



Climate Change and (In)Security Project Briefing Note

On Thin Ice: The Geopolitical Impact of Climate Change in the Antarctic

The Antarctic is an unusual space both environmentally and politically. It is one of the most isolated, coldest, and hostile continents on earth, with temperatures averaging -60°C (BAS 2015a) in winter and the surrounding Southern Ocean experiencing some of the most severe storms recorded (Vichi et al. 2019). However, climate change is seeing significant environmental changes occur. Areas of the Antarctic are warming five-times faster than the global average (UCAR 2022), while its ice mass shrinks (NASA 2022).

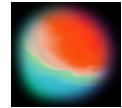
These warming conditions facilitate the hope, if not yet reality, of increasingly cost-efficient human and economic activity and infrastructure exacerbating or driving the regions steadily increasing geopolitical competition. This particularly is pressuring the fragile Antarctic Treaty System (ATS) as exploitation and conservation-minded states prepare for its renegotiation in 2048, jostling for the best physical, political, and legal position for their maintained or potential claims. This is a competition that while presenting as a political and diplomatic arena, could potentially, as it has done in the past, become re-militarized.

The Antarctic's Political Environment

Due to its harsh environment the Antarctic is *terra nullius* in the truest sense in that it completely lacks an indigenous population. It was not until 1904 that the first permanent outpost was established (Scott Polar Institute 2022). Antarctic bases, historically and now, are not settlement communities but scientific or government-affiliated outposts conducting research while acting as a physical sovereign presence to safeguard, justify, or position for, a state's staked claims in an ongoing competition for the continent (Howkins 2017).

The 1959 Antarctic Treaty System (ATS) is the consensus-based international governance system of the continent (Scientific Committee on Antarctic Research 2022). It was established by the claimant states (Argentina, Chile, Norway, France, New Zealand, Australia, and the UK) and those reserving the right to make claims (US and Russia) to ensure the continent would be "exclusively" used for peaceful purposes, and prevent "international discord" over the region (BAS 2015b; Scientific Committee on Antarctic Research 2022). These original signatories became consultative members with voting rights.

This was needed due to two escalatory political-security competitions happening in the region. Firstly, there were increasing concerns that the 1957-58 International Geophysical Year would create a new Cold War front on the continent as the USSR and US would deploy significant presences (TNA 1957a-d). According to some key US Presidential advisers, this front had the potential to host an escalation-free nuclear exchange courtesy of Antarctica's isolation and lack of civilian-collateral (TNA 1957e).



Secondly, there was the escalating post-1942 UK-Argentine-Chilean competition over overlapping claims (AAP 2016; Howkins 2017). On several occasions this almost led to open conflict having seen military deployments by all three powers to construct, support, or dispute rival Antarctic bases, and live-fire incidents (Beck 2015; Dodds 2002; Haddelsey and Carroll 2014).

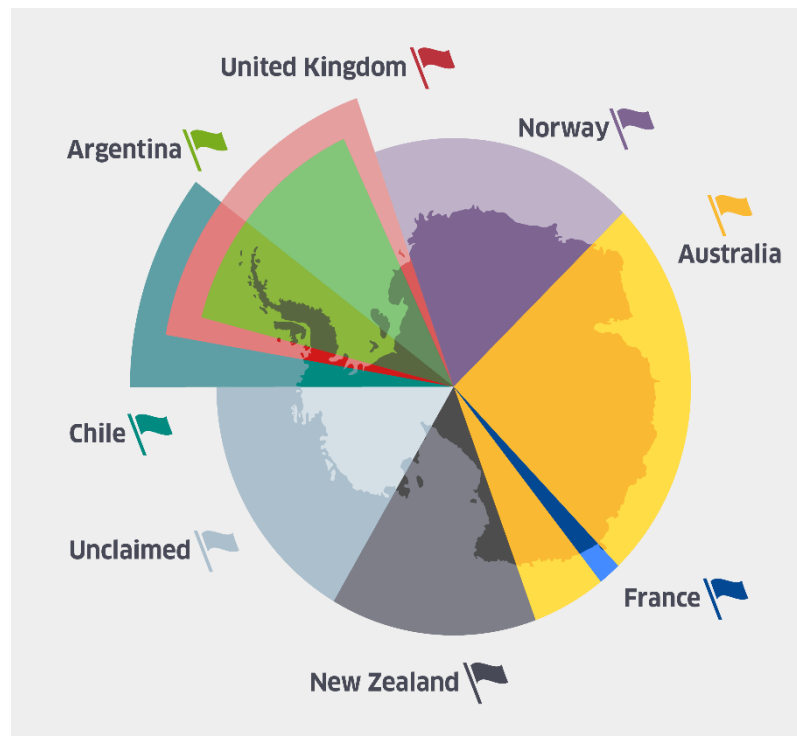


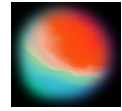
Image of Rival Antarctic Claims (Discovering Antarctica 2022)

