contestation, not least because the Arctic is a homeland to Arctic Indigenous peoples, a site of long-standing state-led campaigns of sovereignty, internal colonialism, and resource autarky, and also a vastly varied physical space. In diplomatic practice, definitions of where the Arctic can be found abound – from rooted in the uppermost reaches of the treeline to the permafrost border and from tightly encircled 'circumpolar states' to more global framings such as the heritage of humankind (Bennett, 2015; Dodds & Nuttall, 2016; Steinberg, Tasch, Gerhardt, Adam, & Nyman, 2015; Wilson Rowe, 2018). The question of where the Arctic is located – and, by extension, who is affected by Arctic issues and who can participate politically – is frequently one of the first political premises to be established in Arctic diplomatic and cooperative settings.

Despite all these variations in policy and diplomatic practice about where the Arctic actually is, reference to physical interconnections and the natural environment in some form has certainly been essential to justifying a supranational approach to cooperation and governance. Understanding, utilizing, and, sometimes, conserving the natural features of the Arctic – from its migratory species to its ocean circulation patterns – have all been drivers for Arctic political cooperation and coordination across national lines (English, 2013; Keskitalo, 2007; Neumann, 1994; Sörlin, 2013). These historical traditions and practices are also present in contemporary political discourse about how and why Arctic states, collectively, and especially the Arctic Ocean coastal states (Canada, Greenland/Kingdom of Denmark, Norway, Russia, and the USA), must work together (Burke, 2019; Dodds & Nuttall, 2016; Steinberg, Tasch, Gerhardt, Adam, & Nyman, 2015). To take one key illustration, the Ilulissat Declaration was an unofficial diplomatic statement issued by the Arctic Ocean coastal states after the 'shock year' of 2007 with the lowest recorded September sea ice extent in the Arctic Ocean. This Arctic sea ice low was a highly visible manifestation of a state change in the Arctic (Young, 2016) and, in tandem with the planting of a titanium Russian flag on the seabed below the North Pole, led to intensified interest from outside the region (Depledge, 2018; Dodds & Nuttall, 2016; Jacobsen, 2020; Nilsson & Christensen, 2020; Woon and Dodds, 2020). In demonstrating governance capacity and justifying the Arctic Ocean coastal states' leading role, the physical nature of the Arctic environment figured prominently. The Declaration (28AD, pp. 1–2) states:

> The Arctic Ocean stands at the threshold of significant changes. Climate change and the melting of ice have a potential impact on vulnerable ecosystems, the livelihoods of local inhabitants and indigenous communities, and the potential exploitation of natural resources. By virtue of their sovereignty, sovereign rights and jurisdiction in large areas of the Arctic Ocean the five coastal states are in a unique position to address these possibilities and challenges … The Arctic Ocean is a unique ecosystem, which the five coastal states have a stewardship role in protecting … We will take steps in accordance with international law both nationally and in cooperation among the five states and other interested parties to ensure the protection and preservation of the fragile marine environment of the Arctic Ocean.

In combination with what the signatories see as an already robust international legal regime, especially the UN Convention on the Law of the Sea, the claim to collective ability and capacity to govern the shared ecosystem is also a justification for downplaying or halting the efforts ongoing outside the region, such as in the European Parliament, to govern the region on a more global scale through a region-specific treaty (see Raspotnik, 2018; Wegge, 2012 for more on this episode and related dynamic). This is evident in how the Declaration continues: 'we therefore see no need to develop a new comprehensive international legal regime to govern the Arctic Ocean. We will keep abreast of the developments in the Arctic Ocean and continue to implement appropriate measures' (Ilulissat Declaration, 2008, pp. 1–2).

