

BRIEFER

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THE FORGOTTEN COUNTRIES IN THE “MUDDY MIDDLE” OF CLIMATE SECURITY RISK

A CASE FOR ADDRESSING THE GAP

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MIND THE MIDDLE

Climate security analysis lends itself to focusing on the extremes among countries, whether the greenhouse gas trajectories of the highest emitting countries or the adaptation challenges in the most exposed. This is evident in the (understandable) focus on the ten or 20 most climate vulnerable countries, where climate-related security impacts are most clear. However, with climate impacts set to worsen for decades even in a best-case emissions scenario,¹ climate-related security challenges will continue to intensify in countries that are not considered the most vulnerable today—those in the “muddy middle” of climate vulnerability rankings. These countries get less attention because they are not top-5 emitters, great power rivals, or conflict-ridden crisis areas, but they are places where climate risks are less certain and where increased instability could be globally consequential.

This pitfall can be seen in the wide use of climate vulnerability indices by governments, civil society, journalists, and the private sector to measure countries’ vulnerability to climate change. Such indices have their place, but they can obscure aspects of climate security risks in countries with mixed or unremarkable scores.

¹ “Data Explorer: IPCC Scenarios.” *Our World in Data*, <https://ourworldindata.org/explorers/ipcc-scenarios?facet=none&Metric=Temperature+increase&Rate=Per+capita&Region=Global&country=SSP1+-+1.9~SSP1+-+2.6>. Accessed 26 Jan. 2023.

THE LIMITS OF RANKINGS

Risk rankings agree on the most and least vulnerable countries, but not much else. This means they have the least insight where it is most needed—on the countries between extremes. Take two rigorous and widely cited examples—Notre Dame’s Global Adaptation Initiative (ND-GAIN)² and the EU-sponsored INFORM.³⁴ Each have largely consistent and unsurprising top and bottom rankings, with Afghanistan, Chad, and the Democratic Republic of Congo near the bottom, and Singapore and Iceland near the top. While this highlights the compound crises the most vulnerable states face, and may help inform where resources go within countries, it largely reaffirms existing areas of defense, humanitarian, and diplomatic focus.

However, there is less consensus about the middle 70% of countries whose vulnerability is less obvious. ND-GAIN ranks Turkey the 135th most vulnerable country, better off than most. But INFORM ranks it the 43rd most vulnerable, just behind Cote d’Ivoire. Similar disagreement exists for states like Mexico, Brazil, Egypt, and Colombia that are far from strategic afterthoughts, but get relatively limited attention in climate security circles (though my organization has covered climate security dynamics in Brazil⁵ and Egypt⁶ in the past).

This uncertainty reflects factors that make such rankings less useful for countries in the middle. First, rankings choose different datapoints to represent factors like climate exposure and resilience—choices that produce more divergent results when looking between the extremes. Second, rankings use slow-changing statistics and climate projections, which don’t account for climate variability and extremes, the biggest near-term factor in where climate change will hit hardest. Third, they emphasize quantitative factors that are easily captured in uniform country statistics. But in addition to the number of dollars and doctors, resilience hinges on socio-political context that is harder to standardize—just look at the unexpected⁷ strain caused by COVID-19 in the United States, which ranks at the top⁸ of health security indices. Fourth, rankings focus on vulnerability to climate change effects, but not the potential risks related to the energy transition and climate policies, which could also have potentially destabilizing impacts if not conceptualized or executed in a sensitive way. And finally, country-centric rankings may mask the vulnerabilities of subnational locales or populations, which can cause local insecurity even if the country as a whole is well-resourced.

2 University of Notre Dame. *Notre Dame Global Adaptation Initiative*. <https://gain.nd.edu/our-work/country-index/>. Accessed 26 Jan. 2023.

3 *INFORM Climate Change*. <https://drmkc.jrc.ec.europa.eu/inform-index/INFORM-Climate-Change>. Accessed 26 Jan. 2023.

4 INFORM includes risk ratings for multiple emissions scenarios and timeframes. Here examples are drawn from INFORM’s climate change risk index rating for an intermediate emissions scenario (RCP4.5, referred to by INFORM as “optimistic”) and a mid-century timeframe (~2050), because it is most comparable to the climate scenarios used in ND-GAIN.

5 “Climate and Security in Brazil.” *International Military Council on Climate and Security*, 27 Nov. 2020, <https://imccs.org/climate-and-security-in-brazil/>.

6 Werrell, Caitlin E., et al. “Did We See It Coming?: State Fragility, Climate Vulnerability, and the Uprisings in Syria and Egypt.” *SAIS Review of International Affairs*, vol. 35, no. 1, 2015, pp. 29–46.

7 Abbey, Enoch J., et al. “The Global Health Security Index Is Not Predictive of Coronavirus Pandemic Responses among Organization for Economic Cooperation and Development Countries.” *PLoS One*, vol. 15, no. 10, Oct. 2020, p. e0239398.

8 “The 2021 Global Health Security Index.” *GHS Index*, 21 June 2019, <https://www.ghsindex.org/>.

