National Security and the Threat of Climate Change

https://www.e-ir.info/2014/05/14/national-security-and-the-threat-of-climate-change/

TOBY FENTON, MAY 14 2014

Outline the extent to which climate change threatens the national security of states. In light of your discussion, is it appropriate to securitise this issue?

Security discourse has traditionally emphasised the threat from inter-state war and purposive agents (Busby, 2008:471); climate change policy has resided primarily in economic or cost/benefit discourses (Busby, 2007:1), or focused on finding environmentally friendly energy substitutes and establishing cooperative international environmental agreements, 'not [on] potential security challenges' (Broder, 2009). There are many readily identifiable concerns related to climate change, including environmental degradation, natural resource scarcities, CO2 emissions, melting polar ice, extreme temperatures, flooding, natural disasters, and extreme weather. However, *security* 'is an inherently ambiguous and inconsistent concept' (Edwards, 1999:311), with its images culturally, temporally and spatially grounded – each born of a different philosophical tradition (Haftendorn, 1991:3-6). At the individual level, security can be 'the condition of being protected from or not exposed to danger' (Barnett, 2003:7); a subjective perception of 'assurance' about 'survival and well-being' (Soroos, 1997:236); and an 'inner security that ultimately forms the bedrock of our being' (Myers, 1994:16). In emphasising the state as the referent object, national security discourse traditionally aligned with the realist paradigm and its concern with strategies for survival (Haftendorn, 1991:6-8; Buzan et al, 1998:21) through violence and military force (Trombetta, 2009:587; Busby, 2008:474; Haftendorn, 1991:8). For realist Stephen Walt (1991:212), '[t]he main focus of security studies is easy to identify… it is the phenomenon of war.'

However, this 'conveys a profoundly false image of reality' (Ullman, 1983:123), as it 'excludes environmental and other non-military threats by definition' (Levy, 1995:39). Fortunately, the post-Cold War 'search for a new security paradigm helped open up the security debate to new issues' (Hauge & Ellingsen, 1998:300). In 2004, the British government's chief scientist asserted that '[c]limate change is a far greater threat to the world than international terrorism' (King, cited in BBC, 2004), and in 2007 the UNSC held its 'first-ever debate on the impact of climate change on peace, [and] security' (UNSC, 2007). Evidently, understandings of security are 'expanding to include threats from a changing global environment' (Hendrix & Glaser 2007:696), including '[p]henomena like pandemic disease, natural disasters, and climate change' (Busby, 2007:5). Still, Buzan's Cold War-era delineation of national security, which does mention environmental threats, is perhaps the most developed and identifies three core referent objects: the *idea*, the *institutional expression*, and the *physical base* of the state (1983:39-64) – although Buzan also recognises that national security 'cannot be defined in any general sense, but only in relation to specific cases' (1983:6). Ultimately, national security is still 'flexible enough to mean anything one wishes' (Levy, 1995:37). To outline the extent of the climate change threat to every plausible referent object of national security is impracticable here. Consequently, this essay will focus on the following areas: resource security; territory and population; military capability; and catalysts for conflict – after which the securitisation of climate change will be considered.

As Buzan (1983:64) suggests, 'since the state ultimately rests on its physical base, the protection of territory and population must count as fundamental national security concerns'. Sea level rises are a considerable threat, especially for low-lying, densely populated coastal areas, such as parts of West Africa (Brown et al, 2007:1147) and the Asia-Pacific region (IIED, 2007). For instance, 'a 45cm rise in sea-level will potentially result in a loss of 10.9% of Bangladesh's territory, forcing some 5.5 million people to relocate' (Barnett, 2003:9), and elsewhere resulting in land 'lost or rendered unproductive and uninhabitable' (Edwards, 1999:313); in the Pacific, rising waters threaten 'our

very existence as homelands and nation-states' (Falcam, 2001). Indeed, there are theoretical ontological implications too, as the existential threats posed by such extreme climate change effects 'could result in challenges to sovereignty as the current qualifications defining the existence of a state include a permanent population and a defined territory' (Abbott, 2008:5). Rising waters and flooding can threaten the state's functional capacity and economic health: many states have large economic and transportation centres along their coastlines (Mathews, 1989:170), so extreme weather and sea level rises in particular threaten 'life and property and other key infrastructure such as communication, transport and energy supply networks.' (Abbott, 2008:3). As Brown et al (2007:1146) explain, '[l]arge delta systems are at particular risk of flooding, with associated costs estimated at 5–10 per cent of gross domestic product or above.'

