Threats to conservation from national security interests

Katarzyna Nowak[1], Dinah Bear[2], Anwesha Dutta[3], Myles Traphagen[4], Michał Żmihorski[5], Bogdan Jaroszewicz[1]

[1] Białowieża Geobotanical Station, Faculty of Biology, University of Warsaw, ul. Sportowa 19, 17-230 Białowieża, Poland
[2] Attorney and Consultant, P.O. Box 27024, Tucson, Arizona 85726, USA
[3] Chr. Michelsen Institute, Jekteviksbakken 31, 5006 Bergen, Norway
[4] Wildlands Network, 300 East University Blvd., Tucson, Arizona 85705, USA
[5] Mammal Research Institute of the Polish Academy of Sciences, Stoczek 1, 17-230 Białowieża, Poland

Corresponding authors: Katarzyna Nowak, k.nowak39@uw.edu.pl, and Anwesha Dutta, anwesha.dutta@cmi.no

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Abstract

There is a growing trend of nation states invoking national security and emergency declarations to build state-sponsored infrastructure projects, most commonly for border defense, energy production and transportation. Established laws, regulations, and agreements for the protection of nature and cultural heritage within and between countries, are becoming secondary to national security, compromising the function of protected areas like national parks, wilderness areas, and biosphere reserves, which safeguard biodiversity, climate, and human health. We describe cases where decades-long multinational cross-border endangered species recovery and rewilding programs have been jeopardized by waivers of environmental protection laws to facilitate rapid construction of border barriers that impede the movement and migration of animals, such as at the U.S.-Mexico and Poland-Belarus borders. Renewable energy megaprojects, like the Pinacate solar plant in Mexico, coupled with power transmission lines and road networks, likewise cast a large footprint on the land and are being carried out with minimal to no environmental compliance under the guise of national security, while similar projects like Mexico's Dos Bocas refinery and Poland's Vistula Spit canal proclaim national sovereignty as justification for bypassing laws. Increasing military expenditure by the world's largest economies has also created a mismatch with improvement in environmental policy stringency. These decisions trivialize our dependence on functioning ecosystems, undermine democratic principles and environmental review protocols, and contradict the UN resolution on the human right to a healthy environment. Framing projects as national security also foments civil and political unrest by the labeling and casting of dissenters, such as conservation scientists and environmental defenders, as anti-national. World leaders should refrain from misusing extraordinary powers, adhere to laws and international agreements, and consult experts and local people before taking unilateral action on projects that impact ecological and human communities.

Introduction

Pitting national security against long-term sustainability and shared nature protection agendas and goals is coming at the cost of a healthy environment—also a vital national and international interest.

In May 2022, in a letter to a European Parliament member, European Commission President Ursula von der Leyen wrote that "decisions on infrastructure at borders is the national responsibility of each Member State" and that the Commission at the European Union (EU) level "consistently supports efforts towards long-term sophisticated border management and on surveillance solutions as part of the 'European integrated border management' concept". Environmental concerns were deemed secondary to "imperative reasons of overriding public interest or public safety". The border and site in question was the Polish-Belarusian border and Białowieża Forest, a transboundary UNESCO World Heritage site and one of Europe's most intact forest ecosystems. That same month, European Commissioner for Home Affairs Ylva Julia Margareta Johansson stated that "overriding public safety" may exempt damage to environments protected under the EU's Habitats Directive (Nielsen 2022). Scientists who criticized Poland's construction of a border wall through Białowieża Forest (Jaroszewicz et al. 2021) were labeled treasonous in a Polish media outlet (Gazeta Polska Codziennie 2022).

The EU Commission's response with respect to a border barrier through Białowieża Forest epitomizes a growing trend of invoking national security concerns to respond to geopolitical challenges, irrespective of costs to nature, local communities, or public health. National security decrees sanction the bypassing of environmental review processes and public input requirements in place for the protection of places like old growth forests, deserts and glaciers (Fig. 1). There appear to be fewer limits on what constitutes national security

(Drinhausen & Legarda 2022). Big infrastructure may be built for the alleged welfare of a country or, as in the case of Poland's border wall, "to defend the external eastern border of the EU". These semantics are important because the line between national security and national interest is becoming increasingly blurred, with their misuse resulting in abuse of authority. Nation states, along with the international community, would be wise to agree within and amongst themselves what constitutes each.

