

Climate Change, Human (In-) Security and Stability

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Policy brief prepared for presentation at:

Climate Change and Security

A conference organized by:

S. Rajaratnam School of International Studies, Nanyang Technological University

&

Embassy of Switzerland in Singapore

11-12 October 2007

Traders Hotel, Singapore

Climate change will cause great human suffering and poses a risk to economic development and social and political stability. This risk is real and is already felt. Asia will be hit particularly hard – environmental disasters already do strike Asia with worse consequences than in any other part of the world.¹ The results of climate change will cause natural disasters, food shortages, and displacement of peoples. In addition, the impact of climate change will significantly amplify already existing threats to the point where they might trigger instability and violent conflict.²

Despite current international efforts to mitigate greenhouse gas emissions, climate change will likely continue largely unhampered. Neither will the world's already prosperous countries react quickly enough and reduce their consumption patterns to the point where climate change becomes reversible. Nor will newly rising transition economies (such as India or China – the latter soon surpassing the USA as largest contributor of CO₂ emissions) slow or green their growth to the point where greenhouse emissions will be stopped quickly enough to halt the negative repercussions of advancing climate change. We will have to adapt to new climate patterns and climatic conditions. We will have live with (but not necessarily suffer from) the consequences of climate change. While investments in offsetting the root causes of climate change (such as changing consumption patterns or alternative resource use) are clearly worth exploring and investing in, and changes may over time slow down or even halt climate change, it will be too late to reverse the dramatic consequences of climate change already set in motion.

There is wide variation in countries' ability to cope with and adapt to the negative impact of climate change. Countries with surplus wealth will develop coping mechanisms – although costly, those measures will move populations away from danger zones, adapt agriculture and industry, and generate other means to minimize the inconveniences caused by climate change to society, economy and the political system. Early preparedness and response will allow those societies to absorb the negative fallout of climate change. Ironically, such additional effort to confront threats to comfortable levels of security and prosperity will likely absorb some of the surplus wealth otherwise available for investing in – and securing – stability elsewhere in the world. Investing in one's own stability may come at the expense of securing other countries' well-being. Moreover, the industrialized North will likely come to develop a better and more nuanced appreciation of human

security needs and requirements and refocus some of its traditional investment in military security to invest in more apparent and immediate threats to the survival and well-being of the population – including those emanating from negative impacts of climate change. In fact, for those who have the means, climate change will be trigger to make long-overdue adjustments to traditional security policies, by refocusing attention to actual threats at hand – not war but disease, natural and man-made environmental disasters and over-dependence on non-renewable sources of energy.

Countries that are already stricken with multiple stress factors including poverty, social and political instability, will be much more susceptible to the negative consequences of climate change for at least two reasons: On the one hand, they possess only few means to prepare to counter the impacts of climate change; and on the other hand, they are already suffering from a variety of threats that will only be amplified by the latter. Single crop economies will be more susceptible to rising temperatures, and poverty-stricken populations will have no means for developing coping strategies to deal with changing climate patterns, to resist rising water levels in costal regions, or migrate into higher lying areas. Inadequate health services will not be able to cope with mounting cases of old and new diseases. Achievements towards reaching millennium development goals will be reversed – poverty and disease will increase, as will migration pressures and social and political tensions. This will exacerbate tensions within already fragile societies in the South – all the while the North is less likely to divert resources to the South as increasing efforts are required to secure their own well-being. Global institutions like the UN will be unable to impress upon the North the need and moral responsibility to share the burden of helping the South adapt to climate change – until the failure of the latter to do so will trigger explosions of violence, instability and population movements strong great enough to pose severe threats to the stability and well-being of the North. However, high levels of human suffering will accompany such developments in affected areas in the South – suffering and instability that will be largely irreversible. Not reaching this point of uncertain return will be the challenge at hand.

Thus, the global community will need to assess realistically the unavoidable threats posed by climate change – and explore means and ways to limit its negative impact. Finding the right balance between self-preservation and incentives to actively support other nations in their quest to adapt to and avert climate change is a tremendous challenge. The negative consequence of climate change also pose opportunities: They leave nations little choice but to resolve existing threats that could be greatly amplified by climate change. Otherwise, those able to cope with the negative impact of climate change will cordon themselves off from those who cannot. As a consequence, little momentum would be created and maintained to address the root causes of climate change in a systematic, global manner, by those in the industrialized North, threshold countries and those at the bottom of global wealth and prosperity. The gap between the “haves” and “have not’s” – and those able to live with climate change and those who are not able to do so, will widen. Increasing tensions – intra- and inter-state conflict over land and resources – and accompanying human suffering and instability will be unavoidable consequences.