Climate change can also directly threaten population health. Ozone-depletion contributes to health issues such as skin cancer (Levy, 1995:47-51), while 'the IPCC are predicting… more intense heat waves, with obvious implications for disease patterns and human health' (Abbott, 2008:2). Indeed, global warming 'threatens to increase the incidence of malaria, Rocky Mountain spotted fever, and other insect-borne diseases' (Levy, 1995:52), phenomena which may also contribute to malnutrition (Brown & Funk, 2008:580). Broadly, it is apparent that 'some of the effects of climate change could swiftly kill or endanger large numbers of people and cause such large-scale disruption that local public health, law enforcement, and emergency response units would not be able to contain the threat.' (Busby, 2007:5).

Climate change threatens food security most acutely in arid parts of Africa and South Asia, 'in poor countries with low capacity for adaption' (Hanjra & Qureshi, 2010:366) and in states that rely on agricultural production such as East Timor (Barnett & Adger, 2007:641); but also in the more developed countries, as with reduced crop yields in parts of Europe in 2003 caused by elevated temperatures and precipitation deficits (Gregory et al, 2009:2833) or with possible desertification in the US green belt (Mathews, 1989:169). There may be degradation in water quality (Raleigh & Urdal, 2007:677), which is vital for irrigation and agriculture (Hanjra & Qureshi, 2010:366). Increased CO2 levels, temperature changes and rainfall variability can increase the susceptibility of crops to pests, insects and crop pathogens (Gregory et al, 2009:2829-2832). This presents problems for non-producing, import states (Abbott, 2008:3). However, climate change-induced increases in production (Raleigh & Urdal, 2007:677) may alleviate this, and others argue that '[f]ood insecurity… is not solely a product of "climatic determinism" and can be addressed by improvements in economic, political, and agricultural policies at local and global scales' (Brown & Funk, 2008:581).

Potable-water security may be threatened, for example through pollution from flooding, sea level rises and extreme weather (Mathews, 1989:170), and, with growing populations, 'it is believed that climate change will increase water scarcity in the coming decades' (Hanjra & Qureshi, 2010:365). Energy security is a concern, as it is fundamental for state functionality, military capability and industrial capacity – especially large, developed states like the US (see Bang, 2010:1646). Oil supplies are especially vital, and 'events like a natural disaster or political unrest can leave the world in short supply of oil' (Bang, 2010:1647), having potential 'consequences so severe they might resemble the sort of supply and price disruptions experienced during the 1970s oil crisis' (Busby, 2008:478). Resource scarcity 'may put severe pressure on both society… [and] state institutions', and weaken a state's 'functional capacity' and 'social cohesion' through unequal distribution and access (Raleigh & Urdal, 2007:679). Furthermore, the unsustainable demand for food, water and energy resources could be compounded by population growth and climate change effects, such that 'greater competition for such resources should be expected, both within and between countries…' (Abbott, 2008:4).

Indeed, climate change may be a *factor* in conflict and instability, from 'simple scarcity conflicts' over resources, to ethnic or identity conflicts resulting from mass migration, and 'relative-deprivation conflicts' brought about by massive resource inequity (Homer-Dixon, 1991:106-109). First, climate change effects 'have the capacity… to exacerbate food, water and energy scarcities' (Brown et al, 2007:1147), which 'can exacerbate local grievances and contribute to conflict' (Busby, 2007:9), although resource conflicts are more likely in 'economies dominated by natural resources rather than manufacturing' (Levy, 1995:56) – causality for the Darfur conflict was located substantially in farmland desertification (Ban, 2007; Broder, 2009). Indeed, Homer-Dixon rebutted his earlier work (1991:102) to suggest that 'environmental scarcity causes violent conflict' (1994:39). Second, 'environmental migration' (Reuveny, 2007:657) is another factor, where, as Abbott explains, 'drought, food shortages and flooding will lead to the mass movement of peoples, with perhaps up to 200 million environmental refugees by the middle of the century' (2008:4), possibly

causing social, ethnic, political and economic tensions and instability (Homer-Dixon, 1991:98) – as with migration from Bangladesh to India and Pakistan (Barnett, 2003:12).