Similarly, there are clear signs of diplomatic investment in and efforts directed towards maintaining an Arctic-level geopolitical framing of northern challenges, firmly rooted in the natural/ecosystemic thinking that historical research and recent political statements, like the Ilulissat Declaration, display. In fact, how the lines between regional and global politics should be drawn are recurring themes within the region's most established political forum: the Arctic Council. The eight-country Arctic Council is the highest-level multilateral setting for Arctic issues with the most comprehensive membership of all Arctic/northern

forums (for example, compared to the Barents cooperation in the European Arctic); it has undertaken two decades of extensive cooperative work on both science and policy responses relating to Arctic climate change regionally within its various science networked working groups. However, in 2015, the Senior Arctic Officials (SAOs) representing the Arctic states and the Permanent Participants representing northern Indigenous peoples could not agree whether to represent the Arctic Council with even a publication display at the top global climate meeting in Paris. In the end, and in the absence of real agreement on what to do, the result was quite modest. The compromise agreement was that the Nordic Council of Ministers would display a few Arctic Council publications at their own informational stand (Wilson Rowe, 2018). This extensive exchange over the display of Council reports in a 'global' setting illustrates the intensive diplomatic work involved in maintaining and navigating a circumpolar framing of Arctic space and governance issues. In fact, several scholars have observed that one of the most important political outcomes of post-Cold War cooperation is a framing of Arctic politics that privileges adjacency as the most important form of political capital (see, for example, Dodds & Nuttall, 2016 and Depledge, 2018, on polarization and circumpolarization respectively).

However, beyond a few studies mapping the participation of non-Arctic actors in circumpolar settings (Knecht 2017a, 2017b; ; Spence, 2016), as well as case study analyses of the Arctic policies and plans of non-Arctic polities (Ikeshima, 2017; Depledge, 2018; Tonami, 2016; Raspotnik, 2018; Knecht, 2017a; and see Woon and Dodds, 2020 for a broader comparative discussion), there has been little systematic exploration of how the efforts by Arctic actors to speak globally for the Arctic ecosystem have shaped the influence and relationships of non-adjacent actors. The case study below focuses on exploring the position and access of non-Arctic actors and global institutions in the Arctic Council. As argued above, analyzing the networked hierarchies of and norms around participation in the Arctic policy field is a promising avenue for mapping the broader effects of these kinds of cooperation, anchored in what is presented as a border-crossing shared ecosystem. It is also a pathway to a conceptual framework for sorely needed, albeit outside the scope of this paper, comparison to other case study analyses of ecosystemic politics.

4.1. Methods

To explore the broader effects of the Arctic ecosystem policy field, this article analyzes the same set of empirical material along three dimensions (networks, hierarchies, and norms) at three points in time. The empirical material is Arctic Council minutes from top-level diplomatic meetings (13 min/reports from SAO meetings, 24 ministerial statements), participant lists (16), and project lists (3) at three periods in time: 1998–2000 (American chairmanship), 2007–2009 (Norwegian chairmanship), and 2017–2019 (Finnish chairmanship) (see Appendix 1). The documents analyzed were coded in NVivo. To ensure robust and systematic usage of our coding scheme, all the documents, as detailed below, were independently coded three times (by the author and two research assistants).

With about ten years between each chairmanship, we can consider both institutional change and maturity as well as the impact of external/non-institutional events. While archival data will not capture all dynamics, the data analyzed is longitudinal and facilitates the study of change over time. It is also worth noting that because of the formal political nature of the documents, the position of non-state actors may (or may not) be underplayed. While these actors – Indigenous peoples and nongovernmental organizations (NGOs) – do feature in the material analyzed and consequently in the analysis, the traditions of formal interstate diplomacy still shape and influence how the diplomatic record has been formed. As a corrective, it should be noted that analyses based on interviews or other data aptly show how Indigenous peoples' organizations in particular have been decisive in shaping Arctic governance outcomes (English, 2013; Wilson Rowe, 2018).

Norms: Firstly, the selection of documents were read and coded for moments of reference to and discussion of how to interface with global/non-regional institutions and actors. These statements were then interpreted for both content and change of frequency over time.

Hierarchies: Secondly, to explore the dynamics of leadership, the number of 'interventions' made by any actor as recorded in the minutes of Arctic Council SAO meetings were coded. The definition of an intervention was a statement meant to shape the work of the Arctic Council or direct the activities of others. This was defined in a limited fashion to highlight leadership and diplomatic weight, excluding general expressions of gratitude for work, reporting on own efforts, and chair-like comments about agenda and meeting procedure. Nonetheless, a coding bias towards the chairmanship country likely remains, this is also reflective of the heightened diplomatic and financial resources that the chairing country normally brings to the proceedings.