This development can be averted if a few simple and urgent steps are taken, particularly by and for those societies mostly affected by climate change. A focus on human security is particularly helpful in both identifying climate change-induced threats and in developing and implementing effective, context-relevant mitigation as well as adaptation measures. Parts 1-3 of the following discussion address in more detail the links between climate change, human security and stability, while parts 4-6 offer recommendations for policy and implementation.

1. The threat of climate change: Causes, risks and impact

General risks/impact

Climate change is primarily a result of human activities, particularly the burning of fossil fuels and deforestation. Rising carbon dioxide levels lead to global warming, which in turn contributes among others to global ice melting, thermal expansion of the oceans and rising sea levels, shifting wind patterns and distribution of rainfall, heat waves, drying out of currently fertile regions, melting permafrost regions (which will further release CO₂ emissions into the atmosphere) and a large range of resulting environmental disasters. According to IPCC findings, global temperatures have been rising by 0.74 C over the past 100 years, with an expected further increase of 1.1 to 6.4 C by the end of this century. This could cause a rise in sea levels by 18 to 59 cm, and much higher levels if the Greenland ice sheet or Antarctica continue to melt.³

Risks for/impact on Asia

Asia already suffers the lion's share of environmental disasters worldwide: These will be compounded by climate change. For instance, according to one study, in 2006 Asia suffered 44% of worldwide natural disasters, with 119 million people killed or affected (83% of all reported victims worldwide), and US\$ 25 billion in economic damage (72.9% of worldwide damage).⁴ Between 1987 and 2006, the highest numbers of victims were caused by hydro-meteorological disasters in India and China (in 1987 one drought affected 300 million in India; in 1991, one flood affected 210 million in China; in 1994 of flood affected 78 million and one drought 80 million in China; in 1998 one flood affected 200 million in China; in 2002, droughts affected 300 million in India and 60 million in China, and a flood affected 60 million in China).⁵ India and China are among the future top contributors to greenhouse gases and are among those who stand to suffer the most. According to the UN, in Asia "[m]ore than a billion people could be affected by a decline in the availability of freshwater, particularly in large river basins, by 2050. Glacier melt in the Himalayas, which is projected to increase flooding and rock avalanches, will affect water resources in the next two to three decades. As glaciers recede, river flows will decrease. Coastal areas, especially heavily populated mega-delta regions, will be at greatest risk due to increased flooding from the sea and, in some cases, from river flooding."⁶

Climate change, environmental factors and violent conflict

The impact of climate change on violent conflict can at best be assumed: The Oxford Research Group speaks of "a global catastrophe costing millions of lives in wars and natural disasters" and "resulting persistent food shortages and even famines [that] would lead to increased suffering, greater social unrest and the pressure of greatly increased migration."⁷ While the IPCC reports that conflicts are among multiple stresses that affect exposure, sensitivity and adaptation capacity among populations confronted with the impact of climate change, it does not specifically outline the impact of climate change on the likelihood of new climate change-induced conflicts. This speaks to the wisdom of the IPCC, as such a link cannot be determined. Research has shown that there is no mono-causal and direct link between environmental degradation or climate change and the outbreak of violent conflict.⁸ Negative impacts of climate change cannot be understood or mitigated outside the larger political, economic and social conditions and threats characterizing an

affected society. However, it is safe to expect that the higher the level of instability and fragility due to other threats, the greater the impact of climate change will be.

2. The case for a human security-approach

Climate change greatly affects levels of human security among affected populations. The operationalisation of a concept that focuses on the survival and well-being of populations, with marked positive effects on state security and stability, deserves our attention and can serve as the foundation for effective adaptation and mitigation policies.

The frustration of and threats to the basic human needs of individuals and communities leads to human suffering, social and communal deterioration, and therefore to violence in its many direct and structural manifestations – which again leads to the frustration of human needs. This is a cyclical relationship. On the other hand, however, if individuals and communities feel secure and protected from the existential threats that emanate from social, political, and economic injustice, military violence, environmental disruptions or natural disasters – that is, if their basic human security is guaranteed – human suffering on an individual level and conflict and violence on communal, regional and international levels can be significantly reduced.

