



STRATEGIC INSIGHTS

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We publish scholarly articles that address issues of current interest to the makers and executors of U.S. national security policy. We are particularly interested in articles addressing U.S. homeland security, WMD proliferation, regional conflict, and role of U.S. forces in contemporary conflicts.

The journal seeks articles that will make our readers think, generate discussion, and gain new insight into the challenges and opportunities confronting policymakers and military professionals.

Views that run counter to the conventional wisdom or official U.S. government policy are welcomed.

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Table of Contents

[Introduction to the Fall 2010 Issue](#)

Sandra R. Leavitt [1](#)

Feature Articles

[Climate Change and Climate Politics](#)

Daniel J. Moran [4](#)

[Situating Climate Security: The Department of Defense's Role in Mitigating Climate Change's Causes and Dealing with its Effects](#)

Daniel Clausen and Michael Clausen [14](#)

[Structural, Environmental, and Political Conditions for Security Policy in the High North Atlantic: The Faroe Islands, Greenland, and Iceland](#)

Rasmus Gjedssø Bertelsen [26](#)

[Stability and Security in a Post-Arctic World: Toward a Convergence of Indigenous, State and Global Interests at the Top of the World](#)

Barry Scott Zellen [53](#)

Conference Report

[U.S.-China Strategic Dialogue Phase V: "Connecting Long Term Goals To Contemporary Policy"](#)

Michael Glosny and Christopher P. Twomey [79](#)

Report Documentation Page				Form Approved OMB No. 0704-0188	
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Introduction to the Fall 2010 Issue

Dr. Sandra R. Leavitt

This issue of *Strategic Insights* explores the fascinating nexus of climate and security. While the jury remains out on the ultimate consequences of climate change, and whether the implications of recent warming trends will be as profound as the more pessimistic scenarios have suggested, military planners and security experts have been considering the potential impacts, and devising mitigative measures in case recent trends continue or accelerate. In the far northern reaches of our planet, earlier seasonal ice melts and brief periods of ice-free conditions in the Arctic Ocean have been a reality for several years—forcing Arctic states and peoples to confront a more pressing imminence of climate security challenges than yet experienced in many other parts of the world.

In this issue, we consider both the broader issues of climate change and national security—as presented by Daniel Moran in “Climate Change and Climate Politics” and by Daniel Clausen and Michael Clausen in “Situating Climate Security: The Department of Defense’s Role in Mitigating Climate Change’s Causes and Dealing with its Effects”—and also the specific consequences of climate change on the Arctic region—as presented in “Structural, Environmental, and Political Conditions for Security Policy in the High North Atlantic: The Faroe Islands, Greenland, and Iceland” by Rasmus Gjedssø Bertelsen, and “Stability and Security in a Post-Arctic World: Toward a Convergence of Indigenous, State and Global Interests at the Top of the World” by Barry S. Zellen.

- In “[Climate Change and Climate Politics](#),” NPS Professor of National Security Affairs Daniel Moran shares insights from the introduction to his forthcoming edited volume, *Climate Change and National Security: A Country-Level Analysis*, which will be published by Georgetown University Press in 2011. His book appraises the intermediate-term security risks that climate change may pose to the United States, its allies, and to regional and global order, and thereby contributed to the growing literature on “environmental security”—a phrase that encompasses a wide range of policy problems. For many, Moran notes, environmental security is chiefly about addressing the challenges climate change may present to humanity and its institutions. Security in this context is to be sought through measures designed to mitigate or adapt to changes in the earth’s ecology, which may some day make current social and economic practices unsustainable. Others, including Moran, interpret climate change less as a direct threat than as an additional source of stress on the sinews of public life, which may cause fragile governments to fail, or provide new impetus for a range of violent outcomes, ranging from social upheaval to aggressive war. Moran’s book does not seek to comment on the likelihood that the environmental changes foreseen by current earth science will come to

pass, nor to evaluate policies that might be chosen in response to them—but instead attempts to lay the problems hypothesized by science on top of the known or anticipated challenges of international life, and to consider what might change as a consequence.

- In [“Situating Climate Security: The Department of Defense’s Role in Mitigating Climate Change’s Causes and Dealing with its Effects,”](#) Daniel Clausen and Michael Clausen note the publication of a bevy of key reports by respected think tanks, research organizations, and government agencies—including the latest Defense Department *Quadrennial Defense Review* (QDR) and the *National Security Strategy* (NSS)—illustrate how climate has increasingly become recognized as a legitimate object of national security thinking. The authors consider three issues in their article—the emerging threat of climate change as it is currently known through climate change models; the way climate security is increasingly being internalized in the U.S. national security community; and the tasks the DoD can undertake to mitigate the causes of climate change and deal with its effects. The authors apply concepts developed by the Copenhagen School of securitization studies, which offers insights into how and why issues move beyond normal politics to become vital issues of security, as definitions of the national security are defined through the interactions politicians, external contexts, and audiences of key stakeholders, elevating issues such as climate change to the top level of the national agenda.
- Shifting to a more direct examination of the consequences of climate change on Arctic security, United Nations University professor Rasmus Gjedssø Bertelsen presents his article, [“Structural, Environmental, and Political Conditions for Security Policy in the High North Atlantic: The Faroe Islands, Greenland, and Iceland,”](#) in which he addresses the structural, environmental, and political conditions for formulating and implementing security policy in the Greenland-Iceland-Faroe Islands region of the high North Atlantic. All three of these “microstates” possess very limited absolute resources, yet are situated in vast, and increasingly important air and sea spaces undergoing a rapid geophysical transformation as a result of climate change. This article considers the public finance, administration, and security policy challenges facing these three northern microstates, each with small populations and narrow tax bases for security policy expenses – forcing policymakers to approach the new challenges creatively in their search for effective security policies.
- And lastly, in [“Stability and Security in a Post-Arctic World: Toward a Convergence of Indigenous, State and Global Interests at the Top of the World,”](#) Barry S. Zellen shares his observations from the Western Arctic, where he long resided, noting that like the high North Atlantic, the North American Arctic has also experienced a rapid transformation during the last few years as unprecedented ice melts caught ice scientists, climatologists, and northern residents all by surprise, resulting in ice-free conditions in both Canada’s Northwest Passage and Russia’s Northern Sea Route for the first time in human history. Zellen examines how increasing commercial and strategic activity in the Arctic basin will

bring the region's long-isolated indigenous peoples into closer and more frequent contact with the modern state, testing the new systems of self-governance conceptualized and negotiated in an earlier time. Zellen's article examines the political modernization of the Inuit and their integration into the political fabric of the modern state through a mosaic of bilateral land claims and self-government processes that more closely bind tribe and state, and considers how the thawing of the long-frozen Arctic will affect these nascent governing structures at the top of the world.

In addition, we present a new conference report, "[U.S.-China Strategic Dialogue Phase V: 'Connecting Long Term Goals to Contemporary Policy'](#)," on the fifth annual session of the U.S.-China Strategic Dialogue, which was held in Honolulu, HI on May 2 -4, 2010. The Dialogue is a track 1.5 conference; thus, while formally unofficial it includes a mix of government and academic participants. Organized by the Naval Postgraduate School and Pacific Forum-CSIS and both funded and guided by the Advanced Systems and Concepts Office of the U.S. Defense Threat Reduction Agency, the goal of this series of annual meetings has been to identify important misperceptions regarding each side's nuclear strategy and doctrine and highlight potential areas of cooperation or confidence building measures that might reduce such dangers. Beyond that, the conference aims to deepen American understandings of the way China views nuclear weapons, the domestic debates that shape those views, and the degree to which there is change in strategy, doctrine, and force posture in Beijing. Previous meetings focused their discussions on general perceptions of the utility of nuclear weapons, the nature of current nuclear strategy and operational concepts of each side, regional issues pertaining to nuclear weapons issues, and prospects for cooperation with regard to specific policy areas. This year, the meeting was organized around six panels (see the attached agenda) centering on the key strategic threat perceptions of each side—general and proliferation related—and the various sorts of security policies each undertakes to address these threats—unilateral, bilateral, or multilateral.

We hope you enjoy our Fall 2010 issue, and look forward to seeing you again soon.

Dr. Sandra R. Leavitt
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Climate Change and Climate Politics

Daniel Moran

The essay that follows is based on the introduction to the forthcoming volume titled *Climate Change and National Security: A Country-Level Analysis*, edited by Daniel Moran (Georgetown University Press, 2011), and is reprinted with the permission of the publisher and copyright holder (www.press.georgetown.edu). The book in turn is based on the revised and expanded proceedings of a conference held at the Naval Postgraduate School in December 2007, and sponsored by the Long-Range Analysis Unit of the National Intelligence Council, to support the preparation of the National Intelligence Assessment on Climate Change presented to the United States House of Representatives Permanent Select Committee on Intelligence (Select Committee on Energy Independence and Global Warming) in June 2008.

* * *

This book appraises the intermediate-term security risks that climate change may pose to the United States, its allies, and to regional and global order. It is intended to be a contribution to the growing literature on “environmental security,” a phrase that encompasses a wide range of policy problems. For many, environmental security is chiefly about addressing the challenges that climate change may present to humanity and its institutions. Security in this context is to be sought through measures designed to mitigate or adapt to changes in the earth’s ecology, which may some day make current social and economic practices unsustainable.^[1] Others interpret climate change less as a direct threat than as an additional source of stress on the sinews of public life, which may cause fragile governments to fail, or provide new impetus for a range of violent outcomes, ranging from social upheaval to aggressive war.^[2]

The present work is of the latter kind. It does not seek to comment on the likelihood that the environmental changes foreseen by current earth science will come to pass; nor to evaluate policies that might be chosen in response to them. It is, instead, an attempt to lay the problems hypothesized by science on top of the known or anticipated challenges of international life, and consider what might change as a consequence. It seeks to do this in a relatively precise and disciplined way, however, and it is useful to begin by considering why, in the field of environmental security, precision and discipline can be hard to achieve.

The greatest difficulty arises from the different speeds at which politics and the natural environment operate, or more precisely the rates at which they change. It must be admitted that the phrase “intermediate-term security risks” that was employed a few sentences ago to describe this project’s goals was chosen for no better reason than because it is equally unsatisfactory to scientists and statesmen alike. This volume originated in a project directly connected to real-

world policy-making, and was intended to produce a result of practical value in that context. To that end all contributors were asked to evaluate the security implications of climate change out to the year 2030. In the world of politics, twenty years is not the intermediate term. It is a long time: the far horizon within which serious strategic planning has traditionally been done.^[3] To policy-makers and planners, risks that are a generation away are long-term risks.

For earth scientists, on the other hand, twenty years is, if not quite the blink of an eye, then certainly a brief span of time, across which their models of our environmental future are barely able to generate useful results. The mainstream of credible work on climate change, as exemplified by the reports of the UN's Intergovernmental Panel on Climate Change (IPCC), has tended in recent years to look further outward, toward 2050 or 2100, in presenting its conclusions.^[4] Of necessity, models that are intended to anticipate conditions in fifty or a hundred years lose precision when asked to render judgments over significantly shorter (or longer) periods.

If we imagine the models of the earth scientist as a kind of lens through the future may be viewed, then we must accept that, like real lenses, those models have an optimum focal range, on either side of which the image becomes progressively blurry. The same can be said of the assumptions, experiences, and predilections of policy-makers, which are the lenses by which they also seek to envision the future. The central challenge in the field of environmental security arises from the fact that these two sets of lenses have such different focal lengths that their useful fields of vision barely overlap. The timeframe of this study was chosen not because it is optimal in terms of either politics or science, but because it is at least credible in both contexts, and sufficiently so to impose a reasonable restraint on the range of conditions to be considered. Twenty years may be a long time in politics, but not so long as to be unimaginable. It may be a short time in the life of the earth, but not so short that the changes anticipated by current science will not have become subject to preliminary "out-of-sample" testing, which will in turn strengthen (or discount) the credibility of predictions about the longer-term future.

In the same way that scientists and policy-makers diverge in their sense of how quickly time passes, so too do they differ with respect to the maps of the world they carry in their heads. The earth scientist's map is drawn by natural forces on a planetary scale, which may be effected by human actions in aggregate, but which nevertheless operate without regard to human institutions. Its crucial boundaries are drawn by nature, in the form of sea coasts, mountain ranges, forests, deserts, glaciers, and so on. These things matter to the policy-maker too, of course, but their influence is often trumped by other lines, drawn by the hand of man, which divide one sovereign state from another. It is within those lines that the political choices that govern humanity's response to climate change will be made.

There is every reason to believe those choices will vary a good deal, even among polities confronted with substantially similar forms of environmental stress. This project appraises the security risks that climate change poses when its most readily anticipated effects are applied to the known political and social conditions of states whose fortunes are of particular importance to

the United States. The process of selection, it is worth emphasizing, was driven by concrete considerations of policy as judged by those tasked with making it, and not by social-scientific criteria aspiring to general theoretical validity. The resulting list—39 countries plus the European Union—could easily have been extended to almost any length. It also omits some countries whose policy relevance would appear to demand their inclusion. A number of places of intense current interest, including North Korea, Afghanistan, Iran, and the states of the Horn of Africa, have not been included because their politics are at present so opaque or unsettled that it did not seem possible to disentangle and evaluate the likely consequences of their exposure to climate change, however grave that exposure might be. Nevertheless, the resulting study is still the most comprehensive of its kind, and broadly representative of the security challenges that climate change may pose over the next few decades.

All the research that follows takes as its starting point what might be described as “down the middle” assumptions about how anthropogenic climate change will unfold over the next few decades: i.e. that basic trends, both human and natural, will continue in their current directions and at their current pace. Climate science is all about building scenarios, and then modeling projected results across future time periods. Because this project considers a relatively short time period in environmental terms, albeit an extended one in political terms, it seemed most reasonable to employ scientific data based on models that assume the world economy will continue to develop more or less as it has recently: that the large-scale distribution of goods will continue to be governed by international markets; that market participants will continue to seek economic growth as a social good; and that no remarkable changes will occur in the consumption of fossil fuels, other than those that may arise as a consequence of rising costs in the marketplace.

Other sets of assumptions are possible, and have often been explored by earth scientists by way of testing the range of outcomes their models may generate under varying patterns of human activity—increasing or decreasing economic growth, static or increasing efforts at environmental mitigation, and so on.^[5] Because the focus of this project is on human activity itself, however, it was essential to hold the earth science constant, and also to avoid analyses predicated upon “worst-case scenarios”—or “best-case,” for that matter.

The one area in which the “no-worst-case-scenarios” rule proved most difficult to enforce was with respect to rising sea level, a particularly contentious area of climate science. Many well-founded early efforts to estimate sea level rise, including the work summarized by the IPCC, have been revealed as too conservative in light of subsequent experience, owing to the currently rapid melting of polar and glacial ice, whose pace has outstripped the scientific consensus.^[6] Our data on sea level rise is pegged to low-elevation coastal zones of one and three meters, which, within our timeframe, imply a rate of sea level rise significantly faster than anything foreseen by the mainstream of climate scientists even a few years ago. On balance, and assuming the persistence of current conditions, a one-meter rise would lie at the far end of the range of what is currently thought possible by 2030.^[7] A three-meter rise lies outside that range, and has been incorporated as a (relatively conservative) proxy for the kind of tidal surge that severe weather events like tropical cyclones routinely produce, and whose incidence is expected to

increase as a consequence of global warming.[8] The tidal surge produced by Hurricane Katrina, the most famous such episode in recent American history, exceeded seven meters.[9]

Contributions to this volume are organized around six primary questions, which chapter authors were asked to address in whatever form seemed best to them. Here are the questions as originally posed:

1. Your country or region may already be susceptible to unruly socio-political change due to existing traditional risk factors. Are the climate impacts hypothesized for 2030 likely to be an appreciable additional factor in triggering disruptive change, internally or externally?
2. The most basic negative responses to environmental stress are either fight (civil conflict or external aggression) or flight (internal or external migration). For the people of your country or region, which response would you consider more likely? Please provide what detail you can with respect to the political parties, social or ethnic groups, or local areas where the actions you anticipate may be most serious or most likely to occur.
3. Considering the disruptive possibilities you have described in response to the questions above, how would you assess the risk that the net result will be complete failure of the state?
4. Conversely, might your country or region possess latent reserves of social resilience and ingenuity, or of institutional capital, which will allow it to meet the challenges of climate change successfully? Are there important social or other interest groups in your country or region that might benefit from climate change? or expect to?
5. Would you anticipate that climate change might make your state an object of aggressive war to control scarce resources? Might it become a destination for migrants and refugees from neighboring countries?
6. What do the behaviors and developments that you have foreseen in your state suggest about the outlook and tone of official foreign policy? Would you expect it to become more or less open to engagement with the larger world? More or less amenable to Western and American influence and interests?

These are not quite the questions that scholars, left to themselves, would have formulated. They reflect the perennial need of policy-makers for firm, “actionable” answers to straight-forward questions, and as a consequence they may sometimes trample upon analytic nuances that are worth preserving in other contexts. It is apparent, for instance, that the choices available to a population confronted by climate stress go beyond “fight” or “flight.” The most likely choice is in fact adaptation in place; a possibility that is effectively acknowledged in the subsequent

question about ingenuity and social resourcefulness. Similarly, while it is possible that climate change may produce “winners” and “losers” within given societies, it is more likely to produce complex patterns of differential loss, thus increasing inequality while depressing economic performance and degrading social conditions for everyone.

The governing assumption of this project has been that realistic arguments about environmental security must be conducted within a politically relevant time frame, and with reference to real states and the real societies they govern. Its outstanding inference, in turn, is that easy generalities about the security implications of climate change will be hard to come by. Nevertheless, there is one general point that is worth emphasizing: given the power of the natural forces that appear to be bearing down on mankind, it is easy to lose sight of human agency, and assume that all essential questions will eventually be decided by phenomena that dwarf all human endeavor. That may be true in the long run. It certainly will be true if the worst anticipated effects of climate change come to pass. But it is not true during the period that concerns this book. Even when confronting the untrammelled forces of nature, humanity can expect to keep making its own history for a while longer yet. It will have to do its best.

Without unduly anticipating the results of the studies that follow, a few comments may be useful by way of highlighting some of the larger patterns that emerge from considering the questions above across dozens of individual countries and regions. It is apparent, first of all, that the kinds of social and political actions that impact international security are almost invariably overdetermined, and most commonly arise from the intersection of multiple factors that may well seem manageable individually. Viewed in these terms climate change poses an especially insidious challenge, combining as it does the gradual accumulation of relatively subtle effects, and an increasing tendency toward dramatic events (flooding, drought, storms, and so on) that are liable to galvanize public opinion at unexpected moments. Even the best governments have every reason to hate problems of this kind, and they are likely to prove especially troublesome to authoritarian regimes whose institutions have been optimized (if that is the word) to deal with more traditional forms of opposition and instability. In this respect it may be easy to underestimate the threat that climate change poses to the well-ordered police states of the developing world, whose true social base does not extend much beyond the armed forces and rent-seeking economic elites.