There could also be 'ripple effects… beyond national boundaries' (Brown et al, 2007:1147), as unregulated population movements might exacerbate unrest, facilitate terrorism, and, in extremes, lead to inter-state conflict (Bali, 2013:523). Arguably, 'if they are to occur at all, climate-induced conflicts are most likely as a result of migration' (Barnett, 2003:12). Another factor is changing geographies. For example, the Arctic may become more valuable as melting ice (see Vidal, 2012) offers new shipping routes and energy reserves there (oil and gas) become more accessible (Arsenault, 2012; Baczynska, 2013). This may catalyse disputes over maritime sovereignty, especially amongst Canada, the US and Russia; in 2010, a summit was convened in Moscow 'to try to prevent the Arctic becoming the next battleground over mineral wealth' (BBC, 2010). Indeed, 'border disputes over territory and waters historically have been a major contributor to interstate disputes' (Busby, 2008:474). While numerous variables caution against 'a straight-line progression' from climate/environmental change to conflict (Brown et al, 2007:1148), it is 'likely to act as a threat multiplier' (Abbott, 2008:8), 'exacerbating conflicts or adding new dimensions' (Holst, 1989:123).

Climate change may threaten a state's ability to defend both itself and its citizens. There is the potential for the 'loss of strategic defence assets' which are 'vulnerable to rising sea levels and extreme weather events' (Abbott, 2008:8), the increase in the frequency of which 'almost certainly will continue during the next 20 years' (NIC, 2012:32). Through such events, climate change could have a 'direct impact on national security by severely damaging critical military bases, thereby diverting or severely undermining significant national defense resources' (Busby, 2007:6). Air bases in Florida were critically damaged (one never reopened) by hurricanes in 1994 and 2004 (Broder, 2009), while Hurricane Katrina in 2005 forced the US 'to divert its attention and military resources [away from operations in Afghanistan and Iraq] to respond to a domestic emergency' (Busby, 2007:1). Of course, as suggested earlier, any threat to population, territory and resources supplies, as well as climate change-induced instability in areas abroad where a state has citizens, assets and interests, may jeopardise military-security capability, and do not really need separate explanation here. Ultimately, states may discover they have 'difficulties maintaining military capability' in the 'changed climatic conditions of the future' (Abbott, 2008:8).

There are, however, problems with the above outline. Often, the issue is how climate change and weather events combine to increase the threat (see Abbott, 2008:2). We must distinguish between direct threats from 'high-impact events' (Barnett & Adger, 2007:640), which are extreme in their magnitude or duration (Gregory et al, 2009:2833) such as Hurricane Katrina (Busby, 2007:1); and indirect threats where the concern is the political, social and other developments 'sparked by' climate change (Levy, 1995:55). However, direct threats in one state can become indirect to another, through 'spillover security effects' into a neighbouring countryor 'blowback' to a distant one(see Busby, 2007:6-8). And climate change impacts are not certain or uniform, having most acute effects in developing regions (Homer-Dixon, 1991:88-99). Because 'sovereignty over delineated territory is the material substrata of national security' (Barnett, 2003:9), issues from sea level rises and land erosion, to violent internal conflict are severe threats – but not to all states. The climate-conflict link depends substantially on social-political structure (Homer-Dixon, 1991:114) and is more pronounced in weakstates (Raleigh & Urdal, 2007:679; Barnett, 2003:9), where an internal 'security dilemma' (Kahl, 2006:47) threatens the idea, institutional expression and physical base – as do climate change-induced civil unrest (Abbott, 2008:4-5) and economic disruption (Busby, 2008:478) which 'corrode confidence in the national purpose, weaken the tax base, and undermine financial, legal, and political institutions' (Homer-Dixon, 1991:98). The sociological notion of adaptivecapacity – 'a process of adjustment to survive and, ideally, thrive in the face of change' (Brown et al, 2007:1149) – is a determining variable here (Barnett & Adger, 2007:649-650; Abbott, 2008:5; Barnett, 2003:12; Busby, 2008:486), particularly in relation to food insecurity (Gregory et al, 2009:2827). Ultimately, unless political structure, institutions and social cohesion are 'relatively stable as a prior condition, the image of the state as a referent object for security fades into a meaningless blur' (Buzan, 1983:69).

