Ecological Security

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This chapter appraises the concept of Ecological Security. The treatment of environmental questions as matters of security has grown over the last half century—both in theory and practice—but has also proved contentious. Firstly, environmental "securitization" is anathema to the traditional realist view that non-military issues do not warrant such treatment and, secondly, it is resisted by most ecologists through fears that this may prompt the inappropriate militarization of such concerns. The critical or human security rationale that the millions of deaths from pollution are, in themselves, enough to merit emergency treatment has subsequently suffered by being unwelcomed by a large proportion of both the conservatives and the radicals in international environmental politics.

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Introduction

The treatment of questions of environmental change as matters of security has evolved over the last half century—both in theory and practice—but this has also proved contentious on two levels. Firstly, environmental "securitization" is anathema to the traditional realist view that non-military issues do not warrant such treatment and, secondly, it is resisted by most Ecologists through fears that this may prompt the inappropriate militarization of such concerns. Securitization, of course, need not mean militarization, but the critical or human security rationale—that the annual millions of deaths from pollution, climate change, or ozone depletion are enough to merit emergency treatment—has suffered by being unwelcomed by a large proportion of both the conservatives and the radicals in international environmental politics.

Ecological Securitization in Theory

Whilst it was post-Cold War optimism that encouraged the securitization of environmental problems, such an approach was being articulated as far back as the early 1970s in line with increased appreciation of the depletion of the Earth's resources. The Liberal arch critic of

realism, Richard Falk, in *This Endangered Planet* (1971), articulated that "We need to revamp our entire concept of 'national security' and 'economic growth' if we are to solve the problems of environmental decay."[1] In a similar vein, the Sprouts' *Toward a Politics of the Planet Earth* called on governments and academics to focus on global as opposed to national security because of the scale of threat posed by resource scarcity and overpopulation.[2] Going back further still, Osborn, in 1948, opined that resource scarcity could be a cause of war nearly half a century before this notion came to be popularized; " … one of the principal causes of the aggressive attitudes of individual nations and of much of the present discord among groups of nations is traceable to diminishing productive land and to increasing population pressures."[2] Written before the Cold War had fully set in place, this highlights just how that conflict came to dominate the security agenda in the second half of the twentieth century, stifling other concerns.

State Securitization

Towards the end of the Cold War, ecological securitization began to permeate the political mainstream and even found the ear of a superpower when a landmark article by U.S. diplomat Jessica Mathews for *Foreign Affairs* highlighted the need to give much greater political attention to newly-apparent threats posed by environmental problems. Mathews, a former member of the U.S. government's National Security Council, followed the line of reasoning of Osborn, Falk, and the Sprouts but in a more state-centered, realist analysis. In addition to calling for greater consideration to be given in foreign policy to the effects of resource depletion on the political stability of poorer states, Mathews argued that environmental problems with global ramifications, such as ozone depletion, climate change, and deforestation, should become issues of state security because they were the underlying cause of regional instability.[4] Though less heralded, four years earlier legendary U.S. diplomat George Kennan, in the same journal, similarly had argued that the world faced "two unprecedented and supreme dangers,"

which were nuclear war and "the devastating effect of modern industrialization and overpopulation on the world's natural resources."[5]