On balance it is clear that, for much of the world, the most important sources of resilience to climate change reside within societies rather than within governments; and also that many governments may prove reluctant to take the kinds of measures required to tap into that resilience and mobilize social capacity. It is in this area that the intersection between climate change and local conditions becomes especially complex, and where general statements about how things can go wrong at the macro level are of least value. It is of little use, for instance, to be told that “by 2020 between 75 million and 250 million [Africans] are projected to be exposed to increased water stress due to climate change,”^[10] unless one also knows which Africans specifically are most at risk, and what kinds of governmental and other responses can be expected.

The evidence presented here offers little reason to anticipate significant international violence as an immediate consequence of climate change and associated resource scarcities. Rather, problems of this kind seem more likely to arise as second-order effects brought about by climate-induced demographic shifts, which may inspire violent reactions depending on the social groups involved and the prevailing attitudes in play. Climate change will tend to increase inequality across a wide range of societies, even if it does not produce many outright “winners” anywhere. It is especially likely to heighten strains between urban and rural populations, a crucial social fault line throughout the developing world. And here one specific inference may be worth highlighting, which is that, for the foreseeable future, the critical path connecting climate change to social and political failure lies less through rising temperatures or rising sea-levels than through changing distributions of fresh water. If there is one piece of advice that this study would appear to recommend to policy-makers and strategic planners everywhere, it would have to be “follow the water.”

As to the ultimate question of how climate change may impact relations between the countries studied here and the United States, the picture is mixed. In the developing world there is little doubt that adaptation to climate change will outweigh the mitigation of carbon emissions as a policy priority; and that in the pursuit of effective adaptation Western technological expertise and financial assistance will be essential. In this respect climate change may provide a framework of common interests that, if faced squarely and honestly, might bring North and South closer together. Yet it is also likely that, as public consciousness of climate change and its perils expands, so too will an awareness that historical responsibility for those perils lies disproportionately at the feet of a few states. Some of those states are among the greatest beneficiaries of the exploitative economic and colonial practices of the past. Others are among the chief victims of those same practices. The largest producer of greenhouse gases today, as is well known, is China. It is less well known that Indonesia is now on the verge of outstripping the entirety of the EU as a carbon emitter. India and Russia also rank high in this regard, and appear destined to rise; though neither they nor anyone else is likely to surpass the United States on a per capita basis anytime soon.

This last metric may well prove to be the one that makes the most emotional sense to the average citizens of the developing world. They now find themselves subject to unexpected scrutiny on account of environmental practices no different than those adopted by advanced societies during their own rise to material prosperity. There is no question that such perceptions will play their part in determining whether climate change proves to be a new source of strife, or a new means of reminding mankind that we really are all in this together. This volume is intended as a contribution to security studies, not to moral philosophy. Yet it is safe to say that, in managing the security consequences of climate change, it will not be possible to leave questions of justice out of account.

References

1. For a representative selection of recent scholarship in this vein, see the papers presented at the workshop on *Human Security and Climate Change* (Oslo, 21–23 June 2005), collectively available at http://www.gechs.org/2005/06/24/holmen_workshop/. It goes without saying that traditional concepts of national and international security, and newer ones of human and environmental security, are not mutually exclusive. See for instance Jon Barnett and W. Neil Adger, “Climate Change, Human Security, and Violent Conflict,” *Political Geography* 26, no. 6 (August 2007): 639–55. Sharon Burke and Christine Parthemore, eds. *A Strategy for American Power: Energy, Climate, and National Security*, Center for New American Security Solarium Strategy Series (June 2008), is an interesting example of how the rhetorical strategies of Cold War security studies can be adapted to the challenges of reducing dependence on fossil fuels and cutting greenhouse gas emissions.

2. Climate change was first injected into the mainstream literature of security in the 1990s as a consequence of a number of challenging works hypothesizing that, in the wake of the Cold War’s unwinding, *casus belli* should henceforth be expected mainly from competition over resources, which climate change would exacerbate. See, for instance, Thomas Homer-Dixon, *Environment, Scarcity, and Violence* (Princeton, NJ: Princeton University Press, 1999); and Michael T. Klare, *Resource Wars: The New Landscape of Global Conflict* (New York: Metropolitan Books, 2001). More recent work has tended to back away from such neo-Malthusian scenarios, primarily because it has proven difficult to specify the nature of the causal links required to connect environmental stress and international violence. Yet it remains apparent that such linkages are possible and even likely in given circumstances. See for instance Idean Salehyan, “From Climate Change to Conflict? No Consensus Yet,” *Journal of Peace Research* 45, no. 3 (2008), 315–26; Halvard Buhaug, Nils Petter Gleditsch and Ole Magnus Theisen, “Implications of Climate Change for Armed Conflict,” presented at the World Bank Workshop on *The Social Dimensions of Climate Change* (Washington, DC, 5–6 March 2008), http://siteresources.worldbank.org/INTRANETSOCIALDEVELOPMENT/Resources/SDCCWorkingPaper_Conflict.pdf; and the articles assembled by Ragnhild Nordås and Nils Petter Gleditsch in *Political Geography* 26, no. 6, Special Issue on Climate Change and Conflict (August 2007): 627–735. Nordås and Gleditsch begin their volume with a useful survey of the evolution of the literature on environmental security (627–38), which may be compared to an earlier one by Gleditsch (“Armed Conflict and the Environment: A Critique of the Literature,” *Journal of Peace Research* 35, no. 3 [1998]: 381–400); and a more recent one by Geoffrey D. Dabelko, “Planning for Climate Change: The Security Community’s Precautionary Principle,” *Climate Change* 96 (2009): 13–21, <http://www.springerlink.com/content/gn2h652887023576>.

3. The current top-line statement of American military doctrine, for instance, is *Joint Vision 2020*, which appeared in May 2000, www.fs.fed.us/fire/doctrine/genesis_and_evolution/source_materials/joint_vision_2020.pdf. It will eventually be succeeded by a new statement called *Joint Vision 2030*, which is under development now. See also the series of long-range planning documents created by the National Intelligence Council: *Global Trends 2010* (1997); *Global Trends 2015* (2000); *Mapping the*

Global Future 2020 (2004), and the current statement, *Global Trends 2025: A Transformed World* (http://www.dni.gov/nic/PDF_2025/2025_Global_Trends_Final_Report.pdf), which appeared in 2008; also NATO's "Multiple Futures Project: Trends and Challenges in Global Security to 2030," <http://www.act.nato.int/multiplefutures/ACT-RUSI%20Roundtable%20Report.pdf>.

4. Intergovernmental Panel on Climate Change, *Climate Change 2007: Impacts, Adaptation and Vulnerability*. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, ed. M. L. Parry et al., (Cambridge: Cambridge University Press, 2007). See also Nick Mabey, *Delivering Climate Security: International Security Responses to a Climate Changed World*, Royal United Services Institute Whitehall Paper 69 (London: Routledge, 2008).

5. An influential set of alternative future scenarios for use in this context were presented in the *IPCC Special Report on Emission Scenarios* (2000), http://www.grida.no/publications/other/ipcc_sr/?src=/climate/ipcc/emission/, which sought to envision future conditions varying with relation to economic practices, regional and global integration, and increasing or static emphasis of environmental remediation. Within the IPCC framework the assumptions of this project are consistent with scenario A1B, the one most frequently discussed in subsequent IPCC reports. Scenario A1B hypothesizes that economic and demographic trends will continue along current lines, and that energy consumption will remain balanced among multiple sources, rather than shifting decisively away from fossil fuels. An example of a study that seeks to consider global security across a range of climate scenarios—roughly the mirror image of the present project's structure—is Kurt M. Campbell et al., *The Age of Consequences: The Foreign Policy and National Security Implications of Global Climate Change*, Center for Strategic and International Studies (November 2007), http://www.csis.org/media/csis/pubs/071105_ageofconsequences.pdf.

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Situating Climate Security

The Department of Defense's Role in Mitigating Climate Change's Causes and Dealing with its Effects

Daniel Clausen and Michael Clausen

An Emerging Security Focus: Climate Security

A new concern is circulating among policymakers, think tanks, and scholars: securing the planet's climate. For those who debate what counts as "national security," the question over whether climate change should be framed as a security issue has been argued along well-worn lines. For those who seek a more expansive definition of security, one that reaches beyond military threats, the threat of climate change is another reason why the lines of security need to be re-drawn. For those who see the inclusion of climate change as a threat to the notion of security as the protection of the state in a competitive international system, widening the term to encompass climate change threatens to draw attention away from traditional threats (future peer competitors like China and a resurgent Russia) and the "new nontraditional" threats (rogue states and transnational terrorism). At the most basic level, the inclusion of environmental threats in a security paradigm risks confusing national security with foreign policy and global politics. As this article will show, however, in many ways this debate has already become obsolete. Since the issuance of the 2007 Intergovernmental Panel on Climate Change (IPCC) estimates, the publication of a bevy of key reports by respected think tanks, and most recently the latest Defense Department *Quadrennial Defense Review* (QDR) and the *National Security Strategy* (NSS), climate security has increasingly become recognized as a legitimate object of national security thinking.^[1]

In this essay we will examine three issues: the emerging threat of climate change as it is currently known through climate change models, the way climate security is increasingly being internalized in the U.S. national security community, and the tasks the DoD can undertake to mitigate the causes of climate change and deal with its effects. We will mostly draw on the wealth of research done by academics, think tanks, and government officials since the issuance of the IPCC 2007 synthesis report—most prominently the 2010 Department of Defense QDR. In addition to these influential reports,^[2] our analysis will also use concepts developed by the Copenhagen School of "securitization studies."^[3] This approach offers important insights into how and why issues move beyond normal politics to become vital issues of security. The key insight of the Copenhagen School is that there is no externally valid definition for "security" or "national security," but rather, that the meanings of these terms are always defined through the interactions politicians, external contexts, and audiences who support definitions of security. In a

somewhat paradoxical sense, while the struggle over the meaning of “security” is political, the reason the status of the “security” label is sought is because it takes issues beyond the fray of normal politics. The label of “security” is an important political asset because it raises an issue above normal debates and gives the issue an aura of unquestioned priority.

Unlike other security issues that are largely defined and debated within well-known national security institutions, to date the threat of climate change has primarily been defined by an epistemic community outside of the national security community. This epistemic community’s concern has typically been global, not national. For this reason, climate security has frequently been framed as an international *political* problem—one that requires bargaining, institution-building, and information-sharing, not the support of the military. That being said, the problem has gained and should continue to gain credibility as a security issue for a number of important reasons. The first is that framing climate change as a security concern elevates the issue above normal political conversations. Given current knowledge of the threat of climate change to global political stability, the issue clearly warrants increased attention. The second reason is that because the effects of climate change threatens to intensify many of the issues the defense community currently deals with, planners will need to become increasingly aware of the deep connections between environmental breakdowns, political institutions, and potential threats. The third reason is that the military has an important role to play in mitigating the causes of climate change. As the Department of Defense (DoD) increases its cooperation with other agencies on research and development, works to develop a more energy efficient fighting force, and lowers its carbon footprint at bases around the world, it will also play an important role in driving technological innovation that could help stop the environmental pollution that fuels climate change.

This paper will begin by recounting how climate change has evolved as an object of national security thinking and discourse, beginning from the 1980s and stretching to the current “Climategate” issue. It will then examine the research climate change scientists and national security-oriented think tanks have done in terms of formulating plausible scenarios with a special focus on the way climate change has been defined as a “threat multiplier.” The paper will then examine the role the DoD can play in mitigating the causes of climate change. In addition to building the intellectual framework for understanding the three points outlined above, this paper will also attempt to leave the reader with an appreciation of the tensions between climate change as a security issue (an issue worthy of being elevated as a national priority) and climate change as an issue for military planners in the DoD.

The Rise of Climate Change as an Object of National Security

Since the 1980s, the issue of climate change has been on and off the political agenda—to say nothing of its framing as a national security issue. After James Hansen (then director of NASA’s Goddard Institute of Space Studies) famously asserted in 1988 that climate change was near certain,^[4] speculation and research began on the linkages between national security, climate change, and environmental degradation. That same year the IPCC was created under the

guidance of the UN Environmental Programme (UNEP) and World Meteorological Organization (WMO) to represent the consensus of scientists on the issue of climate change. It wasn't until the 1990s, however, that the Strategic Environmental Research and Development Program (SERDP) was created within the DoD to address issues of environmental concern. This corresponded with a gradual rise in policy statements placing the environment and environmental degradation within the sphere of national security. The 1991 *National Security Strategy* features a brief section on the environment that mentions issues of food security, ozone depletion, water supply, deforestation, biodiversity and treatment of wastes, in addition to the problem of climate change.[5] In addition, a Global Environmental Affairs Directorate at the National Security Council and an Office of Environmental Security led by a Deputy Undersecretary of Defense were established to address the rising interest in the connections between the environment and security. Around this same time, the idea that environmental scarcity could fuel a future anarchy of ungovernable spaces was first elaborated in the scholarship of Thomas Homer-Dixon and then popularized by Robert Kaplan in his famous 1994 article for the *Atlantic Monthly*,[6] an article that was widely circulated among policymakers. This popular speculation would lead to the creation of the new subfield of environmental security and a flurry of new initiatives for securing the environment within the Clinton administration. Thus, the 1997 *National Security Strategy* reflected Kaplan's concerns of resource scarcity fueling an increasing number of post-modern conflicts.[7]

Despite a growing awareness of climate change, the issue remained largely neglected. The Kyoto Protocol of 1997, though signed by the United States, was never sent to the Senate for ratification. Bipartisan resistance to the protocol centered on its failure to address pollution from rising industrial powers like China and India. While the Pentagon did commission one report in 2003 that garnered some media attention, the issue remained largely undervalued as a national security priority.[8] Even though interest was growing in some circles of the defense community about the linkages between environmental degradation and conflict, without national leadership these projects remained largely on the backburner. As the national security community dealt first with the immediate threat of Al Qaeda and addressing gaps in homeland security, then wars in Afghanistan and Iraq, and then rising nuclear threats from Iran and North Korea, the issue of climate change was neglected both as a political issue and as a security concern.

Since 2007, however, there has been a dramatic rise in the attention paid to climate change both as an international political issue and as a mounting security threat. That year both Al Gore and the IPCC won the Nobel Peace Prize for their work in raising awareness of the issue. The IPCC's 2007 synthesis report judged that the evidence for climate change is "unequivocal"[9] and that the evidence that human generated greenhouse gases are the cause of increased temperatures is "very likely" (over 90 percent).[10] That year also saw the issuance of an influential report by the Center for Naval Analysis (CNA) backed by retired generals framing climate change as "threat multiplier." [11] In addition, the Triangle Institute for Security Studies hosted a conference that addressed the impacts of climate change on national security.[12] Following these influential reports, several other studies and volumes were published, along with a National

Intelligence Assessment[13] issued by the Office of the Director of National Intelligence.

Most importantly, the notion of climate change as a security issue has now captured the attention of political and military senior leadership. Whereas the 2006 *Quadrennial Defense Review* made no mention of climate change or environmental security, the DoD 2008 *National Defense Strategy* acknowledged both that “climate pressures may generate new security challenges” and the need to “tackle climate change.”[14] Riding this new wave of engagement with the issue of climate change, the latest 2010 DoD *QDR* and *NSS* devote entire sections to the subject. The *QDR* addresses the full range of effects that climate change is likely to have on the security environment, and what needs to be done to tailor future force structure, mitigate the DoD’s carbon footprint, and help spur new technological developments in clean energy;[15] the *NSS* meanwhile emphasizes the risk climate change poses to national security and the need for a broad shift toward an energy efficient economy. As the 2010 *NSS* states: “The danger from climate change is real, urgent, and severe.”[16]

The “Climategate” incident of winter 2009, where over a thousand emails and other documents were made public through a server breach of the University of East Anglia’s Climate Research Unit (CRU), has served as a major publicity blow to those hoping to establish a wider consensus on combating climate change. Even though the incident has done little to undermine the scientific consensus on the reality of anthropogenic climate change, the scandal has done much to undermine public confidence in climate change science, and thus, undermine the U.S. domestic consensus for pursuing robust policies to lower greenhouse gasses. An independent committee set up by the University of East Anglia has largely exonerated the beleaguered CRU and its director, though it has noted that the unit should be more open in the future.[17] The longer term concern is that incidents like “Climategate” will continue to foster a siege mentality within the scientific community that encourages scientists to guard data and restrict openness. These practices would only continue to feed conspiratorial attitudes toward the scientific community engaged in climate change research.

Estimates, Scenarios, and the Special Role of the Scientific Epistemic Community

It is not an insignificant point that many of the recent reports and scholarship that connect climate change to national security point to climate change’s already perceptible influences—from the increased likelihood of hurricanes, to the spread of desertification in parts of Africa, to increased tension over scarce water resources in the Darfur region of the Sudan. As Buzan, Waever, and de Wilde write about past attempts to frame environmental issues as security threats: “Environmental issues often point to an unspecified, relatively remote future and therefore involve no panic politics.”[18] The vagueness of environmental predictions often conflicts with a national security culture that privileges threats that are certain, proximate, and grounded in an understanding of the international system as a competition among states.

While most reports on climate change note the ambiguity involved in modeling environmental systems, the consensus among scientists is that not only is climate change verifiable, but

predictions up until this point have been too conservative. Because of the ambiguities involved in modeling environmental systems, one group of scholars (a combination of former government officials and Brookings Institute, Center for Strategic and International Studies, Center for Naval Analyses, and Center for New American Security scholars) has purposely used the word *scenarios* rather than prediction to describe their approach.^[19] These authors argue that because climate change involves a complex relationship of interlinked variables that are difficult to predict—demography, energy policy, technological change, and their interactions with complex ecological systems—one should not dwell on the most likely scenario, but rather, examine a range of plausible ones. This logic applies not only to rate of climate change but also to its effects. As many scholars have pointed out, the linkages among environmental stress, environmental shocks, and trends such as political violence, migration, and the spread of disease are difficult to theorize with precision.^[20]

Currently, the average obtained from IPCC climate change scenarios projects that over the next twenty to thirty years the earth's average temperature will rise by 1.3 degrees Celsius. This scenario assumes that there are no trigger effects or feedback loops, and thus, extrapolates largely from trends known to date.^[21] While the geographical impact of climate change will vary, in the next twenty to thirty years vulnerable regions will face prospective food shortages, droughts, and flooding. Among the possible implications of these environmental changes will be pandemics, political instabilities, and potential energy and food shocks. These ecologically-induced crises could destabilize entire regions, feeding terrorist movements and sparking interstate and civil conflicts. What is significant about this scenario is that it has been described as inevitable.^[22] Though climate change may bring some benefits to the United States in the form of near term increases in agricultural yields,^[23] these benefits will be offset by irregular weather patterns and political and economic losses from the failure of poorer countries to cope with climate change.