Megaprojects like dams and highways, generally fall under the category of national interest, but categorizing them as national security may in some cases override human rights by disturbing or even displacing Indigenous and local communities, restricting access to the public, researchers, media and even humanitarian aid workers and medics, while fragmenting critical habitats. This practice contravenes the recently passed United Nations (UN) resolution upholding human right to a clean, healthy, and sustainable environment (UN Resolution 76/300, 2022). Public discussions linking environment and security began in the 1980s with the proposition that environmental degradation leads to security risks. A gap in the narrative is how nations override environmental regulations in the interest of national security. We describe cases where environmental laws, domestic and international, have been circumvented for national security including border protection, energy, transportation, and sovereignty. We draw on examples from the United States (U.S.), China, India, Mexico, Poland, and Hungary, all of which, except for China (which abstained), endorsed the above-named UN resolution. We think it is imperative to engage the conservation science community in discussions surrounding the dangers ensuing from pursuits of national security that have repealed environmental laws, along with public access to information, as it is setting back the legal protection of nature. We recognize that the cases mentioned are non-exhaustive, that our emphasis is biased towards border regions and geographical areas we are

most familiar with. We rely on our thematic and regional engagements on these issues in combination with a literature review.

Border security

Borders are often marked by geographical features like mountains and rivers, which tend to be focal points for biodiversity. Policies that ease environmental clearance near borders to erect barriers or enact other types of "border defense" jeopardize such areas, which also tend to be socio-ecologically and culturally meaningful and diverse (Gamble 2019; Liu et al. 2020; Titley et al. 2021). Borders, from the perspective of security, are regarded as protecting citizens from outside threats, rendering border control the unilateral right of a state; however, a more balanced perspective underlines that states still need to be held accountable to international law standards in their practices of border protection (Espejo 2020).

We describe four examples of environmental laws being bypassed for: 1) "border security" in the case of the U.S.-Mexico border; 2) "national security" in the context of so-called "hybrid warfare" / border crossings into Poland from Belarus; 3) "border security" in China's Land Borders Law; and 4) "military conflict" in the Siachen glacier between India and Pakistan, a nuclear trijunction and source of freshwater for millions of Indians and Pakistanis. All four cases involve expansive and expensive infrastructure, including in protected areas and sensitive habitats along international, shared borders. Two—Siachen glacier and the U.S.-Mexico border—emerged in discussions about peace parks as possible means of arresting environmental degradation and stemming border conflicts in these regions (Biringer & Cariappa 2012; Chester & Sifford 2012); however, these peace parks have yet to materialize.

In 2005, as part of the REAL ID Act, the U.S. Congress authorized the Secretary of Homeland Security to waive all legal requirements that the Secretary determines necessary to

ensure expeditious construction of border barriers and roads. As of today, 84 laws have been waived (see a list of 84 citations to the identified waived laws and additional information at https://u.osu.edu/madsen.34/maps/). The statutory basis for the waiver of all legal requirements for border barriers and associated infrastructure in the United States is IIRIRA § 102, as amended (codified at 8 U.S.C. § 1103(c) (Note). Long-term, possibly irreversible damage caused by U.S. border walling includes draining of desert springs, changes in hydrology, and blockage of gene flow between wildlife populations (Peters et al. 2018; Garbus 2018; Fig. 2) as well as disruption of binational programs protecting transboundary species.

While the 2006 Secure Fence Act was described as the "first step in addressing one of our nation's greatest security vulnerabilities: our porous borders" by Congressman John Carter from Texas (Espejo 2020 p. 283), "national security" does not explicitly appear in the Secure Fence Act (*ibid*.). However, when former U.S. President Donald Trump issued a National Security Strategy in 2017, he included strengthening of border control (White House Archives 2017).

In February 2019, President Trump declared a national emergency at the U.S.-Mexico border to access defense funds for the construction of the border wall (Manne & Weinberger 2020) which resulted in 737 kilometers of 10-meter-tall pedestrian barriers (border wall) with 10 cm spacing between the steel beams impeding passage of medium and large mammals (Traphagen 2021). The Mexican gray wolf (*Canis lupus baileyi*) and Sonoran pronghorn (*Antilocapra americana sonoriensis*), both subjects of decades-long joint binational recovery programs (USFWS 2015; USFWS 2022), have been impacted by the U.S.-Mexico border wall. In 2021, a GPS satellite collared wolf traveled 37 km along the border wall but was unable to cross into Mexico. Conversely, in 2017, prior to border wall building, another collared wolf traveled over 1,000 km from Mexico, crossed into the U.S. in the same

location, then returned to Mexico (Kocherga 2018). While current U.S. President Joe Biden terminated the national emergency in February 2021, the waiver of laws in the name of homeland security remains and is being used for additional wall construction along the U.S.-Mexico border.

