paper prepared for presentation in Section 31 of the Pan-European Conference on International Relations, The Hague, 9-11 September 2004

ENVIRONMENTAL SECURITY IN PRACTICE: TRANSBOUNDARY NATURAL RESOURCES MANAGEMENT IN SOUTHERN AFRICA

Larry A. Swatuk, PhD
Associate Professor, Okavango Research Centre
University of Botswana, Private Bag 0022 Gaborone, Botswana
email: swatukla@mopipi.ub.bw
tel: +267 71305145

Abstract

This paper presents a review of the literature of environmental security, particularly that written by scholars working in the United States and Europe. While not a critique as such, the paper does highlight the various differences between the different theoretical schools of thought. The author characterises these competing schools as 'environmental security studies' and 'critical environmental security studies'. The paper also presents a brief case study of the various ways in which environmental security is understood and practised in a specific geographical location – in this case, Southern Africa. As shown below, abiding theoretical differences are manifest in the practice of environmental security. As with security studies, the paper argues, the discourse and practice of environmental security is dominated by the most powerful (state and non-state) actors in the global system. The result, therefore, is environmental security for some, but abiding environmental insecurity for the many.

1 Introduction

The study of environmental security revolves around a central idea that environmental problems – in particular, resource scarcity and environmental degradation – may lead to violent conflict between and among states and societies. Although these ideas are not new, they have gained momentum since environmental issues emerged on the international political agenda in the early 1970s (Gleditsch, 1998: 382). And while scholars such as Deudney (1990) lament the interlinking of environmental problems with security studies, for Dalby, since matters such as ozone depletion, pollution, and 'many situations with a vaguely environmental designation' are now 'part of international political discourse and policy initiatives, environment cannot be separated from matters of what is now called "global" security' (Dalby, 2002a: 95).

Proponents of environmental security argue that if environmental change is a potential source of social conflict, and if societies face dangers from environmental change, then security policies – indeed, the very concept itself – must be redefined to account for these threats (Conca and Dabelko, 1998). While new thinking about security had been ongoing throughout the 1980s (Ullman, 1983; World Commission on Environment and Development, 1987; Mathews, 1989), the end of the Cold War provided real intellectual

space for considering how the environment might be accounted for in various approaches to security (Dalby, 2002b).

Thus, the 1990s saw two interrelated discussions: one involving the redefinition of security (Booth, 1991; Buzan, 1991; Walt, 1991; Lipschutz, 1995; Krause and Williams, 1997; Baldwin, 1997; Buzan, Wæver and de Wilde, 1998); the other involving questions about how environmental change threatens (individual, state, global) security (Myers, 1989 & 1993; Renner, 1989; Deudney and Matthew, 1999; Ohlsson, 1999). As this chapter will show, there is little consensus on either of these issues. Yet, because these debates are ongoing at policy level, the practical application of various ideas regarding environmental security by a wide array of actors embodies all of the contradictions and controversies extant in the debates. This will be demonstrated in our case study below.

This chapter proceeds as follows. In the next section I outline the traditional, Realist, approach to 'security'. Following that I provide a number of critiques of this approach: institutionalist, neo-realist, structuralist, and poststructural/postmodernist. I argue that the first three work within a problem-solving framework in an effort to 'rethink' security, whereas the last presents a 'critical' challenge to both the analysis and practice of security. I then turn to an extended discussion of the environment and security. I frame this section in terms of scholars working within the ambit of the dominant paradigm – what I call *environmental security studies* – and those who challenge this approach – *critical environmental security studies*. Lastly, I show how the analysis and practice of 'environmental security', contested though it is, manifests in the area of transboundary natural resources management (TBNRM) in Southern Africa.

2 Security

The traditional approach to security studies, known as Realism, focuses on the causes of war and the conditions of peace between and among states. Given the systemic condition of anarchy, wherein sovereign states pursue policies of self-help, states by their very existence threaten each other. 'Security', then, may be defined as the protection of a state (and, by logical extension, its citizens) from the threat of other self-regarding states acting in their own interests. This protection is facilitated by military preparedness. Diplomacy is considered the practice of 'war by other means'. In this rendering, the 'state' is both means and end (or 'referent object') of 'security'. State security is achieved through the exercise of 'power', itself also both means and ends, to wit: a powerful state is made secure by the exercise of power. Power involves multiple factors, including centrally the threat and use of military force.

Since the acquisition and projection of power is the main currency of the inter-state system, self-regarding states usually find themselves caught up in global and regional security dilemmas. The end result may be an overall decrease in regional or global security, depending on the nature of the arms produced. For Realists, stability of the inter-state system depends on achieving a 'balance of power'.

3 Rethinking Security

To many, great power 'security' threatens the lives of everybody. Critiques of the Realist approach to security proliferated during the 1970s and 80s. There are many different ways to categorise these challenges to Realist analysis. One is to group them according to general theoretical position. ***Liberal institutionalists***, for example, work within the accepted framework of inter-state relations but challenge the logic of states pursuing unilateral security policies (Ruggie, 1998; Hurrell, 1995). Liberal institutionalists argue in support of both a broadened understanding of 'security' (defined in military, economic and ecological terms) and a multilateral framework for addressing multidimensional challenges to global security (Commission on Global Governance, 1995).

Neo-realists, working within the ambit of 'national security', have modified their position in acknowledgement of the multidimensional nature of threats to the state. For example, while retaining his focus on the state as the primary referent object and provider of security, Buzan argues that rethinking security 'reflects the relentless pressure of interdependence on the older ways of thinking of both Realists and Idealists' (1991: 12). Alongside conventional military threats, Ullman (1983), for example, includes the inability to meet basic needs, environmental deterioration and natural disasters. So while security means freedom from these threats, the framework for analysis remains state-centric.

Structuralist analyses may or may not work within a statist ontology. For example, dependency and world systems theorists generally retain a statist language while focusing attention on broad, structural processes like global capitalism. So, states may be divided into core, semi-peripheral and peripheral (Wallerstein, 1974). In the context of late-20th century and early-21st Century globalization, whole regions are seen to merit core, intermediate, or peripheral zone status (Hettne, 1997). In terms of security,

> Regions in the core zone, North America, Europe and East Asia centred on Japan, are thus economically more advanced and normally growing, and they have stable – if not always democratic – regimes which manage to avoid interstate as well as intra-state conflicts …Regions in the intermediate zone … are under 'core guidance' … Regions in the peripheral zone, in contrast, are politically turbulent and economically stagnant. War, domestic unrest, and underdevelopment constitute a vicious circle which make them sink to the bottom of the system, creating a zone of war and starvation (Hettne, 2001:95, 96).

Thus, for many structuralists, insecurity is a consequence of a state's or region's history of incorporation into the global capitalist system.

Focusing attention on other structural processes and conditions – e.g. race, class, and gender – helps reveal a panoply of threats and insecurities individuals and groups suffer despite (or possibly because of) the existence of a 'strong', militarily-secure state (Tickner, 1995). Herein lies a more serious challenge to traditional renderings of security: the challenge is not merely to redefine the content of security (from military to military-

plus), but to reconsider the very subject itself. If traditional approaches to security ignore or exacerbate those global socio-political-economic inequalities that constitute the basis for most forms of insecurity, whose interest does the traditional approach serve? When combined with the spectre of nuclear Armageddon, the answer would seem to be 'no one'. Yet, Steven Walt, reflecting upon the 1980s 'renaissance' in security studies, admonishes those who would ask such difficult questions:

> Security studies seeks cumulative knowledge about the role of military force. To obtain it, the field must follow the standard canons of scientific research: careful and consistent use of terms, unbiased measurement of criticial concepts, and public documentation of theoretical and empirical claims (Walt, 1991: 222).

But is security studies the dispassionate search for objective truth? ***Post-structuralist*** and ***post-modernist*** perspectives suggest that it is nothing of the sort. To the contrary, they suggest that, as a discourse, it acts as the handmaiden of the powerful (Walker, 1997: 62). Traditional security studies have long been tied to the strategic interests of the world's most powerful states. So, answers given to questions regarding the security of (powerful) states lead directly to policies that serve the few and imperil the many. The post-modern/structural critique constitutes a broad but barely unified church, including, inter alia, feminism, environmental politics, political ecology, development studies and critical strands of IPE. In Waever's terms (1997), they are part of IR's 'fourth debate'. Most of these challengers may be thought of as constitutive of a nascent, open-ended 'critical theoretical' enterprise (George, 1994). Critical theory is to be contrasted with 'problem-solving theory' which, in Cox's terms, takes 'prevailing social and power relationships and the institutions into which they are organised … as the given framework for action' (Cox, 1986: 206). For several key reasons, the environment stands at the epicentre of this fourth debate.