Networks: Finally, interactions between actors were coded using the relationship coding function in NVivo. Actors were coded as having a relationship if they directed interventions to one another or were supportive of other actors' interventions. Thus, a relationship could be positive or corrective. For this initial study, we did not code the 'direction' of the relationship but rather assumed them to be mutual. We also coded project lists for relationships, taking involvement in a shared project as a relationship indicator. In other words, diplomatic support/comments and project partnerships are seen as the ties (lines) connecting parts of the network, with the points (nodes) being actors present at a given SAO meeting. To establish the full universe of potential relationships, we included all actors from the participant lists of the meetings. This allowed us to get a better sense of 'absent' potential relations and of the interactiveness of the network as a whole. Once coded, certain measures generated by NVivo's network analysis tools were of particular interest, specifically degree centrality (how many ties a given node/actor has).

4.2. Networked hierarchies and norms of participation in Arctic ecosystemic politics

Turning first to a discussion of norms, a key finding here is that there is evidence of a strengthening norm over time to diminish discussion time devoted to non-regional actors and international organizations. Interestingly, there was no controversy over global representations of the Arctic or global versus non-Arctic actors in the earliest Arctic Council chairmanship studied (1997–1999); non-regional actors and global institutions were frequently mentioned (see Fig. 1). For example, in framing key players, the American SAO made the following statement: 'The European Union and the Global Environment Fund are important players; cooperation with them is desirable and we have invited them to join as observers' (Arctic Council, 2000, p. 13). Support for the EU is
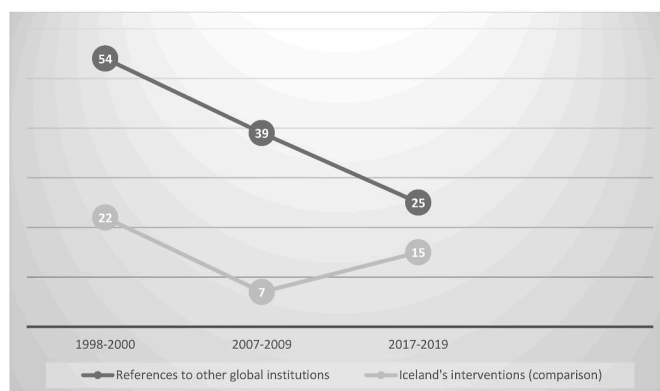

Fig. 1. References to other global institutions/organizations in Arctic Council minutes, by chairmanship period, with Icelandic diplomatic interventions for comparison.

particularly strong and there is little to suggest that, as of 2020, the application of the EU to be an official observer to the Arctic Council would still be held in abeyance today. Finland, for example, suggested in 2000 at a meeting in Alaska that it was a realistic avenue to pursue some kind of permanent inclusion of the EU in the Arctic Council (Arctic Council, 2000, p. 14):

> It is time to present our valuable work at other international fora and develop fruitful relations with them to promote globally significant issues. While Canada and the United States have not been directly involved with the Northern Dimension, it is part of the regular transatlantic dialogue between the EU and those two countries. The Arctic Council provides a link between Northern Europe and North America, including all of northern Russia. The permanent participation of the EU in the Council would be mutually beneficial.

In sum, in the infancy of this cooperation around the Arctic ecosystem, there are frequent and positive references about the significance of potential contributions that could be made to Arctic cooperation by the Global Environmental Facility (GEF), UNEP, and the EU, among others. This ties in with the broader observations made by scholars about how during the earliest iterations of a post-Cold War Arctic cooperation it was unclear who the most relevant actors would be (English, 2013).

However, by 2007, well before the EU 2009 ban on import of seal fur products that became a thorny Arctic diplomatic issue, the atmosphere was less welcoming of the EU, formerly a popular participant in the consolidating policy field around the Arctic. It is clear that after a decade of intensified political region-building activity, the EU is no longer an obvious partner for Arctic politics. Sweden, an Arctic and EU country, attempted to make a space for the EU on Arctic issues – the effort required to highlight why the EU was relevant serves to highlight the changes in the policy field since the EU's positive reception ten years earlier (Arctic Council, 2009, p. 2–3):

> We also appreciate the increasing interest of the European Commission in Arctic issues. Representing an EU member state, I know from experience that this is long overdue. We need the Commission to be on the same wavelength as the three Arctic EU member states. That would facilitate internal EU deliberations. Many EU policies impact on the Arctic, for example the EU policies on climate change, on chemicals and on fisheries. At the same time, Sweden fully understands that some of the other Arctic states view these developments with a certain scepticism. The European institutions have not always demonstrated the necessary understanding of Arctic conditions and concerns that we all believe is a prerequisite for informed decision-making on Arctic issues.