In September 2021, the Polish government declared a state of emergency on its shared border with Belarus (Government of Poland 2021) and, like the U.S., fast-tracked construction of a border barrier, 187-kilometers long and 5.5 m high (Fig. 1); alternative solutions were not weighed. Among the Natura 2000 sites affected by the wall is the transboundary UNESCO World Heritage site Białowieża Forest; laws forgone include the European Union (EU) Habitats Directive, EU Strategic Environmental Assessment Directive, Bern Convention, and Polish national laws such as the Water Law, Environmental Law and regulations on: provision of environmental information, planning and spatial development, protection of agricultural and forest land and the environment. Detrimental impacts on sensitive habitats, species, and populations—for example of wolf (*Canis lupus lupus)*, lynx (*Lynx lynx*) and moose (*Alces alces*)—remain unmitigated (Jaroszewicz et al. 2021) while applications to access the border for research purposes, including to inform mitigation, have been denied. In Białowieża Forest, we have observed trees cut, toppled or damaged along the border and forest roads leading to the border, wildlife road mortality associated with high traffic of construction and military vehicles, and appearance of at least one nonnative plant taxon in construction material.

Both these border walls bypassed environmental and social impact assessments, international and national laws and conventions (e.g., Espoo Convention), without mitigation and compensatory measures enacted. Given negative impacts on border ecosystems and communities, and erosion of common conservation causes on continental or even intercontinental scales, thousands of scientists and conservation practitioners denounced both

these walls in petitions (e.g., Nauka Dla Przyrody 2022) and publications (Jaroszewicz et al. 2021; Peters et al. 2018). Furthermore, Poland national courts ruled that Polish border guard is violating international human rights laws by pushing people back into Belarus without recourse to international protection (ELENA 2022). The EU has meanwhile allocated 7.4 billion Euro to an Integrated Border Management Fund (2021-2027). In February 2023, EU leaders from 27 countries unanimously decided to tighten border controls through more funds allocated for cameras, drones, and watchtowers (surveillance technologies) at EU's external borders (The Guardian 2023a) in response to a high number of asylum claims made since 2016. In contrast, it took the European Parliament several months of political arguments and an opposition campaign (debunked by scientists as misinformative) to finally pass the Nature Restoration Law in July 2023, with a narrow margin of about a dozen votes. Negotiations on the final version of the law could potentially take months, awaiting final approval from a committee comprising representatives from national governments, Parliament and EU executives (The Guardian 2023b). In sum, compromise was reached more quickly over border protection than nature restoration.

"Border security" is also a central tenet of China's Land Borders Law. It involves the building of infrastructure by China along its borders including with India, Nepal and Bhutan, while simultaneously prohibiting similar construction near China's border by neighboring countries without prior permission from Chinese authorities (Luo 2021). Illustratively, China's construction of highways is exempt from environmental review (China Dialogue 2022) with anticipated adverse effects on high biodiversity and climate-sensitive regions. In response to India's construction of roads near China's border, north of the Pangong Tso (lake), a violent clash broke out along the Line of Actual Control (LAC) in Ladakh, in the Himalayas in May 2020, described as an "infrastructure arms race" and a "race to secure borders" between the two countries (Sun 2020). Both countries are increasingly investing in

hydropower projects that have extended boundary disputes to water, for which Himalayan glaciers are the principal source (Bawa et al. 2010) demonstrating the intricate links between politics and environment of the Himalayan region (Davis et al. 2019; Davis 2023).

The Siachen glacier lies in the world's only nuclear trijunction area where the border between India, China and Pakistan remains unresolved with competing claims. While China is not an active combatant on Siachen, they are a close ally to Pakistan and the disputed Sino-India border is only about 30 kms from Siachen (Baghel and Nusser 2015; Kashmir Reader 2022). The glacier is characterized by unusual flow and accumulation dynamics rendering it a highly challenging battlefield now for over thirty years, affecting the glacier and combatants alike (Smith 2021). Soldiers are stationed, along with infrastructure including satellite broadband, at 6700 meters ASL (Tahir-Kheli and Biringer 1998). The permanent outposts lead to dumping of enormous amounts of human and military waste into these crevasses, altering and polluting the englacial microbial community and rivers that originate from the snout of the glacier (Biringer & Cariappa 2012; Rafiq et al. 2017). The downwasting of the glacier (Agarwal et al. 2017), and destruction of habitats of already endangered snow leopard (*Panthera uncia*), Himalayan ibex (*Capra sibirica*), Himalayan black and brown bears (*Ursus thibetanus laniger* and *U. arctos isabellinus* respectively) and cranes (*Anthropoides virgo*), have led the World Wide Fund for Nature to designate the entire Tibetan Plateau Steppe, encompassing Siachen Glacier, as one of 200 areas "critical to global conservation" (Smith 2021).

There are commercial aspects of border conflicts and defense since contractors and companies involved in border infrastructure projects (e.g., Atlas Steel, Fisher Sand & Gravel Co. in the U.S.; Budimex S.A. in Poland) may have connections to politicians or be partly state-owned. They may rationalize their involvement and activities as "by order from the government", "obliged to support the state" or strategic for a country's defense, thus

condoning violations of environmental review processes and safeguards, and lack of transparency with the public and investors. They might also receive exemptions and concessions by governments.