Environmental degradation, resource depletion, species loss – for critical theorists these conditions are emblematic of the crisis of contemporary society. Along with weapons of mass destruction and the Holocaust (George, 1994; Baumann, 1989), they are logical consequences of modernity whose overriding idea – progress – has for several hundred years been dependent upon a belief in the rightness of 'harnessing' nature, of rendering useful to 'rational man' all that is 'natural'. Given that the modern age arose out of a white, Western European Enlightenment, too often and for too long, this contructed category has included not just the physical environment, but animals, women, inferior European men, and all people of colour (Pettman, 1996).

There are two points of importance for the topic at hand. First, the national security state remains the primary institutional structure of the modern era. 'Security studies' as the handmaiden of the most powerful of these states is founded on key binaries: the possibilities of the political (inside the state where order is possible); the location of threats (outside the state where anarchy reigns); the means of discerning threats and proper responses (through the identification of objective facts by a rational 'knower'); the construction of a theory of security through practice so that one eventually arrives at an accurate representation of truth (i.e. knowledge claims independent of subjectivity); the

masculine exercise of 'power over' the 'irrational other' as proper form of response (in defense of the weak and feminine, but also, given the condition of anarchy, any other response would itself be weak and feminine).

For critical theorists, the practice of this form of 'social science' produces simultaneously, wealth for the few, poverty for the many; creative invention and possibly irreversible environmental destruction; increased leisure and choice for some, increased toil and a lack of options for most. Any 'celebration of the age of rational science and modern technological society', therefore, 'cannot simply be disconnected from' its myriad, historically-specific negative consequences. They are, in fact, integrally related (George, 1994: 141; Peterson, 2003: 22-29). In terms of 'the environment', the very forms and practices giving rise to its degradation cannot, therefore, be its salvation. As will be seen below, 'the state is not only unnecessary from a Green point of view, it is positively undesirable' (Paterson, 1995: 238).

The second, and related point is that for critical theorists, these outcomes are not the accidental result of policies based on poorly understood science. Rather, they are the direct outcome of a form of knowledge production dependent upon a positivist/empiricist methodology, a discipline whose ontological frameworks regarding both 'human nature' and social organisation asks the wrong questions, or frames the right questions the wrong way, and whose epistemological claims 'to know' 'obstruct a relational, multi-dimensional understanding of the social' (Peterson, 2003: 39).

While constructivist methodologies take us some way toward a more nuanced understanding of the ways in which human language, thought and action create social reality – so, in my view, effectively contesting positivist claims of passive subjects studying objective reality – it is the poststructural, postmodernist perspective which lends most insight into this process.

In the face of dramatic change – e.g. global warming, deforestation, the collapse of fisheries, the collapse of the Soviet empire – we desire explanations that will ensure stability or bring order. In other words, we seek to contain the 'threat'. But explanations regarding causality diverge markedly: for Realists, 'nature' remains somehow 'out there', as does a collapsed Soviet Union – an untamed other beyond the purview of ordered civilisation within a (democratic) state. Security requires containment. For a majority of critical theorists, however, these events and conditions are linked. They are emblematic of the multidimensionality of and multiple paradoxes within the late-modern era, wherein the state system, industrial capitalism, technological innovation (particularly its military dimension), individual liberty manifesting as consumerism, and the tyranny of bureaucracy are equally complicit (Hall, Held and McGrew, 1992). 'Stability' in this case requires a fundamental re-ordering of late-modern society. To quote Peterson (2003: 43):

> In our pursuit of meaning and sociality, we necessarily impose order, and systematically so. The point [of interpretive scholarship] is more to render *visible* – to politicise – the effects, the specific trade-offs imposed by particular stabilizations, conceptual orders, and what becomes "common sense"; in other

> words, to expose the power that operates through how we identify and think as well as how we act in empirically observable practices. Insofar as we deem the trade-offs less desirable than those imposed by other possible orderings, we are not without agency in shaping change.

This is an on-going academic debate whose impact on people, places and things is, as we will see below, very real. Having mapped the terrain of and debates within security studies, let us now turn to environmental security.

4 Environment and Security

Positing negative outcomes of environmental decay for humanity and/or the planet, particularly from an over-consumption perspective, has a proud lineage stretching back 75 years or more (Mumford, 1934; Leopold, 1948). It has been particularly strong since the 1960s, however, with the seminal text being provided by the Sprouts (1965). As with realism, a variety of historical examples – e.g. the 'lessons of Easter Island' – provide a foundational narrative of sorts. Since the end of the Cold War, however, the security focus has been dominated by state-centric approaches interrogating the implications of environmental degradation *in the global South* for security of states *in the global North*, an argument described by critics as 'Malthusian' or 'neo-Malthusian' (Dalby, 2002a).

The end of the Cold War meant that, for a time, Western state-makers were at a loss regarding a revised role for their militaries. If the West had arrived at 'the end of history', as hypothesised by Fukuyama (1992), from where would future threats emanate? Given twenty years of high profile summitry regarding the human impact on the global environment, state-makers logically looked to the 'threat potential' of the environment.

Throughout the 1990s several extensive research programmes were undertaken regarding the hypothesised link between environmental degradation, resource scarcity and violent conflict, commonly called 'environmental security'. There have been a number of attempts to review and synthesise this vast literature (Gleditsch, 1998; Barnett, 2001), with the annual report of the Woodrow Wilson Center's Environmental Change and Security Project (ECSP) acting as a valuable 'rough guide' to the field (see http://wwics.si.edu). Matthew (2002) reviews the research in terms of studies explicitly concerned with the state and environmentally-induced acute conflict probability and those that are more holistic, historical and criticial in their approaches.

In essence, the first group are engaged in an intra-paradigm debate regarding problem-solving theory. They are primarily concerned with methodology, data collection, appropriate scope and definitions in the hope that their research programmes will lead both to the accumulation of knowledge (Homer-Dixon, 2003: 90) and policy relevance.

The second group, in contrast, are centrally concerned with critical theory, though they come at it in a wide variety of ways. While no less concerned with scope and method, they are equally concerned with engaging those working within the problem-solving camp regarding ontological and epistemological questions. Their central concern is that

problem-solving theory begins, rather like traditional security studies, from a false premise, that is, global society is primarily a world of self-regarding states, some of which have more (political, military, technological) power and are more economically developed than are others. A state's place in the system is largely the result of its own efforts, and political order – indeed, 'political life' – is only possible within the boundaries of the sovereign state (Walker, 1997: 62).

Many scholars, mostly of the neo-institutionalist or political ecology variety, fall somewhere in between the two – at once holding post-structuralist positions regarding, for example, an ontology centred on individuals or ecosystems, and making policy advice for states and global institutions.

In the next section, I detail the findings of these two different groups. Following Krause and Williams (1997), I label these 'environmental security studies' and 'critical environmental security studies'.

5 Environmental Security Studies

Gleditsch (1998) summarised historical concerns with the link between environmental degradation, resource scarcity and violence in terms of fights over territory, raw materials, continental shelves and islands, energy and food. In traditional Realist analysis, state power depends fundamentally on the natural resources contained within its territorially delimited space (Morgenthau, 1978). National power also depends on the ability to access key resources not contained within the state. In the late-modern, industrial era, national power also depends on the ability of a state to transform these renewable and non-renewable resources into tradable consumables. Natural resources may be enhanced, depleted or transformed over time. According to Klare (2002), competition and control over critical natural resources will be the guiding principle behind the use of military force in the 21st Century. The popular press throughout the world continues to play on these fears. The physical location of these events in the global South and its link to warfare and general human misery in the popular imagination has been facilitated by magazine and newspaper reporting focusing on the more bizarre and fantastical aspects of West African conflicts, with Robert Kaplan's 1994 article 'The Coming Anarchy' for the *Atlantic Monthly* being influential in policy circles (see Ellis, 1999, for a trenchant critique).

5.1 Renewable Resource Degradation and Violent Conflict

The Homer-Dixon-directed projects on 'Population, Environment and Security' and on 'Environmental Change and Security' are undoubtedly the most well-known in North America of these systematic programmes of research (Homer-Dixon, 1991; 1994; 1999; Homer-Dixon and Blitt, 1998). Research focused on the causal link between violent conflict and the depletion of renewable resources, in particular agricultural land, water, forests, and fisheries, arguing that the social effects of large scale environmental changes such as global warming and ozone depletion 'will not be seen until well into the [21st] century' (in Conca and Dabelko, 1998: 289). 'Researchers sought to answer two questions. First, does environmental scarcity contribute to violence in developing countries? Second, if it does, how does it contribute?' (Homer-Dixon, 1998: 279).

Three hypotheses were used to link conflict with environmental change:

- Decreasing supplies of physically-controllable resources (e.g. water and agricultural land) would provoke 'simple-scarcity' conflicts;
- 'group identity' conflicts would result from large population movements caused by environmental stress;
- Severe environmental scarcity would simultaneously increase economic deprivation and disrupt key social institutions (most importantly, the state) and cause 'deprivation' conflicts.