While climate change evidently threatens national security, the appropriateness of its securitisation is debatable. Securitisation 'is when an issue is presented as posing an existential threat to a designated referent object' (Buzan et al, 1998:21), usually through performative speech acts (Trombetta, 2009:588). Securitisation and national security

traditionally focus on militarism, territorial control and sovereignty (Dalby, 2013:315), and there is 'a tendency to confuse national defense with what the military can do' (Busby, 2007:23). Militaries are 'trained in the arts of killing and destroying' (Deudney, 1990:465), so, arguably, if the 'traditional military focus… is uncritically imposed on discussions of climate, things are likely to be made worse rather than better' (Dalby, 2013:313). However, from a constructionist perspective, 'if an issue succeeds in being labelled as a security issue, the method of handling it will be [suitably] transformed' (Trombetta, 2009:588). Additionally, 'understanding climate change as a security issue risks making it a… sovereignty rather than global commons problem' (Barnett, 2003:14). Indeed, climate change is not ''national' in character' (Deudney, 1990:464). However, security can 'serve as an integrative concept which links local (human security), national (national security) and global (inter-national security) levels of environmental change and response' (Barnett, 2003:14-15).

Yet, these notions might 'forswear any hope of linking environmental issues to the conventional security agenda' (Levy, 1995:43-44) and 'alienate foreign policy intellectuals' (ibid:46); broadening security studies excessively might 'destroy its intellectual coherence' (Walt, 1991:213), while a shift in funding towards 'non-military elements of security' (Abbott, 2008:8) risks jeopardising national security vis-à-vis traditional threats. Climate-security discourse can also be 'faulted for being polemical rather than a useful analytic construct' (Busby, 2008:470) and may weaken the utility of securitisation discourse, 'creating a conceptual muddle rather than a paradigm or world view shift' (Deudney, 1990:465). However, because of this it is suggested that climate change 'is not a threat to national security. Rather environmentalism is a threat to "national security" mindsets and institutions' (ibid:475). There are also problems for policy planning: the rate of climate changes is uncertain (Mabey, et al., 2011:25), and while '[t]he fact that climate change may have security consequences is generally accepted… some analysts can be rather vague about the precise nature of those consequences' (Abbott, 2008:1). However, as 'the security rubric is used as a rhetorical attention-getter' (Levy, 1995:44), securitising climate change may imbue a sense of urgency (Brown et al, 2007:1154) and 'a certain gravitas that is arguably necessary in climate change policy' (Barnett, 2003:14). Perhaps if securitisation encourages pragmatic action and preparation for future security environments, then as Brown et al (2007:1154) recognise, 'it will serve a useful purpose'.

Analysing the extent to which climate change threatens national security is highly complex. Climate change is not a constant-value variable: it 'will come in jumps whose timing and magnitude are unpredictable' (Broecker, 1987:126), such that 'we do not know where and when we might cross a threshold and move to a radically different and perhaps highly undesirable system' (Homer-Dixon, 1991:80). Predicting future security environments, threat situations and timescales based on current/past values/dynamics is problematic. It is also difficult to generalise research findings, as even climate models cannot predict the variable impact of climate changes or the socio-political responses (Schwartz & Randall, 2003:7). Nevertheless, climate change threatens national security in a number of ways: existentially – through rising sea levels and extreme weather events; jeopardising states' military capability and capacity for defence, which can be exacerbated by migration/refugee flows and resource scarcities – which themselves may be a threat; and through unpredictable climate change-induced violence and conflict.

However, it could be detrimental – both to states and wider humanity – to locate these issues within *national* security frameworks, to the extent that these are transnational dynamics unappreciative of socially-constructed territorial boundaries; and such frameworks may hinder pragmatic cooperation in favour of traditional statist self-interest. Regarding the securitisation of climate change, there are multiple considerations, including the national/military conception of security, the converse implications for the utility of traditional security discourse, and how to incorporate climate-security into policy planning. Nevertheless, securitising climate change is arguably advantageous – not least to the extent that it encourages preparation and planning for what is a clear and increasingly present danger. As Stipp (in Brown et al, 2007:1142) suggests, climate change may well prove to be the 'mother of all security problems'.