As we see in Fig. 1, the overall number of references – positive or negative – to international institutions and non-Arctic actors and initiatives declined precipitously as Arctic Council cooperation matured. In other words, the more organized Arctic cooperation became, it became either less necessary or less acceptable to discuss non-Arctic/globally anchored initiatives of relevance.

During the last chairmanship period analyzed, an exchange on climate issues illustrates that the question of how Arctic cooperation should interface with the global level had, in fact, become more contentious than two decades prior. The exchange revolved around representatives of the Arctic Council (from the Finnish chairmanship, the Inuit Circumpolar Council, and AMAP, an Arctic Council science working group) reporting on a side event that had been held at the COP23 climate summit in Bonn. The event focused on presenting results from a previously approved and already published report on climate

change in the Arctic. Several delegates applauded the well-attended session and the importance of making an 'Arctic voice' heard at such events. The United States, however, raised the issue of whether the speakers and presentations had been approved by the national delegation heads of the working groups concerned. The presenters responded that the AMAP board had been engaged, and that the material and speakers came directly from existing AMAP work. The AMAP Chair apologetically noted that, due to uncertainty about the actual date of the event, it had been difficult to find speakers available on short notice to take part. This exchange suggests that the seeking political approval might have led to resistance from some Arctic Council states and/or time-consuming/contentious discussions about the speaker list for presenting at this global climate setting (Arctic Council, 2017, p. 6).

A similar dynamic between Arctic and non-Arctic actors can be discerned when it comes to who intervenes in ways to shape the progress of politics or the actions of others in the Arctic policy field. If we think of interventions as indicative of a diplomatic stature, making a larger number of statements (and having these recorded in the official minutes) would suggest that the others viewed the speaking actor as having a greater relevance or as having a greater legitimate demand on the time of those gathered than other actors. We have taken this to be an initial indication of leadership dynamics and a hierarchy amongst Arctic actors. As Fig. 2 illustrates, over time, Arctic coastal states retained and increased their dominance of the forum, while global or non-Arctic actors decreased in prominence. Interestingly, we also see the growing stature of non-state but Arctic-based actors (these include Indigenous peoples, working groups, and Arctic-based NGOs). In this way, we see how a key source of political capital in this cooperative setting is Arctic adjacency/location for state and non-state actors.

Is this same preference for Arctic state leadership manifested in how central these actors are within the broader networks around the Arctic Council? A look at relationships between actors and how this has changed over time suggests that non-Arctic actors have moved to more marginal positions in the policy networks around the Council. One key finding of the network coding is that a relatively small number of actors have active relationships with other actors in the network, despite ever-expanding lists of participants and observers at Arctic Council meetings. In fact, the density of the network around the Arctic Council has decreased significantly over time (from 0.074 in the American chairmanship to 0.3 in the later Norwegian and Finnish chairmanships). Density is a measure of the actual number of relationships compared to the number of theoretically possible relationships between actors in a network. The decreasing density score shows that as the Arctic Council has deepened its cooperation and increased its activities, the relational activity has grown more focused on a comparatively smaller number of actors.

Another network analytical measure, this time degree centrality, allows us to consider the actors in the network who are in the most relationships. 'Degree' indicates the number of times any particular actor is involved in a relationship with another actor, in our case at Arctic Council meetings or via projects.