Key to their analysis is the definition of scarcity. Scarcity, can come about in one of three ways: (i) as a result of increased demand (demand-induced), for example through population growth or increased per capita consumption; (ii) as a result of decreased supply (supply-induced), for example the erosion of cropland ; and/or (iii) as a result of unequal access to and distribution of a resource (structural) 'that concentrates it in the hands of relatively few people while the remaining population suffers from serious shortages' (Homer-Dixon, 1998: 280). These push and pull factors are said to often coexist and interact (Homer-Dixon and Blitt, 1998: 6). In the event of scarcity, two processes are set under way: resource capture by those with the means to do so, economic marginalization of those without.

Resource capture is said to occur 'when demand- and supply-induced scarcities interact to produce structural scarcity'. Homer-Dixon and Blitt (1998: 6) describe resource capture as follows: 'Powerful groups within society, anticipating future shortages due to increased population growth and a decrease in the quantity and quality of the resource, shift resource distribution in their favour, which subjects the remaining population to scarcity'. Ecological marginalisation is said to occur 'when demand-induced and structural scarcities interact to produce supply-induced scarcity: lack of access to resources caused by unequal distribution forces growing populations to migrate from regions where resources are scarce to regions that are ecologically fragile and extremely vulnerable to degradation' (Homer-Dixon and Blitt, 1998: 6).

So, what is important is not merely the absolute supply of a resource. 'What we should investigate, rather, is the resource's supply *relative to*, first, demand on the resource, and, second, the social distribution of the resource' (Schwarz, Deligiannis and Homer-Dixon, 2000: 79).

A key finding of this project is that 'environmental scarcity does not inevitably or deterministically lead to social disruption and violent conflict'. Nevertheless, their research suggests certain states are prone to environmentally-induced conflict. 'The character of the state is particularly important: a representative state will receive [demands from civil society] and react quite differently to a non-representative state such as apartheid South Africa' (Homer-Dixon, 1998: 281). Moreover, economically poor states lacking both financial and human capital, and being ethnically diverse seem less able to adapt to severe environmental challenges. They are said to lack adaptive capacity

(Homer-Dixon and Blitt, 1998: 9). A cursory look at their case studies gives some idea as to the sorts of states Homer-Dixon and his colleagues consider short on adaptive capacity: Mexico, the Philippines, South Africa, Pakistan, Rwanda.

Societies failing to adapt demonstrate one or more of the following five negative social effects: constrained agricultural production; constrained economic productivity; migration; social segmentation; and disruption of legitimate institutions. These negative social effects 'can, either singly or in combination, produce or exacerbate conflict among groups. They do so by simultaneously increasing the grievances of the affected populations and changing the structure of political opportunities so that it is more rational to act violently upon those grievances' (Homer-Dixon and Blitt, 1998: 10).

Even so, the causal pathway from environmental degradation to social violence is neither direct nor unilinear. On the one hand, 'environmental scarcity … increases society's demands on the state while decreasing its ability to meet those demands' (Homer-Dixon, 1998: 281). But, on the other hand, 'environmental scarcity produces its effects within extremely complex ecological-political systems' (Homer-Dixon, 1999: 178). Therefore, a second key finding is that 'environmental scarcity is not sufficient, by itself, to cause violence; when it does contribute to violence, research shows, it always interacts with other political, economic, and social factors. Environmental scarcity's causal role can never be separated from these contextual factors, which are often unique to the society in question' (Homer-Dixon, 1999: 178).

5.2 'Maldevelopment' as Contextual Factor

While coming to most of the same broad conclusions as the Toronto group, the international research team under the direction of Günther Baechler began from a slightly different set of assumptions. Of most importance is the perceived links between ***maldevelopment***, environmental transformation and conflict. While increasing population pressure on renewable resources remains important, population increase is but one of a number of consequences of maldevelopment in developing and transitional societies: '*Development and security dilemmas* are connected to a syndrome of problems which produces environmental conflicts of varying intensity and nature' (1998: 24). Maldevelopment, in Baechler's terms, is most often the result of the ways in which developing and transitional societies have experienced modernisation, the outcome typically being a weak state form imposed on a multi-ethnic society, but dominated by one ethnic group dependant on one or a few primary commodities for revenue. This, they argue, is the most likely setting in which conflict will occur.

In contrast to Homer-Dixon, Baechler suggests a somewhat longer causal chain, one that begins from the conditions that gave rise to environmental degradation. The important finding here is that states in both the North and South help constitute instability in the South. With regards to war-torn Sierra Leone, Richards (1996: xvii) states, ''we' and 'they' have made this bungled world of Atlantic-edge rain-forest-cloaked violence together'. Maldevelopment is a consequence of historical processes and contemporary global links (also, Duffield, 2001).

Forty case studies were carried out wherein 'transformation of society-nature relationships was perceived as *serious* in terms of both degradation of renewables and discrimination against actors highly dependent on their shrinking natural capital'. Eighteen cases crossed the threshold of violence, with eight leading to war (Baechler, 1998: 32).

Baechler draws the following conclusions. First, 'while environmental discrimination plays different roles in the causation of a conflict, its intensity does not depend on the degree of the physical and chemical degradation of the landscape' (Baechler, 1998: 37). Rather, 'it is the political context that matters'. Second, 'there is no automatic spiral towards violence'. Indeed, 'environmental conflicts become a catalyst for cooperation if political compromises are seen as desirable and technical solutions are feasible' (Baechler, 1998: 37, 38). Third, there seems to be 'little empirical support for the first hypothesis that environmental scarcity causes violent conflicts or wars between states'. But, fourth, at the same time 'there is substantial evidence to support the second hypothesis that environmental scarcity causes large population movements, which in turn cause conflicts'(Baechler, 1998: 38). Migration-triggered conflicts vary depending on location and impacted groups (highland vs. lowland producers; rural vs. urban dwellers). These conflicts do not always manifest as inter-group identity conflicts; they may, in fact, involve 'one and the same ethnic group that may be divided by geographical or national boundaries' (Baechler, 1998: 38). This finding differs somewhat from Homer-Dixon's more general claim that migration triggers inter-group identity conflicts.

Fifth, while Baechler acknowledges that there does seem to be some empirical support for the claim that environmental scarcity simultaneously increases economic deprivation and disrupts key social institutions (these are Homer-Dixon's terms), this is no guarantee that the problem will result in violent conflict.

Whereas Homer-Dixon relies heavily on the rather vague hope of 'ingenuity' as a way forward for societies suffering environmental degradation and resource depletion, Baechler's study, in my opinion, more readily leads toward practical policy choices linking environment to sustainable development, and by extension, Northern practices of production and consumption to Southern experiences of conflict and environmental transformation. They do this by identifying modernisation, particularly its 'global socioecological side', as a primary causal factor in the occurrence of violent conflict in developing and transitional societies (Baechler, 1999: 227). This suggests, importantly, that solutions to environmental conflict are not dependent solely on the ingenuity available to particular societies suffering protracted conflict, but on the willingness of Northern states, individuals, corporations and non-governmental organisations to acknowledge the very real role they play in fomenting conflict in the South (Callaghy, Kassimir and Latham, 2001). Two relatively obvious pathways to peace present themselves: debt forgiveness and stemming the flow of Northern arms sales to Southern recipients: so, political economic policies in the North can directly alleviate 'environmental stress' and human insecurity in the South (Swatuk, 2004).

While remaining primarily state- and region-based in analysis, the Baechler-led study points toward interconnections. Ingenuity may be important, but Baechler's world does not neatly divide into societies that have it in abundance and those that do not; neither does this study 'blame the victim' for the concentration of 'diffuse and persistent' violence in the South, as suggested so clearly by Kaplan's 'coming anarchy'.

5.3 Governance and Violent Conflict

Aspects of environmental security research also touched on democratic peace theory (Midlarsky, 1998) and the analysis of state failure (Esty *et al*., 1999), sometimes yielding surprising results. Midlarsky (1998: 358), for example, concludes that 'instead of positive relationships between the extent of democracy and environmental protection, as much popular and recent scholarly writing have suggested, the associations found here are principally negative or non-existent'. The CIA-established 'State Failure Task Force', rather unsurprisingly, argued that 'partial democracies' are the most vulnerable to state failure (e.g. revolutionary or ethnic warfare, adverse or disruptive regime transition, genocide or politicide) and that, based on available evidence, the environment plays no direct role in here (Esty *et al,* 1999).

A mid-1990s pilot study from NATO made two important contributions to the analysis of 'environmental stress' – defined as a combination of resource scarcity and resource degradation – and violent conflict: (i) aggregate data combined with the 'syndrome approach'[1] added space and time dimensions to studies that had hitherto been overwhelmingly ahistorical and focused on Third World states; and (ii) analyses also hypothesised about the potential for inter-state cooperation to result from environmental stress (Lietzmann and Vest, 1999).