Energy, infrastructure and transportation

The internationalization and globalization of energy as an industry and growing energy interdependence globally with reliance on and competition for fossil-based resources have resulted in intricately linking energy security with national security. The North Atlantic Treaty Organization (NATO) plays an important and distinct role in areas of energy security of its allies (Bartuška et al. 2019). In the case of the U.S., Russia and European nations, energy security is linked continually with national security making it necessary to secure nations' energy supplies. According to securitization theory, construal of an issue as "security" elevates it above regular politics, shuts down public discourse and validates the execution of extraordinary means (Buzan et al. 1998). This leads to energy security discussions being concentrated at the level of the nation, devoid of environmental considerations and climate change mitigation. It also highlights the failure to consider securing the environment as intricately linked to energy security (Nyman 2018). We explain this with some recent examples.

In the current global order, increasing demands for energy coupled with sharp recent increases in energy prices (or limited availability) mean that energy may be couched as strategic and superior to environmental issues, including by way of extraordinary powers. For example, as part of the EU's emergency energy plan, the Polish government passed a bill (Government of Poland 2022) suspending—for 2 years—a ban on burning coal and other fuels of low quality, aggravating greenhouse gas emissions and leading to further worsening of Poland's already poor air quality with adverse health effects. Hungarian Prime Minister

Viktor Orbán meanwhile signed a "decree on emergency firewood supply" relaxing logging rules in protected state-owned forests (Government of Hungary 2022; Telex 2022).

There is motion in the U.S. Congress to expedite all forms of energy development, including fossil fuel development, through modification of the environmental review process. For instance, the recently introduced RESTART bill ("Revitalizing the Economy by Simplifyng Timelines and Assuring Regulatory Transparency Act") bill (S. 1449) would eliminate the requirement to assess cumulative and indirect impacts in the environmental review process. More positively, the recently passed Inflation Reduction Act provides over one billion dollars to increase capacity of agencies to implement environmental review (P. Law 117-169; Aug. 16, 2022), a far superior approach to expediting alternative energy projects intended to address climate change than weakening environmental review processes (Pleune 2022).

A worrying trend is that among areas being targeted for energy and transportation development, including in the U.S. and Mexico, are Indigenous sacred sites and ancestral lands (Takala and Goldberg 2022) even when it is precisely such areas that are sustaining biodiversity and staving off climate change (Garnett et al. 2019). Mexican President Andrés Manuel López Obrador is using a decree enacted in November 2021 that declares megaprojects as works of national security (Business & Human Rights Resource Centre 2021). The decree requires that federal agencies grant automatic approval to any project the government deems in the national interest, the most notable of which is the Tren Maya (Mayan Train), a 1,500 km train line in Mexico's southern Yucatan Peninsula that will pass through three Mexican states and fragment portions of the second largest intact tropical rainforest in the Americas, the 15 million hectare Selva Maya, which contains the Calakmul Biosphere Reserve, a UNESCO World Heritage Site (Miguel 2023). The train will impact 1,240 Indigenous communities and could result in forced displacement of many residents

(Kiszwari 2023). Another UNESCO World Heritage site in Mexico, the El Pinacate and Gran Desierto de Altar Biosphere Reserve, already affected by the U.S. border wall, is slated for a 5,000 ha (1000-megawatt) solar project with an accompanying transmission line that will bisect the reserve (Blust 2022) and affect *ejidos* (communally owned lands). This is an example of a protected area facing cumulative effects of multiple national interests.

Similarly, in 2022, India's Ministry of Forest, Environment and Climate Change (MoFECC) cleared the decks for the "Holistic Development of Great Nicobar Island", along the Galathea Bay, an important leatherback sea turtle (*Dermochelus coriacea*) habitat. This mega infrastructure project consists of a transshipment port, international airport, 450 MVA gas and solar based power plant and a greenfield township on over 160 square kilometers of land, of which 130 sq km comprises primary forest. This will involve clear cutting of a million trees in an intact rainforest ecosystem. Of the island's total land area of 900 sq kms, 850 sq kms is delegated as an Indigenous reserve under the Andaman and Nicobar Protection of Aboriginal Tribes Regulation, 1956, which the project directly violates. Moreover, due to its ecological diversity, the region was declared a biosphere reserve in 1989 and included in UNESCO's Man and Biosphere Programme in 2013. Researchers and civil society organizations have objected deeming the government's EIA process flawed, non-transparent, inadequate, and pernicious to Indigenous communities, critical habitats, tectonic volatility, sand disaster vulnerability of the island (the Hindu 2023). The idea for developing Great Nicobar, closer to Myanmar and Sumatra than to the Indian mainland, was first floated in the 1970s, centered on national security and consolidation of the Indian Ocean Region. India's geopolitical security continues to be underscored over socio-ecological concerns.

