Climate change and human security: an overview

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In a recent speech in Korea (earlier this month in fact), the UN Secretary General Ban Ki-Moon drew attention to the catastrophic impact that climate change could have for humanity, a statement that places people at the centre of the climate security debate. Yet in much of the security literature and in the policy reviews undertaken by governments and defense and security think tanks, climate change is documented as a threat multiplier, overstretching societies' adaptive capacities and creating or exacerbating political instability and violence, possibly to the extent of inter-state conflict. Other presentations at this conference will provide the detail of climate change and its impacts, and the vulnerabilities – or human insecurities – of specific groups. In this short paper, I provide an introduction to human security and explore the importance (and consequences) of making human security central to the climate change debate.

Human security

The human security model is the most prominent of the non-traditional security approaches to climate security and other forms of environmental security. From an orthodox security discourse, it is also possibly the most controversial in that it focuses on individuals rather than the state as the referent of security, and expands the agenda of concerns to include what many would still prefer to think of as welfare challenges. The genesis of the human security approach lies in ideas articulated initially by the United Nations Development Programme in its 2004 Human Development Report. The UNDP presented human security as a universal, people-centred concern with 'human life and dignity' and as an antidote to conventional views of security that had 'for too long … been shaped by the potential for conflict between

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states … [and] equated with … threats to a country's borders'.[2] While environmental degradation was not the only component of human security explored by the UNDP, the report nevertheless identified the 'basic question of human survival on an environmentally fragile planet' as a central matter of concern. This theme was also picked up by the Commission on Global Governance which argued that [inter alia] 'threats to the earth's life support systems … challenge the security of people far more than the threat of external aggression'.[3] Human insecurities and social stresses can sometimes be tied up with more conventional interpretations of state and regional security. A country or region in which people are not economically, socially and environmentally secure in their daily lives cannot be said to be 'secure'.

Climate change and human insecurity in the region

Climate change is likely to have a fundamental impact on the survival and the livelihoods of millions of people in the region. This is a region in which subsistence lifestyles, which are heavily dependent on the health of ecosystems, constitute a significant sector of human economic activity. Of the ten countries in the world most imperilled by climate change in terms of the *number* of people likely to be affected, six are in the Asia Pacific region: China, Vietnam, Indonesia, Japan, Thailand and the Philippines.[4]

It is people who ultimately bear the cost of climate-related environmental harm through increased vulnerability, poverty, disease, loss of livelihoods, and food insecurity sometimes to the extent of real malnutrition and starvation. A decline in fisheries production, caused by over-fishing and by possible increases in sea-surface temperatures and salinity, will complicate food security for millions of people in the region who rely on fish stocks as their major source of protein. Coupled with a projected decline in crop yields, particularly in key cereal crops, this could result in malnutrition and possible starvation for the region's most disadvantaged. According to the ADB, about 20% of people in the world who will be affected by coastal flooding by 2100 will live in Southeast Asia, particularly Indonesia,

[2] United Nations Development Programme, *Human Development Report 1994* (New York: Oxford University Press, 1994), pp. 22.
[3] Commission on Global Governance, *Our global neighbourhood* (Oxford: Oxford University Press, 1995), p. 79.
[4] EEPSEA reports, however, that climate change is less rapid in Southeast Asia compared with global averages; Herminia Francisco et al. (2008) Climate change: impacts, adaptation and policy in Southeast Asia (Singapore: EEPSEA), p. 5.S

Philippines, Thailand, and Viet Nam.[5] Barnett reports that declining rainfall in the Yellow River catchment in China is already exacerbating water scarcity driven by industrialisation and urbanisation, causing periodic water shortages for many of its 130 million farmers.[6] Higher average temperatures and the likelihood of more intense flooding from potentially disastrous weather events is likely to be accompanied by an increase in diseases such as cholera, malaria and dengue fever. The IPCC Fourth Assessment Report anticipates regional increases in morbidity and mortality due to water borne diseases.

Table 3.15. Observed Impacts of Climate Change on Health Sector in Southeast Asia

Climate Change	Indonesia	Philippines	Singapore	Thailand	Viet Nam
Increasing temperature and variability in precipitation	Significant increase in dengue cases in La Niña years; Illness and deaths due to heat stress	Increased dengue outbreak; Illness and deaths due to heat stress	Increasing cases of dengue; Spreading to areas not previously found	Impacts of dengue fever significant and increasing	Increased number of dengue cases
Sea level rise	Spread of water-borne infectious diseases	Spread of water-borne infectious diseases		Spread of water-borne infectious diseases	Spread of water-borne infectious diseases

Sources: Boer and Dewi (2008), Cuong (2008), Ho (2008), Jesdapipat (2008) Perez (2008).