Despite these advances, it has proved difficult for Northern scholars to move away from both neo-Malthusian assumptions and a South-focused geography of conflict – even where evidence points in a different direction. For example, Tir and Diehl (1998), in their analysis of population patterns and conflict propensities among all states over 1930-1989, show, among other things, that: (i) population growth rate varies inversely with escalation to war; (ii) 'population density has no independent effect on the propensity for conflict involvement'; (iii) 'there is little evidence that high population growth states are more likely to initiate militarised conflict'; and (iv) while there is a weak positive correlation between population growth and conflict involvement, it is really only in combination with military capability that makes it significant. 'States with multiple borders and high military spending are more conflict-prone' (Tir and Diehl, 1998: 332-36). Yet, in their conclusion the authors feel compelled to say, 'Generally, we have found population growth pressure to have a significant impact on the likelihood of a state becoming involved in military conflict' (Tir and Diehl, 1998: 336; dataset at http://wsi.cso.uiuc.edu/polisci/faculty/diehl.html).

5.4 From 'faith' in 'ingenuity' to deliberate peace building

[1] Sixteen different 'syndromes' were identified and grouped into three categories: utilization syndromes (e.g. 'sahel syndrome', 'overexploitation syndrome'); development syndromes (e.g. 'aral sea syndrome', 'urban sprawl syndrome'); and sink syndromes (e.g. 'smokestack syndrome').

A clear trend across these studies is the distance they have travelled away from a fascination with conflict potential toward deliberately pursuing peace building opportunities through cooperation on environmental issues. For Lietzmann and Vest (1999: 40), 'violence is by no means the automatic outcome of conflict. Countless issues of conflict, particularly at the local or regional level are resolved cooperatively; only a limited number of conflicts reach a higher conflict intensity'. Environmental stress plays different roles along the 'conflict dynamic': as a structural source; a catalyst; or a trigger (Lietzmann and Vest, 1999: 41). To ensure that environmental stress does not reach levels at which violent conflict becomes likely, 'the development of early warning indicator systems, data bases and decision support systems are feasible and warranted'. The Executive Summary Report suggests a number of ways in which institutions (at local, national, regional, global levels) can be strengthened, adherence to agreements can be facilitated, and that 'existing prevention and dialogue mechanisms can be used to address the security impact of environmental issues, capitalise on the catalytic function of environmental cooperation for confidence building, and enhance dialogue and cooperation among themselves' (Lietzmann and Vest, 1999: 46, 47, 48).

Environmental 'peacemaking' is a very new trend in the environmental security studies literature. Conca and Dabelko (2002), for example, suggest two specific ways in which cooperation on environmental problems can help build peace: by altering the 'strategic climate' within which states operate; and by helping construct post-Westphalian forms of governance that may ultimately tie states into cooperative agreements and practices so facilitating 'learning'.

6 Critical Environmental Security Studies

Almost as soon as 'the environment' appeared on the policy map of state security apparatuses, dissenting and critical voices could be heard questioning the appropriateness of linking environmental issues to (national) security practices. Dalby (2002b), Peluso and Watts (2001), Barnett (2001), Gleditsch (1998), and Levy (1995) are among those who have made important critical interventions in the environment and security debate. Yet, it was Deudney's 1990 article which remains, to my mind, the most compelling argument against this link, with all others taking their cue in one way or another from him. His discussion centres on three basic points. First, the structures developed to ensure *national* security are of little help as far as environmental problems – be they local or global – are concerned. National security is 'safeguarded' through a system of organised violence highly dependent on secrecy and technological expertise, whereas solutions to environmental problems require transnational cooperation, openness and creativity.

Second, given that national security discourses render all those people, places and things outside the state as a potential 'threat' – as an unknowable, untrustable 'other' – 'it seems doubtful that the environment can be wrapped in national flags without undercutting the "whole earth" sensibility at the core of environmental awareness' (in Conca and Dabelko, 1998: 309).

Third, while 'few ideas seem more intuitively sound than the notion that states will begin fighting each other as the world runs out of usable natural resources', global systems of trade, the substitutability of many raw materials, and 'the very multitude of interdependency in the contemporary world, particularly among the industrialised countries, makes it unlikely that intense cleavages of environmental harm will match interstate borders … Resolving such conflicts will be a complex and messy affair, but the conflicts are unlikely to lead to war' (in Conca and Dabelko, 1998: 310, 312).

Each of these three claims has been subject to, in Matthew's terms, 'a decade of environmental security research, debate and policy experimentation' (Matthew, 2002: 109). Military organisations have gone to great lengths to argue the value of their institutions and methods to environmental preservation. Others have revealed an abiding tendency, however, to 'securitize the environment' rather than 'green the military' (Van Deveer and Dabelko, 1998; more generally, see Williams, 2003). Most importantly, in my estimation, however, is Deudney's claim that environmentalism calls into question the very idea of a world of self-regarding states seeking security through violent practices.

6.1 The problem of 'the state'

A common theme running through the critical environmental security studies literature is what to do about the state – as a constellation of power and practice and as an analytical concept. Many of those who first argued for an expanded definition of security, including environmental issues, did so from the vantage point of disciplines not wedded to the state – environmental studies; human geography; ecology; philosophy; anthropology; biology; feminist theory and gender studies – and/or from physical locations outside traditional networks of power and privilege. While many people working in these fields bring traditional methodologies to bear on their research, their starting points are generally conceptions of space and time at variance with state-based analyses. The world they 'see', therefore, is one quite different than those working within IR's dominant paradigm, be they (neo)Realist or (neo)Institutionalist. And what they see, most often, is the negative consequences of modern industrial life dominated by a hierarchy of states.

What this disparate group shares, therefore, is a general desire to problematize practices and institutions that are considered 'natural' and/or immutable by, for example, most political scientists, security studies 'specialists'(be they experts or practitioners), or policy-making elites. For example, to many ecologists environmental security is about securing environmental health (within specific ecosystems; or at the level of the planetary biosphere) and, by extension, human well-being for humans are part of the biosphere, not separate from it. To ensure this 'security' requires a holistic understanding of the ways in which humans interact with 'nature'. It requires at minimum 'global environmental governance', not divisive national security policies.

At the same time, however, they recognise the very real power wielded by state-makers and maintainers (Pettman, 1991). If 'anarchy is what you make of it', as Wendt suggests, so too is order. States, as powerful actors operating within a largely Realist logic, make a rather brutal reality. For this reason, most people concerned with the negative side of the

modern era, in particular those activities undertaken in the name of 'order' and 'stability', are forced to work with states so that they might at minimum modify their practices. Just how difficult this is has been demonstrated in America's 'war on terror', its decision to reject the Kyoto Protocol and perhaps overturn its commitment to the Montreal Protocol, the latter long considered the shining example of global environmental governance.

In terms of dealing with the state as a constellation of power and practice, most academics, if called upon, are only too willing to give testimony in the halls of state power. The environment, being outside the traditional purview of security practitioners, requires a different kind of expertise so opening up the heavy (and heavily fortified) doors of the state to 'ecologists, humanists and statists' alike (Matthew, 2003: 36,37).

In terms of dealing with the state as an analytical category, once again preferences differ. Matthew (2002), Lonergan (2000), and Barnett (2001) are among those who, as far as the environment goes, seek to decenter the state. For Matthew, 'the roots of environmental change lie in poverty, population growth and distribution, consumption rates, production technologies and waste management practices (Matthew, 2000: 47). These are, themselves, the result of two hundred years of industrialisation whose impact has been uneven and felt differently across time and space. State-centric approaches at once dehistoricize the process and obscure structural features which tie, for example, Northern high mass consumption to Southern environmental destruction (Matthew, 2002: 114). Moreover, the obsession with 'endpoints', with 'conflict', overlooks the capacity of communities to adapt to change. 'The position commonly attributed to Homer-Dixon is a chapter in a larger and more complicated story'. When environmental change is located within this larger story, Matthew argues, it leads toward a concern not with immediate national security, but long term approaches to human security, globalization and transnational security challenges (Matthew, 2002: 117, 118, 120).

Barnett (2001) suggests that issues of equity, justice, and human well-being are deliberately marginalized by powerful social forces within the environmental security debate. The abiding focus on how the environment contributes to conflict both deflects attention from Northern consumption patterns that lie at the heart of all forms of environmental insecurity and slots neatly into a discourse of danger whereby 'anarchy' and uncertainty reside in the global South. In his estimation, rather than turn the South into a security threat, 'the issues that ought to be of more concern are the day-to-day insecurities associated with the erosion of individual and group welfare and resilience' (Barnett, 2001: 64). Similarly, Lonergan (2000: 69) argues, 'that less attention should be given to researching the links between environment and *violent conflict*, and more devoted to obtaining a better understanding of how environmental change is related to *human security*'.