References

Abbott, C. (2008) 'An uncertain future: law enforcement, national security and climate change', *Fride: Comment* [Online]. Available at: http://fride.org/descarga/COM_Law_Security_Climate_EN_feb08.pdf [Accessed: 27 March 2008]

Arsenault, C. (2012) *Melting Arctic heats up resource scramble*. Available at: http://www.aljazeera.com/indepth/features/2012/09/201291613371745162 2.html [Accessed: 1 April 2013]

Baczynska, G. (2013) *Veteran explorer stakes Russia's claim over the Arctic*. Available at: http://www.reuters.com/article/2013/02/27/us-russia-arctic-idUSBRE91Q11F20130227 [Accessed: 1 April 2013]

Bali, S. (2013) 'Population Movements', pp521-533, in Williams, P. *Security Studies: An Introduction* (2nd edition). New York: Routledge

Ban, K. (2007) *A Climate Culprit in Darfur*. Available at: http://www.washingtonpost.com/wpdyn/content/article/2007/06/15/AR2007061501857.html [Accessed: 29 March 2013]

Bang, G. (2010) 'Energy security and climate change concerns: Triggers for energy policy change in the United States?', *Energy Policy*,38(2010), pp1645-1653

Barnett, J. (2003) 'Security and Climate Change', *Global Environmental Challenge*, 13(1), pp7-17

Barnett, J. & Adger, W. N. (2007) 'Climate change, human security and violent conflict', *Political Geography*, 26(6), pp639-655

BBC (2004) *Global warming 'biggest threat'*. Available at: http://news.bbc.co.uk/1/hi/3381425.stm [Accessed: 29 March 2013]

BBC (2010) *Arctic summit in Moscow hears rival claims*. Available at: http://www.bbc.co.uk/news/world-europe-11387175 [Accessed: 1 April 2013]

Broder, J. M. (2009) *Climate Change Seen as Threat to U.S. Security*. Available at: http://www.nytimes.com/2009/08/09/science/earth/09climate.html?pagewanted=all&_r=0 [Accessed: 2 April 2013]

Broecker, W. (1987) 'Unpleasant Surprises in the Greenhouse?', *Nature*, 328(6126), pp123-126

Brown, M. E. & Funk, C. C. (2008) 'Food Security Under Climate Change', *Science*, 319(2008), pp580-581

Brown, O. et al (2007) 'Climate change as the 'new' security threat: implications for Africa', *International Affairs*, 83(6), pp1141-1154

Busby, J. W. (2007) *Climate Change and National Security: An Agenda for Action*. New York: Council on Foreign Relations [Online]. Available at: http://www.atlanticcoastconservancy.org/National%20Publications/climate-change-and-national-security.pdf [Accessed: 27 March 2013]

Busby, J. W. (2008) 'Who Cares about the Weather?: Climate Change and U.S. National Security', *Security Studies*, 17(3), pp468-504

Buzan, B. (1983) *People, States, and Fear: The National Security Problem in International Relations*. Sussex: Wheatsheaf Books Ltd

Buzan, B. et al. (1998) *Security: A New Framework for Analysis*. London: Lynne Rienner Publishers Inc

Dalby, S. (2013) 'Climate Change and Environmental Security', pp311-323, in Williams, P. *Security Studies: An Introduction* (2nd edition). New York: Routledge

Deudney, D. (1990) 'The Case Against Linking Environmental Degradation and National Security', *Millennium:*

Journal of International Studies, 19(3), pp461-476

Edwards, M. J. (1999) 'Security Implications of a Worst-Case Scenario of Climate Change in the South-West Pacific', *Australian Geographer*, 30(3), pp311-330

Falcam, L. (2001) *Global Warming "Slow Death" For Pacific Island Nations: FSM President Falcam.* Available at: http://166.122.164.43/archive/2001/August/eww-falcam.htm [Accessed: 28 March 2013]

Gregory, P. J. et al (2009) 'Integrating pests and pathogens into the climate change/ food security debate',*Journal of Experimental Botany*, 60(10), pp2827-2838

Haftendorn, H. (1991) 'The Security Puzzle: Theory-Building and Discipline-Building in International Security', *International Studies Quarterly*, 35(1), pp3-17