Another plausible scenario, explored by Leon Fuerth,^[24] assumes that various tipping points and feedback loops are activated, and thus, that the earth's climate increase more rapidly. In this scenario, methane released from melted ice sheets, the decline in carbon absorbing forestry, and the rate of rapid industrialization lead to double the climate change increase predicted in the first scenario—temperatures increase over the next twenty years by 2.6 degrees Celsius instead of the expected 1.3 degrees. Water scarcities increase, crop yields decline rapidly, coastal regions are subject to drastic flooding, and global fisheries decline as a result of coral bleaching and ocean acidification.^[25] These multiple ecological breakdowns strain political institutions (especially in the less developed world), leading to mass migration, intra and interstate conflict, and possibly the resurgence of virulent fascist ideologies.^[26] As many scholars have stressed, however, because of the many complex systems involved in predicting these events—both ecological and political—speculation on the consequences of abrupt climate change are at best useful stories for understanding what is at stake.^[27]

Seeing Climate Change through its Effects: Climate Change as a “Threat Multiplier”

Currently, much of the national security literature designates climate change as a “threat multiplier.”^[28] The idea is that climate change’s impact on ecosystems will cause critical food and water shortages, spur mass migration, and strain governments’ capacities and credibility, thus leading to more conflict and anarchy—especially in those countries that lack the resources to deal with these effects. According to this research, the first victims will likely be states that lack reserve capacities in capital, scientists, engineers, or flexible political institutions able to adjust to the effects of climate change.^[29] This is not to reinforce stereotypes of the poor in the Global South as the inevitable seed of world anarchy—to suggest as much would in any case ignore the source of much carbon pollution.^[30] Though there is currently a wealth of research challenging these neo-Malthusian assumptions of easy connections between environmental scarcities and violent conflict,^[31] the saliency of the environment-conflict linkage will likely increase as the severity of environmental shocks increases. As current environmental security thinking suggests: because of this threat of expanded ungovernable spaces, the United States will need to continue to secure U.S. energy supplies, most likely through increased stability operations in unstable areas of the world where energy is abundant, and expand capabilities for guarding sea lanes in newly opened up areas of the Arctic Ocean.^[32]

Analysts who examine the threat of climate change to U.S. security often point out that potential ecological catastrophes threaten the “resilience of the international community,”^[33] creating dangerous imbalances between nations that have the capacity to deal with climate change and those that do not. While some might quibble that some of this language conflates global justice with the United States’ vital security interests, the connection is analytically useful for a number of reasons. As weak states become afflicted by environmental stresses, the United States will have to face the possibility of a rapid surge in migration, the spread of pandemics, and the breakdown of political stability in energy rich countries and countries that are becoming increasingly embedded in the global economy, thus affecting the economic security of U.S. citizens.

There is a growing consensus that the impact of climate change will continue to strain the United States’ credibility as a global security provider, peace broker, and disaster relief provider. As the United States and other countries try to attenuate the impact of climate change on their own soil, security scholars are worried that the United States and the world will lose established levels of international cooperation—the current state of the international community as such. This loss of cooperation could affect U.S. efforts to uproot terrorism, stop nuclear proliferation, and confront rogue regimes. Because the United States is the per capita leader in greenhouse gas emissions, the United States may also be seen as a legitimate target for groups that are most affected by climate change, thus intensifying terrorist recruitment. In addition, these threats need not come from transnational groups subject to U.S. border patrol and other surveillance techniques. Instead, threats to U.S. economic infrastructure could come from “homegrown” eco-terrorist groups who see U.S. pollution as the ultimate threat to Gaea.^[34]

Though accurate and analytically useful, the term “threat multiplier” could also lead to some dangerous gaps in understanding how to respond to climate change. The idea of climate change as a threat multiplier leads the defense community to focus more on responding to the outcome of climate change (an intensified environment of threats defined in the usual terms of disaster relief, increased terrorism, rogue and collapsed states) than attenuating its causes—greenhouse gas emissions.[35] As the current QDR illustrates, however, the DoD has taken proactive steps toward lowering its carbon footprint and establishing programs that spur important technological developments in energy efficiency and alternative fuels.

The Case for Prevention—The DoD’s Role in Mitigating the Causes of Climate Change

The DoD is currently the single largest emitter of greenhouse gases in the United States. In 2007, the DoD spent some \$12.6 billion on petroleum, consuming some 395,000 barrels of oil or about as much as the total consumption of Greece.[36] Because current economic models suggest that the opportunity to mitigate the worst impacts of climate change cheaply is declining drastically,[37] it is essential that the DoD continue to make strides toward becoming more energy efficient. In this regard, the U.S. military has been proactive in promoting energy efficient technologies, eliminating waste at major facilities,[38] recovering waste that has renewable energy content,[39] increasing the amount of solar technology it uses on buildings and equipment, employing smart grid technology, and integrating renewable energy sources and hybrid energy sources into energy plans.[40] While these strategies are commendable, recent reports argue that the defense community should attempt to reduce energy consumption by twenty percent by the year 2025.[41] Greater energy efficiency will not only help to mitigate the causes of climate change, but will also shorten logistical supply lines (thus freeing up units for combat operations), and deprive illiberal oil-rich regimes and the terrorists they support of funding.[42]

As the 2010 QDR states, the DoD will increase the rate at which energy efficient technologies reach end users.[43] These technologies include solar powered military mobile command centers which use a combination of solar power, improved fuel cells and batteries, and new quantum dots and other semi-conductor technologies that improve solar panel efficiency on vehicles and bases.[44] In addition, the Environmental Security and Technology Certification Program uses military installations as a test bed for innovative technologies coming from DoD and Department of Energy laboratories and the private sector.[45] The DoD has invested in non-carbon power sources such as solar, wind, geothermal, and biomass energy at domestic installations and in vehicles powered by alternative fuels, including hybrid power, electricity, hydrogen, and compressed natural gas. The Nellis Air Force base, with its 140-acre solar array, serves as another sterling example of what the military is doing to cut down on its greenhouse gas emissions.[46] By 2016, the Air Force will be positioned to use 50 percent of its aviation fuel via an alternative fuel blend that is greener than conventional petroleum fuel. This will eventually pave the way for commercial aviation to follow.[47]

Though these programs should be applauded, there is still much to be done. These disparate

programs will need to be synthesized into an integrated energy strategy under the DoD's Director of Operational Energy Plans and Programs.^[48] By cutting down on energy consumption and moving toward renewable and hybrid forms of energy, the military will "ultimately address the long-standing irony of fueling our defense establishment from a system that threatens our nation's security."^[49] Energy efficiency will also serve as a "force multiplier" by reducing the number of combat forces diverted to protecting energy supply lines, which are vulnerable to both conventional attacks and disruptions.^[50]

Towards a Conclusion: Dealing with the Uncertain Future

For some, securing the planet's climate may continue to sit uncomfortably with traditional threats (most notably peer competition from rising states) and the new nontraditional threats (rogue nations and terrorism) to national security. As discussed earlier, part of this discomfort comes from a tradition of seeing national security threats as issues of violence from outside the state, and as seeing these issues as separate from issues of global justice and political institution building. As skeptics would rightly note, the most important steps toward mitigating the causes of climate change reside outside of purview of the security community—in the realm of domestic policy and international diplomacy. Thus, from this view, following up on the Copenhagen Accords, moving toward an international cap and trade system, and restructuring the nation's energy infrastructure should be the most vital initiatives, not adding another issue to the already bloated plate of security practitioners.

However, as this essay has attempted to show, such easy separations between domestic policy, international diplomacy, and national security no longer make sense. Though climate change has previously been neglected as a national security concern, security planners are now starting to conceive of innovative programs for dealing with both the causes of climate change and its potential dire effects. One of the key areas the DoD will need to focus on—energy efficiency and innovations in energy efficient technologies—should be the least controversial since it also overlaps with key strategic goals in the war on terror. Even for those skeptical of climate change, it is clear that an energy efficient military will deprive illiberal states of support and starve the terrorist networks they support of resources,^[51] also freeing the United States of dependence from other countries.

This is not to argue that climate change politics—or even technological change or climate change research—needs to be militarized; but rather, that securing the world's climate should be a security priority on par with countering nuclear proliferation, terrorism, and rogue regimes. Though some would prefer to keep the categories of environment and security separate, the language of security is essential for mobilizing public attention and support. In the end, however, the foundation of an effective climate security strategy will remain an international carbon regime that limits the emissions of the most polluting powers through a carbon cap and trading system. While much of the impetus lies in foreign policy maneuvering, the elevated position climate security now shares—and should continue to share—with other threats to national security should go a long way toward legitimizing more stringent efforts to limit greenhouse

emissions both domestically and internationally.

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30. This is a point that cannot be stressed enough. As Peluso and Watts argue, much of the literature on environmental security often recreates the world’s poor as the threat to civilization; while I would suggest this is at best a thematic shadow that haunts the literature, environmental security scholars should be clear whenever possible to acknowledge the sources of economic insecurity for the poor. For a fuller discussion, see Nancy Peluso and Michael Watts. “Violent

Environments” Eds. Nancy Peluso and Michael Watts. *Violent Environments*. (Ithaca: Cornell University Press, 2001): 3-38

31. The criticisms of neo-Malthusian assumptions of the easy linkage between scarcity and conflict vary by different concerns. Edited volumes such Peluso and Watts (2001) examine some of the ways environmental security narratives reinforce stereotypes of the poor (especially in the Global South) as the basis for anarchy and disorder. Another author examines the way the environment-conflict linkages can possibly justify endless interventions by the Global North into the sovereign political domains of the Global South: see Jon Barnett “Destabilizing the environment-conflict thesis” *Review of International Studies* 26 (2000): 271-288; other scholars find little empirical evidence in statistical studies to support the strong linkage between renewable resource scarcity and conflict: see Clionadh Raleigh and Henrik Urdal. “Climate Change, Environmental Degradation, and Armed Conflict”. *Political Geography* 26 (2007): 674-694; Ole Magnus Theisen. “Blood and Soil? Resource Scarcity and Internal Armed Conflict Revisited” *Journal of Peace Research* 45:6 (2008): 801-818; and Henrik Urdal. “People vs. Malthus: population pressure, environmental degradation, armed conflict revisited”. *Journal of Peace Research* 42:4 (2005): 417-434. This is just a small sample of the literature from what we term the “environmental security skeptics.”

32. Pew Center on Global Climate Change. *National Security Implications of Climate Global Change*. (August 2009). www.pewclimate.org; DoD (2010), 84

33. Campbell and Parthemore (2008), 17.

34. See Elizabeth L. Chalecki. “Environment and Security.” *The International Studies Encyclopedia*. Ed. Robert A. Denemark. (Blackwell Publishing, Blackwell Reference Online, 2010); also, see Elizabeth L. Chalecki. “A New Vigilance: Identifying and Reducing the Risks of Environmental Terrorism”. *Global Environmental Politics* 2:1 (2002), 46–64.

35. One author for example, Anthony Patt, criticizes a recent volume that evaluates climate change as a national security problem for not focusing enough on the issue of mitigation. See, Anthony Patt. “Book Review: *Climatic Cataclysm: The Foreign Policy and National Security Implications of Climate Change*” *Global Environmental Politics*. 9:2 (May 2009).

36. Jerry Warner and Peter W. Singer. *Fueling the “Balance”: A Defense Energy Strategy Planner*. (The Brookings Institute, 2009), 2-3.

37. Nicholas Stern. *The Economics of Climate Change*. (Cambridge: Cambridge University Press, 2007).

38. The DoD has taken proactive steps to eliminate waste at existing facilities. One way the DOD is eliminating waste in new construction is by applying the Green Building Council’s

Leadership in Energy and Environmental Design (LEED) standards. See, David Sheets. Military Technology and Renewable Energy. Ed. Carolyn Pumphrey *Global Climate Change: National Security Implications*. (Strategic Studies Institute/ Triangle Institute for Security Studies, 2008), <http://www.strategicstudiesinstitute.army.mil/pubs/display.cfm?PubID=862>.

39. The ability to utilize waste as energy will become especially important during disaster relief operations where waste is abundant but fuel and energy structures are scarce. According to the DoD research almost 79 percent of the waste in the field has recoverable energy content. See Sheets (2008). The waste can be turned into electricity, heat, fuels, hydrogen, methane, and JP-8.

40. DoD (2010); Sheets (2008).

41. Warner and Singer (2009).

42. Ibid; James R. Woolsey “A Partnership Deal: Malevolent and Malignant Threats”. Ed. Kurt Campbell. *Climatic Cataclysm: The Foreign Policy and National Security Implications of Climate Change*. (Washington, D.C.: Brookings Institute Press, 2008): 169-190.

43. DoD (2010), 86.

44. Sheets, 2008, 310.

45. DoD (2010), 86; Sheets (2008), 305.

46. Warner and Singer (2009), 3.

47. DoD (2010), 84-88.

48. For a similar plea, see: Peter W. Singer. “Fueling our Security: The Need for a Defense Energy Strategy” *The Washington Examiner*. (August 25, 2009), http://www.washingtonexaminer.com/politics/Fueling-our-security_-The-need-for-a-defense-energy-strategy-8149899-54612187.html.

49. Warner and Singer (2009), 1-2.

50. DoD (2010), 87.

51. Woolsey (2008).



Structural, Environmental, and Political Conditions for Security Policy in the High North Atlantic

The Faroe Islands, Greenland, and Iceland

Rasmus Gjedssø Bertelsen

Introduction

Security policy in the Faroe Islands, Greenland, and Iceland has historically taken place in a nexus of structural, environmental, and political conditions which pose particular challenges for such policy—a situation that continues and which will continue to take place. This article examines these conditions for broad security policy-making and implementation in the region in a historical, current and future perspective. It shows how these three societies have historically addressed and currently address security policy, where the experience of Iceland as the only fully independent state is enlightening. On this basis, the article discusses how these societies can address future developments with regard to climate change and increased self-government in the case of the Faroe Islands and Greenland, which is a central, but often overlooked, political development in the region. Security policy here is conceived broadly as covering the exercise of sovereignty, participation in international security orders such as NATO, well-grounded and researched debate and policy-making, law enforcement, intelligence, civil defense, marine resource management, environmental protection, provision of search and rescue, air and sea surveillance, among other issues.

This article identifies structural, environmental, and political conditions as well as public administration and finance challenges for security policy in section two *Conditions and Challenges for Security Policy in the Faroe Islands, Greenland, and Iceland*. The conditions are: microstates with very limited absolute capabilities, but responsibilities over vast strategically important air and sea spaces; Arctic and Subarctic climatic and geographic conditions, including climate change which affects political and economic conditions and in turn increases strategic interest and pressure on the region; the geopolitical role of the region, including short-term political changes such as the U.S. withdrawal from the Keflavik base and long-term political changes, such as increasing Faroese and Greenlandic self-government and possible eventual independence from the Kingdom of Denmark.

There is, presently, one independent microstate, or very small state, Iceland, and two micro-societies, the Faroe Islands and Greenland, that are overseas autonomies of a small state, the Kingdom of Denmark. Despite their current absence of sovereignty, the Faroe Islands and Greenland are called microstates in this article in light of their historical movement toward greater self-government and possible full independence from the Kingdom of Denmark. The author defines microstates as less than 1 million inhabitants.^[1] Such a capabilities-centered

definition is valid for the purposes of this article. The term 'Kingdom of Denmark' is used for what in Danish is called "Rigsfællesskabet," the unity of Denmark, the Faroe Islands and Greenland under the crown. "Denmark" refers to the Continental European part of the kingdom.

Based on the above-mentioned conditions, public finance and administration as well as security policy challenges are identified (section two: *Conditions and Challenges for Security Policy in the Faroe Islands, Greenland, and Iceland* continued): these microstates have very narrow tax and personnel bases for supplying the means of security policy. Therefore, how can these microstates exercise effective sovereignty over vast, strategically important air and sea spaces, contribute to international security order, conduct well-grounded and researched debate and policy-making, protect society against terrorism, organized crime and illegal trafficking, supply environmental protection and civil defense, provide search and rescue services, etc?

Iceland responds to these challenges through its security policy, and with expanding self-government and possible independence, the Faroe Islands and Greenland will have to design policies to do likewise (section three: *Overview of Historic, Current and Future Icelandic, Faroese and Greenlandic Security Policies*). These case studies show how Iceland successfully has overcome the challenges to security policy-making through a combination of domestic capabilities and external partnerships, which is part of its successful independence. The Icelandic experience indicates ways for the Faroe Islands and Greenland to handle their security policy under changing conditions of both climate change and increasing self-government.

Conditions and Challenges for Security Policy in the Faroe Islands, Greenland, and Iceland

This article identifies a number of central structural, environmental, and political conditions for formulating and exercising security policy in the region of Greenland, Iceland, and the Faroe Islands. Based on these conditions, this article highlights intertwined public finance and administration as well as security policy challenges for the Faroe Islands, Greenland and Iceland.

Structural Conditions: Highly Developed, Strategically Located Microstates in the High North

The *structural conditions* are the combination of the small population sizes and the policy demands made on these highly developed microstates in the High North with vast, strategically important air and sea spaces with Arctic and Subarctic climatic and geographic conditions.

Iceland has a population of around 313,000, the Faroe Islands 48,000, and Greenland 56,000. All these societies are highly developed, thus, with large capabilities *relative* to their populations, but very limited capabilities in *absolute* terms. Highly developed states face largely similar policy tasks, which the less populated states have to face with less absolute resources and smaller organizations and, thus, possibilities for specialization. A fascinating aspect of Icelandic government and society is how tasks are solved at very high levels of proficiency by very small public, private, and civil society organizations with limited internal possibilities for

specialization. The level of proficiency is evident from Iceland's very high level of human development, ranking third globally in 2009.[2]

The term *microstate* is an important analytical category and should be used here, although it is sometimes substituted in political discourse by *small state*: the Faroe Islands, Greenland and Iceland face different conditions than, for instance, Sweden with its population of around 9,045,000, which is a small state with a large territory including Arctic and Subarctic regions.

Environmental Conditions: Constant and Changing Climate with Social Consequences

The *environmental conditions* for North Atlantic security policy are both permanent and changing. Permanent environmental conditions include difficult Arctic and Subarctic climatic conditions as well as great distances over sea and ice (especially in the case of Greenland), which make all kinds of communication, transportation, projection of capabilities much more difficult and thus expensive. These conditions and the sheer distance of the region from areas of conflict kept the region out of European conflicts for centuries. Technological advances, especially in long-range flying during World War II and to even greater extent during the Cold War, as well as in nuclear submarines, cancelled those distances and integrated the region into global politics and conflict. This development led to an unprecedented militarization, which has, however, been replaced by greater cooperation after the Cold War.[3]

Other environmental conditions include abundant resources. Marine resources have caused conflict in the 1950s-1970s—most notably between Iceland and Britain, resolved through the international law of the sea. The region's rich renewable geothermal and hydroelectric energy resources and possibly hydrocarbons are drawing increasing attention and investment. Although difficult to export, the renewable energy resources are sought after as a response to greenhouse gases. This fact is clear from technology export and recent and proposed investments in power generation and energy-intensive aluminum and other industries in Iceland and Greenland. High, although volatile, oil prices also focus attention on possible hydrocarbon resources in the region, where, for instance, the United States Geological Survey predicts with varying probability around 51.8 billion barrels of oil and oil-equivalent natural gas around Greenland.[4]

The environmental conditions are also changing due to climate change, which is particularly pronounced in the High North. Global warming is affecting, for instance, the sea ice in the Arctic Ocean and is "very likely" to improve access to energy exploration and shipping.[5] Improved marine access may place these societies much more centrally in global energy and transportation systems than hitherto possible through oil and gas exploration in their economic exclusion zones or on their continental shelves, as well as through new trans-Arctic shipping lanes linking the North Atlantic and the North Pacific.[6]

Such changes will have profound social, political, and economic impacts. New economic opportunities fostered by climate change may contribute to increased Faroese and Greenlandic self-government and possible independence through reducing fiscal dependence on Denmark.