6.2 A new language for new understanding?

A focus on human security located within a discourse of modernity takes us only part way toward a more inciteful understanding of the forces at work in creating what McKibbon (1998) labels 'Earth II'. They are limited by a constructivist epistemology which remains committed to 'better science for better policy making'. What they are after

is a framework which more accurately represents (socially constructed) reality. As such, they choose to work with and within a positivist understanding of the world that others feel is at the heart of not only environmental degradation but class, race and gender oppression (Peet and Watts, 1996; Escobar, 1996). It is left to scholars such as those included in the collections by Peluso and Watts (2001), Peet and Watts (1996) to bring poststructural and postmodern (together we can call them 'interpretivist') understandings to bear in unearthing the roots of environmental degradation and resource depletion. The utility of an interpretive approach is stated more forcefully by George (1994: 166):

> A postmodernist politics of dissent … is *post*modern in the sense that it seeks to confront, at every level, those aspects of modernity that undermine any potential people might have to produce, in their everyday lives, resistances to power relations that silence, demean and oppress them.

Language is key to this enterprise, for it is not neutral (Peterson, 2003: 41). Because 'development', 'security' and the 'environment' are dominated by 'expert' groups vested with specific technical/managerial knowledge, challenging their way of knowing and ordering the world requires, almost unavoidably, the use of their language. When a term like 'sustainable development' or 'security' is being used, its multiple meanings ensure (i) that different groups continue to talk past each other; and (ii) reaching no consensus, or a consensus so vague as to allow participants in the discourse to walk away equally satisfied, the dominant group's approach remains ascendant.

Magnusson (1994) articulates world politics 'as a problem of urban politics'. Gadgil and Guha (1995) encourage us to think of resource use at global level in terms of biosphere and ecosystem people. McNeill *et al* (1991) describe the 'ecological shadow' of a country as 'the environmental resources it draws from other countries and the global commons'. Wachernagel and Rees (1996) use the term 'ecological footprint' to help us better understand resource flows beyond 'the state' (see Dalby, 2002a for details). These approaches all deploy a new and different language to that of state-centric security and environmental security studies.

Holistic, historically- rooted and -conscious approaches are also key to the critical environmental security studies enterprise. Traditional approaches to environmental security present, at best, a linear and 'bifurcated' understanding of history, with 'developed' and 'developing' states acting as simplified markers in this 'historical' process. States, societies and empires rise and fall through time and do so as a result of decisions taken within their spatial boundaries and/or as they impact upon one another through practices such as trade and war. Successful states persist due to their own 'ingenuity', to use Homer-Dixon's term.

For (human) geographers, (social) anthropologists, sociologists, environmental historians and ecologists, among others, this is only one part of a more complex story. Because political science and international relations focus primarily on the modern state, their frameworks are partial. As such, their understandings and answers to important questions are equally partial. Drawing on Grove's (1997) work on the environmental impacts of

colonisation, and on Mumford's (1934) notion of the emergence of 'carboniferous capitalism', Dalby articulates a history of environmental change that draws our attention to the way processes of modernisation – of (industrial) imperial conquest leading to profound social and ecological transformation throughout the world – implicate 'developed' states in perceived 'resource scarcities' in 'developing' states.

Citing Alker and Haas (1993), who set their own argument about environmental security within the context of 'Vernadsky's ideas of a single biosphere and Braudel's historical formulations of the macropatterns of civilisations', Dalby argues in support of the importance of understanding nature in the long term (Dalby, 2002a: 72). This, he suggests, could lead toward thinking of political space in terms of ecopolitics, rather than through the conventional markers of states.

What makes Dalby and others like him a 'dissident voice' (Lowi and Shaw, 2001) among a majority of environmental security scholars and policy makers, is that a holistic, historical perspective that emphasises interconnections, dynamism and complexity directly challenges each and every assumption underlying mainstream scholarship: *inter alia* the disconnectedness of an inter-state system where order is possible within states and a mature anarchy is the preferable order without. Critical scholars argue that Western 'wealth' and Southern 'poverty' are mutually constituted, and that accelerated and extended forms of ecological disruption are due to 'European expansion, carboniferous industrialisation, and contemporary globalisation' (Dalby, 2002a: 81; Peluso and Watts, 2001; Peet and Watts, 1996). To be sure, this 'offers a very different history and a more comprehensive causal sequence for understanding environmental insecurity' (Dalby, 2002a: 81). More importantly, however, such an analysis exposes to critical scrutiny all those who benefit from the current world 'disorder'. State-makers, more concerned with containment and continuity rather than fundamental change are unlikely to yield to critical insights arguing in favour of (radical) transformation. Hence, Dalby's (2002a) hope for 'reconceptualisation and synthesis' is, in my view, rather idealistic.

Nevertheless, what the critical school makes clear is that, among other things, 'environmental security has been written by the rich omnivores in their comfortable offices and libraries' (Dalby, 2002a: 184). This must change, for it suggests that traditional approaches to environmental security are being folded into dominant security routines designed in the main to ensure the stability of the state system, and U.S. primacy therein. 'Stability' versus 'transformation' ensures that 'environmental security' will remain an essentially contested concept for the foreseeable future.

7 Environmental Security in Practice: TBNRM

Southern Africa provides an excellent geographical location to observe the myriad, often contradictory, and sometimes complementary ways in which environmental security is practiced. The region figures centrally in the global discourse of environmental security. In the mid-1990s, the World Bank identified the region as one in which water scarcity could lead to violent conflict. Recently, the Bank has turned around arguing that water scarcity provides opportunity for regional peace-building. Each of these perspectives has

generated a considerable literature. Beyond water resources, Southern Africa has featured in each of the major studies on environmental conflict discussed above.

Importantly, Southern Africa has been at the centre of traditional discourses and practices of global security and development at least since the end of World War II (Vale, 2003). Most recently, this manifests in U.S. foreign policy and development discussions regarding pivotal states, failed states, transitions to democracy and theories of democratic peace, neoliberal macroeconomic policy, popular participation in rural development, and regional integration, including regional approaches to natural resources management. Duffield (2001) shows how these once separate discourses are now inextricably intertwined.

TBNRM has been defined as 'any process of cooperation across boundaries that facilitates or improves the management of natural resources (to the benefit of all parties in the area concerned)' (Griffin *et al*, 1999 in Jones and Chonguiça, 2001: 1). Boundaries, in this instance, are those between states, although many other boundaries – e.g. those demarcating different forms of land tenure, land use and administrative jurisdictions – come into play.

Ingram *et al* (1994) state that resource management in border areas requires special attention because borders are areas where 'inequities surface and conflicts erupt'. For Katerere *et al* (2001: 9), 'in response to the problem of resource management in border areas, arrangements and initiatives focused on TBNRM have emerged with the following objectives: (1) to improve conservation of shared resources that are being depleted or degraded at unsustainable rates; (2) to ensure that communities and other stakeholders benefit from sustainable use of resources (in particular, to counter inequitable resource distribution associated with land and resource appropriation by local elite and foreign investors); and (3) to optimise regional distribution of benefits from resource use.

TBNRM has taken a number of different forms in the region. Jones and Chonguiça (2001: 2-5) delineate these as transfrontier conservation areas (TFCA), transboundary natural resource management areas (TBNRMA), informal networks of resource use across boundaries, spatial development initiatives (SDI), and development corridors. Whereas the latter two are oriented toward more traditional, infrastructural (roads, ports, railways, cellular telephone networks) and industrial development (e.g. the Mozal Aluminum Smelter Plant and the Maputo Iron and Steel Plant in the Maputo Development Corridor) activities, these are conceived to complement existing and planned formal and informal natural resources management activities (e.g. the MDC links into the GKG transfrontier park) (Jones and Chonguica, 2001: 43-47). Given the central role of and inevitable interest of states in border relations, Katerere *et al* (2001) include regional authorities and protocols and international conventions or agreements as necessary components of TBNRM activities. The same authors account for the 'meteoric rise of transboundary approaches' in terms of several factors:

- The need to better manage shared resources
- The drive for economic growth through regional integration and development

- The need to promote peace and security
- More external factors such as globalisation and agendas of international donors and organisations (Katerere *et al*, 2001: 1)

TFCAs and TBNRMAs are directly linked to the language of 'peace'. TFCAs are initiatives undertaken by state conservation agencies in support of biodiversity conservation and focus mainly on expanding protected areas within one country by linking them to a protected area or areas in one or more neighbouring countries (Jones and Chonguica, 2001: 2). TBNRMAs, in contrast, are more complex, so involving *inter alia* a number of government departments, communities, companies and local and international NGOs. According to USAID (2000), TBNRMA is 'a relatively large area, which straddles a frontier between two or more countries and covers a large-scale natural system (ecosystem)'. The definition is flexible enough to include either a portion of a river basin (e.g. the 'Four Corners' project, see below) or, where integrated environmental management is the driving principle, an entire river basin (e.g. Zambezi River Basin which includes portions of eight states, tens of millions of people, and all economic activities, including conservation). Another feature distinguishing TFCAs from TBNRMAs is the proposed object of security: in the former, it is primarily the environment itself with biodiversity conservation as the driving force; in the latter it is sustainable use for sustainable livelihoods, with people – particularly rural people and those living in remote areas – being the main object of security. These different forms of TBNRM often intersect and overlap. Several of the more advanced projects in the region are as follows (see Map 1):

Selected TFCAs

- Kgalagadi Transfrontier Park between Botswana and South Africa. The total area involved is 37,991 km2 – three quarters of which is in Botswana – involving state-owned protected areas in the two countries and communal land within the South African protected area.
- Gaza/Kruger/Gonarezhou (GKG) TFCA between Mozambique, South Africa and Zimbabwe. The total land area is 99,800 km2 (with 2/3 being in Mozambique) and involves state-owned protected areas, private ranches, private game reserves and communal areas.