Source: Asian Development Bank 2009, p. 53

The IPCC estimates that a 40-cm sea level rise by 2080 could displace as many as 21 million people in Southeast Asia and the World Bank reports that up to 11 million people just in Vietnam alone could be displaced in the event of a 1 metre sea-level rise.[7]

Climate change will create further economic uncertainties and not just for the region's poorest countries although they are likely to be the economies that are least resilient, at least in the short-term. Nevertheless, the poor in both urban and rural areas remain the most disadvantaged and impoverished by climate change, a condition the Asian Development Bank refers to as 'environmental poverty'.[8] In Southeast Asia, for example, over 300 million people live on incomes that fall below $US 2.00 per day (over 40% of the region's

[5] ADB, (2009) *The economics of climate change in Southeast Asia: a regional review* (Manila: ADB) p. 51
[6] Jon Barnett (2007) Climate change and security in Asia: issues and implications for Australia, Melbourne Asia Policy Papers No 3 (Melbourne: University of Melbourne Asia Institute), p. 3.
[7] Cited in Herminia A. Francisco (2008) Adaptation to climate change: needs and opportunities in Southeast Asia, ASEAN Economic Bulletin, 25(1): 7-19 at p. 7.
[8] See ADB, *Environmental Poverty: New Perspectives and Implications for Sustainable Development in Asia and the Pacific* (Manila: ADB, 2007).

population).[9] Poverty exacerbates climate insecurities. Marginal incomes provide little or no safety net against health burdens, food insecurity, flooding and drought, or other impacts of climate change. And those who are economically marginalised are also least able to pursue adaptive strategies, least able to buy their way out of the impacts of climate change.

The human security consequences will also create demands for resources, food, water, health infrastructure, and social and economic assistance in the face of climate-enforced displacement that may be difficult for governments to meet, potentially undermining confidence in those governments and calling their authority and perhaps even legitimacy into question.

Rethinking climate security triggers

Focusing on human security also makes us think differently about those 'triggers' that are often identified in a more orthodox approach to climate insecurity as the threat multipliers. From a human security perspective, for example, enforced migration from unsustainable lands generates insecurity for those whose lands and homes can no longer sustain them, rather than presenting climate refugees as a potential source of pressure on and threat to states. A human security model demands that we worry about the way that climate-related food insecurity, malnutrition and an increased disease burden destroys lives and livelihoods, and exacerbates poverty and misery for the millions of people who are affected, rather than worrying about this only as a trigger for civil unrest and potential extremism. The IPCC notes that 'projected climate change-related exposures are likely to affect the health status of millions of people, particularly those with low adaptive capacity' through increases in malnutrition, greater frequency of death, injury and disease from heatwaves and other disasters of nature, an increased disease burden including diarrhea, cardio-respiratory illness, and infectious diseases.[10] Vulnerability to the kinds of natural disasters (or disasters of nature) and humanitarian crises that accompany severe climate change is more than just a source of demand for financial and physical intervention and stretching of peacetime military deployment (among other things) by countries with the capacity to do so.[11]

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[9] On 2005 figures, about 93 million (18.8%) people in Southeast Asia lived below the $1.25-a-day poverty line, and 221 million (44%) below the $2-a-day poverty line; ADB (2009) *The economics of climate change in Southeast Asia: a regional review* (Manila: ADB) p. 53

[10] IPCC, Summary for policy-makers, Working Group II, p. 12.

[11] Purvis and Busby point out, 'between 1990 and 1999, an estimated 188 million people a year were affected by natural disasters, 6 times more than the 31 million annually affected by armed conflict'. Purvis and Busby, 'The security implications of climate change', p. 69

Yet in conditions of economic weakness (the term used by International Alert), the range of income possibilities is narrowed and the state is deprived of resources with which to meet people's needs, with a higher degree of risk of violence and conflict.[12] From a human security perspective, climate related violence, conflict and social unrest are further sources of human insecurity. The HREC fears that the 'inability of governments to meet the needs of its population … or to provide protection in the face of … hardship could trigger frustration [and] lead to tension'.[13] Social adaptive capacity is thought to be most vulnerable where demands on resource management and social capital are enmeshed in complicated ways with other social tensions. The social and economic impacts of climate change in poorer countries and in poorer parts of rich countries are likely to generate greater demands for effective response which many governments are unable to meet.