From these seeds sewn by Kennan and Mathews in the 1980s, a new strand of enquiry in international relations (IR) emerged in the post-Cold War era, positing that heightened competition for resources would increasingly be a cause of war, particularly in the developing world. Canadian academic Homer-Dixon and U.S. journalist Kaplan were at the forefront of this area of study,[6] the former stating "Environmental scarcities are already contributing to violent conflicts in many parts of the world. These conflicts are probably the early signs of an upsurge of violence in the coming decades that will be induced or aggravated by scarcity."[7] Around the same time that the Homer-Dixon / Kaplan thesis was emerging increased competition for that most precious of all resources heralded a similar and significant "water wars" literature highlighting how arid regions, such as the Middle East, could increasingly see access to water used as a weapon.[8] Many others have come to link scarcity with war and a subsequent strand of the resource war literature has emerged specifically in relation to climate change. Dupont and Pearman, for example, argue that a warming world has increased the likelihood of conflict in five key ways: resource scarcity; land being rendered uninhabitable due either to water scarcity or inundation; the effects of disasters and disease; greater refugee movements; and an increased scramble for remaining resource sources.[9] In line with this an empirical study by Columbia University, similar in style to the Homer-Dixon led research, found that countries affected by the *El Niño–Southern Oscillation* extreme weather phenomenon between 1950 and 2005 were twice as likely to experience major civil or international conflict (i.e., those with at least twenty-five fatalities) as those not. Cases in point highlighted in the study included the fact that *El Niño* struck Peru in 1982, in the same year as the Shining Path insurgency took off, and that civil wars in Sudan had flared up in parallel with

the emergence of extreme weather conditions. The study concluded starkly "when crops fail people may take up a gun simply to make a living."[10]

Human Securitization

Going beyond this "widened security" realism of securitizing environmental issues where national interests are seen to be invoked are critical and human security approaches focusing on the threats environmental change poses to people, rather than states. Among the clearest cases of how environmental change can invoke human security are the threats posed by ozone depletion, climate change, and other forms of atmospheric pollution. The human cost of ozone depletion by the accumulation of chloro-fluro-carbons in the upper atmosphere—in exacerbating the threat posed by cataracts and skin cancer—became apparent towards the close of the Cold War and was key to propelling environmental change much higher up the international political agenda than seen before (and probably since) in the form of the successful 1985 Vienna Convention regime. With climate change the implications of the artificial acceleration of the *greenhouse effect* in the Earth's atmosphere are various but include increased desertification, a raising of sea levels due to the polar ice caps melting, more extreme weather events and the spread of the range of tropical diseases all carrying significant threats to human life in various forms. The World Health Organization suggests that around 150,000 deaths a year since the early 1970s can be attributed to the gradual rise in temperatures across the world.[11] Aside from these global-scale pollution threats, more general contamination by smog, smoke, and long-range contamination of the air and water by pollutants also claim over seven million lives a year.[12]

Set against these annual millions of pollution casualties, war, and terrorism represent relatively minor threats (around 170,000 deaths per year). Since most of these deaths by pollution can be avoided by political action (as has happened in most developed states), it can be posited that an international political failing has occurred. Hence, for human security

advocates, the scale of threats to people posed by environmental change are so far removed from the way in which issues are conventionally ordered on the political agenda by states that IR theory and international political practice needs to find ways of accommodating them, or cease to be truly relevant.

Ecological Security in Practice

Designating an issue as a matter of security is, of course, not just a theoretical question but carries "real world" significance. Realism is undoubtedly most apparent in real world IR, and where the securitization of environmental issues has occurred, it has tended to be of the "widened" variety.

National Environmental Securitization

Many states have come to take a widened approach to security since the 1990s and the resource wars literature was particularly influential on the Clinton Administration in the U.S. Homer-Dixon is known to have been invited to brief Vice President Al Gore and the State Department on several occasions in the early 1990s.[13] In 1993, a new government position in the Defense Department was created with the Deputy Under Secretary for Environmental Security, and the Environmental Task Force set up as part of Washington's intelligence network. The impact of all of this was made explicit in the 1994's "National Security Strategy," the US's annual foreign policy manifesto.