Energy exploration and important shipping lanes for the global economy will also further increased outside strategic interest and pressure on the region.

Political Conditions: Superpower Interests and Constitutional Ties to Denmark

As mentioned, technological developments have firmly integrated the North Atlantic and the Arctic in European, trans-Atlantic and trans-Arctic geopolitics. Because of the location, the area cannot keep out of any conflict in Europe involving trans-Atlantic connections (as evident in WWII and the Cold War) or between North America and Eurasia (as the Cold War or future strategic competition between the United States and China, where the Arctic is the shortest route).

The areas concerned in this article are either overseas autonomies (the Faroe Islands and Greenland) of a small state (Kingdom of Denmark) or an independent microstate (Iceland). They all depend on the military protection of larger powers and alliances. This fact is reflected in the NATO membership of both the Kingdom of Denmark and Iceland and the U.S. bases in Greenland and, until 2006, Iceland.

The European Union plays a growing role in broader societal security questions and will take a greater interest in North Atlantic and Arctic affairs following increased energy exploration and shipping in the region. The relationship between Iceland, the Faroe Islands, and Greenland and the EU is, however, complicated. Iceland has stayed out of the union (while joining the Internal Market through the European Economic Area). The Faroe Islands did not follow Denmark into the European Community in 1973 and Greenland left the EC in 1985. The prospects of Icelandic EU membership is discussed below.

Short term *political changes* have, for instance, included the U.S. withdrawal from the Keflavik Base in Iceland in September 2006. This action removed the capabilities of a superpower from the region leaving it in the hands of microstates (Faroe Islands, Greenland and Iceland) and a small state (Kingdom of Denmark). Iceland was forced to rethink its security policy in light of this loss of, for instance, search and rescue as well as air policing capabilities in the region, which led to innovative policy-making covering the entire spectrum of security policy that is further discussed below.

An overlooked, but an equally very important long-term *political change* in the region is increasing Faroese and Greenlandic self-government and possible independence from the Kingdom of Denmark. This development gradually transfers responsibility to these microstates and would ultimately remove the small state, the Kingdom of Denmark, with its naval and other capabilities from the region. Part of the success of independent Iceland has been to formulate and execute a successful security policy, and the Faroe Islands and Greenland must do the same in taking on greater and perhaps eventually full responsibility.

Public Finance and Administration Challenges: Few Taxpayers and Small Organizations

First of all, the complexity of the structural, climatic, and geographic conditions of microstates in the North Atlantic with vast strategically important air and sea spaces lead to the following public finance and administration dilemma: There is a narrow tax basis for large capital investments and expenditures to implement security policy, for example, ocean-going patrol vessels, surveillance aircraft, search and rescue helicopters, etc., not to mention any kind of combat forces.

Likewise, organizations are very small with limitations to their internal specialization, for instance, military assessments, law enforcement, and intelligence work. As an example, the reader can note that the Defense Department in the Icelandic Ministry of Foreign Affairs has a staff of now five, previously three, and in the aftermath of the U.S. withdrawal from Keflavik the U.S. negotiation team counted 26, while the inter-ministerial Icelandic team counted nine.^[7] The Foreign Ministry of the Faroe Islands has a staff of 26 also covering trade and tourism promotion.^[8] The Directorate of Foreign Affairs of the Greenland Home Rule has a staff of 9 covering Arctic cooperation, EU, indigenous cooperation, the bilateral relations with the United States, foreign trade and promotion, and foreign and security policy.^[9]

Because of the small absolute size of organizations, there are few opportunities to reap returns to scale. There are high average costs in operating patrol vessels, search and rescue helicopters, surveillance aircraft, which in larger organizations can be spread over more units (a problem which becomes more serious from the narrow tax basis). These microstates must therefore design policies to counter these public finance and administration challenges.

At the ideational level, values and preferences also condition the security policy-making of the societies in this article. All three societies have, on one hand, neutralist traditions and, on the other hand, no military traditions, which together works against the establishment of domestic military forces (for instance, in the Icelandic case after the U.S. exit from Keflavik in 2006 in the view of Alyson Bailes).

Security Policy Challenge: Limited Absolute Resources and Large Responsibilities

These public finance and administration challenges are the basis of a pivotal security policy challenge: how microstates with very limited absolute capabilities, but responsibility over vast, strategically important air and sea spaces, can pursue an effective security policy and thereby exercise effective sovereignty over this space, contribute to the international security order, such as NATO, conduct well-grounded and researched debate and policy-making, provide efficient law enforcement and intelligence against terrorism, organized crime and trafficking, and provide environmental protection, search and rescue services?

A practical example of how the means of exercising effective sovereignty can be beyond the capabilities of a country is that Iceland does not field interceptor fighter jets to police its air

space (and at the small state level, for instance, the Royal Danish Navy has abandoned submarines). Historically, Iceland has relied on the United States to supply air policing through the bilateral U.S.-Icelandic Defense Agreement of 1951 and fighters stationed at the Keflavik Base. Since the U.S. abandonment of the Keflavik Base, Iceland has relied on NATO allies rotating fighter jets through Keflavik to provide such policing. This NATO policy is also pursued in the case of other member states with very limited absolute capabilities as Estonia, Latvia, Lithuania, Luxembourg and Slovenia. These Icelandic and other historical and present arrangements are examples of how microstates must create policies around these challenges.

The microstates in this article have no military traditions, and because of their resource-base their military options are extremely limited. Therefore, they have to design policies to have civilian authorities carry out some military tasks and collaborate with foreign, military counterparts. Iceland has had to design specialized policies for its civilian authorities to work with allied military and intelligence authorities, which would otherwise be handled by a similar military or intelligence body.[\[10\]](#)

This security policy challenge of limited absolute resources and large responsibilities will be even greater for increasingly self-governing and perhaps eventually independent Faroe Islands and Greenland with their population bases of around 50,000 to 60,000 individuals or about one-sixth that of Iceland. This difference is sizeable, and the similarities between, on the one hand, the Faroe Islands and Greenland and, on the other hand, Iceland should not be overestimated either. Faroese and Greenlandic society today rely on the ships and helicopters of the 1st Squadron of the Royal Danish Navy, together with the overall security capabilities of the small state of the Kingdom of Denmark. Faroese and Greenlandic self rule governments are becoming increasingly involved in security and defense policy. Increasingly self-governing and possibly fully independent Faroe Islands and Greenland will have to devise policies to replace those Danish assets and reach out to allies and partners in Europe, North America, and the North Atlantic.

Overview of Historic, Current and Future Icelandic, Faroese and Greenlandic Security Policies

The Faroe Islands, Greenland, and Iceland have all, throughout their history, had to address the security policy challenges outlined above and design policies around them. These historical, present, and possible future policy responses are outlined here. The Icelandic case is substantially longer than the Faroese or Greenlandic, since Iceland is the only one to have run the full course to independence. Therefore Iceland is the only community to have had to design and implement the full range of security policy.

Iceland: Setting the Direction for North Atlantic Microstate Security Policy

The history of the independence politics of Iceland and how its foreign and security affairs have been managed at various stages of self-rule is of value for discussing current and future Faroese

and Greenlandic self-rule and possible independence. The independence trajectory of Iceland has inspired Faroese independence politics in particular and is therefore important for understanding self-rule developments in the Faroe Islands and Greenland.

The Viking settlers of Iceland in the 800s and 900s AD formed an independent commonwealth, which in 1262 was absorbed by the Kingdom of Norway. In 1380 the Kingdom of Denmark and the Kingdom of Norway merged under a common king, which brought Iceland, Greenland, the Faroe Islands, Shetland and Orkney into this union. In 1814, Norway was forced into a union with Sweden at the Kiel peace after the Napoleonic wars, but left the Faroe Islands, Greenland and Iceland under the Danish crown. In 1845, the Viking age assembly, the Althingi, was reconstituted as a consultative assembly to the absolutist king of Denmark, and in 1874 it gained legislative, budgetary, and taxation powers over domestic affairs, leaving the executive under Danish administration. In 1904, Iceland gained home rule with an Icelandic executive under an Icelandic minister responsible to the Althingi.^[11]

The Kingdom of Iceland emerged as a sovereign independent state in 1918 tied to the Kingdom of Denmark in a personal union of a common king. Denmark willingly agreed to this step to press rights of self-determination for Danes in North Schleswig under German rule in view of the World War I settlement. This acquiescence is an example how Denmark will give up sovereignty in the North Atlantic for interests closer to home. The Kingdom of Denmark executed the foreign affairs of the Kingdom of Iceland and represented it diplomatically, but the foreign policy was set by parliament in Reykjavik, which, for instance, chose not to enter the League of Nations for neutrality reasons. This personal union was mutually dissolvable after 25 years, and in 1944 Iceland dissolved the union and declared the republic. The Kingdom of Denmark played no role in the foreign or security affairs of Iceland after the German occupation of Denmark on 9 April 1940.^[12]

The Danish-Norwegian navy had operated sporadically in the North Atlantic since the late 1500s exercising Danish-Norwegian sovereignty. With home rule in 1904, Denmark decided to build the first purpose-built inspection vessel, Islands Falk, completed in 1906. In 1913, the Althingi adopted the law on the Coast Guard Fund laying the financial ground for Icelandic coastguard activity. With the union treaty of 1918, coastguard duties were carried out by the Kingdom of Denmark until the Kingdom of Iceland would take them over, which was expected. The Royal Danish Navy continued some inspection duties around Iceland until 1940. In 1919, Althingi adopted legislation authorizing the leasing or buying of coastguard vessels. The Fisheries Association of the Westman Islands south of Iceland bought a used trawler in 1924 as a rescue and support vessel, Þór, which quickly became sponsored by the Icelandic state as a coastguard ship and armed in 1924. In 1924, the first purpose-built Icelandic coastguard vessel, Óðinn, was commissioned in Denmark and entered service in 1926. The Icelandic coastguard was particularly successful in enforcing Icelandic jurisdiction over territorial waters and the economic exclusion zone in the cod wars with the UK in 1958, 1972 and 1975.^[13]

Michael Corgan in his overview of Icelandic security policy^[14] since the settlement of the island in the late 800s shows the core security policy to have been the sheer distance from European conflicts. Internal Icelandic conflict, however, opened the door to Norwegian domination in 1262. This security through distance was fundamentally broken during World War II by technological advances in long-range flying, making Iceland a strategically vital location for control over North Atlantic air and sea space and the connection between North America and Europe. This development led to first British and shortly thereafter American occupation of Iceland during WWII.

Iceland's strategic importance increased further with the onset of the Cold War. Icelandic political leaders addressed this strategic pressure through continued partnership with the United States regarding the airfield at Keflavik, its founding membership in NATO, and the bilateral U.S.-Icelandic defense agreement from 1951 basing troops and aircraft at Keflavik. This policy firmly placed Iceland under the protection of the United States against covert or overt Soviet pressure. In addition, the base earned valuable foreign currency for Iceland, and the search and rescue helicopter assets were valuable additions to Icelandic emergency services.

The base was also an extremely contentious element in Icelandic politics and society, and by many seen as a threat to cultural and linguistic uniqueness. Corgan explains well to readers unfamiliar with Icelandic society and history the concern of this society to preserve its language and culture. This concern is a *de facto* security policy concern for Icelanders as well as other nations and groups with small populations. The development and preservation of the language and culture of a very small society is a particular challenge. The Icelandic nation has been particularly successful in this endeavor through a consistent linguistic policy of creating logical Icelandic words for new terms. This policy has the democratic advantage that a new word through its components ought to be understandable to any speaker of the language without the educational background to know the meaning of the ancient Greek or Latin words behind many words in other Western languages.

For Iceland, being a microstate with very small institutions (though very competent, proven by the nation's very high level of human development) and with no military heritage, hampers domestic debate and policy-making. Corgan shows the value of the development of indigenous security policy and research institutions for Icelandic debate and policy-making as well as for creating a native vocabulary in the field: the parliamentary Icelandic Commission on Security and International Affairs and the Department of Defense Affairs in the Ministry of Foreign Affairs since 1979. Creating a native security policy and strategic studies vocabulary was a particular challenge because of the lack of military tradition, small, less specialized organizations and the linguistic "defense" policy. Corgan shows the importance of such a native vocabulary and how, especially, the above mentioned parliamentary commission contributed to the development of this vocabulary and broader knowledge of these questions. Since the end of the Cold War and the U.S. withdrawal from Keflavik, the demand for renewed debate and analysis has reappeared. A security studies institute was agreed to by the Conservative-Social Democratic

government (2007-2009), which, however, did not materialize. The threat assessment commission established by the then foreign minister has been inactive and has not delivered any report.

These lessons are extremely relevant for the Faroe Islands and Greenland, facing identical structural and historical conditions as microstates with little, if any, military heritage. They must develop such vocabularies in Faroese and Greenlandic together with domestic expertise. The Faroese can, because of close linguistic ties, benefit much from the Icelandic efforts. The Greenlandic efforts can hopefully contribute to Inuit empowerment around the North Pole.

The 2006 U.S. withdrawal from Keflavik was a shock to Icelandic security policy and forced Icelandic authorities to undertake a wide ranging review of security policy, organization, and capabilities, which is the topic of Gunnar Þór Bjarnason's study.^[15] When the U.S. government informed the Icelandic government on 15 March 2006 that it would withdraw its four fighters with search and rescue helicopter support from Keflavik before the end of September of that year, it was a major defeat for Icelandic policy. The conservative Independence Party-led governments since the end of the Cold War had averted U.S. disengagement from Keflavik and maintained the twin aim of avoiding unilateral U.S. decisions and maintaining U.S. air defense capabilities at Keflavik. The U.S. decision was a negation of both aims.

This new situation forced the Icelandic government and authorities to review organization, legislation, and capabilities with substantial development and innovation of Iceland's broad security policy, authorities, and capabilities. Initially, Minister of Justice and Ecclesiastical Affairs, Björn Bjarnason, seized the initiative in the policy response to the U.S. exit. Bjarnason was a central and internationally well-connected, security policy-maker for many years and a leading personality on these questions in the pro-U.S. and pro-NATO Independence Party. In the 2007-2009 Independence Party-Social Democratic coalition, the foreign minister was Ingibjörg Sólrún Gísladóttir from the pro-EU Socialdemocratic Alliance. These two individuals and their ministries were the main actors and competitors responding to the U.S. withdrawal and the response was divided between their organizations.^[16]

Under the Ministry of Foreign Affairs, the Icelandic Defense Agency was established with the first defense policy act from April 2008. The agency's main task is operating the Icelandic Air Defense System with the NATO radar installations in the country. In addition, the agency maintains the security area at Keflavik reserved for visiting NATO forces, collaboration with NATO and other defense and security related tasks. This situation is an example of a civilian authority conducting the affairs of a military or a ministry of defense. In the absence of an Icelandic military, practical security and defense policy is divided between the Ministry of Foreign Affairs and the Ministry of Justice and Human Rights.

The domestic security functions under the then Ministry of Justice and Ecclesiastical Affairs, now the Ministry of Justice and Human Rights, were particularly developed. The police services and Icelandic Coast Guard fall under this ministry. A driving force here was that the search and

rescue capabilities of U.S. forces at Keflavik would no longer support the Icelandic Coast Guard and other emergency services.^[17] Revised civil defense legislation established a Security and Civil Defense Council responsible for policy, composed by the prime minister (chair), the minister of justice and ecclesiastical affairs, minister of transportation, minister of environment, minister of health, minister of foreign affairs and minister of industry, together with relevant senior civil servants and heads of agencies. The legislation also established a new coordination and control center for all civil defense and search and rescue work, bringing together relevant authorities and emergency services supported by a new Tetra communications system.

The Coast Guard leased new helicopters, acquired a new DASH 8 Q300 surveillance aircraft, and commissioned a new ship. The national police have established an intelligence analysis unit. A North Atlantic Coast Guard Forum has been established inspired by its namesake in the North Pacific collaborating on security issues as illegal migration and drug trafficking, fisheries, environment and search and rescue. Icelandic Minister of Justice and Ecclesiastical Affairs, Björn Bjarnason, suggested developing this Forum into a standing multilateral coast guard force in the area. The domestic security functions have close cooperation and joint contingency plans and have established cooperation with their sister organizations in neighboring states, in particular Norway, Denmark, Britain and the United States.^[18]

Climate change presents Iceland with both challenges and opportunities. As a highly developed country, Iceland is seeking to reduce its greenhouse gas emissions. Climate change in the Arctic may affect Iceland profoundly, socially and environmentally for instance, through the reduction of sea ice cover giving access to increased energy exploration throughout the Arctic or to trans-Arctic shipping. Increased energy production in Siberia has resulted in greatly increased oil- and gas-tanker traffic through Icelandic waters to markets in North America. This traffic carries potentially great environmental hazards in case of accidents and oil-spills.^[19]

The long-term opportunities for trans-Arctic shipping between the North Pacific and the North Atlantic have raised significant attention from the Icelandic government evidenced in the detailed 2005 report 'Fyrir stafni haf: Tækifæri tengd siglingum á Norðurslóðum' [Open sea ahead: Possibilities regarding navigation in the Arctic] and the 2007 international stakeholder conference 'Ísinn brotinn: Þróun norðurskautssvæðisins og sjóflutningar' [Breaking the ice: Arctic developments and maritime transportation]. The Icelandic authorities see a number of environmental and socio-economic drivers pushing for trans-Arctic international shipping in the future: The fundamental environmental driver for the socio-economic drivers is climate change, where the extent of sea ice cover in the Arctic Ocean over the summer is significantly reduced and predicted to be reduced much further and thickness of ice throughout the year as well.^[20] The socio-economic drivers are the growth in world trade, which is mainly shipborne, and energy and mineral exploration in the Arctic. The world economy is dominated by the North Atlantic and North Pacific areas, where the Northern Sea Route along the Siberian coast and the Northwest Passage north of Canada are the shortest connecting routes. The present gateways through the Panama and the Suez canals are used close to capacity and limit the future use of

very large vessels, while there are no limitations in the Arctic Ocean. Significant advances in ship building technology allow for ships to break through single year ice without icebreaker support.[21]

These environmental and socio-economic drivers have converged in Iceland to the formulation of a vision to make Iceland the North Atlantic transshipment facility at one end of the trans-Arctic route. The vision is a shuttle service by Arctic purpose-built ships between Iceland and, for instance, the Aleutian Islands which would be serviced by normal ships serving respectively the North Atlantic and the North Pacific.[22]

The EU is playing a greater role in societal security. Iceland has, in the wake of the financial crisis and the challenges of operating a very small independent currency, submitted a membership application to the EU, and the formal negotiation process has begun. However, only one party in the parliament, Althingi, the ruling Social Democratic Alliance, is wholeheartedly behind the application. The public has turned increasingly and decisively against EU membership since autumn 2008.[23] The main argument for EU membership was joining the Euro, but the sharp depreciation of the Icelandic Króna helped much in turning around the Icelandic trade deficit and improving competitiveness. There are two classic explanations for Iceland remaining outside the EU which still apply: the material unacceptability of the Common Fisheries Policy for a country basing its economy on fisheries, and the rhetorical unacceptability of ceding sovereignty to a supranational body for a country which has gained independence after centuries of foreign rule.[24] A recent and influential reason for voter rejection of the EU is the Icesave conflict over deposit insurance of British and Dutch depositors in Landsbankinn, where the United Kingdom and the Netherlands backed by the EU coerced Iceland into politically taking on the Icesave obligations.[25]

The European Commission published a communication to the European Parliament and Council on 20 November 2008 on *The European Union and the Arctic Region* in response to the European Parliament Resolution of 9 October 2008 on Arctic governance.[26] This communication addressed three areas of engagement in the Arctic for the EU: 1) protecting and preserving the Arctic in unison with its population; 2) promoting sustainable use of resources; and 3) contributing to enhanced multilateral Arctic governance. The utility of this EU strategy for Iceland was subsequently set out in a ministry of foreign affairs note. Iceland noted the interest of the European Commission in trans-Arctic shipping, where Iceland sees great prospects for providing transshipment. The Icelandic ministry of foreign affairs concluded that Iceland as an EU member would be the gateway of the EU toward the Arctic Ocean and expected increased European investments in Iceland in Arctic research, energy exploration, and transportation in connection with resource exploitation in the Arctic and new navigation routes. There is no trace in the EU Commission communication of the EU taking on traditional security responsibilities, which NATO currently covers. Concerning immigration and law-enforcement, Iceland has been a member of the Schengen area since 2001 with access to common databases, etc.