It is important to note that the concept of human security focuses not only on military conflict and its consequences for civilians but also on many non-traditional security threats, including disease, economic, or environmental threats. As will be noted below, the costs of non-traditional security threats are more devastating for human beings as those of traditional security threats, while carrying the potential to escalate into violence and war.

Innovation “human security”

What are the innovative characteristics of the human security approach? These include:

- The focus on the individual and the population as the referent objects of security;
- The recognition that a focus on the security of individuals and the population is at least as important as the security of states/national security;
- The recognition that investments in national military security (by maintaining armies to ward off potential external enemies) seem misplaced when most people are killed through environmental disasters (drought, floods, earthquake, etc) and disease;
- The recognition that the security infrastructure must go beyond national actors to include subnational, regional and global efforts to respond to local, cross-border and global threats that affect individuals and communities;
- The parallel focus on the alleviation of threats and efforts to strengthen populations’ coping capacities to adapt to ongoing human insecurity.

Non-traditional – but more severe – risks to peoples’ lives and security

We need to re-think security – by moving from analysing “conflicts” to analysing “threats.” An Oxford Research Group study has recently noted that “[t]he Cold War way of thinking focused on security as ‘defense’. This paradigm has continued to dominate attitudes to international security,

even though the global trend in major armed conflict and interstate wars has continued to decrease in the post-Cold War era and new challenges have emerged to threaten peace and security. What is needed ...is a system of 'sustainable security' that addresses the security concerns of all peoples and tackles both old and new threats."⁹ They argue that "current security policies are self-defeating in the long-term, and so a new approach is needed." Moreover, "international terrorism is actually a relatively minor threat when compared to other more serious global trends, and ...current responses to those trends are likely to increase, rather than decrease, the risks of future terrorist attacks."¹⁰ The group has identified four root causes of conflict and insecurity in today's world: Climate change, competition over resources, marginalization of the majority world, and global militarization. The interdependence between these four factors seems self-evident: The negative consequences of climate change will undoubtedly intensify competition over increasingly scarce and fought-over resources, which will further add to the growing marginalization of the poorest, while wrongly perceived "simple to detect and resolve" traditional military threats will continue to add to the militarisation of nations falsely searching to defend their population from wrong enemies and wrong threats. Thus, resources urgently required to address the threats at hand are diverted to chase traditional, familiar, but overall insignificant threats given the magnitude of socio-economic and environmental threats bound to be compound by climate change.

To put this argument into perspective, a recent study undertaken for the SIPRI Yearbook 2007 argues that, "[i]f the ultimate objective of security is to save human beings from preventable premature death and disability, then the appropriate security policy would focus on prevention instruments and risk reduction strategies for their causes." Thus, "[w]hile collective violence causes a great many premature deaths and disabilities, other types of injury cause an even greater number."¹¹

According to statistics prepared by the World Health organization, in 2005 (the most current year for which data was available), worldwide 17 million people died of communicable diseases, among them 2.8 million of HIV/AIDS; 1.7 million of diarrhoea-related sicknesses; 900'000 of malaria; 3.7 million of respiratory infection; and 2.4 million of perinatal conditions. 35.3 million people died of non-communicable diseases, among them 17.5 million of cardiovascular diseases and 7.5 million of cancers. In comparison, 5.4 million people died of injuries – 3.7 million of unintentional violence (including 1.3 million road accidents); and 1.7 million of intentional violence, of which 912'000 were self-inflicted 912'000 (suicide), 600'000 due to interpersonal violence (homicide), and 184'000 as a result of collective violence (armed violence).¹²

This further strengthens the argument emanating from human security thinking that investments in national military security must be re-thought when by far the most people are killed by preventable diseases compounded by poverty and environmental impediments. Clearly, government policies and spending priorities on security provision must be seriously rethought and re-directed at the real threats at hand.

Climate change – a powerful amplifier of existing threats

The negative results of climate change will create problems – problems that will, in combination with other factors, generate human suffering, economic decline and political instability. The negative consequences of climate change are thus contributing factors to a potentially dangerous escalation of human suffering and instability. Moreover, climate change and resulting environmental factors serve as powerful "amplifiers" of already existing problems and threats to

human and state security. In the absence of such threats, the impact of climate change is less severe and means are available to invest in averting its most serious consequences. If a country is already stable, prosperous and without significant social tensions, resources can be targeted at the negative fallout of climate change. Adaptation is thus possible without risking social, political, economic and security breakdown.