> Not all security risks are military in nature. Transnational phenomena such as terrorism, narcotics trafficking, environmental degradation, rapid population growth and refugee flows also have security implications for both present and long term American policy.[14]

> Other instances of governments making the environment the stuff of high politics have since emerged in North America and North Europe, most notably in several defense and foreign policy statements from Finland, Canada, the Netherlands, and the UK.[15] In 2007, Foreign Minister Margaret Beckett used the UK's presidency of the UN Security Council to push

through, with some resistance from other members, the first discussion in that arena of on an overtly environmental topic. A major influence on this stance was the Stern Report of the previous year compiled by a British economist on behalf of the UK government, which provided an economic security rationale for prioritizing action on climate change. Stern calculated the cost of non-action on climate change as amounting to at the very least 5 percent of global GDP for evermore. Set against this, the costs of effective action to curb climate change would cost around 1 percent of global GDP per year.[16] Perhaps, though, the clearest illustration of the environment becoming the stuff of widened security comes from its embrace by the cold warriors of NATO:

> Based on a broad definition of security that recognizes the importance of political, economic, social and environmental factors, NATO is addressing security challenges emanating from the environment. This includes extreme weather conditions, depletion of natural resources, pollution and so on—factors that can ultimately lead to disasters, regional tensions and violence.[17]

As the NATO statement indicates, securitizing environmental issues in practice has tended to be in the traditional national security manner of factoring such concerns into calculations of defense needs. Many governments have politicized issues of environmental change when there is no obvious military dimension, even trumping anthropocentric interests for eco-centric reasons (such as in the restriction of polluting organochlorine pesticides like DDT) but few have "securitized" them and treated them as matters of urgent political priority. An exception is the low-lying states threatened with literal extinction under the waves of the rising oceans. Following the Security Council discussion of climate change two years earlier, the UN General Assembly in 2009 took up this theme with a resolution drafted by the government of low-lying Nauru called *Climate Change and its Possible Security Implications* (A64/350), calling on all UN agencies to prioritize climate change. While the resolution was

unanimously adopted, Nauru—and other similarly threatened island states like Tuvalu, the Maldives—are amongst the smallest of small fry in the international political system and few of the "big fish" have prioritized climate change to the point of seriously compromising their short-term economic interests.

Merits and Demerits of Ecological Securitization

Is ecological securitization to be welcomed? The question of whether environmental problems merit the politically significant label of "security" is a complex one and highly contested. In essence, there are four positions that have evolved: *traditional realists* reject the coupling together of ecology and security either or both because environmental threats are not significant enough to merit such a label and because the politics of "security" is about the military defense of the state not tackling pollution; *security wideners* consider that environmental challenges can be considered the stuff of security but only if they can be seen to cause wars or threaten the sovereignty of states; *traditional ecologists* resist securitization through concerns that this risks invoking inappropriate, militaristic "national security" responses to complex environmental problems; *human / critical security ecologists*, receptive to the ontological and epistemological challenges to the conventions of IR that emerged following the end of the Cold War, contend that environmental threats can and should be securitized by abandoning the traditional preoccupation with the state and the military and facing up to different kinds of threats.

Traditional Realists

Traditional realists in IR share much common ground with political conservatism and some of the resistance to ecological securitization is rooted in the environmental skepticism of sections of the political right most prominent today in relation to climate change fears. This skepticism, however, pre-dates climate change debates and first crystalized in the 1970s in response to the doomsday resource depletion scenarios prompted by global overpopulation concerns that

marked the rise of political ecology in the late 1960s and early 1970s. These concerns were ultimately overcome by the food supply being expanded to meet demand through the "Green Revolution" of agricultural technology transfers from North to South, fuelling the notion that environmental problems tend to be exaggerated and can be overcome by human ingenuity. Traditional realist resistance to ecological securitization, though, is not just about skepticism or denial. Ecological policy may be considered important from this perspective but just not as pressing a concern as the military defense of the state, a priority that has not changed and is maybe more important than ever in a contemporary world marked by transnational terrorism and the proliferation of weapons of mass destruction.

Security Wideners

The security widener's embrace of environmental issues has been influential as a practical method of re-ordering foreign policy priorities since the end of the Cold War but does not represent a compromise position on ecological securitization and is rejected by the other three perspectives for differing reasons. For traditionalists, widening is an unwelcome distraction from the still-important priorities of defense (though less of a distraction than the other perspectives); for ecologists and human security advocates widening exacerbates rather than addresses the general over-emphasis on military matters over environmental threats.