Faroe Islands: Broad-spectrum Security Concept and Partnership with Denmark

The Faroe Islands were also settled by Viking settlers and eventually absorbed by the Kingdom of Norway around 1035, and thus eventually coming under the Danish-Norwegian crown. Independence-minded Faroese have always looked to Iceland and there were family ties between independence political families in the two societies around 1900 when Iceland gained home rule. The Faroe Islands were fully integrated as a county in Denmark, and the ancient assembly and court of law, the Løgting, was reconstituted in 1852 as a consultative and later county assembly.[\[27\]](#)

The Faroe Islands were equally drawn into European conflict during WWII and occupied by Britain because of their strategic location in the North Atlantic. After the war, the Faroe Islands remained in the Kingdom of Denmark gaining home rule in many domestic issues in 1948, 44 years after Iceland, with the Løgting as legislative assembly. The Faroese home rule act excludes the constitution of the Kingdom of Denmark, citizenship, monetary affairs, and foreign, defense and security policy. The act divides between A and B areas of legislation, where the Løgting could take over the A items at its own or Danish request, and which especially cover social policy, health care, business, education, and infrastructure. The B items, covering, of relevance here, police, radio, air traffic and natural resources, could be taken over by mutual agreement. This constitutional status left security policy, including law enforcement and intelligence matters, in the hands of government authorities in Copenhagen, and integrated the Faroe Islands together with the Kingdom of Denmark into NATO during the Cold War.[\[28\]](#)

In 2005, an expansion of the existing 1948 home rule legislation was adopted in equal partnership between the Kingdom of Denmark and the Faroe Islands, whereby the Faroe Islands can take over all issue areas except the constitution, citizenship, the Supreme Court, and foreign, security, and defense policy as well as currency and monetary policy. The only areas of relevance here which the Faroe Islands have not taken over are police and air traffic. At the same time, legislation was passed, which authorizes the Faroe Islands to enter into international agreements on issues it has taken over and opens the possibility for Faroese membership of international organizations in areas covered by self-rule.[\[29\]](#)

During WWII, Britain established a LORAN radio navigation station in the islands, which Britain, the United States and others were keen to maintain after the war. Copenhagen was keen to keep foreign forces out of the Faroe Islands, so the Royal Danish Navy took over the station despite great technical difficulty and established a previously unseen level of presence in the islands. As with Greenland and Iceland, the Faroe Islands were important for NATO to close the Greenland-Iceland-United Kingdom (GIUK) gap to keep the Soviet navy out of the North Atlantic and protect trans-Atlantic lines of communication. The Royal Danish Air Force operated a NATO radar facility at Sornfelli from 1963 to 2007. Today, the Royal Danish Navy usually has an inspection vessel of the Thetis class (112 m long) with helicopter in the area. The Faroese home rule government through Faroese Islands Fisheries Inspections operate the two patrol and

rescue vessels Brimil (60m long) and Tjaldrið (42m long), and the national carrier, Atlantic Airways, has a Bell 412 helicopter on 24/7 standby for search and rescue work.[30]

The Faroese parliament, Løgtingið, has on several occasions since 1940 expressed a stand emphasizing keeping the Faroe Islands out of international conflict and keeping military forces out of the islands. Danish and NATO military activities were only partially disclosed to Faroese authorities according to Jákup Thorsteinsson's 1999 report on the Faroe Islands during the Cold War. The Faroese self rule government does not refer to security policy on its website, unlike the Greenlandic, which points to the lack of a common strategic culture among Iceland, the Faroe Islands, and Greenland. This lack is an important hurdle to overcome in the development of broad security policy in the region. The Løgting today adapts a broad security concept and is concerned with topics such as organized crime and trafficking. In the modernization of the Faroese home rule in 2005, it was emphasized in the Danish-Faroese legislation that foreign, defense, and security policy does not fall under the home rule. On the other hand, the Kingdom of Denmark and the Faroe Islands agreed to involve the Faroe Islands as an equal partner in foreign and security policy deliberations concerning the islands.[31]

Faroese society bears resemblance to Iceland culturally and historically. Both are descendants of Viking settlers in the 800s with mutually intelligible languages. Socially, both are highly developed microstates and knowledge-based societies with roots in fisheries and sheep farming. They share political and historical roots as North Atlantic autonomies of the Kingdom of Denmark, and possible Faroese independence is likely to follow a path similar to that which led to Icelandic independence, with sovereignty in a union as Iceland between 1918 and 1940/1944. The Danish-Icelandic union was clearly the inspiration for the Faroese proposal in 1998 for Faroese sovereignty in a personal union with Denmark. This proposal fell on unresolved Faroese fiscal dependency on Denmark, which seems the stumbling block for further or full independence for now. In the Løgting, independence-minded parties, Tjóðveldi (8), Fólkaflokkurin (7) and Miðflokkurin (3), have a slight majority out of 33 members.

Security policy-making and implementation in the Faroe Islands will continue to face the public finance and administration dilemmas identified above. These dilemmas exist for current policy carried out under self rule, such as fisheries inspection, and will be accentuated by taking over important areas as law enforcement and air traffic as is predicted in current self rule legislation. These dilemmas will also be accentuated by increased energy exploration and shipping, which, however, also gives economic opportunities for further self-government. As in the Icelandic case, these dilemmas must be faced through a combination of developing domestic capabilities, organizations, policies, and vocabulary to the possible extent and building outside alliances for addressing tasks beyond domestic capabilities. Increased regional collaboration and integration through, for instance, joint deployment of assets, procurement, maintenance, and training may ameliorate these dilemmas by expanding the basis of organizations and the organizations themselves allowing for greater efficiency, returns to scale and specialization.

The Faroe Islands can replicate Iceland with domestic civilian security, law enforcement, and coast guard organizations. For replacing the assets of the Kingdom of Denmark, the Faroe Islands can also replicate Iceland with NATO membership with security guarantees and air policing directly from Britain or Norway. The importance of the GIUK gap depends on the state of the international system. Today, the gap is of little importance as reflected in the closure of the Royal Danish Air Force Sornfelli NATO radar station. If the gap regains importance and the Faroe Islands have gained independence, the Faroe Islands could replicate the Icelandic Defense Agency establishing civilian air surveillance integrated into NATO.

Greenland: North American Security and U.S.-Danish-Greenlandic Relations

Greenland straddles circumpolar Inuit and Nordic culture and history. Inuit have migrated from North America to Greenland since prehistoric times. Norse settlers arrived in the Viking age from Iceland and were absorbed in the Kingdom of Norway, but disappeared in the middle ages. The Danish-Norwegian missionary Hans Egede arrived in Greenland in 1721 to rediscover the Norse and reassert the Danish-Norwegian claim to Greenland. Greenland remained a colony of the Kingdom of Denmark until it was integrated on an equal standing in the Kingdom as a county in 1953, the old status of both Iceland and the Faroe Islands. In 1979, Greenland gained home rule similar to Faroese home rule, 75 years after Iceland and 31 years after the Faroe Islands.[\[32\]](#)

Greenland's steady movement to greater self-government and a more independent role in the world is clear, as with the Faroe Islands. In 2005, the Kingdom of Denmark and Greenland agreed—as in the Faroese case—to grant Greenland the right to enter into agreements with foreign countries and international organizations on issues Greenland had taken over. Greenland also received the right to join international organizations in these domains, usually as associate member. In 2009, the Kingdom of Denmark and Greenland agreed on self rule for Greenland, which recognizes the Greenlanders as a people under international law, awards the rights to natural resources to Greenland and gives the self rule government the right to take over all issue areas except the constitution, citizenship, currency and monetary policy, and foreign, defense and security policy. The areas Greenland can and desire to take over in due course involve important broad security policy areas such as police, justice, immigration, transportation, and other areas. The self rule agreement explicitly grants Greenland the right to pursue full independence, and thus, shows Danish acceptance of this goal. The self rule agreement received 75.5 percent support in a referendum in Greenland on 25 November 2008, showing the strong popular support for increased self-government.[\[33\]](#)

Greenland has played a key role in North Atlantic and North American security since its occupation by U.S. forces during WWII, the U.S.-Danish agreement on the defense of Greenland from 1941 and the defense agreement from 1951. The United States kept forces and facilities in a number of bases in Greenland. Today, the only facility is the Thule radar, which is part of the National Missile Defense project showing the continued central strategic role of Greenland. The Royal Danish Navy operates inspection vessels of the Thetis class with helicopters and the patrol

vessel class Knud Rasmussen, and the national carrier, Air Greenland, has a fleet of 15 helicopters.[\[34\]](#)

The Greenland home rule government has been keen to take a greater and equal role in the foreign, defense and security policy deliberations concerning the island. Whereas the Faroe Islands seem concerned with a broad spectrum of security challenges, Greenland is focused on the US-Danish-Greenlandic relationship and the presence of U.S. forces in Greenland. In addition, Greenland is focused on developing its relations with the United States in other areas as economic development, science and education, etc., which are seen as important to socio-economic development, the precondition for independence.

An important achievement for Greenland was the U.S.-Danish-Greenlandic foreign ministers' meeting at Igaliku in Southern Greenland on 6 August 2004. Here, Colin Powell, Per Stig Møller and Josef Motzfeldt agreed on involving the Greenland home rule government and authorities in the hitherto bilateral U.S.-Danish relationship regarding the defense agreement and the U.S. forces in Greenland. This agreement was a Greenlandic condition for allowing the upgrade of the Thule radar for the National Missile Defense project. In addition, the parties made joint declarations on the environmental aspects of the U.S. presence in Greenland and economic and technical cooperation between the United States and Greenland with a tripartite joint committee to support this collaboration.[\[35\]](#)

Greenland is keenly pursuing increased energy and mineral exploration, where offshore hydrocarbon resources are seen as a way to replace financial support from the Kingdom of Denmark and thus pave the way for greater and eventually, full independence.[\[36\]](#) Large incomes from hydrocarbon exploitation may supply the financial basis for increased and perhaps full Greenlandic independence, but does not solve the public administration dilemma pointed out in this article of very small organizations with very limited possibilities for specialization. Greenland is also much more dependent on trained civil servants, etc., from Denmark than the Faroe Islands. Greenland needs to achieve a higher level of education through both domestic efforts and studies abroad, where Iceland is a successful example of transferring much knowledge and technology through education abroad.

As pointed out by Corgan, domestic security policy expertise and vocabulary is vital for informed debate and policy-making. The Faroe Islands and Greenland must (to the extent they have not done so already) follow in the footsteps of Iceland and develop the domestic vocabularies and expertise to assess military, strategic, and other security issues. An important challenge and aim will be to develop a common regional strategic culture of security and surveillance for a common space increasingly exploited for energy and marine resources and traversed by international shipping rather than Cold War standoffs. Existing organizations can help in forming the relationships to create such a common strategic culture, such as the West Nordic Council, the Nordic Council and the Arctic Council. The West Nordic Council chose safety at sea and international cooperation for its thematic conference in 2008 and made recommendations to the Nordic Council.

Increased Greenlandic self-government and possible independence will be highly dependent on the ability to create and staff highly qualified indigenous organizations and services such as bureaucracies, coast guard and law-enforcement. As in the case of the Faroe Islands, Greenland will, with growing self-government and perhaps full independence, have to combine solving some security policy tasks domestically and others in collaboration with outside parties, as is the case currently with the Kingdom of Denmark. Greenland could—and is expected to—remain a member of NATO with a bilateral defense agreement with the United States and to host the U.S. Air Force base at Thule. Such an arrangement would supply the guarantees of Greenland's defense and could supply other assets. Only the U.S. commitment to the security of the region can assure convincing escalation domination against Russia, and in the future, China. Furthermore, large-scale civilian emergencies will be outside the capabilities of the present and future actors in the region and will demand outside assistance. Greenland is also expected to work closely with Canada concerning the Northwest Passage.

Regarding Denmark's interest in North Atlantic security, it must, first of all, be emphasized that the only reason for Denmark's involvement in the Arctic and North Atlantic is naturally the Faroe Islands and Greenland being part of the Kingdom of Denmark. The day these societies might gain full independence from the kingdom, Denmark will, in all likelihood, be as completely removed from their security policy as it is from that of Iceland (apart from cooperation because of the Faroe Islands and Greenland or NATO collaboration). Denmark will remain involved during a time of union, as with Iceland between 1918 and 1940.

It is clear from current Danish foreign and security policy that its primary defense interest is in combat-like operations in areas as the Middle East, Central Asia, and the Horn of Africa, etc. These are the missions of the future for the Danish military and the Royal Danish Navy, rather than its rich North-Atlantic history, which in all likelihood will end with the possible independence of the Faroe Islands and Greenland. There is no reason to believe there will be political will or interest in Denmark to maintain—and certainly not renew—the present significant Danish Arctic naval capabilities in the event of Faroese and Greenlandic independence.

Conclusion: Smart Microstate Solutions of Small Domestic Organizations and Outside Collaboration

Security policy-making and implementation in the North Atlantic region of Greenland, Iceland, and the Faroe Islands take place under demanding structural, environmental, and political conditions, which cause significant public finance and administration and security policy challenges. This article identifies these conditions and challenges, describes how these three microstates historically and currently address these conditions and challenges, and points toward future environmental and socio-political developments.

The structural conditions are that the Faroe Islands, Greenland, and Iceland all are highly developed microstates, thus with large relative, but limited absolute capabilities. These

conditions are intensified by the difficult Arctic and Subarctic environmental, such as climatic and geographic, conditions, which make communication, transportation, and projection of capabilities difficult and expensive. Environmental conditions are changing with climate change, where, for instance, melting sea ice is very likely to improve access to oil and gas exploration and trans-Arctic shipping. These processes may further Faroese and Greenlandic self-government and possible independence through economic opportunities, but will also increase outside strategic interest and pressure on the region. Political conditions are changing with, in the short term, the U.S. abandonment of the Keflavik base, which removed the capabilities of a superpower leaving behind three microstates and a small state. In the longer term, a crucial political change in the region will be increased Faroese and Greenlandic self-government and perhaps eventual independence from the Kingdom of Denmark.

Based on these conditions, the three microstates face the public finance challenge of a very narrow tax basis for the capital investments and expenditures of security policy as ocean-going patrol vessels, search and rescue helicopters, and surveillance aircraft. Equally, they face the public administration challenge of very small organizations with limited possibilities for specialization, for instance, in strategy, law enforcement, and intelligence. This complex of conditions and challenges pose the security policy challenge of how these three microstates with large, strategically important air and sea space can pursue security policies to effectively exercise sovereignty, contribute to international security, conduct well-grounded and researched debate and policy-making, protect society from organized crime, illegal trafficking or terrorism, and provide search and rescue as well as environmental protection.

Iceland has successfully faced these challenges, which is part of its successful independence. The Faroe Islands and Greenland must equally formulate and implement successful security policies as part of increasing self-government and possible eventual independence. Sheer distance and difficult environmental conditions isolated the region from international conflict until WWII and the Cold War. NATO membership and the U.S. presence at Keflavik, together with domestic capabilities addressed Iceland's security needs during the Cold War and fifteen years after. The U.S. withdrawal from Keflavik forced Iceland to review its security policy, legislation, and capabilities. The Faroe Islands and Greenland benefit from Danish capabilities, which they will have to design policies to replace under greater self-government and responsibilities and possible full independence.

The public finance and administration and ultimately, security policy challenges addressed in this article are not unique to the North Atlantic. The Caribbean, the Pacific and the Indian Oceans all have island states with very limited absolute capabilities while they have very large air and sea space with serious security issues in areas such as illegal trafficking. If the very small societies in the North Atlantic can present innovative and smart solutions to address and overcome these challenges, these societies can make a unique and important contribution to security policy-making and implementation of countries with very limited absolute resources, especially island nations, around the world.

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Stability and Security in a Post-Arctic World:

Toward a Convergence of Indigenous, State and Global Interests at the Top of the World

Barry S. Zellen

Introduction

The Arctic region has experienced a rapid transformation during the last few years as unprecedented ice melts caught ice scientists and climatologists by surprise, suggesting that a period of rapid climate change had arrived in the polar region, precipitating earlier and historically unprecedented ice melts—including the first opening of both the Northwest Passage in North America and the Northern Sea Route along the Eurasian Arctic coast. As these extreme changes to the Arctic landscape (transforming an icescape to a navigable maritime domain for part of the year) take place, there has been concern that a race for resources might precipitate a period of state conflict in the region. Increased economic, military and diplomatic activity in the Arctic will bring the long-isolated indigenous peoples of the Far North into closer and more frequent contact with the modern state, testing the new systems of self-governance conceptualized and negotiated in a more static time where traditional conditions of deep freeze had long been the norm. This paper will examine the political modernization of the Inuit and their integration into the political fabric of the modern state through a mosaic of bilateral land claims and self-government processes that more closely bind them to the states that lay sovereign claim to their homeland, and consider how the thawing of the long-frozen Arctic will affect them, and their new relationships with the modern states along the Arctic basin.