In countries with already existing threats and low social, political, economic and military stability, the impact of the same consequences of climate change will be much more severe, will more rapidly amplify existing cleavages and instability, trigger escalation to further tension, while little capacity and resources exist to mitigate the onslaught of climate change-induced threats.

Thus, if we assume that climate change will continue, that its negative consequences will affect all countries worldwide, and that its impact feeds on and increases threats already affecting a society, then the most severe consequences of climate change can be effectively resolved by addressing already prevalent threats.

A word of caution: The temptation of this – by and in itself logical – argument is the assumption that we could indeed comfortably and at relatively low cost adapt to climate change as long as there are no other destabilizing threats. The North might argue that the South should fix its existing problems in order to be more resilient to the negative fall-out of climate change. Sensitivity to climate change would thus be self-imposed. Ethically, this is a highly problematic argument as the solution of many countries' social, political and economic problems will surely far outlive the onslaught of climate change-related threats. Moreover, even if fragile states and societies are more prone to new threats because of unresolved problems, making matters even worse (in the literal sense "fuelling" climate change) through one's own actions (such as the North's and developing nations' unabated CO₂ emissions) is unacceptable.

3. Stability through human security provision

When faced with climate change and the potential for security repercussions, the following objectives could be pursued in order to maintain stability:

- 1) If the objective is the prevention of instability and armed violence resulting from impacts of climate change, the pursuit of local, national, regional, global efforts to maintain stability might secure short to mid-term stability, but will not necessarily contribute to sustainable human security provision. The main objective is attaining stability through maintaining state security.
- 2) If the objective is to prevent and reduce human suffering, climate change should be halted and reversed and adaptation capacities strengthened in order to limit human suffering (such as malnutrition, poverty, disease or instability caused by environmental migrants). Assuming that human suffering is closely linked with instability and potential escalation to armed conflict, such investment in human security will likely also be a significant investment in political stability. In this case stability is gained from serving both human and state security.
- 3) One could also opt to do nothing and prepare to react and subdue the effects of human suffering, increasing economic damage, political instability and the outbreak of collective

violence. In this case stability will be preserved at the risk of protracted state and human *in*-security.

Clearly, the second option would be most promising and effective in creating sustainable stability and security for both states and populations.

4. Solution: Context-relevant analysis of human security threats and responses

The design of effective responses to climate change depends on careful, context-focused analyses of threats and mitigation measures. Which are the main threats in a given context, how are they best addressed, and how are they or will they be affected by climate change?¹³

The **first step** consists of a careful threat analysis:

- *What* is the threat? (name of threat)
- *Who* is threatened? (section of society)
- By *whom*? (source)
- *Where & when*? (location and time)
- Is the threat *life threatening*? (threat to survival of individuals/population?)
- How many *victims*? (numbers, estimates, levels)
- Is it a *potential* and/or *actual* threat? (threat in future or already felt?)
- What can be *triggers*? (unexpected events triggering escalation)
- What are the *symptoms*? (visible evidence of the threat)
- What are the *root causes*? (underlying reasons)
- How *serious* is the threat? (is it a credible threat or a product of fear? What is the impact on society and greater political stability?)
- What would be a *good scenario*? (positive trend if threat is addressed)
- What would be a *bad scenario*? (negative trend if threat remains unaddressed)

The **second step** consists of a careful analysis and assessment of past, current and required responses for each threat:

- Which response measure *has been taken and concluded in the past*?
 - *By whom*? (actor)
 - *To whom*? (target group)
 - *Feasibility*? (was it doable and feasible?)
 - *Effectiveness*? (was the measure effective? Did it make a difference?)
- Which response measure *is currently being taken*?
 - *By whom*? (actor)
 - *To whom*? (target group)
 - *Feasibility*? (is it doable and feasible?)
 - *Effectiveness*? (is the measure being effective? Is it making a difference?)
- Which response measure *needs to be taken in the future*?
 - *By whom*? (actor)
 - *To whom*? (target group)
 - *Feasibility*? (would it be doable and feasible?)
 - *Effectiveness*? (would the measure be effective? Could it make a difference? What

could be indicators for success?)

The **third step** consists of an examination of the effect of climate change on threat and response analyses:

- Analysis of climate change-induced impact: Is it felt locally, nationally, cross-border?
- What are the results of climate change for each threat experienced in a particular geographic context?
- How does climate change affect those threats (worsen, improve, or mutate already existing threats)?
- How are existing threats intensified (in scope, severity and duration), how are responses obstructed (or in some cases aided)?
- Which additional efforts are required to manage the impact of climate change on existing threats and their management?