Sovereignty

Infrastructure projects may also be rationalized on the basis of sovereignty facilitating circumvention of approvals through standard regulatory review processes. For example, to justify the Dos Bocas oil refinery, President Obrador stated that dependence on imported fuels undermines Mexico's sovereignty (Reuters 2023). In late 2022, in the name of "Polish sovereignty, independence, and freedom", timed with the 83rd anniversary of Russia's invasion of Poland, the Vistula Spit canal opened. It was justified by Poland's need for independent access from the Vistula Lagoon to Gdańsk Bay, circumventing the existing Strait of Baltiysk controlled by Russia. To enable its construction, economic and ecological arguments were rendered secondary to national security (Sommer & Zakrzewski 2021). The project, for which some 10,000 trees were cut, forged ahead chiefly for symbolic reasons despite environmental concerns, impacts on three protected areas including a Natura 2000 site, and lack of EU approval (*ibid*.; Reuters 2019). Coalition Clean Baltic (CCB) described the canal as contradicting the "goals, spirit and principles of the (1992) Convention for the Protection of Marine Environment of the Baltic Sea Area" and urged the European Commission to take accountability measures in response to Poland's unilateral implementation of the project (CCB 2019).

Sovereignty could thus be a legitimizing tactic for furthering big infrastructure plans for energy, defense, and freedom from hostile neighbors, irrespective of associated environmental harms or lack of approval.

Military expenditure and environmental policy stringency

Drawing on available data on military spending and an index on environmental policy stringency, we tested if 33 countries, 30 of which were among the world's top 50 biggest economies in 2022 by gross domestic product, are improving less in environmental regulation while increasing military spending in recent years. We sourced data on military expenditure

(Milex) from the Stockholm International Peace Research Institute (SIPRI) and data on environmental policy stringency (EPS) from the Organization for Economic Cooperation and Development (OECD). EPS reflects the extent to which regulatory policies deter environmentally harmful behavior, with an emphasis on air pollution and climate change mitigation (Kruse et al. 2022). We examined trends in both Milex and EPS from 1990-2020 for the 33 countries for which both types of data are available including our focal countries, apart from Mexico (for which environmental stringency data are not openly available from the OECD website).

We estimated temporal trends of Milex and EPS with two general additive models (GAM) implemented in "mgcv" R package (Wood 2017; R Core Team 2022). In the two GAMs, year effect was fitted with a thin plate regression spline which allows testing of non-linear trends, country identity was introduced as a random effect, while Milex and EPS were response variables, standardized for each country separately before analysis (i.e., variables have a mean of 0 and standard deviation of 1).

We note that the recent trend in improvement in EPS has plateaued relative to the spike in Milex (Fig. 3). This is consistent with analysis by Kruse et al. (2022) who reported a 1.1% average annual increase in EPS from 2010-2020 as compared with 6.8% and 8% in 1990-2000 and 2000-2010 respectively. Meanwhile, a sharp increase in Milex since 2015 is reported by SIPRI (2023). This indicates a growing mismatch between investment in environmental regulation and investment in military, with potential adverse environmental consequences, and negative impacts on national security as well.

Discussion

An emphasis on national security (e.g., in China; Drinhausen & Legarda 2022) and on defense (e.g., in the U.S., where a recent Brown University report showed 1% federal

spending on diplomacy and 72% on defense; Peltier 2023) is occurring at the cost of nature. While conservation strategies and legislation are typically planned during and for stable times and not emergencies, a 2022 policy brief of the European section of the Society for Conservation

Biology states, "Do not sacrifice biodiversity to swiftly address war and energy crises" (SCB Europe 2022). Relatedly, in August 2023, the Indian Parliament passed the Forest (Conservation) Amendment Act, 2023. The contentious law redefines the scope of forest legislation by excluding forest lands due to "strategic linear projects of national importance and concerning national security" that fall within 100 kilometers from international borders (The Wire 2023). Scientists and activists are concerned that this will divert large tracts of forest land for commercial activities including plantations and render 28% of India's forest cover vulnerable since these tracts would fall outside of recorded and protected forest area. The lives and livelihoods of local and Indigenous forest-neighboring and dependent communities would be altered (Mongabay 2023). If environmental safeguards and laws continue to be waived for national emergencies, security, energy needs, and other stated national interests and "imperative reasons", we stand little chance of weathering our precarious times. We need long-term, climate-resilient thinking on bioregional scales.