Background

Over the centuries, interest in the Arctic, its natural resources, and the commercial and strategic potential of its sea lanes has been persistent, from the fur trading empires of Rupert's Land and Russian America to our own time. However, climatic conditions prevented the region's full potential from being achieved before now, by holding back its development and limiting its contribution to the world economy. Neither a rimland nor a heartland, the Arctic more closely resembles what geopolitical theorist Mackinder called *Lenaland*^[1]—named for the isolated Lena river valley in Russia, this concept captures the unique geostrategic isolation which made it possible for the Cold War's two armed and often hostile superpowers to come face to face along their long ice curtain with little risk of war, in great contrast to the Central Front in the once-divided Germany where a million men stood armed and ready for a generation.

This long isolation dates back before the dawn of man and accounts for the region's unique fauna, such as the polar bear and beluga whale, which blend into an environment defined by ice and snow for millennia. What long defined the region's biological evolution also shaped its geopolitical stability, and limited mankind's otherwise heavy footprint. But all this now looks to be changing—or least the prospect of such a change has tipped from the implausible to the possible—as a result of the rapid warming of the Arctic climate and the measurably accelerated summer ice melts. Even the most alarmist of ice scientists were caught off guard three years ago when summer ice minimums hit new lows several decades earlier than anyone had imagined possible.[2] This has put the region in play strategically for the first time since the end of the Cold War as the renewed promise of unlocking the Arctic's full potential and the simultaneous global rush for natural resources stimulates interest among numerous stakeholders who had otherwise been content to ignore the polar region throughout the 1990s.[3]

Fear, Hope, and Change in the Arctic

With the Arctic, there is a marked divergence between optimists and pessimists. Some, such as Canadian author and dedicated Arctic journalist Ed Struzik, have postulated that what we think of as the Arctic is actually coming to an end, and that we now stand at the threshold of what I call the “Post-Arctic” world. Struzik referred to the “End of Arctic,” a phrase he introduced in the early 1990s and still uses to describe our historical and geopolitical moment. The Arctic Ocean and its increasingly active basin will of course still be there—more obviously so as the ice retreats. But its currently dominant characteristics are changing rapidly—in particular the massive continent-sized barrier of multi-year ice that sits atop the pole, which could disappear in time and has certainly shown a capacity to retreat further and faster than anticipated, presenting us with something of a strategic surprise that suggests further surprises could arise. As the ice pack retreats, the polar barrier that marked the very “ends of the Earth,” or what was long ago called “Ultima Thule,” has the potential to become something of a trans-polar crossroads, or what mapmakers long ago imagined to be the “Midnight Sea.” Already shipping companies are testing routes across the top of the world to link Northeast Asian ports with their counterparts in Europe and Russian ports with their counterparts in Canada, anticipating that new sea lanes will become a feature of the maritime world.

What Rob Huebert and Brooks Yeager called a “New Sea” in their January 2008 World Wildlife Fund report will eventually emerge if summer warming trends are sustained (and if decelerations of the ice-melts prove to be only temporary), with huge geopolitical consequences.[4] What was once the “ends of the Earth” now has the potential to become its new center, a literal “*mediterranean*.” Many are worried about these consequences; Ed Struzik, in his 1992 *Equinox Magazine* article titled “The End of Arctic,” predicted a world without a frozen Arctic;[5] and more recently, of course, is Al Gore’s “Inconvenient Truth”[6] thesis (which experienced something of a meltdown on the eve of Climategate when he exaggerated Wieslav Maslowski’s predictions of an ice-free Arctic (Maslowski was thinking *seasonally*, and Gore was thinking *messianically*) which echoed Struzik’s earlier argument that we are witnessing the end of a unique part of the Earth’s heritage.[7] Gore went further, suggesting a potential global

catastrophe that threatens to end most life on our planet. But even if such an apocalyptic end does not result from climate change, Arctic peoples and their governments will have to contend with the impacts of shifting wildlife migration patterns, coastal erosion and permafrost thaws that jeopardize many northern infrastructures. And even new opportunities such as increased trans-polar shipping will bring new risks and challenges, especially as multi-year ice breaks up and drifts south into the emergent sea lanes, requiring much investment and infrastructure development to ensure that adequate safety, search and rescue, environmental cleanup, and marine service capabilities are in place.

There are also some optimists who see us standing at the start of a new era, much like Francis Fukuyama viewed the end of the Cold War as a symphonic Hegelian finale called the “End of History,”^[8] and the dawn of a new era of hope. This more optimistic viewpoint believes we’re entering a new “Age of the Arctic,” the title of the well-known book (and earlier *Foreign Policy* article by Oran Young from the Winter 1985/86 edition),^[9] or as described by the phrase made famous in 1973 by the late Walter Hickel, Alaska’s very own philosopher-king—who not only helped endow the state of Alaska with the necessary land base to be viable (103 million acres), but who would later run the state as Governor serving two separate terms, and who also served in President Nixon’s Cabinet as Interior Secretary—that it’s the dawn of the “Day of the Arctic.”^[10] One can look even further back, all the way to William H. Seward’s 1853 “Destiny of America” speech that predicted the expansion of America “so that it shall greet the sun when he touches the Tropic, and when he sends his glancing rays towards the Polar circle.”^[11] Seward helped fulfill his prediction when he negotiated the purchase of Alaska from Russia in 1867—though at the time this was much criticized as reckless and shortsighted, and became infamously known as Seward’s Folly.

Whether you stand at a precipice before a tragic “End of the Arctic,” or at the gateway to a promising “Day of the Arctic,” depends ultimately on whether you approach the climate issue with hope or fear, and whether you anticipate great opportunity, or severe danger. I prefer to think of the coming era as the onset of the “Arctic Spring,” which imagines a forthcoming period of great change that offers tremendous hope as well as risk, a view that is shared by many northerners who look to climate change with something of a “bring it on” mentality, seeing in the thaw a potential economic awakening. “Arctic Spring” has the potential to transform the Arctic basin much like Prague Spring promised to open up and integrate Czechoslovakia with the West, but which in the end was crushed for another generation. However, the hope expressed in 1968 was finally realized twenty years later, when the Velvet Revolution succeeded in toppling the communist regime. As we think about this coming transformation, we should remember that this is a new (and as such unwritten) chapter of history—with the potential for new ideas and innovation.

Former Soviet Premier Gorbachev had such a vision for the Arctic at the Cold War’s end, expressed in October 1987 in his Murmansk Initiative,^[12] which called for the Arctic to become a “Zone of Peace,” and to lead the way forward to an end of the Cold War, a vision articulated by the Inuit as well, showing a unique alignment of tribal, territorial, state and international

interests. But events quickly sped beyond Gorbachev's control with the fall of the Berlin Wall, and the cascading swarms of people-power more speedily integrating East and West than his imaginative Arctic diplomatic efforts. But the idea was a good one, and perhaps worth revisiting. At Ilulissat in May 2008, a similar vision of an Arctic united and governed by international law was asserted; it remains to be seen if this vision ultimately triumphs, but as Lawson Brigham has recently observed in *Foreign Policy*, the prognosis is good and even recent saber-rattling through military exercises and assertive policy statements has not created frictions "beyond the realm of diplomacy."^[13] It remains possible that the Arctic basin will become a new arena for cooperation between Russia and the West, much like Gorbachev foresaw at Murmansk before his empire collapsed internally, fostering an East-West unification along the Central Front and not the northern front as he had hoped.

But much depends on the evolution of political attitudes in all of the Arctic states, and whether the political climate warms along with the geophysical climate. It is notable that at the Ilulissat Summit two years ago, only the top foreign affairs officials of the Arctic rim states were invited—suggesting that even as they pledged to collaborate in their efforts to resolve future Arctic disputes, they have yet to fully integrate the input of the region's inhabitants, and in particular its indigenous peoples. This was noted by the Inuit leadership, who a year later issued their own Circumpolar Declaration on Arctic Sovereignty,^[14] calling for their rightful, and central, place in determining its future and taking a baby-step forward toward a more robust assertion of sovereignty. In response to the emboldened Inuit response to their exclusion at Ilulissat, Secretary of State Clinton famously waded into the muskeg this past March, chastising her alliance partner, next-door neighbor to the north, and primary oil supplier, for excluding the Inuit and the non-rim Arctic states from the next meeting of the Arctic 5.^[15]

It appears that more than the climate is heating up; with Secretary of State Clinton's not-exactly-subtle diplomacy in Ottawa this past spring, a tectonic shift in the diplomatic balance of power may be taking place, with sub-state indigenous groups like the Inuit now finding a sympathetic ear at Foggy Bottom, and values long localized at the tribal level now shared by powerful states, not unlike the alignment that nearly came into balance at Murmansk a generation ago. The next step is to continue broadening the circle of stakeholders, so that the dynamic and creative efforts of the indigenous peoples of the region, and their many interests and perspectives, can increasingly shape the world's response to the changes taking place at the top of the world.

With the new regional governing structures across the Arctic now fully integrating the Inuit, from the North Slope Borough to the increasingly autonomous island-province of Greenland, and settled land claims empowering indigenous peoples with huge tracts of lands and substantial economic resources across the North American Arctic, their participation is not only enabled, it is essential—as the internal and external dimensions of Arctic security come together at the top of our world, where all hemispheres, and all jurisdictions, not only come together but fade into a singular point, where concepts like "East" or "West," or "Tribe" and "State," lose their meaning as they merge into a point of singularity in the high North.

The Inuit Political Odyssey: From Assimilation to Empowerment

Over the last half century, tremendous structural innovations have been made to the political economy of Arctic North America, stretching from the Bering Sea to Baffin Bay, with the completion of a multi-generational process of negotiating comprehensive aboriginal land claims treaties to resolve issues of land ownership, and to foster an enduring partnership between the indigenous peoples and the modern state through a variety of new institutions, including aboriginal regional and community corporations, investment corporations, land administration agencies, a variety of tribe-state co-management boards, plus a complex patchwork of local, regional and territorial governments created to give a voice to the native interest. As a result of these changes, which I examine in my 2008 volume, *Breaking the Ice* and its 2009 sequel, *On Thin Ice*, the Inuit and other aboriginal northerners have become powerful stakeholders in the economic and political systems that govern the Arctic today, and also, importantly, the largest private land owners with direct control over some ten percent of North America's Arctic territories, and indirect influence over a far larger portion of the Arctic land mass.^[16]

The historical process, seen from Alaska to Nunatsiavut, has been by and large a two-step process. The first step was to address the land question, and to negotiate and, in most cases, implement land claims accords to bring clarity of title, helping to identify who owns which lands, and to reconcile the competing interests of tribe and state and thereby open up (or, for sensitive ecosystems and traditional hunting lands, close off) the region to economic development with various mechanisms of co-management helping to keep native and state interests in balance. Once land claims were settled, the next step in the process of northern development has been the pursuit of new systems of aboriginal self-governance, taking various forms and employing various structures over time (with greater powers becoming available as time went by, and earlier policies of assimilation being replaced by more contemporary policies promoting cultural and political renewal)—from the establishment of municipal or borough governments under existing constitutional law as we saw in Alaska in the 1970s; to the creation newly empowered tribal councils governed by federal Indian law in Alaska and the NWT in the 1980s and 90s; or the negotiation of entirely new systems of governance—with the most ambitious being Nunavut, with their comprehensive land claim settlement in 1993 linked to the subsequent formation of a new territorial government in 1999, creating a complex and potentially powerful system of self-governance applying a public model to a predominantly indigenous region for de facto indigenous self-governance.

After Nunavut, the evolution toward more distinctly indigenous self-governing structures has continued, as reflected in the Labrador Inuit Land Claim of 2005 with the very first truly Inuit self-governing structure, whose governing principles were articulated in detail in the 2002 Labrador Inuit Constitution. More recently, in November 2008, the Danish province of Greenland held a referendum on evolving beyond their “home rule” system of autonomy toward formal state sovereignty and independence, which passed decisively—paving the way forward for the emergence of a formally sovereign Arctic state with a majority Inuit population, with literally revolutionary (or devolutionary) implications for the rest of the Inuit homeland. In the

years ahead, we may see even further advances in the process of native empowerment toward increased autonomy and perhaps leading toward the Balkanization of the Arctic into independent (or at least more genuinely autonomous) political units.

Regardless of the jurisdiction, whether in Alaska or Arctic Canada, or beyond the shores of North America, indigenous peoples have shown tremendous ingenuity in their effort to build new systems for self-governance since the land claims movement took root in the 1960s, creatively adapting existing institutions or creating new ones when possible, lobbying for and negotiating to further advance their powers. Ideas and institutions for reconciling the interests of indigenous northerners and the modern state have evolved, broadly following (but with some exceptions^[17]) a west-to-east arc across the North, becoming stronger with each new iteration and reversing many of the negative consequences of the colonial experience, and transforming the domestic balance of power to lean heavily in favor of tribal interests, particularly on social, environmental, and economic matters. This increasing shift in power has increased the capacity for the indigenous peoples of the North to confront the many social and economic challenges that remain in their communities, providing the tools necessary to innovate new opportunities and to grapple with the complex challenges (as well as potential opportunities) associated with climate change and a potential Arctic thaw.

The settlement of land claims and emergence of new structures of self-government have increased the role of indigenous peoples in the decisions made about the Arctic and its future. One dramatic illustration: in the 1970s, when the Mackenzie Valley Pipeline Inquiry was held by Justice Berger, the struggle was primarily between corporate interests and tribal interests, with the latter excluded from the decision-making of the former. During the more recent Mackenzie Gas Project, the Aboriginal Pipeline Group sat with the oil companies as an aboriginally-owned equity partner; and the Joint Review Panel examining the environmental and social impacts of the proposed pipeline was empowered by the settled regional land claims, providing an indigenous perspective on both sides of the table—contributing to a slow pace but a unique review process with indigenous inputs at all levels.^[18]

Alaska Native Claims: Starting the Process

When the Alaska Native Claims Settlement Act of 1971 (or ANCSA) was enacted, it aimed to quickly bring Alaska natives into the modern economy, and at the same time to clarify the limits of aboriginal title, making it possible to fully develop the state's natural resources and in particular to build the trans-Alaska pipeline. Because its objectives were largely economic, its corporate model became its defining and most transformative characteristic—not without controversy, since the corporate model was viewed with some skepticism by indigenous leaders as a tool of assimilation, and there remains a continuing debate over the appropriateness of the corporate model to the indigenous north. ANCSA formally extinguished aboriginal rights, title, and claims to traditional lands in the state, while formally transferring fee-simple title to 44 million acres—or some twelve percent of the state's land base—to Alaska natives, with \$962.5 million in compensation for the lands ceded to the state, \$500 million of which was to be derived

from future oil royalties (as a result of which over half the “compensation” was to be derived from resources extracted from the Inupiat homeland—an irony not missed by Alaska natives.) ANCSA also created 12 regional native corporations (and later a 13th for non-resident Alaska natives), and over 200 village corporations to manage these lands and financial resources.

These new corporate structures introduced a brand new language and culture, as well as a new system of managing lands and resources that seemed at odds with the traditional cultures of the region and their traditional subsistence economy. The early years of ANCSA were famously described by justice Thomas Berger as dragging Alaska natives “kicking and screaming”^[19] into the twentieth century, and many native corporations approached the brink of bankruptcy, forced to monetize their net operating losses in a last desperate bid to stay in business. A new cottage industry of northern investment, legal, and policy advisors emerged—sometimes to the benefit of their clients, but often not. In addition to the *corporatization* of village Alaska, ANCSA’s original design also had some structural flaws that nearly proved fatal to the land claims experience, including the “1991 time bomb”—the eventual expiration of the 20-year moratorium against transferring shares in native corporations to non-natives, which many feared would inevitably result in the dilution of native ownership. While critics of the land claims process are correct to point out these original structural flaws and the assimilating pressures introduced by new corporate structures, the land claims model has nonetheless proved resilient and adaptive, as native corporations matured and their boards, managers and shareholders found ways to better balance traditional and modern values, learning from their crash course in capitalism as they went—today the native corporations represent a huge economic force in the state of Alaska.

The Inuvialuit of the Northwest Territories: Evolving the Land Claims Model

Across the border, the Inuvialuit of the Western Canadian Arctic had a front row seat to ANCSA, and were impressed by all the money that was flowing north, as well as the new corporate structures created, and the sizeable land quantum formally transferred to Alaska natives. But they also noted continuing threats to indigenous culture, and the lack of adequate protections of subsistence rights, traditional culture, and environmental protection, and were determined to do better. So when they began negotiations for the 1984 Inuvialuit Final Agreement (IFA) in the late 1970s, the land claims model became significantly enhanced—in addition to creating new native corporations, the IFA also made an equal institutional commitment to preserve native culture and traditions, to protect the land and the wildlife, and to empower not just new corporate interests but also traditional cultural interests as well by creating new institutions of co-management and more powerful hunters and trappers committees. They also made sure all Inuvialuit became shareholders, and that no non-Inuvialuit ever could, learning from the Alaskan experience. The Inuvialuit thus successfully modified the land claims concept, so that its structure included a natural institutional balancing—not unlike our own balance of powers concept—that has enabled a greater commitment to cultural and environmental protections.

Their land claim entitled 3,000 Inuvialuit living in six communities to 35,000 square miles of land; co-management of land use, water use, wildlife, and environmental assessment; wildlife harvesting rights; financial compensation of \$45 million in 1978 dollars (inflation-adjusted to \$162 million), for lands ceded to Canada; a share of government royalties for oil, gas, and mineral development on federal land; the formation of new national parks in their settlement area to further protect their land base from development while leaving subsistence activities unhindered; and a commitment to meaningful economic participation in any development in their settlement area. This model has remained largely intact in later comprehensive land claims, showing a 25-year endurance as a model for northern development. But one issue that was not yet on the table in the late 1970s and early 1980s when the Inuvialuit chose to pursue their own regional land claim—and thereby gain some control over the intense oil boom in their homeland—was the establishment of new institutions of aboriginal self-government, something that the Inuit of the central and eastern Arctic—the future Nunavut territory—decided to wait for. The Inuvialuit felt they did not have the luxury of time given the frenetic pace of oil and gas exploration in their lands. But Nunavut remained more isolated, providing more time to re-think, and renegotiate, the land claims model.

Nunavut: Augmenting Land Claims with Regional Political Power

In the years separating the signing of the Inuvialuit land claim in 1984, and the signing of the Nunavut land claim in 1993, much progress was made on the political question, and an increasing respect for aboriginal rights in Ottawa enabled the establishment of a new concept: reshaping political boundaries to correspond to a land-claims settlement area, and establishing a new government to administer this region, augmenting the land claims with real political power. In 1993, with their signing of an historic accord, the Inuit of Nunavut were awarded \$1.1 billion and title to 135,000 square miles of land, including 13,600 with subsurface rights, on top of various co-management boards, clearly defined rights protecting subsistence, and royalty sharing from resource development activities. Nunavut has a population of around 30,000 in 28 communities spread out across over 770,000 square miles, or one fifth of Canada's land mass, including the High Arctic islands and the central-arctic coastal mainland. While its population is tiny, its jurisdiction is vast and its resource base potentially tremendous, and the sea lanes that cross through the territory include the famed Northwest Passage.