Despite its influence the approach of framing environmental scarcity as a military security matter has not been without its critics. The empirical evidence linking environmental degradation and political conflict is, by Homer-Dixon's own admission, not straightforward, prompting skepticism as to whether other variables are the real causes of conflicts in situations where environmental scarcity can be demonstrated. The assumption that changes in the balance between resources and people creates political problems is considered unfounded by "resource war skeptics." Critics have reasoned that it is easy to link droughts in Sudan to the Darfur conflict but such events are unfortunate facts of life in the Sahel and the responsibility for the

bloodshed lay squarely with the Janjaweed insurgents and the Sudanese government that failed to stop them.[18] Equally, as well as finding correlations, history can also provide plenty of evidence of environmental disasters and extreme weather conditions *not* prompting conflict. The devastating dustbowls that struck the US Great Plains in the 1930s did not trigger conflict.[19] Australia has been as much affected by *El Niño* as Sudan or Peru but has not been struck by civil war for obvious economic and political reasons. The cited cases could suggest a correlation between conflict and underdevelopment and a lack of democracy more than with environmental scarcity.

As well as the evidence of transboundary environmental problems or greater resource scarcity prompting war being questionable it can even be suggested that the reverse can be true, and the environment can be "used" in the context of peace building. Among the olive branches presented to the West in the 1980s by Gorbachev were proposals for environmental cooperation in the Arctic (which subsequently happened) and on tackling long-range atmospheric pollution. In a more concrete example of peace-building in 1998, the Peru-Ecuador Cordillera de Condor "Peace Park" was consciously established by both governments to dampen the long running border dispute between the Andean neighbors by consigning a contested mountainous region as a zone of conservation.

Traditional Ecologists

The rise of widened security—and particularly the resource wars thesis—means that ecological securitization for many still invokes a perception of militarization which jars with the pacifistic instincts of most ecologists. National securitization may be welcomed in terms of getting governments on board and giving environmental issues the spotlight they often deserve but old habits die hard and evidence suggests that this does tend to lead to the issues being framed in militaristic terms. The discourse of environmental change in venues of intergovernmental "high politics" invariably becomes reduced down to the resource wars thesis or the apparent threat

posed by a rise in environmental migration. Environmental degradation is deemed important because it *might* be a cause of war and instability rather than because it *is* a threat to life in itself. The UK / UN delegation pushing for the Security Council debate in 2007 cited the following security implications of climate change: border disputes due to the melting of ice sheets and rising sea levels; increased migration with the "the potential for instability and conflict"; conflict over energy supplies; conflict due to scarcity; conflict due to poverty; and conflicts related to extreme weather events (UNSC 2007). Hence the UK advocacy of action on climate change at the UN Security Council in 2007 was, in fact, as realist as the Chinese and South African delegations who led the resistance to this. The British had been won over by the resource war thesis of Homer-Dixon and others to believe that mitigating global warming was a route to peace and also calculated that it made economic sense given the conclusions of the Stern Report they had convened. Compassion for the fate of peoples most affected in arid, low lying, or polar regions doubtless played a part in the thinking of the Labour government but a clear self-interest was apparent and British permanent membership of the Security Council provided a good opportunity to attempt a "tactical securitization" of the issue. The Chinese and South Africans, in disputing this securitization move, were not rejecting the notion that climate change was an important concern but calculating that it was not in their national interests to debate this in the Security Council. The playing of the national security card over climate change by some countries is instinctively treated with suspicion by others because of what national security is understood to stand for in the discourse of IR all have been engaged in over the past century. It invokes a militarization of politics with an aggressive interference in the affairs of others or a defensive retreat behind strengthened armed borders, neither of which are relevant for the multi-dimensional threats posed by climate change. The misgivings of the Chinese and South Africans over debating climate change in the Security Council doubtless have something to do with their determination not to have to compromise

their economic development but there is some merit in the argument that it is an issue better tackled elsewhere. In theory, it is appropriate that climate change be debated at the high table of global high politics but the problem with this in practice is that the UN Security Council has always been an arena of great power *realpolitik*. It is the arena where Soviet and US Cold War adventurism was ignored and, in the present age, where violations of international law by countries like Israel and Syria are still ignored because of their continued sponsorship by Washington and Moscow.