A Fragile Antarctic Treaty System (ATS)

To ensure ATS negotiations were not derailed, claims were left purposefully unresolved and an intentionally ambiguous situation created as Article IV “froze” them (BAS 2015b). This allows states to maintain their claim, or right to make claims, providing they accept that no other state has to recognize them.

Likewise, to manage the opening of the Antarctic, the ATS stipulates that to acquire consultative status – which allows potential claimants to protect a key political-legal pillar of their claims, newcomers must undertake “substantial” Antarctic scientific activity (BAS 2015b). This is costly and exclusionary, and cemented scientific activity as the key metric, rather than just a significant consideration, of legitimizing claims (Howkins 2017; Yao 2021).

While this has ensured that a peaceful “continent of science” was created, the competition surrounding claims continues. Paradoxically, with the ATS’ intent of preventing international discord, the Antarctic became the largest global area affected by unrecognized borders (Dodds 2021). Only the European and Oceanic claimants recognize each other’s claims, and all claimant powers continue to largely conduct



research in “their” respective areas with only a limited internationalization of scientific infrastructure (Hemmings 2011). This is because such states are well aware that physical presence and scientific activity will be key competitive metrics for the legitimacy of claims if these become “unfrozen” as these parameters have been accepted by all parties since 1959, rather than the contested legitimacy provided by geographical proximity, the birth of citizens in the region, or historic discovery or treaty (Beck 2015; Kelly and Child 1988; UK Polar Parliamentary Committee 2020; Yao 2021).

The ATS then, far from resolving geopolitical competition, has through its refusal to settle claims and its inbuilt renegotiation in 2048 made the Antarctic a ticking geopolitical crisis-in-waiting (see Secretariat of the Antarctic Treaty 2022). While it has shifted competition towards non-violent means, it’s important to note that the 1982 Falklands War has a significant Antarctic context (Dodds 2002; Jardine 2022), and pre-1959 militarized competition is no longer unthinkable given how peaceful regions like the Arctic have militarized rapidly due to governance and resource concerns (Kaushal et al. 2022; Saxena 2020); issues also present in the Antarctic.

Climate Change Enters the Antarctic Arena

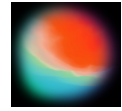
Climate change will significantly contribute to the emerging “battle” over the spirit and understanding of a fragile ATS, which continues to lack significant scaled inter-signatory cooperation – highlighted by the low number of “joint proposals” made by consultative states (Sampaio 2019).

The battlelines are clear. On the one hand, broadly “conservation-states” like the US, UK, and Australia who wish to maintain the Antarctic as a science and conservation-focussed continent, somewhat for their own advantage (Yao 2021). On the other hand, there are “exploitation-states” like China and Russia who aim to nudge the ATS towards facilitating commercial operations. While issues like fisheries, tourist regulation and ATS-prohibited grey-zone militarization loom, a key area which epitomizes the divides, issues and risks of this struggle is mineral exploitation (BAS 2015d; Howkins 2017; McGee et al.2022).

Mineral Exploitation

Antarctic minerals have long been mythologized (Dodds and Nuttall 2015). In 1939, US Admiral Richard E. Byrd contributed to the start of UK-Argentine-Chilean competition by collecting 1457 samples in the region, including of gold, iron, copper, magnesium, zinc, and petroleum. British officials doubted the veracity of his samples but committed to Antarctic competition regardless, partly in case it did prove to be a treasure trove (British Library 1948; TNA 1944).

The Antarctic’s potential mineral wealth remains disputed (US Geological Survey 1974) and it continues to be a source of tension. The 1980s mineral disputes between consultative states pressured the ATS’ resilience to the extent that the eventual 1991 Environmental Protocol would, as with claims, kick the can down the road- banning



mineral extraction ambiguously for non-scientific purposes and delaying the question until 2048 (BAS 2015d).