As a **fourth step**, and based on available means and resources, hard choices have to be made:

- The focus should be on the most severe threats where the combination of hazard and vulnerability makes the hazard “life-threatening” and existential;
- The focus should be on threats that are greatly intensified by climate change; and where existing responses require serious adjustment to retain effectiveness.

Using this framework as the basis for climate change-affected threats will help identify priority threats and entry points for effective counter measures – both in adapting to and mitigating the harmful effects of climate change.

5. Recommendations: Options and actors

Two main options present themselves in responding to climate change-induced threats – first, preventing climate change as such, and second, adapting to damage already done.

Mitigation

First, the causes of climate change must be addressed. Over time, this will halt and reverse climate change and its destructive impact. *However*, how feasible is this approach, given continuing demographic growth, economic growth, and energy demand growth? How feasible is the approach, given the capacity of the top (and possibly middle) third of the world’s population to adapt to climate change impacts; while the bottom third suffers the most but is also least able to improve its resilience? Clearly, key contributors (polluters) to climate change must agree to effective measures (such as the Kyoto Protocol and its successor) to halt and reverse greenhouse emissions before new polluters can be expected to come on board (i.e., the USA must agree, then India and China can be expected to follow suit). Still, the costs of action are likely to be much lower than the costs of inaction (according to one estimate 0.12% reduction of average annual GDP growth rate of GDP)?¹⁴

Adaptation

Second, even if climate change can be halted and reversed in the long run, some of the impact of global warming is already irreversible, and consequences will be felt – and need to be responded to – for some time:

- Adaptation mechanisms will have to be put in place to allow populations to survive and cope with climate change-induced or intensified socio-economic threats;
- The resilience and coping capacity of those affected (particularly those most vulnerable) to the impacts of climate change must be strengthened;
- Existing factors of vulnerability (other threats and their causes) must be addressed to release the social, economic and political capital necessary to manage new threats created by climate change;
- It will be wise to expect and prepare for severe repercussions of climate change for existing problems and threats. Thus, responses must be taken immediately and, separately and jointly, at local, national and regional/international levels – by individuals, households, civil society actors, state governments, regional organizations (such as ASEAN, perhaps in cooperation with regional organizations elsewhere) and the UN.

Whose responsibility?

Which actor carries the main responsibility to take early remedial action, and to strengthen proper preparedness to deal with the negative consequences of climate change in a sustainable matter? One could argue for an ethical responsibility to mitigate and help adapt by those societies who are mainly responsible for the causes of climate change – the past, current and future top polluters. Appeals to the moral and ethical responsibility of polluters (industries and their host/home states) are not necessarily futile, but they are of an academic nature in the eyes of those whose survival depends on action that is taken immediately – regardless by whom and with what motivation. Thus, while various regional and international actors can be called upon to live up to their moral responsibilities (and appeals are launched to highlight the long-term benefits of assisting other countries in halting and coping with climate change), measures must be put in place by and for those mostly affected. This also means that local and national actors might therefore have to take the initiative – and possibly and unfortunately (and unjustly) bear the brunt of the efforts and costs to stem climate change and its most devastating consequences.

6. Urgent next steps for relevant authorities at local, national, regional and global levels

- Do not wait for mitigation efforts to take effect and begin with preparations – in the following order;
 - a. Reduce existing threats that limit populations' coping/adaptation capacity;
 - b. Strengthen coping capacity and adaptation structures and mechanisms, and prepare for slow and fast-moving climate disasters;
 - c. Mitigate climate change;
- Conduct context-relevant threat and response analyses – while considering the impact of climate change on both;
- Threat and response analyses should be done by affected populations and relevant human security providers: Take a multistakeholder approach and work with civil society actors;
- Do not focus on state security and stability only – realize that threats, insecurity and human

suffering (and loss of life) are caused mainly by threats other than collective violence – address those “non-traditional” threats first!

- Recognize that conflicts are an indication of grave underlying problems which need to be tackled;
- Pragmatic responses must be quick and effective and, thus, selective by focusing on the most severe threats, and those causes that are linked to multiple threats;
- The focus on human security helps in identifying immediate and long-term consequences of climate change for affected populations – and effective responses. Taking this route will result in reduced human suffering and increased political, economic and social stability;
- Do not wait for outside help – take immediate action at the local level; pursue national programmes to assist local activities; and aim at regional implementation of international assistance.