Selected TBNRMA Initiatives

- The Four Corners initiative involving 200,500 km2 in Botswana, Namibia, Zambia and Zimbabwe. Land use/tenure in the area is state owned protected areas, communal land and community wildlife areas
- Every River Has Its People initiative involving 160,000 km2 in the Okavango River Basin states of Angola, Namibia and Botswana. Communal land, state-owned hunting areas, protected areas and community wildlife areas are involved.

MAP ABOUT HERE

The fascination with, indeed great hope for, TBNRM initiatives in the region derives in part from SADC states' recent transition from conflict to peace and from colonial/authoritarian rule to unconsolidated democracies. The twin catalysts were the serial endings of the global Cold War and of apartheid rule in Namibia (1990) and South Africa (1994). South Africa's move to majority-rule put an end to a decade of military and economic aggression against its neighbours. A pressing question became 'what to do with the large militaries developed by SADC states?' Aside from demobilisation, one anticipated 'peace dividend' was the possible shifting of military personnel and technology to environmental protection. The IUCN was an early proponent of such activity (Steiner, 1993; Swatuk and Omari, 1997). Given the place of mountains, forests, and national parks as shelters and headquarters for rebel movements, redeployment and reconstruction became key elements in the discourse of 'peace parks'. In the words of one long-time observer of environmental issues in Southern Africa, 'nature has the power to heal old wounds' (Koch, 1998).

The benefits of TBNRM are obvious to supporters of conservation and biodiversity protection. Thus, international NGOs such as Conservation International, the World Wildlife Fund, Birdlife International and International Rivers Network are driving forces behind these initiatives. Member states are *de facto* committed to these projects as signatories to various international agreements (Swatuk, 1996). Funds for TBNRM are also available through, for example, the Global Environment Facility (GEF), and a number of development banks.

Donor states, either singly (e.g. USAID, SIDA, GTZ, DfiD) or together (e.g. the EU) have provided a great deal of funding and intellectual guidance in the area of TBNRMAs, especially integrated water resources (IWRM), river basin (IRBM) and environmental management (IEM), in ascending order of complexity. Some, like SIDA and USAID, have moved away from country-specific lending toward regional programmes with issue specfic foci. There is a strong belief among donors that regional cooperation builds regional peace (Swatuk and Vale, 1999).

SADC states, while happy to participate in these and related projects, vary in degrees of commitment – or 'buy-in' – within and between states. The global environmental agenda is driven by forces external to Southern Africa. While having their epistemic counterparts in various Departments (e.g. of Wildlife and National Parks) and Ministries (of Water Affairs and Forestry; of the Environment), for the most part theory and practice reflect the interests of international NGOs and donor states. Many of these work through local NGOs directly bankrolled or financially dependent on them. Gross asymmetries in power/knowledge ensure that Southern African states and civil societies continue to be recipients of Western ideas (of development, of 'the environment', of security) and capital to implement those ideas. Deviation or disagreement generally results in the withdrawal of funds and technical 'expertise'.

TBNRM, almost by definition, is beyond reproach. How can one be against 'peace parks', 'peace dividends' and 'peace building' (Ramutsendela and Tsheola, 2001)? Against preserving biodiversity? Against rural development? Against building peaceful

inter-state relations? At a theoretical level, TBNRM appears to be the perfect development initiative: The 'peace dividend' appears to enhance environmental security at local, regional and global levels. At the same time, its economic development aspects appear to enhance human security by creating sustainable livelihood options for rural people and increasing sustainable economic returns to states. Lastly, in terms of state security, engaging in low-political, functional activities builds habits of cooperation between and among formerly antagonistic neighbours (Koch, 1998). Yet, in truth, TBNRM is only the latest iteration in a constantly shifting environment/security/development terrain. It is a terrain dominated in the first instance by statist discourses of development. At its most open it is neo-institutionalist, but, like environmental security writ large, rarely does the discussion venture beyond the dominant paradigm.

Because TBNRM in general and 'peace parks' in particular appear to be all things to all people, practice is rife with contradiction. The most 'successful' TFCA thus far has been the relatively non-controversial establishment of the Kgalagadi transfrontier park between the governments of South Africa and Botswana. The park is jointly managed by Botswana's Department of Wildlife and National Parks and South Africa's Department of National Parks (De Villiers, 1999: 127-43). Yet, even here where only 745 tourist entries were recorded on the Botswana side in 1995, generating roughly USD 9,000, the parties to the agreement deemed it necessary to begin the preamble with 'recognising the principle of sovereign equality and territorial integrity of their states' (De Villiers, 1999: 136): joint management is to pose no challenge to the state's ultimate authority. For international donors interested primarily in conservation, this seems a reasonable concession.

The picture is much more complicated in other, more densely populated and economically active, parts of the region. The GKG TFCA, for example, brings together the region's strongest (South Africa) and weakest (Mozambique) states in a border area historically characterised by its apartheid-era electrified fence. Many Mozambicans crossed this fence, then attempted to cross South Africa's Kruger National Park, in a desperate attempt to flee Mozambique's long civil war – a civil war whose main antagonist, the rebel group RENAMO, was supported by South Africa (Hanlon, 1986). Occasionally newspapers would carry reports of refugees having been devoured by lions in the park.

Beyond Mozambique's civil war, many displaced peasants are seeking to return to their homes in the border lands. An estimated 160,000 people live in and around Zinhave and Banhine National Parks and the hunting concession known as Coutada 16 (Koch, 1998: 65-66). The land they now occupy is contiguous with Kruger and integral to the GKG 'peace park'. Little forethought has been given to questions concerning the place of rural peoples within the borders of immanent peace parks. To remove them is to reproduce the worst of colonial and apartheid era state conservation practices. To leave them without a clear understanding of the resource use and personal safety issues for rural peoples living within a TFCA is to subject these citizens to a number of forms of insecurity at individual, household and village levels. Whereas Van der Linde *et al* (2000: 73) argue

that 'the complexity of TBNRM makes it imperative for stakeholders to undertake a very clear appraisal of the opportunities and risks of embarking on such a program', Katerere *et al* (2001: 12) state 'In practice, however, TFCAs have been pushed forward at a rapid pace without much time for consultation with communities and other stakeholders. While there has been little implementation yet, individual countries have signed agreements committing themselves to TFCAs with very little understanding of the consequences'. States have gone ahead with high level deals in the name of peace building, economic benefit sharing, ecosystem protection and the like. Entrepreneurs interested in exploiting tourism-related business opportunities have already begun 'resource raiding' through, for example, the acquisition of freehold land for the establishment of private conservancies bordering the TFCAs (Katerere *et al*, 2001). A devastated state such as Mozambique, classified as a HIPC (highly-indebted poor country), has virtually no capacity at local government level to implement decisions taken at higher levels, or regulate activities in their political jurisdictions. In the case of TFCAs, the working assumption is that the stronger partner, South Africa, will bring its human, technical and capital resources to bear in the sustainable management of the shared resource.

Focusing on the real and potential insecurities of rural people arising from the establishment of TBNRM projects facilitates a critical interrogation of the statist discourses and practices of development/environment/security. It reveals a constructed landscape – the 'peace park' – the establishment of which mirrors vast power asymmetries within states, among states in the region, and between Africa and actors external to the continent. The discourse is driven by 'experts' working within an epistemic community whose self-perception is one based on virtue and justice: peace, sustainable development, the empowerment of Africans at every level of society. The practice, however, reveals how already empowered actors – state-makers, entrenpreneurs, conservation organisations – seek to maintain their dominant positions in local/regional/global society. Where interests conflict, the flexibility of the language facilitates compromise: so conservation organisations see the establishment of their TFCA; entrepreneurs receive various concessions to develop; and states ensure sovereignty through co-management rather than common property relations. In almost every case, rural peoples benefit least. In some cases, rural livelihood strategies are seriously threatened by 'peace parks'. At best, rural people are passive participants in multi-stakeholder practices.