As a recent UNEP (2022) report emphasized, increased investment in nature to halt climate, biodiversity, and land degradation crises is needed from 120 to 285 billion/year by G20 countries. By comparison, world military spending (data on which are more accurate, accessible, and comprehensive than on conservation spending) has risen yearly since 2015, growing by 3.7% in 2022 reaching a record high of 2240 billion (with >80% representing spending by G20 countries). In 2021 (prior to Russia's invasion of Ukraine), the U.S. (800 billion), China (293 billion) and India (77 billion) had the highest military expenditures in the world, while in 2022, Russia leapfrogged India for the world's third highest annual military

expenditures (SIPRI 2023). Disparity between spending on defense and spending on nature is axiomatic even with imperfect data on the latter. Further, military expenditure is associated with increased energy consumption and environmental degradation (Ahmed et al. 2020).

Functioning ecosystems buffer us from disease risk, facilitate restoration of degraded areas (including in post-conflict zones), and accommodate multispecies migration driven by a rapidly changing climate (Titley et al. 2021). Protected areas, apart from helping safeguard species and habitats, offer disaster preparedness and risk reduction (Buyck et al. 2015; Duncanson et al. 2023). As recently observed in Ukraine, intact forests, wetlands and restored woodlands can help disrupt an enemy's advance (Charlton 2022; Ankel 2023). We are not advocating for an "environmental security" approach given the problems—including militarization—with securitizing the environment itself (see Duffy 2016; 2022), but rather for increased investments in environmental stewardship especially by nations that are major consumer societies and military spenders. We also need more consistent compilation and reporting of environmental spending, which could be done through the System of Environmental-Economic Accounting framework (https://seea.un.org/).

National security decrees and emergency declarations, combined with direct disregard for environmental laws, can undermine the foundations of democratic principles and protocols, public input and transparency. Framing border security, energy and transportation as national interests that override environmental interests has already led to labeling of environmental defenders, conservation scientists, journalists and other dissenters as "anti-national", making them targets of hostility and violence (Chacko 2018; Dutta & Nielsen 2022).

What can be concretely done to prevent national interests from overriding conservation efforts and regulations within broader contexts of climate and biodiversity emergencies? The conservation science community needs engaging in the framing of what

constitutes an emergency or crisis (McHugh et al. 2021), calling out when an “emergency” aligns more with political or for-profit motives or when "national interest" is used to cloak—even partially—large-scale commercial interests. Emergency measures should generally be temporary in nature and not leave lasting ecological footprints.

Scientists must partner with environmental defenders and frontline communities (Bluwstein et al. 2021), including the 2,346 jurisdictions in 40 countries which, as of September 2023, have declared a climate emergency (Climate Emergency Declaration 2023) and amplify coordination with the broader community to enable strategic actions, for example lawsuits, like those filed by the Southern Border Communities Coalition (https://www.southernborder.org/) in the U.S.; research and archiving as done by Badaczki i Badacze Na Granicy [Researchers on the Border] (https://www.bbng.org/) in Poland; and co-production of knowledge (Nel et al. 2015). Since sociopolitical factors drive conservation efficacy (Liu et al. 2020; Titley et al. 2021), conservation biologists should foster collaboration with social scientists and employ science diplomacy as a tool for cooperation (Bawa et al. 2020). A cautious revival of peace parks as a global initiative warrants attention to revive momentum toward cross-boundary cooperation (Chester & Sifford 2012; Liu et al. 2022) without domination of national interests, with communities as partners and leaders, and a rights-based approach to tackle sensitive border dynamics like illicit flows of goods and migrants (Duffy 2001; Amerom and Büscher 2005; Büscher 2013). These are some possible ways to arrest reversing gains made in transboundary conservation in the name of national security.

Across scales, given the ubiquity of oversecuritization at the cost of nature and people, leaders and governments need (galvanizing) to 1) adhere to regulatory frameworks and uphold laws and human rights; 2) avoid using national security to justify unilateral or autocratic decision-making about (but not limited to) mega and transboundary infrastructure

projects that jeopardize shared bioregions and heritage areas; 3) apply precaution through compliance with environmental and social review processes without exception or exemption; the precautionary principle applies the burden of proof upon proponents of emergency measures to justify them as superseding the prevailing uncertainty over damage that may or will be caused through their application; 4) follow globally accepted frameworks when planning land-altering projects (Arlidge et al. 2018); 5) not misuse or overuse executive, extraordinary or emergency powers; 6) eschew framing migration as a crisis or security issue; and 7) enhance transboundary biodiversity conservation and climate responsibilities, resilience and cooperation through peaceful means, conflict resolution and demilitarization (Ali et al. 2019).

Conclusions

This essay foregrounds what we perceive as the increasing importance of linking geopolitics with nature conservation, what Davis (2023) in the Himalayan context calls "geopolitical ecology". We also emphasize reconfiguration of geopolitics with a focus on security policies that need to be far-sighted, adhere to human (and more than human) rights and curate a sustainable world, by staying within "planetary boundaries" (Richardson et al. 2023), conceptualized as "Anthropocene geopolitics" (Dalby 2020). We highlight cases where environmental safeguards were or are being bypassed affecting humans and other species in spaces of ecological diversity concomitantly fraught with histories of border disputes and other tensions.