The most striking innovation of the Nunavut claim was the way it was formally linked to the division of the Northwest Territories and the formation of a brand new territory, resulting in the 1999 birth of Nunavut. Nunavut has now been up and running for a decade, gaining valuable but often painful experience in self-governance—and thus showing many strains as it struggles to confront some daunting social and economic challenges in one of the most challenging geophysical environments imaginable. There have also been intergovernmental frictions with Ottawa over implementation, and a growing perception of a crisis in Canada's youngest territory. But there is still much reason for hope for the future; the roots of the problems facing Nunavut go deep and are not likely to be quickly overcome, but the solutions developed can now be northern solutions, rooted in a deep understanding of northern social realities. Since its

population is predominantly Inuit, a public government can, at least for now, govern in an indigenous style—as the principles of the Nunavut land claim and the governing power of the new territorial government mutually reinforce one another. There is a long-term risk the territory could become more like the Yukon, especially if a major mineral strike results in a new mining center. But for now, a public model in an indigenous context is a creative way to create self-government by other means.

After Nunavut: The Labrador Land Claim and the Dawn of Inuit Governance

Half a decade after Nunavut made headlines around the world, the final Inuit land claim along the North American Arctic and Subarctic coast—the Labrador Inuit (Nunatsiavut) Land Claims Agreement—was settled. It was ratified in December 2004 and came into effect a year later, presenting a new stage in the evolution of Inuit governance, making the two-step process more of a one-step process, further redefining the limits of self-government within a land settlement area—transcending the public model applied by the Inuit of Nunavut and the Inupiat of the North Slope. The agreement created the 28,000 square mile Labrador Inuit Settlement Area with an adjoining 18,800 square mile ocean zone extending as far as Canada’s territorial waters. The settlement area includes 6,100 square miles of Labrador Inuit Lands, five predominantly Inuit communities, and 3,700 square miles set aside for the Torngat Mountains National Park Reserve (following a tradition established by prior Inuit land claims to create vast national parks in which subsistence was protected)—with the Inuit retaining special rights in each of these areas. The Government of Canada will pay the Labrador Inuit \$140 million in 1997 dollars in compensation for lands ceded to the Crown.

Just as the formation of the Nunavut territory was the key innovation of the Nunavut land claim, the emergence of truly Inuit self-government is the hallmark of the Labrador claim. As described in section 17.2 of the claim, it “exhaustively sets out the law-making authorities and self-government rights of Inuit,” with the newly created Nunatsiavut Government to be governed by the “fundamental law of Inuit” as enunciated by the 159-page 2002 Labrador Inuit Constitution. The constitution, among its many components, included an Inuit charter of human rights, recognized Inuit customary law and its application to “any matter within the jurisdiction and authority of the Nunatsiavut Government,” and embraced laws to protect Inuit culture, language, and traditional knowledge.” The Labrador Inuit Constitution created a blueprint of Inuit values and a pathway to the rapid formation of a truly Inuit system of government in a region that’s adjacent to coastal waters of emerging strategic significance, with active commercial and subsistence fisheries, major strategic mineral deposits such as the Voisey’s Bay project, and the prospect of much future economic potential. It also showed a new path toward aboriginal self-government, one that did not require secession like Nunavut, but instead forged a regional sub-government within an existing province, but with unique governing principles.

A Path toward Sovereign Independence: Beyond the Land Claims Model

The Arctic land claims model, with its subsequent modifications, has become an inspiration to many, proof positive of what can be gained through a determined, forward-looking effort to rebalance and modernize the relationship between the indigenous people of the North and the modern state. As with any land reform effort, changes in land tenure can have a profound impact on the domestic balance of power, shifting not just title to land, but the wealth created from that land, resulting in concentrations of economic power in the hands of a small indigenous population numbering in the thousands or tens of thousands. In Alaska and the Canadian Arctic, the Inuit have become owners of vast tracts of land, making them a landed elite with control over numerous economic, and increasingly, political levers. While not formally sovereign, they are poised to become increasingly influential stakeholders, partners in the consolidation of state sovereignty, and in the economic development of the northern frontier. A comparable situation exists in the post-Ottoman Middle East, with extended tribal families and clans sitting at a powerful and lucrative nexus of land ownership, natural resource wealth, and political power. While northern natives in Arctic North America are not in command of the ultimate levers of sovereign state power, such as military forces or national treasuries, they do have in their possession or within reach many tools of regional power, making them dominant regional elites. As the climate warms and the Arctic basin yields more natural resource wealth, the economic resources in their possession will also increase, and with that political influence.

In 2008, Greenland held a non-binding referendum on increasing the island's autonomy and eventually restoring its sovereign independence; the proposal was approved decisively, showing how far the desire to be self-governing extends across the Arctic.^[20] Denmark has shown a unique openness to the possibility of Greenland becoming formally independent (in contrast to the other Arctic states which attach great economic, strategic and emotional/ideological significance to their Arctic territories)—and if independence happens, it would mark perhaps the final stage in the process that began with ANCSA nearly half a century ago, with the full restoration of sovereignty to an Arctic nation. Other micro-states are sovereign (even if unable to defend that sovereignty)—from the South Pacific to the city-states of Europe. So why not in the Arctic? What a sovereign Arctic state will look like, how it affirms traditional native values, and balances modernization with tradition, will be fascinating to observe. The risks are real; Iceland's economic collapse, Nunavut's persistent social challenges, the near-collapse of Alaska's native corporations, are cautionary tales to consider.

Fostering a Tribe-State Partnership: A Sea Change in America's Arctic Policy

Many of the policies of President Bush's prior administration were controversial, and some believe unnecessarily unilateral and divisive; but in the closing hours of his historic (if not universally popular) presidency, he issued the first new American Arctic policy since 1994. This document appears to have been written with the new era in mind; it takes a multilateral approach to Arctic issues, pledging the United States to work with international, regional, local, and even tribal organizations, and continues to provide a blueprint for the Obama Administration. The collaborative spirit of the policy update was so unexpected that the initial response was largely one of denial, with media attention fixating on the few unilateral components relating to national

and homeland security, but not on the dozens of other more collaborative dimensions. Those unnoticed affirmations of a multilateral Arctic future reflected a rather sophisticated awareness of the transformation of the Arctic, and showed an appreciation of the increasing role of its indigenous peoples—marking a collaborative and multilateral conclusion to his highly controversial presidency.

A tectonic shift—toward greater collaboration with, and participation of, the numerous tribal, national, and international actors on the circumpolar stage—was evident in the first comprehensive re-articulation of U.S. national policy on the Arctic region since 1994.^[21] Indeed, it is noteworthy that among the six policy objectives identified in Section III, part A of National Security Presidential Directive 66/Homeland Security Presidential Directive 25 (NSPD-66/HSPD-25)—issued on January 9, 2009, in the final days of the Bush administration—were to “Strengthen institutions for cooperation among the eight Arctic nations” (objective number four) and to “Involve the Arctic’s indigenous communities in decisions that affect them” (objective number five.) This is historically significant, and demonstrates both an increased awareness of, and respect for, the growing political and economic participation of the Arctic peoples in governing their own affairs, as well as a continued commitment to a collaborative, multilateral approach to solving the region’s challenges. While the first policy objective listed in Section III, A, is to “Meet national security and homeland security needs relevant to the Arctic region”—a point that has dominated news coverage and commentaries on the new Arctic policy—the second and third objectives are to “Protect the Arctic environment and conserve its biological resources,” and to “Ensure that natural resource management and economic development in the region are environmentally sustainable,” directly benefitting the foundational pillars upon which the indigenous Arctic cultures depend for their cultural, nutritional, and economic survival. The sixth policy objective is to “Enhance scientific monitoring and research into local, regional, and global environmental issues,” which further reinforces America’s renewed commitment to multilateralism at the top of the world and increasing environmental knowledge at all levels, from the local to the global, during this time of Arctic transformation.

These important dimensions to the new U.S. Arctic policy were largely overlooked by many observers, in particular by the op-ed pages of several newspapers north of the border that emphasized the national security and unilateral dimensions of America’s new Arctic policy. But somehow, the unprecedented level of collaboration that the White House embraced—with its top-level commitment to indigenous as well as global participation, and its refreshingly holistic approach to the region’s environmental and ecological health, as well as to continued scientific research in the interest of protecting this fragile domain—got overlooked in the first round of commentary, analysis, and opinion that greeted the release of the directive. Clarifying its policy, on January 13, 2009, the U.S. State Department provided a statement in response to a question at its daily press briefing, explaining: “The new directive is the culmination of an extensive interagency review process undertaken in response to rapid changes taking place in the Arctic, the principal drivers of which are climate change, increasing human presence in the region, and the growing demand for Arctic energy deposits and other natural resources,” and noted the

“directive focuses on seven broad areas of Arctic policy.”^[22] The State Department also reiterated its commitment to Arctic cooperation, noting that “States safeguard their national security interests in numerous ways, some on their own, and some in cooperation with others. The United States wants to cooperate with other governments in the Arctic. The best way to address both the challenges and opportunities of the Arctic is through cooperation. Any U.S. action would respect international law.”^[23]

This certainly does not suggest a go-it-alone attitude by the United States. Quite the contrary, it reflects an awakening to the increased participatory role of indigenous peoples, circumpolar neighbors, and international organizations in the management of the Arctic, and the continued need for a multilateral approach to managing the Arctic’s unique challenges in the years ahead. While the new policy does not reflect a change of perspective on the legal status of the Northwest Passage, or a softening in America’s commitment to freedom of the seas, it does suggest a sea change is underway in its perception of, and sensitivity to, the numerous challenges mounting at the top of the world as the ice continues its retreat, and the prospect of a post-Arctic world enters the realm of the possible. Most importantly, it shows a far greater sensitivity to the interests and perspectives of the indigenous peoples as well as America’s Arctic neighbors, and a willingness to work together in a joint effort to resolve these challenges in the years ahead—so much so that America’s Arctic policy remains unchanged under the Obama administration, with Secretary of State Clinton, as noted above, providing vocal support of the Arctic’s non-state peoples

The Circumpolar Inuit Declaration: Reasserting Indigenous Sovereignty in the Arctic

On April 28, 2009, a delegation of Inuit leaders from Greenland, Canada, Alaska, and Russia presented a Circumpolar Inuit Declaration on Arctic Sovereignty^[24] in Tromsø, Norway, where the Arctic Council was meeting. It represented the Inuit response to their exclusion at Ilulissat, and while it does not directly consider the many details presented in the new U.S. Arctic policy, it nonetheless illustrates that both the Inuit and the modern state are converging in their conceptualization of Arctic sovereignty, with both viewing it to be an increasingly collaborative and mutually reinforcing concept. The declaration emerges from the work of the first Inuit Leaders’ Summit on November 6–7, 2008, in Kuujuaq, Nunavik, in Northern Quebec, where they “gathered to address Arctic sovereignty” and “expressed unity in our concerns over Arctic sovereignty deliberations, examined the options for addressing these concerns, and strongly committed to developing a formal declaration on Arctic sovereignty.”^[25] There, the Inuit leaders “noted that the 2008 Ilulissat Declaration on Arctic sovereignty by ministers representing the five coastal Arctic states did not go far enough in affirming the rights Inuit have gained through international law, land claims and self-government processes.”^[26] In many ways, their declaration was their direct response to the foreign ministers of the Arctic states for their exclusion at Ilulissat, and it constructively redresses this exclusion, and persuasively argues for their central role in determining the fate of the Arctic. As the Inuit Circumpolar Council observed in a press release issued at this start of their effort in November 2008, “Sovereignty is a complex issue. It has a variety of overlapping elements, anchored in international law. But

fundamentally it begins with the history and reality of Inuit use and occupation of Arctic lands and waters; that use and occupation is at the heart of any informed discussion of sovereignty in the Arctic. Arctic nation states must respect the rights and roles of Inuit in all international discussions and commitments dealing with the Arctic.”[27]

The April 2009 declaration unveiled at Tromsø updates the Inuit policy on sovereignty in the Arctic, and asserts that “central to our rights as a people is the right to self-determination,” which “is our right to freely determine our political status, freely pursue our economic, social, cultural and linguistic development, and freely dispose of our natural wealth and resources. States are obligated to respect and promote the realization of our right to self-determination.”[28] Section two of the declaration concerns the “Evolving Nature of Sovereignty in the Arctic,” and notes that sovereignty “has often been used to refer to the absolute and independent authority of a community or nation both internally and externally” but that it remains a “contested concept, however, and does not have a fixed meaning.”[29] Further, the declaration notes, “Old ideas of sovereignty are breaking down as different governance models, such as the European Union, evolve,” where “sovereignties overlap and are frequently divided within federations in creative ways to recognize the right of peoples.”[30] Therefore, for the Inuit, “issues of sovereignty and sovereign rights must be examined and assessed in the context of our long history of struggle to gain recognition and respect as an Arctic indigenous people having the right to exercise self-determination over our lives, territories, cultures and languages.”[31] The Inuit further note that “recognition and respect for our right to self-determination is developing at varying paces and in various forms in the Arctic states in which we live,” and that:

Following a referendum in November 2008, the areas of self-government in Greenland will expand greatly and, among other things, Greenlandic (Kalaallisut) will become Greenland’s sole official language. In Canada, four land claims agreements are some of the key building blocks of Inuit rights; while there are conflicts over the implementation of these agreements, they remain of vital relevance to matters of self-determination and of sovereignty and sovereign rights. In Alaska, much work is needed to clarify and implement the rights recognized in the Alaska Native Claims Settlement Act (ANCSA) and the Alaska National Interest Lands Conservation Act (ANILCA). In particular, subsistence hunting and self-government rights need to be fully respected and accommodated, and issues impeding their enjoyment and implementation need to be addressed and resolved. And in Chukotka, Russia, a very limited number of administrative processes have begun to secure recognition of Inuit rights. These developments will provide a foundation on which to construct future, creative governance arrangements tailored to diverse circumstances in states, regions and communities.[32]

The Circumpolar Inuit declaration observes that in “exercising our right to self-determination in the circumpolar Arctic, we continue to develop innovative and creative jurisdictional arrangements that will appropriately balance our rights and responsibilities as an indigenous people, the rights and responsibilities we share with other peoples who live among us, and the

rights and responsibilities of states,” and that in “seeking to exercise our rights in the Arctic, we continue to promote compromise and harmony with and among our neighbours.”^[33]

However, even though the Ilulissat Declaration pledged the Arctic rim states to “use international mechanisms and international law to resolve sovereignty disputes,” thus far “in their discussions of Arctic sovereignty” the Arctic rim states “have not referenced existing international instruments that promote and protect the rights of indigenous peoples. They have also neglected to include Inuit in Arctic sovereignty discussions in a manner comparable to Arctic Council deliberations.”^[34] The Inuit declaration thus reminds us that the “inclusion of Inuit as active partners in all future deliberations on Arctic sovereignty will benefit both the Inuit community and the international community,”^[35] and that “extensive involvement of Inuit in global, trans-national and indigenous politics requires the building of new partnerships with states for the protection and promotion of indigenous economies, cultures and traditions.”^[36] These partnerships, the declaration contends, “must acknowledge that industrial development of the natural resource wealth of the Arctic can proceed only insofar as it enhances the economic and social well-being of Inuit and safeguards our environmental security.” Anything less will be rejected by the Inuit, and with their many settled land claims accords, regional and territorial governments, and numerous mechanisms of co-management and environmental regulation, proceeding without the full support of the Inuit might be surprisingly futile. That’s why the Inuit have drawn a line in the tundra, and so vocally insisted that their exclusion from the table at Ilulissat must be redressed, so that the future development of the Arctic is a truly joint effort, not just between the Arctic states, but between the states and the Inuit as well.

The Warming Earth and the New Sea: Onset of the Arctic Spring

There is still reason for hope, as evident by the tremendous progress made since 1971 reconciling state and tribal interests throughout the North American Arctic. But the challenges are still substantial—and just as we approach the end of this long journey of native empowerment, with the institutional transformation of the Arctic nearing completion, a new challenge emerges: that of rapid climate change. The visible evidence is overwhelming, as illustrated by the record ice melts (coming decades ahead of scientists’ predictions), the greening of the tundra as southern flora migrate north, and the melting of permafrost (affecting northern infrastructure and releasing methane trapped below, which could accelerate the warming trend.) The geophysical landscape of the Arctic is in a rapid transition.

While this presents new economic opportunities for the least developed part of North America, and promises to alleviate endemic poverty with new jobs, and new sources of revenue for the emergent Inuit governments, there is still much uncertainty and risk—particularly to subsistence hunting that depends on predictable wildlife migration patterns, and on stable winter ice and summer ground conditions. At risk are the indigenous cultures that have evolved along with the unique Arctic ecosystem and all its interconnected components. But all of the efforts to modernize the Arctic’s political economy over these past forty years have empowered the indigenous people of the region to directly address, mitigate, and potentially resolve these new

challenges, and to leverage the emerging economic opportunities—with a wide assortment of new tools, and increasing levels of power.

While that can't stop or even slow the warming, it can at least enable the peoples of the Arctic to contribute toward the creation of new solutions, as they rise to the new challenges of this era.

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17. For example, James Bay and Northern Quebec, due to the intensification of Quebec's hydro-power development activities in its northern reaches.

18. See the website of the Mackenzie Gas Project at <http://www.mackenziegasproject.com/> and the Aboriginal Pipeline Group at <http://www.mackenziegasproject.com/>. As described by Aboriginal Pipeline Group chairman Fred Carmichael, "Community consultations on a proposal to bring Mackenzie Delta natural gas to southern markets have begun in the Northwest Territories. As a longtime northerner, it reminds me of the Berger Inquiry. But this time, northern Aboriginal people are at the planning table. In a sense, we are now wearing two hats. One hat we wear identifies our traditional role as guardians and stewards of the land. The other hat represents our emerging role as business opportunity developers."

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U.S.-China Strategic Dialogue Phase V: “Connecting Long Term Goals to Contemporary Policy”

May 2-4, 2010; Honolulu, Hawaii

Conference Organized By

The U.S. Naval Postgraduate School and Pacific Forum CSIS

For

The Advanced Systems and Concepts Office

Of the U.S. Defense Threat Reduction Agency (DTRA/ASCO)

Michael Glosny and Christopher P. Twomey

Introduction

This report summarizes a recently held track II conference among U.S. and Chinese analysts and officials on strategic nuclear issues. This report begins by explaining the history of this series of meetings as well as describing the backgrounds of the participants and format of this session. The substantive discussion that follows is organized thematically rather than strictly following the panel structure from the conference, so as to capture the key points in a more logical and analytical fashion. It begins by highlighting core findings with regard to each side’s nuclear policy and strategy and some discussion of their nuclear arsenals. In doing it particularly emphasizes the perceptions of each side regarding the other’s nuclear forces and strategies. Then it summarizes the key points regarding both sides’ views of arms control and disarmament policy. A few brief miscellaneous points are discussed before the report concludes with a number of policy recommendations and discussion of potential “ways forward” for further engagement between the two countries on these issues.