Various INGOs have undertaken to preserve biodiversity and empower communities through the establishment of Community Based Natural Resources Management (CBNRM) projects (Jeffery and Vira, 2001; Vira and Jeffery, 2001). Many have deliberately attempted to begin from village level and only involve the state when necessary and/or unavoidable. Where the resource being used – e.g. a veld product such as thatching grass or a type of fruit – improves (personal/household/community) incomes but the amount is relatively small, projects have been sustainable. However, where projects (potentially) involve state-owned resources, such as wildlife, challenge existing forms of land tenure, or possibly truly empower local people such that they are no longer dependent on central government for survival, the state invariably gets involved, often in an obstructive way. Katerere *et al* (2001) suggest that this is one reason why USAID

shifted support from country-specific CBNRM projects to region-wide TBNRM projects: CBNRM, through the empowerment of local people, challenges state power; TBNRM, in contrast, needs the state to succeed. So, while not losing sight of the desire to empower local people through the sustainable management of natural resources, donors acknowledge that state interests must be respected.

In summary, environmental security is a highly contested concept. For state-makers it means, first and foremost, threats posed to sovereign states by environmental change. This has led state-makers in Southern Africa to consider new ways of sustainably managing natural resources – specifically, through TBNRM – and the potential role of the military therein – for example, through anti-poaching units or technical expertise in drought monitoring. However, implementation of these projects raises a number of questions regarding beneficiaries of 'environmental security'. This is particularly the case when contrasting the language of 'peace parks' with the reality of impacted rural communities. Donors, as the primary drivers of these activities, are forced to make compromises and often put regional cooperation, biodiversity preservation and peace building at state level ahead of the interests of rural people living in borderlands. This realist decision is masked by a discourse of development that presumes failure in rural settings (Ferguson, 1990). A small corps of critical thinkers regularly exposes contradictions in theory and practice, but they remain marginal forces in decision-making. As such, environmental security in practice reflects the continuing hegemony of the statist paradigm as articulated by, Homer-Dixon, Klare, and others. This is not because the theoretical framework is more persuasive, but that it better serves dominant interests.

Bibliography

Alker, H. and P.M. Haas, 1993. 'The Rise of Global Ecopolitics', in N. Choucri, ed., *Global Accord: environmental challenges and international responses*. Cambridge: MIT Press.

Baechler, G., 1999. *Violence Through Environmental Discrimination: Causes, Rwanda Arena, and Conflict Model*. Dordrecht: Kluwer.

Baechler, G., 1998. 'Why Environmental Transformation Causes Violence: A Synthesis', *Environmental Change and Security Project Report*, issue 4 (Spring): 24-44.

Baldwin, D., 1997. 'The Concept of Security', *Review of International Studies*, 23/1: 5-26.

Barnett, J. 2001. *The Meaning of Environmental Security: ecological politics and policy in the new security era*. London: Zed Books.

Baumann, Z., 1989. *Modernity and the Holocaust*. Cambridge: Polity.

Booth, K., 1991. 'Security and Emancipation', *Review of International Studies*, 17:4, 313-26.

Buzan, B., 1991. *People, States and Fear*, 2nd edn. Boulder: Lynne Rienner.

Buzan, B., O. Waever, and J. de Wilde, 1998. *Security: A New Framework for Analysis*. Boulder: Lynne Rienner.

Callaghy, T.,1984. *The State-Society Struggle: Zaire in Comparative Perspective*. New York: Columbia University Press.

Callaghy, 1987. 'The State as Lame Leviathan: The Patrimonial Administrative State in Africa', in Z. Ergas, ed., *The African State in Transition*. New York: St. Martin's Press.

Callaghy, T., R. Kassimir and R. Latham, eds, 2001. *Intervention and Transnationalism in Africa.* Cambridge: Cambridge University Press.

Carius, A. and K.M. Lietzmann, 1999. *Environmental Change and Security: a European perspective*. Berlin: Springer.

Commission on Global Governance, 1995. *Our Global Neighborhood*. Oxford: Oxford University Press.

Conca, K. and G.D. Dabelko, eds, 2002. *Environmental Peacemaking*. Washington, D.C.: Johns Hopkins University Press.

Conca, K. and G.D. Dabelko, eds, 1998. *Green Planet Blues: environmental politics from Stockholm to Kyoto*, 2nd edn. Boulder: Westview.

Cox, R.W., 1986, *Production, Power and World Order*. New York: Columbia University Press.

Dalby, S., 1997. 'Contesting an Essential Concept: Reading the Dilemmas in Contemporary Security Discourse', in K. Krause and M.C. Williams, eds, *Critical Security Studies*.

Dalby, S., 1998. 'Ecological Metaphors of Security: World Politics in the Biosphere', *Alternatives*, 25/3: 291-320.

Dalby, S., 2002a. *Environmental Security*. Minneapolis: University of Minnesota Press.

Dalby, S., 2002b. 'Security and Ecology in the Age of Globalization', *Environmental Change and Security Project Report*, issue 8 (Summer): 95-108.

Deudney, D., 1990. 'The Case against Linking Environmental Degradation and National Security', *Millennium*, 19/3: 461-76.

Deudney, D. and R.A. Matthew, eds, 1999. *Contested Grounds: security and politics in the new environmental politics*. New York: SUNY Press.

De Villiers, B., 1999. *Peace Parks: the way ahead*. Pretoria: HSRC.

Duffield, M. 2001. *Global Governance and the New Wars*. London: Zed Books.

Ellis, S., 1999. *The Mask of Anarchy*. New York: New York University Press.

Erhlich, P., 1968. *The Population Bomb*. New York: Ballantine.

Escobar, A., 1996. 'Constructing Nature: Elements for a poststructural political ecology', in R. Peet and M. Watts, eds, *Liberation Ecologies*.

Esty, D.C. *et al.*, 1999. 'State Failure Task Force Report: Phase II Findings', *Environmental Change and Security Project Report*, Issue 5 (Summer): 49-72.

Ferguson, J., 1990. *The Anti-Politics Machine: 'Development', Depoliticization and Bureaucratic Power in Lesotho*. Cambridge: Cambridge University Press.

Fukuyama, 1992. *The End of History and the Last Man*. New York: Free Press.

Gadgil, M. and R. Guha, 1995. *Ecology and Equity: the use and abuse of nature in contemporary India*. London: Routledge.

George, J., 1994. *Discourses of Global Politics: a critical (re)introduction to international relations*. Boulder: Lynne Rienner.

Gleditsch, N.P., 1998. 'Armed Conflict and the Environment: A Critique of the Literature', *Journal of Peace Research*, 35/3 May: 381-400.

Gleditsch, N.P., 1997. *Conflict and the Environment*. Dordrecht: Kluwer.

Griffin, J., *et al.*, 1999. *Transboundary Natural Resource Management in Southern Africa: main report*. Washington, D.C.: Biodiversity Support Program.

Grove, R., 1997. *Ecology, Climate and Empire: colonialism and global environmental history, 1400-1940*. Cambridge: White Horse.

Hall, S., D. Held, and T. McGrew, eds, 1992. *Modernity and Its Futures*. Cambridge: Polity Press.

Hanlon, J., 1986. *Beggar Your Neighbours: apartheid power in Southern Africa*. London: James Currey.

Hauge, W. and T. Ellingsen, 1998. 'Beyond Environmental Security: Causal Pathways to Conflict', *Journal of Peace Research*. 35/3: 299-317.

Hettne, B., 1997. 'Development, Security and World Order: A Regionalist Approach', *The European Journal of Development Research*, 9/1: 83-106.

Hettne, B., 2001. 'Regional Cooperation for Security and Development in Africa', in P. Vale, L.A. Swatuk, and B. Oden, eds, *Theory, Change and Southern Africa's Future*. Basingstoke: Palgrave.

Homer-Dixon, T., 2003. 'Debating Violent Environments', *Environmental Change and Security Project Report*, Issue 9, 89-96.

Homer-Dixon, T., 1999. *Environment, Security and Violence*. Princeton: Princeton University Press.

Homer-Dixon, T., 1991. 'On the Threshold: Environmental Changes as Causes of Acute Conflict', *International Security*, 16/2: 76-116.

Homer-Dixon, T., 1994. 'Environmental Scarcities and Violent Conflict: Evidence from Cases,' *International Security*, 19/1: 5-40.

Homer-Dixon, T. and J. Blitt, eds, 1998, *Ecoviolence: Links Among Environment, Population and Security*. Lanham, MD: Rowman and Littlefield.

Hurrell, A., 1995. 'International Political Theory and the Global Environment', in K. Booth and S. Smith, eds, *International Relations Theory Today*. Oxford: Clarendon Press.

Ingram, H., L. Milich, and R.G. Varady, 1994. 'Managing Transboundary Resources: lessons from Ambos Nogales', *Environment*, 36/4.

Jeffery, Roger and Bhaskar Vira, eds, 2001. *Analytical Issues in Participatory Natural Resources Management*. Basingstoke: Palgrave.

Jones, B.T.B, and E. Chonguica, 2001. *Review and Analysis of Specific Transboundary Natural Resource Management Initiatives in the Southern African Region.* IUCN-ROSA Series on Transboundary Natural Resource Management, No. 2. Harare: IUCN-ROSA.

Kaplan, R., 1994. 'The Coming Anarchy', *The Atlantic Monthly*, February.