CLIMATE SECURITY RISKS BETWEEN THE EXTREMES

Climate-related security risks in “muddy middle” countries are likely to look different than risks in those that are the absolutely most vulnerable. Rather than raw climate hazards overwhelming inadequate adaptive capacity at a country-wide level, climate change and the energy transition could worsen risks by influencing sensitive political, economic, and social dynamics within and between countries. In particular, climate hazards and policy responses might prompt scapegoating of internal or external enemies, raise or depress the value of economic assets in ways that heighten competition, or impact sensitive political divisions or governance expectations that cause backlash or polarization.

One need not look far for potential previews. First, climate change is likely to increasingly prompt scapegoating when it intersects with domestic or international grievances, as it has in Algeria, Greece, and Turkey. When all suffered wildfires in 2021, which are growing more common amid worsening heatwaves and droughts, Algeria accused opposition groups of setting fires with backing from rivals Morocco and Israel,⁹ Turkey blamed the separatist Kurdistan Workers’ Party for the blazes,¹⁰ and the Greek far right fanned rumors that an Afghan migrant arsonist was involved.¹¹ And in the United States, armed militias regularly mobilize to combat the perceived threat of migration to the southern border¹²—a dynamic threatening the security of migrants¹³ and government personnel¹⁴ that may grow as climate change exacerbates socioeconomic drivers of migration.

Additionally, as the energy transition continues, competition might grow over economic assets gaining and losing value, as political forces in petrostates, agricultural producers, conservation hotspots, and critical minerals powerhouses fight to preserve or acquire economic prizes. Although the risk of declining fossil fuel revenues for petrostates as the energy transition advances is generally well-appreciated, there are nuances that matter for security analysis. For example, the first to lose out will likely be those countries like Algeria or Venezuela,¹⁵ whose inefficient oil production¹⁶ makes them ill-equipped to compete for declining market share with the likes of Arab Gulf states, who might benefit in the short term. Meanwhile, control of increasingly lucrative crit-

9 “Algeria Accuses Groups It Links to Morocco, Israel of Setting Wildfires.” *Reuters*, 18 Aug. 2021, <https://www.reuters.com/world/africa/algeria-accuses-groups-it-links-morocco-israel-setting-wildfires-2021-08-18/>.

10 TRTWorld. “Why is the PKK suspected to have caused wildfires in Turkey?” *TRT World*, 30 July 2021, <https://www.trtworld.com/magazine/why-is-the-pkk-suspected-to-have-caused-wildfires-in-turkey-48802>.

11 Patrikarakos, David. *Conspiracy Theories Rise From the Ashes of Greece’s Fires*. 21 Aug. 2021, <https://foreignpolicy.com/2021/08/21/greece-heat-fires-climate-change-conspiracy-theories/>.

12 “U.S. Militia Groups Head to Border, Stirred by Trump’s Call to Arms.” *The Washington Post*, 3 Nov. 2018, https://www.washingtonpost.com/world/national-security/us-militia-groups-head-to-border-stirred-by-trumps-call-to-arms/2018/11/03/ff96826c-decf-11e8-b3f0-62607289efee_story.html.

13 Shah, Khushbu. *FBI Arrests Leader of Private Militia Accused of Detaining Migrants on US Border*. 21 Apr. 2019, <https://www.vox.com/policy-and-politics/2019/4/21/18509998/fbi-arrests-leader-private-militia-accused-of-detaining-migrants-on-us-border>.

14 LaPorta, James, and Chantal Da Silva. “Migrant Caravan: Border Troops Preparing for Threat of Armed, Unregulated Militias, Leaked Documents Show.” *Newsweek*, 1 Nov. 2018, <https://www.newsweek.com/trump-administration-migrant-caravan-border-troops-1196855>.

15 Bordoff, Jason. *Everything You Think About the Geopolitics of Climate Change Is Wrong*. 5 Oct. 2020, <https://foreignpolicy.com/2020/10/05/climate-geopolitics-petrostates-russia-china/>.

16 Masnadi, Mohammad S., et al. “Global Carbon Intensity of Crude Oil Production.” *Science*, vol. 361, no. 6405, Aug. 2018, pp. 851–53.

ical minerals sectors could motivate more destabilizing competition between and within countries. Consider how a projected explosion in copper demand to enable electrification¹⁷ might have raised the stakes in Peru. Last year leftist president Pedro Castillo was removed¹⁸ in a constitutional crisis fueled in part by demands to nationalize¹⁹ or redistribute profits²⁰ from the country's copper mining sector, with security forces killing dozens of pro-Castillo protesters from southern mining regions in January.²¹

And finally, climate effects and policies can both strike at sensitive political constituencies, potentially mobilizing opposition or fueling polarization. The political fallout of climate change and response measures is apparent in Brazil, where climate change²² and mismanagement²³ have caused drought and electricity shortages in the hydroelectric power-dependent country, and where blackouts have a history²⁴ of stoking public dissatisfaction.²⁵ And where today, newly re-elected President Luiz Inácio Lula da Silva's efforts to reinvigorate protection of the Amazon are poised to run up against the politically powerful agribusiness community²⁶ and a radicalized segment²⁷ of former President Jair Bolsonaro's rural-leaning base,²⁸ which ransacked the Brazilian Congress with financing in part from small timber and agriculture interests.²⁹

17 "The Future of Copper," *S&P Global*, https://cdn.ihsmarkit.com/www/pdf/1022/The-Future-of-Copper_Full-Report_SPGlobal.pdf.