Significantly, the controversy of this mineral debate galvanized international attention, with the number of ATS signatories increasing over the 1980s from 25 to 38 as states feared being left without influence regarding any potential mineral bonanza (BAS 2015d). The possibility of minerals is enough to generate competitive interest that could become an unstable international flashpoint. This is especially true as geopolitically-driven competition between China and the US surrounding strategic minerals intensifies globally with potential shortages expected in the 2030s due to this politicization, increasing populations, and the “green revolution” (Adamas Intelligence 2020; Jardine et al. 2022).

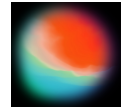
China

China having joined the ATS during the mineral controversy (Secretariat of the Antarctic Treaty 2022), reserves the right to make a claim while not recognizing others’ (Brady 2017a). Beijing frequently utilizes climate change to shield its Antarctic interest and increasing presence from criticism. For instance, it justified its latest base to the ATS, in the face of criticism that it was unnecessary from other consultative members, on the premise of climate research, while domestically extolled both this and its “resource exploration” measures (Brady 2017b).

Similarly, China has attempted to propose a “Chinese Management Area” near its Kunlun base, arguing the necessity for environmental conservation (Brady 2017a). In practice it would simply make that area more difficult for other states to operate in. While rejected, this is a clear case of attempting to use climate and conservation as cover for increased control and is part of efforts for China to potentially make a claim here for 2048. A notion supported by China’s concentration of its infrastructure around a “resource rich” triangular strip in the Eastern Antarctic (Brady 2017b), which would allow it to weaken Australia’s claim to the region and strengthen its own through superior logistics and presence as Argentina and Chile did to the UK pre-1959 (TNA 1956, 1957f).

These actions, regardless of their 2048-intent support China’s lead in pushing for an exploitation-centric ATS, having articulated the need to strike a new balance between the continent’s protection and “use” (Antarctic Treaty Consultative Meeting 2017; Young 2021). Indeed, a Chinese diplomat charged with China’s Antarctic policy wrote a paper highlighting that the 1991 mining ban “won preparation time” for China to position itself to capitalize in 2048 deeming environmental protection to not include a ban on exploitation (Yilin 2009).

To this end China utilizes the ATS’ ambiguity and lack of enforcement mechanisms (Yermakova 2021). Significantly, it never stopped prospecting for Antarctic resources despite the Environmental Protocols requirement to do so (Brady 2017a). Instead, Beijing justifies geological exploration as scientific, which the Environmental Protocol’s ambiguity allows (Young 2021).



The “Rich Man” Trap

China’s exploitation-minded steps are supported by Russia who has also sent prospecting missions into the Antarctic recently as part of Moscow’s 2030 strategy to explore the continent’s value (Perkins and Griffin 2020). However, this sets up a politically problematic collision course with the US and UK who committed publicly to upholding the extraction-ban (Antarctic Treaty Consultative Meeting 2009). Such a collision may be to China and Russia’s advantage as an opportunity to force conservation-states to compromise and accommodate (McGee et al. 2020), or risk the implication or threat of ATS non-adherence escalating, something already a danger (Hooper 2021). This weakens the ATS’ resilience and unity and fuels an incremental nudging towards an exploitative model. If the US and UK refuse to compromise it gives Beijing a platform to reiterate its ATS criticisms such as it being “a rich man’s club” (Brady 2012). A narrative targeted at states interested in exploiting future climate-driven Antarctic wealth, but who fail to meet the ATS’ exclusionary standards (Hemmings 2022). This could generate a significant global backlash against the current ATS and pressure conservation-states to modify or even replace it.

On Thin Ice

Climate change will exacerbate the problems faced by a fragile ATS. It will increase the opportunities and frequency in which conservationist and exploitation-minded consultative states must spar for the future of the ATS towards the 2048 renegotiations. The more these issues happen, the wider the international audience becomes, and more likely that the ATS is significantly pressured to accommodate commercial activity. This would undermine the stability provided by the exclusionary “continent of science” and potentially reinvigorate claims and attendant competition with a similar setting to its pre-1959 predecessor; particularly for instance, as Argentina continues to pursue its claims against Britain energetically (see Jardine 2021).

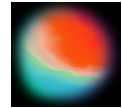
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*This briefing note is written in the author’s personal capacity and should not be taken as reflecting the opinions or policies of the CCI Project, Reuben College, or CHACR.

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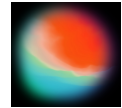
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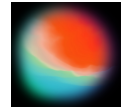
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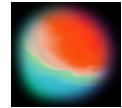
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