Katerere, Y., S. Moyo and R. Hill, 2001. *A Critique of Transboundary Natural Resource Management in Southern Africa*, IUCN-ROSA series on Transboundary Natural Resource Management, No. 1. Harare: IUCN-ROSA.

Klare, M., 2001. *Resource Wars: the new landscape of global conflict*. New York: Henry Holt and Company.

Koch, E., 1998. 'Nature Has the Power to Heal Old Wounds: War, Peace and Changing Patterns of Conservation in Southern Africa', in D. Simon, ed., *South Africa in Southern Africa: reconfiguring the region*. London: James Currey.

Krause, K. and M.C. Williams, eds, 1997. *Critical Security Studies*. Minneapolis: University of Minnesota Press.

Levy, M.A., 1995. 'Is the Environment a National Security Issue?' *International Security*, 20/2 (fall): 35-62.

Lietzmann, K.M. and G. Vest, 1999. 'Environment and Security in an International Context: Executive Summary Report, NATO/Committee on the Challenges of Modern Society Pilot Study', *Environmental Change and Security Project Report*, issue 5 (Summer): 34-48.

Lipschutz, R., 1995. *On Security*. New York: Columbia University Press.

Lonergan, S., 2000. 'Human Security, Environmental Security and Sustainable Development', in M.R. Lowi and B.R. Shaw, eds, *Environment and Security*.

Lowi, M.R. and B.R. Shaw, 2000. *Environment and Security: Discourses and Practices.* London: Palgrave.

Magnusson, W., 1994. 'Social Movements and the Global City', *Millennium*, 23/3: 621-45.

Mathews, J.T., 1989. 'Redefining Security', *Foreign Affairs*, 68/2: 162-77.

Matthew, R.A., 2002. 'In Defense of Environment and Security Research', *Environmental Change and Security Project Report*, Issue 8 (Summer): 109-24.

Matthew, R.A., 2000. 'Environment and Security in an International Context: Critiquing a Pilot Study from NATO's Committee on the Challenges of Modern Society', *Environmental Change and Security Project Report*, Issue 6 (Summer): 95-98.

McKibbon, B., 1998. 'A Special Moment in History', *The Atlantic Monthly*, May.

McNeill, J., P. Winsemius, and T. Yakushiji, 1991. *Beyond Interdependence*. New York: Oxford University Press.

Midlarsky, M., 1998. 'Democracy and the Environment: An Empirical Assessment', *Journal of Peace Research*, 35/3: 341-62.

Morgenthau, H., 1978, *Politics Among Nations*, 5th edn. New York: Knopf.

Myers, N., 1989, 'Environment and Security', *Foreign Policy*, 47: 23-41.

Myers, N., 1993. *Ultimate Security: The Environmental Basis of Political Stability*. New York: W.W. Norton.

Mumford, L., 1934. *Technics and Civilization*. New York: Harcourt Brace and World.

Nathan, L. and J. Honwana, 1995. *After the Storm: Common Security and Conflict Resolution in Southern Africa*. The Arusha Papers: a working series on Southern African security, no. 3 (February).

Ohlsson, L., 1999. *Environment, Scarcity and Conflict: a study of Malthusian concerns*. Goteborg: PADRIGU.

Paterson, M., 1995. 'Green Politics', in S. Burchill, A. Linklater *et al*. *Theories of International Relations*. New York: St. Martins Press.

Peet, R. and M. Watts, eds, 1996. *Liberation Ecologies: environment, development, social movements*. London and New York: Routledge.

Peluso, N. and M. Watts, 2003. 'Violent Environments: Responses', *Environmental Change and Security Project Report*, Issue 9, 89-96.

Peluso, N. and M. Watts, eds, 2001. *Violent Environments*. Cornell: Cornell University Press.

Peterson, V. Spike, 2003. *A Critical Rewriting of Global Political Economy: integrating reproductive, productive and virtual economies*. London and New York: Routledge.

Pettman, J.J., 1996. *Worlding Women: a feminist international politics*. London and New York: Routledge.

Pettman, R., 1991. *International Politics*. Boulder: Lynne Rienner.

Ramutsendela, M. and J. Tsheola, 2001. 'Transfrontier Conservation Areas: A Framework for Managing Peace and Nature in Southern Africa?' in T.A. Benjaminsen, B. Cousins and L. Thompson, eds, *Contested Resources*.

Rees, W.E. and M. Wackernagel, 1994. 'Ecological Footprints and Appropriated Carrying Capacity: Measuring the Natural Capital Requirements of the Human Ecology', in A.M. Jannson, M. Hammer, C. Folke, and R. Constanza, eds, *Investing in Natural Capital*. Washington, D.C.: Island Press.

Renner, M., 1989. *National Security: the economic and environmental dimensions*. Worldwatch Paper No. 89. Washington, D.C.: Worldwatch Institute.

Richards, P., 1996. *Fighting for the Rainforest: war, youth and resources in Sierra Leone.* Oxford: James Currey.

Ruggie, J.G., 1998. *Constructing the World Polity: essays on international institutionalism.* London: Routledge.

Schwarz, D.M., T. Deligiannis, and T. Homer-Dixon, 2000. 'The Environment and Violent Conflict: A Response to Gleditsch's Critique and Some Suggestions for Future Research', *Environmental Change and Security Project Report*, Issue 6, (Summer): 77-94.

Sprout, H. and M. Sprout, 1965. *The Ecological Perspective on Human Affairs with Special Reference to International Politics*. Princeton: Princeton University Press.

Steiner, A.M., 1993. 'The Peace Dividend in Southern Africa: prospects and potentials for redirecting military resources towards natural resources management', paper presented at the UNDP conference on *Military and the Environment: Past Mistakes and Future Options*, New York, 22-23 February.

Swatuk, 1991, *Between Choice in a Hard Place: contending theories of international relations*, (Halifax: Centre for Foreign Policy Studies).

Swatuk, L.A., 1996. *Power and Water: The Coming Order in Southern Africa*. Bellville: Centre for Southern African Studies.

Swatuk, L.A., 2001. 'Southern Africa Through Green Lenses', in P. Vale, L.A. Swatuk and B. Oden, eds, *Theory, Change and Southern Africa's Future*.

Swatuk, L.A., 2004. 'The United States and Africa: Cybernetic Foreign Policy, Continental Decline', *Journal of Military and Strategic Studies*, special issue on 'The American Empire'.

Swatuk, L.A. and A.H. Omari, 1997. 'Regional Security: Southern Africa's Mobile 'Frontline'', in L.A. Swatuk and D.R. Black, eds, *Bridging the Rift: the new South Africa in Africa*. Boulder: Westview.

Swatuk, L.A. and P. Vale, 1999. 'Why Democracy is Not Enough: Southern Africa and Human Security in the Twenty-first Century', *Alternatives*, 24/3: 361-89.

Tickner, J.A., 1995. 'Re-visioning Security', in K. Booth and S. Smith, eds, *International Relations Theory Today*. Cambridge: Policy Press.

Tir, J. and P.F. Diehl, 1998. 'Demographic Pressure and Interstate Conflict: Linking Population Growth and Density to Militarized Disputes and Wars, 1930-89', *Journal of Peace Research*, 35/3 (May): 319-39.

Ullman, R., 1983. 'Redefining Security', *International Security*, 8: 129-53.

UNDP, 1994. *Human Development Report*. New York: Oxford University Press.

Vale, P., 2003. *Security and Politics in South Africa: the regional dimension*. Boulder: Lynne Rienner.

Van der Linde, H. *et al.*, 2001. *Beyond Boundaries: a framework for transboundary natural resource management in Sub-Saharan Africa*. Washington, D.C.: Biodiversity Support Program.

Van Deveer, S. and G.D. Dabelko, 1998. 'Redefining Security Around the Baltic: Environmental Issues in Regional Context', *Global Governance*, 5/2: 221-49.

Vira, B. and R. Jeffery, eds, 2001,*Conflict and Cooperation in Participatory Natural Resource Management*, (Basingstoke: Palgrave).

Wackernagel, M. and W. Rees, 1996. *Our Ecological Footprint: reducing human impact on the earth*. Philadelphia: New Society.

Waever, O., 1997. *Concepts of Security*. Copenhagen: Institute of Political Science.

Walker, R.B.J., 1997. 'The Subject of Security', in K. Krause and M.C. Williams, eds, *Critical Security Studies*.

Walker, R.B.J., 1993. *Inside/Outside: International Relations as Political Theory*. Cambridge: Cambridge University Press.

Wallerstein, I., 1974. *The Capitalist World Economy*. Cambridge: Cambridge University Press.

Walt, S.M., 1991. 'The Renaissance of Security Studies', *International Security Studies Quarterly*, 35: 211-39.

Williams, M.C., 2003. 'Words, Images, Enemies: Securitization and International Politics', *International Studies Quarterly*, 47/4 (December): 511-31.

World Commission on Environment and Development, 1987. *Our Common Future*. New York: Oxford University Press.