As well as recognizing that it is people and their communities who are most at risk from climate change and from the instability, incapacity, social and economic stress that might occur, a human security model will give equal emphasis to adaptation strategies that have the potential to save lives, increase individual adapative capacity, build societal resilience and lessen the chances of conflict. Karen O'Brien (director of the IHDP Global Environmental Change and Human Security project) reminds us that that 'framing climate change as a human security issue [also] brings to the forefront questions about vulnerability, equity, conflict and cooperation, and sustainability'.[14]

Human security approaches also have something to say about how to respond to climate insecurity. The expectation in more traditional, adversarial models of climate security is that governments should work cooperatively to avoid the kinds of tensions that might result from competition for resources and the cross-border challenges of 'climate refugees' but should also prepare themselves for possible demands on their defence forces to protect borders against refugees, to protect strategic assets and supply lines, or to assist in cases of climate-related humanitarian crises or civil unrest. Underlying this has been a focus on climate mitigation as a preventive strategy. Certainly cooperative and multilateral approaches to climate change are essential – and preferable to the deployment of military capability. Less

[12] Jan Smith and Janani Vivekananda, A climate of conflict: the links between climate change, peace and war (London: International Alert, 2007), p. 3.
[13] HREC, *Climate change and international security*, p. 5.
[14] Karen O'Brien, 'New beginnings', GECHS News, no. 1 (2006), p. 1

attention, however, has been paid in these debates to the importance of adaptation and building social resilience for those communities and countries most affected by climate change (of which there are many in the Asia Pacific). Yet adaptation is key to minimizing social instability, inter-communal conflict and, in turn, regional insecurity and instability. International Alert offers the stark message that it is too late to rely on mitigation alone. Indeed, IA argues in fragile states adaptation should be prioritised over mitigation if climate change, as well as climate-related violent conflict and its impact on local communities are to be avoided or minimised.[15] Adaptation to climate change is a process by which vulnerability is reduced and resilience increased. It serves as a traditional security response, to reduce the potential for conflict and instability, and a human security response, to support the lives of those who are most vulnerable to climate-induced conflict and to the social and economic consequences of climate change. The human security model for adaptation suggests that this cannot be a process of 'top-down' technocratic responses. In its report on climate change and conflict, International Alert outlines a 'peacebuilding' model that requires dialogue and social engagement, inclusivity and transparency.[16]

As the IPCC observes, more extensive adaptation is required than is presently occurring but the barriers, limits and costs are not always well known. Working group II summarises it this way:

> The array of potential adaptive responses available to human societies is very large, ranging from purely technological (e.g., sea defences), through behavioural (e.g., altered food and recreational choices), to managerial (e.g., altered farm practices) and to policy (e.g., planning regulations). While most technologies and strategies are known and developed in some countries, the assessed literature does not indicate how effective various options are at fully reducing risks, particularly at higher levels of warming and related impacts, and for vulnerable groups. In addition, there are formidable environmental, economic, informational, social, attitudinal and behavioural barriers to the implementation of adaptation. For developing countries, availability of resources and building adaptive capacity are particularly important.[17]

[15] Smith and Vivekananda, A climate of conflict, p. 5
[16] Smith and Vivekananda, A climate of conflict.
[17] IPCC, *Summary for policy-makers: Contribution of working group II*, p. 19.

A recent ADB report on the economics of climate change in Southeast Asia calls for countries to 'treat adaptation as an extension of sustainable development practices'. The key elements of this strategy, the Bank argued, include: 'adapting agricultural practices to changes in temperature and precipitation; adapting water management to greater risk of floods and droughts; adapting coastal zone management to higher sea levels; safeguarding forest areas from forest fires and degradation; and adapting people to threats of vector-borne infectious diseases. Southeast Asian countries need to take timely action to adapt to climate change, build resilience, and minimize the costs caused by the impact of GHG emissions that have already been locked into the climate system'.[18]

[18] Asian Development Bank (2009) *The economics of climate change in Southeast Asia: a regional review* (Manila: ADB) p. vii.