We encourage colleagues to partake in and expand on this discussion and propose undertaking of a more comprehensive review to systematically examine the enabling conditions for bypassing nature-related protective legislation to help avert its further erosion in the name of security.

Confronted with mounting challenges, world leaders should adhere to existing laws, treaties, agreements, and disavow the misuse of extraordinary powers. 62 years ago, U.S. President Dwight D. Eisenhower warned in his Farewell Address (Eisenhower, 1961), "we must guard against the acquisition of unwarranted influence, whether sought or unsought, by the military-industrial complex. The potential for the disastrous rise of misplaced power exists and will persist." The pragmatic and moral imperative he imparted in 1961 is more relevant today than ever, "we must avoid the impulse to live only for today, plundering, for our own ease and convenience, the precious resources of tomorrow."

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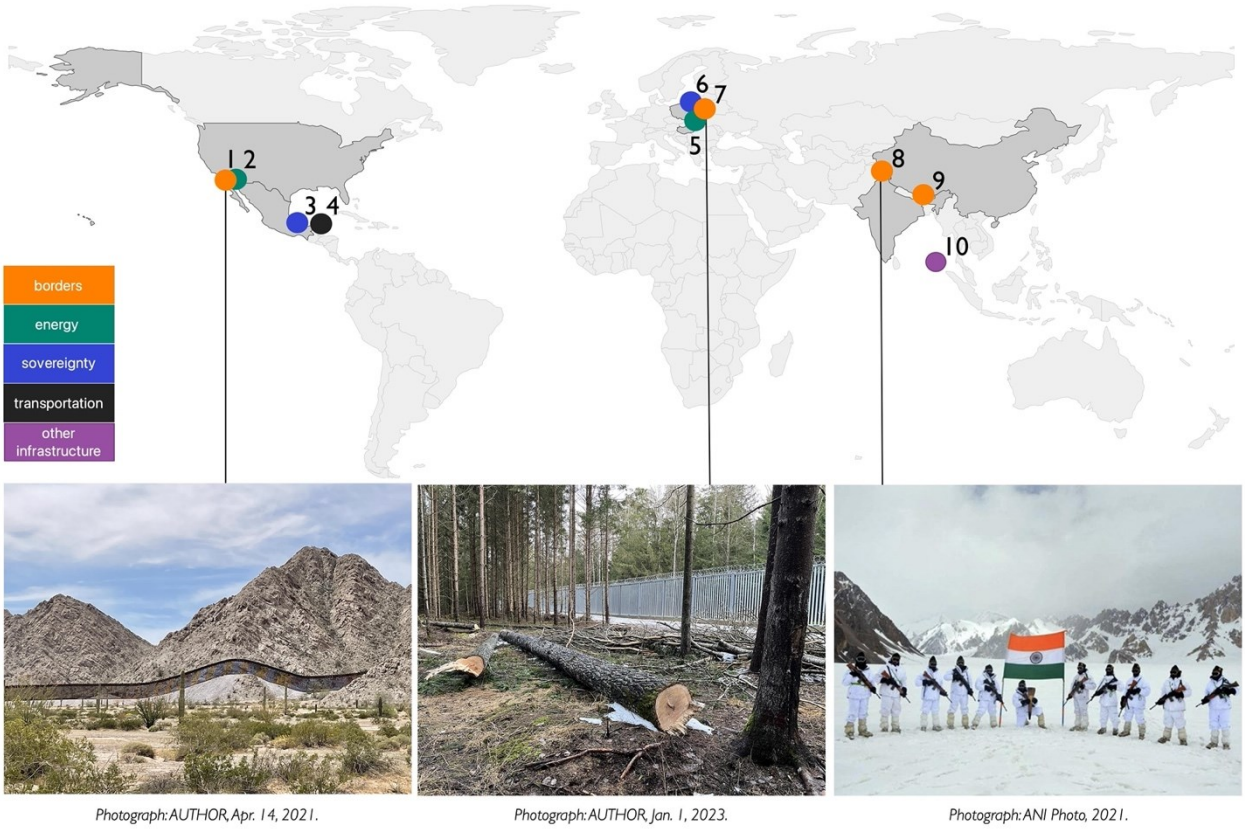