18 The Christian Science Monitor. *Peru President Castillo Impeached after Moving to Dissolve Congress*. 7 Dec. 2022, <https://www.csmonitor.com/World/Americas/2022/1207/Peru-President-Castillo-impeached-after-moving-to-dissolve-Congress>.

19 "Peru Cabinet Seeks Solution for Las Bambas Crisis as Leftists Urge Nationalization." *MINING.COM*, 3 June 2022, <https://www.mining.com/web/peru-cabinet-seeks-solution-for-las-bambas-crisis-as-leftists-urge-nationalization/>.

20 "Peru's Mining South, Rocked by Violence, Braces for 'Endless Battle.'" *Reuters*, 10 Jan. 2023, <https://www.reuters.com/world/americas/perus-mining-south-rocked-by-violence-braces-endless-battle-2023-01-10/>.

21 "Thousands March on Peru's Capital as Unrest Spreads, Building Set Ablaze." *Reuters*, 21 Jan. 2023, <https://www.reuters.com/world/americas/peru-protesters-fired-up-by-deaths-march-lima-demanding-change-2023-01-19/>.

22 Getirana, Augusto, et al. "Brazil Is in Water Crisis - It Needs a Drought Plan." *Nature*, vol. 600, no. 7888, Dec. 2021, pp. 218-20.

23 *Main Drivers of Drought in South East Brazil, 2014-15*. <https://www.worldweatherattribution.org/southeast-brazil-drought-2014-2015/>. Accessed 26 Jan. 2023.

24 Rohter, Larry. "Energy Crisis in Brazil Is Bringing Dimmer Lights and Altered Lives." *The New York Times*, 6 June 2001, <https://www.nytimes.com/2001/06/06/world/energy-crisis-in-brazil-is-bringing-dimmer-lights-and-altered-lives.html>.

25 "Brazil Minister Warns of Deeper Energy Crisis amid Worsening Drought." *Reuters*, 1 Sept. 2021, <https://www.reuters.com/world/americas/brazil-minister-warns-deeper-energy-crisis-amid-worsening-drought-2021-08-31/>.

26 Malleret, Constance, and Fanny Lothaire. "Brazil's Agribusiness Sector Provides Fertile Ground for Bolsonaro." *France 24*, 26 Sept. 2022, <https://www.france24.com/en/americas/20220926-brazil-s-agribusiness-sector-provides-fertile-ground-for-bolsonaro>.

27 "'Coup-Mongering' Bolsonaro's Battle Cry Reveals a Radicalized Brazil." *Reuters*, 28 Dec. 2022, <https://www.reuters.com/world/americas/coup-mongering-bolsonaristas-battle-cry-reveals-radicalized-brazil-2022-12-28/>.

28 "Brazil's Rural Boomtowns Ensure Bolsonaro's Future." *Reuters*, 28 Oct. 2022, <https://www.reuters.com/world/americas/brazils-rural-boomtowns-ensure-bolsonarismos-future-2022-10-28/>.

29 "Brazilian Authorities Target Riot Financiers' Assets to Pay for Damage." *The Washington Post*, 12 Jan. 2023, <https://www.washingtonpost.com/world/2023/01/12/brazil-riot-asset-freeze/>.

CLOSING THE ANALYTIC GAP

With that in mind, analysts and practitioners at the intersection of climate and security would do well to keep such states on their radar. Of course, this is not to discount the genuinely urgent climate-related security risks and needs among today's most vulnerable countries. But unlike places that are in crisis even before climate change enters the equation, insecurity in seemingly more stable countries with larger and more interconnected economies is more likely to surprise policymakers and spill beyond borders.

Questions for country analysts to consider might include: How will climate change and the energy transition lift or depress the value of economic assets important to this country's political forces? How might climate extremes align with existing social divisions, misinformation narratives, or cultural flashpoints, amplifying the impact of both? How could climate change or policies spur destabilizing grievances, by violating local expectations of governance, regardless of the level of absolute deprivation?

The Center for Climate and Security (CCS) has recently explored climate-related risks in places like the Balkans³⁰ and Brazil,³¹ and we look forward to partnering with multidisciplinary experts to develop research and analysis of climate security threats in the “muddy middle” of climate vulnerability.

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30 “Climate Security Snapshot: The Balkans.” *International Military Council on Climate and Security*, 25 July 2022, <https://imccs.org/climate-security-snapshot-the-balkans/>.

31 “Climate and Security in Brazil.” *International Military Council on Climate and Security*, 27 Nov. 2020, <https://imccs.org/climate-and-security-in-brazil/>.