Human and Critical Security Ecologists

Human and critical security advocates share the ecologist's misgivings about widened security but, nevertheless, support ecological securitization because, for them, the concept is for more profound than the resource war thesis. While it has been criticized for its vagueness and has—in practice—been endorsed in different strengths (such as the "freedom from fear" interpretation favored by the Canadian government over recent years which tends not to consider non-violent "natural" threats as security matters), human security does have a clear referent object: the human. Given the transboundary and global nature of environmental problems the human is a more clear-cut reference point for security than the state in this issue area. Human security, though, is still somewhat problematic from an ecological perspective since this is, by definition, an anthropocentric rather than eco-centric way of framing problems. However so long as human security is understood in the context of us being part of a global biosphere, the safeguarding of which enhances both human and non-human interests, this need not be a problem. Thinking in such ecological terms means that social and economic transformations are not treated as distinct from atmospheric or biological developments in terms of their consequences. Human security can then be incorporated into the logic of ecological security. Appreciating that human phenomena like urbanization or increasing consumption have effects in the natural world with implications for human security can heighten awareness of them

and so improve the management of the resultant threats. Security threats can be more subtle than the rapid emergence of a hole in the ozone layer and the solutions more complex than switching from the use of CFC to replacement chemicals (as prompted by the Vienna Convention regime). Security politics can, in fact, be about the pro-active management of potential threats rather than the sudden, dramatic and reactive strategies that most assume of policy labeled in this way. A better appreciation of this complexity could help alleviate these difficulties before they become imminent crises, as the evolution of domestic environmental policy in most developed countries has come to acknowledge. The traditional practices of IR, though, are much better suited to responding to crises rather than tackling long-term, underlying causes of these sources of insecurity. Re-orientating these practices to the "longer game" of addressing vulnerability and insecurity is actually an aim common to both ecologists and human security advocates.

Conclusions

The consideration of environmental issues as matters of security has gathered momentum academically and politically but remains highly contested. This is not only a consequence of environmental issues being given different levels of priority by different ideological perspectives but also a question of appropriateness. Those resisting securitization are not only the environmental skeptics but also ecologists alarmed at the apparent coupling of the issue area with the politics of national interest and militarism.

Where the military assumption can be overcome the national securitization of the environment can still lead to inappropriate solutions. Technological quick fixes, reactive responses after a crisis and headline grabbing stunts are often more politically attractive than the slow, unspectacular politics of tackling underlying causes of vulnerability. Low key, gradual solutions, however, are usually what are needed to address insecurities arising from environmental change. It was the careful, prolonged work of transnational scientists and civil society actors rather than grand government gestures that achieved the international political

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successes seen in combating ozone depletion, based on the Montreal Protocol of the 1985 Vienna Convention, which has averted millions of cases of skin cancers and cataracts. Put in these terms, this is environmental policy clearly in the cause of human security but putting limits on industrial emissions is not what most people think of as the politics of security. Enquiry in IR (and particularly security studies) often, rightly, stands accused of being so preoccupied with semantics, ontology, and epistemology that matter of life and death are not addressed as fully as they deserve to be. However, determining how best to address environmental change does necessitate such reflection on what "security" means and how it can be optimized. Leaving aside the ever-dwindling gaggle of (chiefly non-academic) "environmental skeptics," a lack of consensus on the precise meaning of "ecological security" is hampering political efforts to tackle some of the most urgent threats facing the world today.

Notes

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