Fig. 1 Map of case studies mentioned in the text: Large infrastructure projects and militarization jeopardizing natural habitats such as the Sonoran Desert, Białowieża Forest, Siachen Glacier and Great Nicobar Island justified on the basis of national security or national interests such as border defense, energy, transportation and sovereignty. 1 = US-MX border wall with photo showing a 10m-high segment bisecting El Pinacate and Gran Desierto de Altar Biosphere Reserve, Sonora, Mexico, 2 = 5,000-ha Puerto Peñasco solar plant (MX), 3 = Dos Bocas oil refinery (MX), 4 = Tren Maya (MX); Poland and Hungary: 5 = lower fuel standards and lax logging rules (both countries), 6 = Vistula Spit Canal (PL), 7 = PL-BY border barrier (built by PL) with photo showing 5.5m-high border barrier bisecting Białowieża Forest, a transboundary UNESCO World Heritage site shared by Poland and Belarus; China and India: 8 = Military conflict on Siachen Glacier with overlapping boundary

claims by India, China and Pakistan, photo showing Indian Army soldiers, 9 = China's land borders law, 10 = “Holistic Development” megaproject on Great Nicobar Island at Andaman and Nicobar Islands.

Fig. 2 Sonoran desert tortoise (*Gopherus morafkai)* at the US-Mexico border wall, Coronado National Forest, Santa Cruz County, Arizona (September 28, 2022). Photo by AUTHOR.

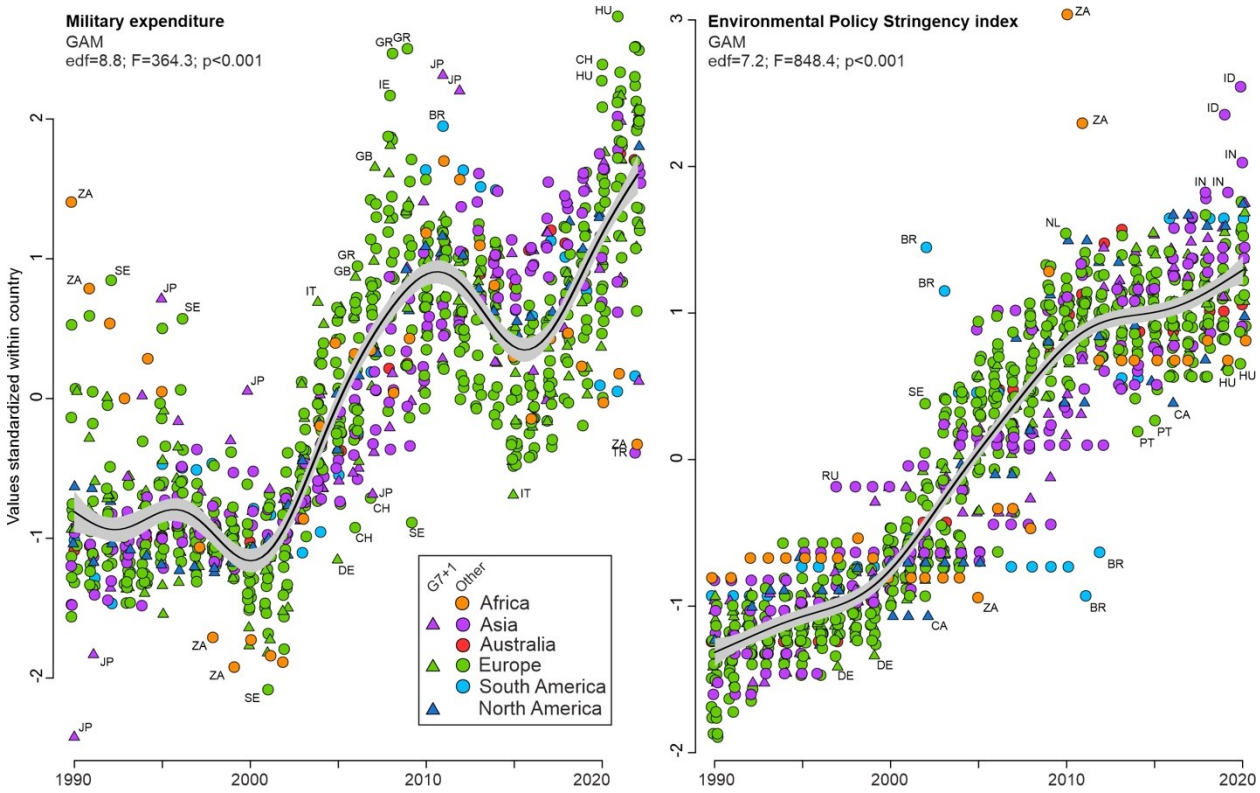

Fig. 3 Temporal trends of military expenditure and Environmental Policy Stringency (EPS) index (both standardized prior to analysis) over 1990-2022 (1990-2020 for EPS) for 33 countries. Black curves show general additive model fit accompanied by 95% confidence intervals in grey, while symbols (triangles for G7 and China and circles for others) represent original data with colors corresponding to different continents. Abbreviations of country name are shown for some outliers. GAM statistics for the year effect (edf – estimated degrees of freedom, F-statistic and P-value) are given in each subplot.