Hanjra, M. A. & Qureshi, M. E. (2010) 'Global water crisis and future food security in an era of climate change',*Food Policy*, 35(2010), pp365-377

Hauge, W. & Ellingsen, T. (1998) 'Beyond Environmental Scarcity', *Journal of Peace Research*, 35(3), pp299-317

Hendrix, C. S. & Glaser, S. M. (2007) 'Trends and triggers: Climate, climate change and civil conflict in Sub-Saharan Africa', *Political Geography*, 26(6), pp695-715

Holst, J. J. (1989) 'Security and the Environment: A Preliminary Exploration', *Bulletin of Peace Proposals*, 20(2), pp123-128

Homer-Dixon, T. F. (1991) 'On the Threshold: Environmental Changes as Causes of Acute Conflict',*International Security*, 16(2), pp76-116

Homer-Dixon, T. F. (1994) 'Environmental Scarcities and Violent Conflict: Evidence from Cases', *International Security*, 19(1), pp5-40

IIED (2007) *Climate change: study maps those at greatest risk from cyclones and rising seas.* Available at: http://www.iied.org/climate-change-study-maps-those-greatest-risk-cyclones-rising-seas [Accessed: 29 March 2013]

Kahl, C. H. (2006) *States, scarcity, and civil strife in the developing world*. Princeton: Princeton University

Kaplan, R. D. (1994) *Coming Anarchy: Shattering the Dreams of the Post Cold War* . Westminster, MD: Random House

Levy, M. A. (1995) 'Is the Environment a National Security Issue?', *International Security,* 20(20, pp35-62

Mabey, N. et al. (2011) *Degrees of Risk: Defining a Risk Management Framework for Climate Security* . London: E3G

Machiavelli, N. (1908[1515]) *The Prince*, translated by W. K. Marriott [Online]. Available at: http://www.gutenberg.org/files/1232/1232-h/1232-h.htm [Accessed: 4 April 2013]

Mathews, J. T. (1989) 'Redefining Security', *Foreign Affairs*, 6(2), pp162-177

Myers, N. (1994) *Ultimate Security: The Environmental Basis of Political Instability*. Washington: Island Press

National Intelligence Council (2012) *Global Trends 2030: Alternative Worlds*. Washington: National Intelligence Council [Online]. Available at: http://www.fas.org/irp/nic/global_trends_2030.pdf [28 March 2013]

Raleigh, C. & Urdal, H. (2007) 'Climate change, environmental degradation and armed conflict', *Political Geography*, 26(2007), pp674-694

Reuveny, R. (2007) 'Climate change-induced migration and violent conflict', *Political Geography*, 26(2007), pp656-673

Schwartz, P. & Randall, D. (2003) *An Abrupt Climate Change Scenario and Its Implications for United States National Security*. Virginia: Defence Technical Information Centre [Online]. Available at: http://www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA469325 [Accessed: 27 March 2013]

Soroos, M. (1997) *The Endangered Atmosphere: Preserving a Global Commons*. Columbia: University of South Carolina Press

Trombetta, M. J. (2009) 'Environmental security and climate change: analysing the discourse',*Cambridge Review of International Affairs*, 21(4), pp585-602

Ullman, R. H. (1983) 'Redefining Security', *International Security*, 8(1), pp129-153

UNSC, 5663rd Meeting (2007) *Security Council Holds First-Ever Debate On Impact Of Climate Change On Peace, Security, Hearing Over 50 Speakers*. 17 April 2007. New York: UNSC Department of Public Information [Online]. Available at: http://www.securitycouncilreport.org/monthly-forecast/2011-07/lookup_c_glKWLeMTIsG_b_7535735.php [Accessed: 29 March 2013]

Vidal, J. (2012) *Arctic expert predicts final collapse of sea ice within four years*. Available at: http://www.guardian.co.uk/environment/2012/sep/17/arctic-collapse-sea-ice [Accessed: 28 March 2013]#

Walt, S. M. (1991) 'The Renaissance of Security Studies', *International Studies Quarterly*, 35(2), pp211-239

—

Written by: Toby Fenton
Written at: Plymouth University
Written for: Jamie Gaskarth
Date written: January 2013