Analyzing the effects of climate change and designing and implementing feasible and effective responses are based on: First, pragmatism, self-interest and self-preservation; second, the search for ethical solutions; and third, the merging of pragmatic with ethical solutions. The latter will lay the foundation for sustainable mitigation and adaptation strategies to avert, limit and survive the negative impact of climate change.

Notes

¹ P. Hoyois, J-M. Scheuren, R. Below and D. Guha-Sapir, *Annual Disaster Statistical Review: Numbers and Trends 2006*, Brussels: Centre for Research on the Epidemiology of Disasters (CRED), School of Public Health, Catholic University of Louvain, May 2007, p. 13.

² Please note: This policy brief focuses exclusively on the negative impact of climate change.

³ Jean-Pascal van Ypersele, "Climate change and cities: The IPCC case for action," keynote speech at the C40 Large Cities Climate summit, New York, 15 May 2007, p. 2. See also: <http://www.un.org/climatechange/bg.shtml>. See the IPCC working group reports: <http://www.un.org/climatechange/ipcc.shtml>

⁴ Hoyois et al., *Annual Disaster Statistical Review*, p. 13.

⁵ *Ibid.*, p. 19 and pp. 47-50.

⁶ <http://www.un.org/climatechange/background/csqufuture.shtml>

⁷ Oxford Research Group, *Global Responses to Global Threats: Sustainable Security for the 21st Century*, Briefing Paper, June 2006, pp. 6-7.

⁸ Simon Mason, Albrecht Schnabel, Adrian Muller, Rina Alluri and Christian Schmid, *Linking Environment and Conflict Prevention – The Role of the United Nations*, Zürich and Bern: Center for Security Studies, ETH Zürich and swisspeace, forthcoming.

⁹ Oxford Research Group, *Global Responses to Global Threats*, p. 6. At the very threshold of the post-Cold War era this subject was discussed in the Swiss context – also with reference to climate change as a non-traditional security threat: Heinz Kruppenbacher, "Was hat die Klimakatastrophe mit Dissuasion zu tun? Überlegungen zur Weiterentwicklung der schweizerischen Sicherheitspolitik," in *Sicherheitspolitik und Friedenspolitik: Gegensatz oder notwendige Ergänzung?*, Lenzburger Protokolle 1/89, Bern: Swiss Peace Foundation, 1989.

¹⁰ *Ibid.*, p. 4.

¹¹ Elisabeth Sköns, "Analysing risks to human lives," in *SIPRI Yearbook 2007: Armaments, Disarmament and International Security*, Stockholm: Stockholm International Peace Research Institute and Oxford: Oxford University Press, 2007, p. 243

¹² *Ibid.*, p. 250.

¹³ The methodological approach towards human security analysis, monitoring, warning and response described in this policy brief is informed in large part by swisspeace's ongoing work in human security research, particularly the four-year project "Operationalizing Human Security for Livelihood Protection: Analysis, Monitoring and Mitigation of Existential Threats by and for Local Communities," jointly sponsored by swisspeace (HUSEC) and the National Center of Competence in Research (NCCR) North-South: Research Partnerships for Mitigating Syndromes of Global Change is directed by Albrecht Schnabel. For further background on this project, see Albrecht Schnabel, "Human Security and Conflict Prevention," in David Carment and Albrecht Schnabel, eds., *Conflict Prevention from Rhetoric to Reality: Opportunities and Innovations*, Lanham, Maryland: Lexington Books, 2004, pp. 109-131; "Operationalizing Human Security," presented at an international workshop on Evolving Perspectives on Peace and Security in Africa, Igbinedion University Okada, Benin City, Nigeria, December 13-15, 2005; "Human Security and Regional (Non-) Cooperation in the Southern Caucasus" (with S. Neil MacFarlane), presented at the 46th Annual Convention of the International Studies Association, Dynamics of World Politics: Capacity, Preferences & Leadership, Honolulu, USA, March 1-5, 2005; "Operationalizing Human Security: Paradigm – Policy – Local Implementation," presented at the Annual Meeting of the Swiss Political Science Association, Balsthal, November 18-19, 2004.

¹⁴ van Ypersele, "Climate change and cities: The IPCC case for action," p. 4.