As Table 2 illustrates, by the 2007–2009 time period, there are no longer any non-Arctic actors amongst the 'top 10' by degree centrality and this trend endures and intensifies by the time of the 2017–2019 Finnish chairmanship. Interestingly, compared to 2000, the EU has gained degree centrality compared to other non-Arctic entities while UNEP and the other global institutions significant in the first chairmanship period are no longer central network actors. It may be that the EU has retained a partial insider status due to its Arctic member states Finland and Sweden.
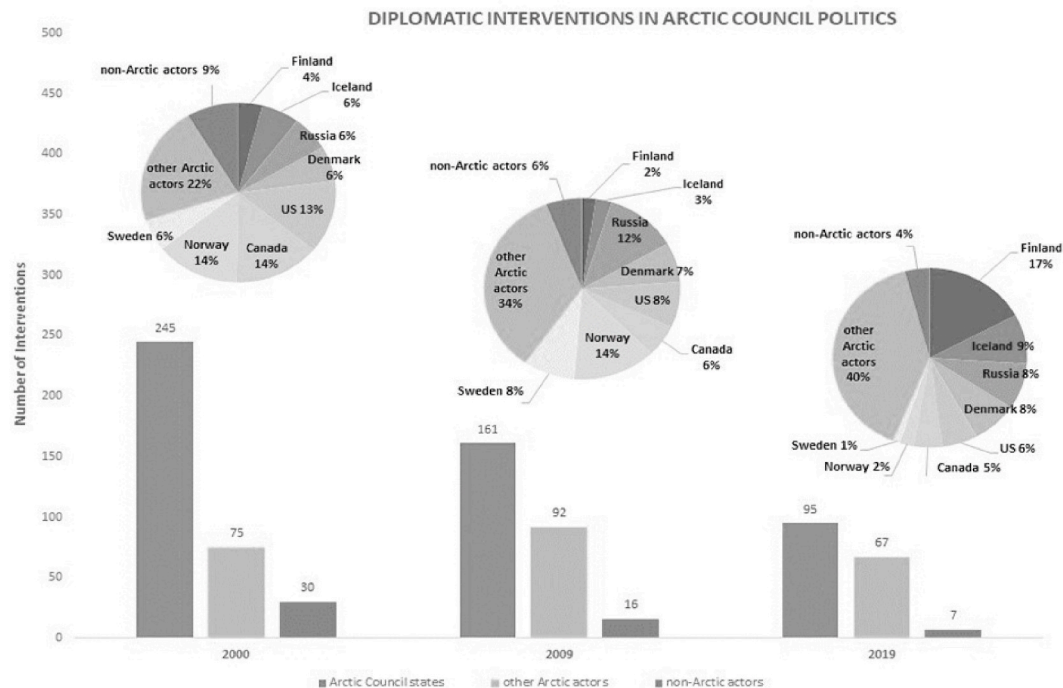
Fig. 2. Diplomatic interventions in Arctic Council politics, comparison over time.

Table 2
Table of network nodes (actors) selected by the highest degree centrality (plain font for Arctic actors, *italic* font for global/non-Arctic actors or organizations).

2019	Degree	2009	Degree	2000	Degree
Finland	19	Canada	17	USA	31
USA	15	Norway	15	Canada	28
AIA - Aleut International Association	14	CAFF	13	Norway	28
Canada	14	Finland	13	Kingdom of Denmark (Greenland/Faroes)	24
Russia	13	USA	12	Iceland	24
Saami Council	13	ICC - Inuit Circumpolar Council	12	Russia	23
GCI - Gwich'in Council International	12	AMAP	12	Sweden	23
ICC - Inuit Circumpolar Council	12	Sweden	10	Finland	23
Norway	12	Russia	10	*UK*	16
Iceland	11	Iceland	10	RAIPON - Russian Association of the Indigenous Peoples of the North	16
Kingdom of Denmark (Greenland/Faroes)	11	RAIPON - Russian Association of the Indigenous Peoples of the North	8	AMAP	15
Sweden	11	PAME	7	*Netherlands*	14
RAIPON - Russian Association of the Indigenous Peoples of the North	7	Kingdom of Denmark (Greenland/Faroes)	7	*Poland*	13
AAC - The Arctic Athabaskan Council	6	Saami Council	6	*Germany*	13
Arctic Economic Council	5	GCI - Gwich'in Council International	6	*France*	13
AMAP	3	ACAP	5	CAFF	12
PAME	3	*EU*	4	High North Alliance	12
UArctic - University of the Arctic	3	SDWG	4	AIA - Aleut International Association	12
EPPR	2	AIA - Aleut International Association	3	*NCM - Nordic Council of Ministers*	11
EU	2	*UNEP - United Nations Environmental Programme*	3	*WMO - World Meteorological Organization*	11
WWF - World Wide Fund for Nature	2	*IPY - International Polar Year*	2	*UN-ECE - The United Nations Economic Commission for Europe*	11

5. Anthropocene governance powerhouse?

The findings above illustrate that the establishment of a stronger boundary between ecosystem-adjacent actors and the broader field of global actors is a consequence of cooperation anchored in the Arctic ecosystem (broadly construed) over time. A dynamic of strengthening the position of regional actors and a diminished role for global actors is evident in several aspects. Firstly, we see the extent to which cooperation with global actors remains a key topic of normative contestation in the Arctic Council, and that reference to global institutions and actors

has decreased over time. Secondly, a similar trend is evident in networks of participation. If one had simply mapped access to and attendance at the Arctic Council meetings, little change over time would have been discernible. The number of the formal actors involved in Arctic Council work has remained stable or even increased in keeping with global preoccupation with the region. However, as a focus on relationships and network centrality measures reveals, there has been a strengthening of connections between the Arctic coastal states, at the expense of the network centrality of non-coastal Arctic states and international/global organizations and initiatives. Similarly, the whole network density – an

analytical score indicating the actual number of relationships amongst network participants measured against the theoretically highest possible number of possible relationships between participants – has decreased over time, resulting in a less interactive network than the number of participants might lead one to think. Finally, the mapping of who speaks and intervenes in Arctic Council settings illustrates a hierarchy of speakers and 'non-speakers' that reflects the increasing privileging of adjacent, Arctic actors at the expense of non-regional actors. The tracing of change over time indicates that this dynamic has also become more pronounced.

These effects highlight that strategies, narratives and institutional practices of ecosystemic politics need to be understood as an exercise in creating scale and in structuring power relations, rather than a simple dividing of the global into more manageable, tidily nested scales of action and implementation. The trio of analytical perspectives used here – networks, hierarchies, and norms – results in a parsimonious and aggregated view on Arctic politics. Taken singly, each concept and associated methods can provide solid insights on global politics and, indeed, focusing on one approach and set of data allows for a richer and more detailed account of a specific dynamic. I argue, and hope that the above case study has demonstrated, that these approaches are even more revealing when combined. For example, the insights on networks using social network analysis metrics would have been difficult to contextualize without the more inductive coding and analysis of moments of norm development.

Importantly, the three analytical takes on ecosystemic politics lend themselves to comparison across cases. As argued above, there is analytical promise and policy relevance to teasing out the subset of sub-global political cooperation that is anchored in ecosystems from both regional cooperation more generally and overlapping global governance fields. As the analysis above has shown, increased value assigned to adjacency – and the concrete political consequences this has for non-regional actors – has been one key consequence of the maturation of ecosystemic politics in the Arctic case explored in this article. However, there are numerous other broader effects on power relationships that can be analyzed, including the power relationships and outcomes within the ecosystemic policy field itself. As scholarship in political geography has aptly illustrated, the techniques needed to govern the natural world can be highly specific and unique and we need to direct further attention to the diversity of governance techniques and the unique impacts certain forms of political organizing may have. Speaking for ecosystems in an authoritative way likely entails, for example, marshalling highly context-specific resources (e.g. geographical proximity, indigeneity, specific forms of expertise). These practices may differ systematically from the practices that function in global governance fields and broader regional settings.

The empirical focus of this agenda – on cooperation anchored in areas identified as politically significant ecosystems – will likely increase in importance in the coming decades. Given the seeming intractability of many global problems and the growing awareness of a new era of Anthropocene challenges for governing in a 'world of complex systems characterized by non-linear change' (Young, 2020, p. 113; Dalby, 2020), the appeal of and reliance on sub-global yet supranational political settings as intermediary governance bodies is already strongly manifested in global environmental architecture (Balsiger & Prys, 2016; Biermann & Kim, 2020). Speaking for adjacent ecosystems may become an even more established and appealing form of political capital and sub-global organization. For example, scholars have noted an intensifying focus on the promise of enclosure and/or regionalization for solving pressing issues in ocean governance and resource management (Boucquey, Fairbanks, Martin, Campbell, & McCay; Campbell et al., 2016; Jacques and Lobo, 2018; Zondervan et al., 2013). Ecosystemic politics and regional approaches may indeed be important solutions for global problems, but the consequences for other non-regional/non-adjacent actors needs to be better understood. Then we will be better equipped to assess whether states speaking for their own immediate environs is better – and if so, in which ways – than seeking global solutions to global challenges.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.polgeo.2021.102497.

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