Background

The fifth annual session of the U.S.-China Strategic Dialogue was held in Honolulu, HI from May 2 to 4, 2010. The Dialogue is a track II conference; thus, it is formally unofficial, but includes a mix of government and academic participants. The Dialogue is organized by the Naval Postgraduate School and Pacific Forum CSIS and is funded and guided by the Advanced Systems and Concepts Office of the U.S. Defense Threat Reduction Agency.

As the leading agency responsible for addressing threats from weapons of mass destruction (WMD), DTRA/ASCO seeks to enhance American situational awareness of Chinese nuclear

strategies and capabilities, reduce the prospects for proliferation in Asia and beyond, and more broadly enhance American deterrence in a time of transformation. Particular interests guiding DTRA/ASCO's leadership of this project have focused on identifying important misperceptions, misunderstandings, and key divergences in national interests, with a goal of reducing these over the long term.

Thus, the goal of this series of annual meetings has been to identify important misperceptions regarding each side's nuclear strategy and doctrine and highlight potential areas of cooperation or confidence building measures that might reduce such dangers. The first four conferences of this series focused their discussions on general perceptions of the utility of nuclear weapons, national threat perceptions in strategic affairs, the nature of current nuclear strategy and operational concepts of each side, regional issues pertaining to nuclear weapons issues, and strategic stability. (Conference reports for the first four years have been published previously and are available on NPS web pages.)

This year, the participants on the U.S. side included participants from think tanks such as CSIS, RAND, NBR, and CNA; universities such as NPS, NDU, and Stanford; and observers from State, the Department of Defense, Pacific Command, and Strategic Command. The U.S. participants totaled over twenty persons. On the Chinese side, participants included one PLA officer of flag rank as well as two retired field grade officers working at official PLA think tanks, three analysts from "official" civilian Chinese think tanks, and two scholars from Chinese universities. The freeze in military to military ties imposed by China in the wake of the U.S. arms sales to Taiwan resulted in a lower-than-usual ranking Chinese delegation.

One of the goals of this series of meetings is to create something of a community of regular participants who develop some accumulated learning and perhaps some personal trust that might facilitate a more open discussion. Typically at least half of the attendees have participated in a previous dialogue, as was the case this year.

The meeting was organized around four panels (see the attached agenda) centering on connecting contemporary doctrine to long-term disarmament goals, which are a renewed emphasis for both sides. The meeting began with wide-ranging discussions about the potential for complete abolition of nuclear weapons in the distant future and the preconditions and process for achieving this goal. This topic, far removed from contemporary events, forced all participants off usual talking points and helped pave the way for a relatively frank and open discussion throughout the two days. Thereafter, each side discussed contemporary nuclear policy and missile defense policy for themselves and the other country. Finally, there was a discussion of near terms steps with regard to arms control and confidence building measures.

For these traditional panels, each had two short presentations. These sessions of the conference were structured to maximize time for discussion rather than focus on vetted presentations. While that is always the goal, in this particular instance it was—by and large—met. Most participants regarded these discussions as the most open to date.

The meeting also included breakout sessions in which smaller groups of participants engaged in very informal discussions about the meaning of a dozen specific terms such as "strategic stability" and "key point counterattack". (The full list of terms is attached.) Each group was asked to discuss what the terms meant and provide some of the context for their usage. The goal

was explicitly not to come to consensus definitions, but rather to understand the commonalities and the differences of how the terms were used, and some sense of their role in each side's thinking about nuclear issues (some terms were more commonly used by one side than the other). The resulting non-vetted, presentation served as the basis for a vigorous discussion in a plenary session the next day.

A few general points came out of this discussion. First, participants from both sides noted that some of the terms, while used in official documents, were not the most important terms. (Indeed, some were dismissed disdainfully.) The track II level is particularly useful for this sort of frank commentary about one's own official documents. Second, in some cases, terms that were originally used in the 1950s in English were translated into Chinese to facilitate their understanding of U.S. doctrine. These terms might then be used by China as a way to communicate back to the U.S. without understanding the full nuance of the term (e.g., escalation control). In short, a sequence of incomplete translations is a recipe for misunderstanding.

It will be worthwhile to continue this discussion of definitions and concepts.^[1] One possible way forward to continue to develop this would be standalone projects for small teams of researchers.

China's Nuclear Modernization, Nuclear Doctrine, And No-First Use Pledge:

Throughout the two days, and transcending the panel on contemporary doctrine per se, participants discussed China's views on its own nuclear arsenal.

Nuclear Strategy

Chinese participants unanimously argued that the fundamental mission of China's nuclear forces is to prevent nuclear attack against China. Most Chinese experts also agreed that China should only use nuclear weapons after a nuclear attack. One Chinese participant argued that this fundamental mission had remained stable and consistent for the last four decades. In support of this view, others cited relevant sections of the 2006 and 2008 Chinese Defense White Papers. With no allies or responsibility to defend other countries, Chinese experts emphasized that China has no need for extended deterrence. One participant suggested that unlike the United States (a point returned to in a later section), China's no-first use (NFU) policy shows that it neither emphasizes the role of nuclear weapons nor has a policy of preemption.

Although Chinese experts mostly focused on the continuities of China's nuclear forces, one highlighted the growing emphasis on conventional missiles within the Second Artillery over the last 10-15 years, mostly driven by the need to deter the threat of Taiwan independence. The implications of the conventional elements of the Second Artillery being focused on more offensive missions, while the nuclear elements of the Second Artillery are focused on defensive, retaliatory missions was not addressed by Chinese experts, but is worth exploring in the future.

Discussions among the Chinese participants shed new light on how they understand and conceptualize "minimum deterrence," which is the term often used to describe China's nuclear doctrine. Minimum deterrence was described as a "dynamic and relative term" and repeatedly emphasized that China was concerned with capabilities, not numbers. This concept referred to the minimum capability required to deter nuclear use and possess a credible retaliatory

capability, although some suggested that “minimum” could mean a lot of different things. Other Chinese participants argued that although China’s requirements are to maintain sufficient forces for minimum deterrence, what that means in terms of quantity and quality of nuclear forces depends on many factors, including developments in U.S. missile defense plans. They emphasized the reactive nature of China’s force structure and argued that even if other factors compelled China to increase the quality or quantity of its nuclear forces, its general defensive doctrine would not change. The interactive element in China’s modernization was emphasized more than in previous dialogues.

Chinese participants argued that “lean and effective” (jinggan youxiao) is the preferred description for the requirements of China’s nuclear forces. One of the definition breakout groups discussed the term “effective and reliable deterrence” (youxiao kekao weishe),^[2] but Chinese participants suggested that this was an older formulation. Participants argued that although “effective and reliable” had been discussed earlier in the decade, the 2006 and 2008 Defense White Papers had adopted the “lean and effective” formulation and that had become the official description of requirements. Chinese experts argued that these were the characteristics that China’s nuclear forces must have to ensure a second-strike retaliatory capability. Moreover, one participant clearly suggested that these were the criteria that China used in determining force posture. It was not clear precisely what “effective” meant, but Chinese participants emphasized that “lean” referred to limited numbers.

The American participants were particularly interested in “lean and effective” as principles for force structure planning and asked the Chinese participants to talk more about how this principle affected force structure decisions. One American participant suggested that being clear and open about how these requirements translated into force planning was exactly the kind of transparency the U.S. was asking for on nuclear capabilities, and indicated that providing such information would go a long way towards addressing many worries in the United States concerning China’s nuclear forces. Another American expert asked how China made the judgment that a certain number of nuclear weapons would guarantee China’s retaliatory capability. Others asked what important external factors, besides U.S. missile defense, could impact the size of China’s arsenal. Several U.S. participants asked how numbers factored into China’s assessments of whether its forces had met the requirements of being “lean and effective.”

Chinese participants did not provide very specific answers to these requests for more information on the analytical link between the requirements of a “lean and effective” force and force sizing decisions. What was promising was that a clearer link between this diplomatic phrasing of “lean and effective” and the force structure existed; this was apparent across the board in Chinese discussions. Fleshing out our understanding of that link would be an important goal going forward.

Transparency of China’s nuclear forces and doctrine came up at several different points during the dialogue. In response to questions about when China will become more transparent about its nuclear modernization, Chinese participants argued that China’s nuclear doctrine and the conditions under which it would use nuclear weapons was already very transparent. Echoing a common refrain in past dialogues, experts also suggested that the U.S. was not very transparent on these issues itself. One participant further cited the 2008 Defense White Paper that provided a much greater amount of official information on China’s nuclear modernization efforts.

The PLA has provided more information on some aspects of nuclear modernization, but the limitations on Chinese transparency on nuclear capabilities was clear. In estimating of the size of China's nuclear stockpiles, Chinese experts were forced to cite American sources, because no official information is available from China. Nevertheless, in an important new development, Chinese participants suggested an understanding that the size of the Chinese arsenal and how it might affect the nuclear arsenals of other countries.

No First Use

While not a centerpiece of the agenda, Chinese participants reaffirmed China's commitment to its NFU pledge. As part of the definitional breakout groups, Chinese participants defined NFU as "a policy of not using nuclear weapons unless attacked by nuclear weapons first." In addition to claims of China's peaceful and defensive strategic culture, a Chinese expert cited China's historical experience as strong evidence for the credibility of the NFU pledge. During the Cold War China faced multiple crises and wars, and according to this expert, there is no evidence that China considered using nuclear weapons, threatened to use nuclear weapons, or even considered threatening to use them. Another Chinese participant further argued that China's strong land forces made the NFU pledge more credible because it would be unlikely to face conventional military defeat that might lead to incentives to use nuclear weapons first. Even if China faced nuclear attacks from countries other than the U.S. or Russia, a Chinese expert argued that China's conventional forces might be sufficient for retaliation and China might not even use nuclear weapons if attacked by nuclear weapons. Another expert supported this view by suggesting that American concerns about Chinese use of nuclear weapons during a war were based on the assumption that China would be facing a conventional defeat; given PLA modernization, this expert suggested this might not be the case. This echoes points made in previous dialogues in which the Chinese side suggests that the burden of escalation will fall on the United States. Another participant argued somewhat differently, that China's nuclear and conventional were completely delinked, noting that even during the Cold War when China was weak militarily, Beijing was still comfortable with a minimum deterrent capability and stood by its NFU.

American participants pushed for greater clarity on the conditions under which China might consider abandoning its NFU, especially during potential crises. These questions led to clear frustration among Chinese participants. The implication was that pushing too hard for clarity, especially based in the context of hypothetical U.S.-China crises and war, would produce mistrust and make the relationship more adversarial.

Although sensitive to these concerns, several American participants highlighted the utility of such frank discussions. One expert argued that having such abstract and hypothetical discussions now helped identify potential areas of misperception, potential instability, and inadvertent escalation. Another expert also noted that understanding U.S. concerns about whether China's NFU pledge will remain credible under a wide range of situations can help China understand why the U.S. does not adopt its own NFU policy. In the definition breakout groups, participants discussed several terms related to crisis and escalation, including "escalation control," "inadvertent escalation," "crisis stability," and "nuclear threshold." In these detailed discussions of hypothetical crisis dynamics, no Chinese participant admitted that these dynamics would put severe pressure on China's NFU pledge, nor that in such a crisis China might have to reconsider its NFU policy.

Transwar Deterrence and Targeting

Discussions among Chinese participants also made it clear that China only sees a role for nuclear weapons in preventing escalation of war from the conventional to nuclear realm. Beijing sees no role for nuclear weapons in controlling war or escalation once the war had already become nuclear (at any level). This discussion emerged during the plenary discussion of the definition for “escalation control.” One group argued that the Chinese side is not convinced that this term has relevance in the nuclear context. In response, two Americans argued that Chinese nuclear doctrinal writings contain numerous references to controlling war and controlling escalation. In response, a Chinese expert argued that China only saw utility for nuclear weapons in preventing the war from going nuclear. However, once the war had crossed the nuclear threshold, the Chinese saw no role for nuclear weapons in controlling further escalation and saw no role for “nuclear warfighting.”

The discussions of the term “key point counterattack” (zhongdian fanji) also deepened understanding of how China thinks about nuclear targeting. Chinese experts argued that because China has few nuclear weapons, it needs to be very selective in the targets it chooses.^[3] Chinese participants denied that it had a counter-force implication. The Chinese participants did not provide greater detail of the considerations and factors that determined what was a “key point.” It should also be pointed out that this phrase has not appeared in any of China’s Defense White Papers.

China’s Missile Defense Test

In January 2010, China reportedly conducted a successful high-altitude anti-ballistic missile test. However, the details of this test and the strategy behind such a system were not well understood by most Chinese. The Chinese side discussed its BMD test, but experts admitted that they had little specific data on BMD, which was a very sensitive issue within China.

Chinese experts offered a range of potential explanations for China’s BMD test and roles for a BMD system. One participant argued that China’s BMD system was not part of a larger move to develop space capabilities or weaponize space. On the contrary, this expert argued that bilateral interactions with the U.S. were sufficient to explain China’s motivations to develop such a system. Chinese participants cited articles by WU Tianfu and SHEN Dingli, which explained the BMD test as a response to American BMD systems. They argued that although China would prefer to live in a world without missile defenses, developments in U.S. BMD systems forced China to defend itself by developing its own BMD system. The logic of how a Chinese BMD system would reduce its vulnerability was not spelled out clearly, but Chinese experts suggested that this was the most widely accepted explanation for the Chinese test and BMD program. The Chinese side also suggested that one of the major changes in recent years was that Chinese officials and researchers have accepted that missile defense cannot be stopped, and the BMD program is an attempt to make the best of that situation.

Chinese experts offered a few other potential factors that might have led China to conduct the test and develop the BMD program. One expert suggested that many within China believed that the rest of the region and world would accept this as a reasonable defense requirement, and there was a broader sense that the international community wanted to accommodate China rather than challenge it. Another participant also noted that there was no international or domestic law that

prohibited China from conducting such a test. Other Chinese participants mentioned the importance of prestige and demonstrating to the world that it had such a capability. An American expert speculated that one reasonable factor for China to develop a BMD capability might be to defend itself against Indian nuclear weapons, but none of the Chinese participants directly engaged this point.

How a BMD system might be deployed was not clear, but Chinese participants were unanimous in their view that a BMD system would not change China's nuclear doctrine or affect its own NFU pledge. Several Chinese participants suggested that China would not only continue its focus on defensive nuclear counter-attack, but that a BMD system would enhance the survivability of Chinese nuclear weapons, and therefore make NFU even more credible. The development of a BMD system, however, would not mean that China should not continue improving its own nuclear capabilities. Even with its own BMD system, effective deterrence would still rest on China's ability to reliably penetrate the other side's missile defenses, so U.S. BMD could still affect the size of China's nuclear forces.

One Chinese participant also argued that Chinese experts have recognized that BMD is very expensive, so it may only serve a limited role in China's future military modernization. The participant further argued that cruise missiles and other offensive weapons might prove more cost effective. Chinese participants did not address questions on the relationship between the BMD test or program and China's anti-satellite (ASAT) capability.

U.S. Strategic Weapons Policy

The conference was timed in part to permit discussions of the recently released Nuclear Posture Review (NPR). In the event, the NPR only was released weeks prior to the conference. Because China had not yet formulated an official response to the NPR, there was no discussion of the formal PRC reaction or policy. On the other hand, the Chinese interlocutors were able to probe for additional understanding of the NPR while their government's formal response was being developed, as well as express some initial concerns about the NPR. The timing also offered an opportunity for the U.S. to address ambiguities and provide a more comprehensive understanding of U.S. policy to better inform China's official response.

While the Ballistic Missile Defense Review had been out longer, it is unclear how much the Chinese side has engaged with that at this time. Thus, discussions of policy in that area were also fruitful.

Nuclear Posture Review

The American side discussed the important elements of the NPR. The 2010 NPR contained numerous continuities with previous NPRs, such as continued emphasis on extended deterrence, discussion of strategic capabilities in a broader context, and repeated rhetoric of reducing the role of nuclear weapons. According to American participants, however, there were significant changes in this NPR. First, preventing the proliferation of nuclear terrorism has been elevated to the top of the U.S. nuclear agenda for the first time. This has included increased funding for cooperative threat reduction and the Department of Energy. This should be a positive foundation on which to develop Sino-American cooperation, as the interests of both countries converge on this issue. Second, the change in declaratory policy has eliminated ambiguity associated with

using nuclear weapons against non-nuclear weapons states. Moreover, the NPR repeated that the “bar” for using nuclear weapons was very high. Third, the NPR devotes significant attention and funding to nuclear infrastructure, which has been neglected for many years. Fourth, the references to China in the 2010 NPR are much more positive.

In general, the Chinese participants were positive in their assessments of the NPR. (At the time of the conference, a short piece by retired Major General XU Guangyu had appeared in the PLA Daily, but it was never mentioned by Chinese interlocutors so it does not seem to represent the formal response to the NPR.) One Chinese expert suggested that the “NPR made an effort to send a positive message” and another explicitly said that this NPR had addressed some of China’s worries and decreased some of its concerns. All participants were pleased at the de-emphasis on nuclear weapons and saw the lack of calls for developing new nuclear weapons as a positive development. Chinese experts were pleased that the NPR did not mention Taiwan or name contingencies for potential use of nuclear weapons, and believed that China was less of a target in this NPR. The NPR’s negative security assurance was not quite a full endorsement of an NFU, according to one expert, but it was definitely a step in the right direction. Chinese participants were also pleased that the U.S. seemed close to accepting a nuclear relationship based on mutual vulnerability, but had questions on exactly what U.S. policy was on this issue.

Given the overall positive assessment of this NPR, several American participants asked what effect this would have on the relationship. Some asked if this would reduce mistrust and lead to more positive views of U.S. intentions, especially in the military realm. Others asked if this might encourage the Chinese to be more forthcoming in sharing information about their nuclear modernization. Still others asked if a more positive relationship in the nuclear arena might lead to greater cooperation in other issue areas, such as deeper cooperation on North Korea and Iran. The Chinese participants were somewhat guarded in their response to these big questions. Most Chinese experts suggested that it would help the overall relationship by removing an irritant and obstacle (i.e., the referencing of China as a potential target in the leaked portions of the 2001 NPR), and one participant said that it would encourage franker dialogue, but these responses were rather vague.

Although the overall response was positive, Chinese participants expressed some concerns and questions about U.S. nuclear policy as expressed in the NPR. Chinese participants were most concerned about the implications of conventional prompt global strike (PGS). Several Chinese experts asked for clarification on its purpose, what the capabilities will ultimately look like, and whether or not such capabilities could be targeted at Chinese nuclear facilities. One participant characterized PGS as a significant impediment to nuclear stability and disarmament. Some Americans tried to reassure the Chinese experts by characterizing PGS as a “niche capability.” American experts argued that the purpose was to have a capability to quickly respond to time-sensitive targets around the globe. Although the scope of the capabilities that will result from the PGS concept are still unknown, they suggested that it would likely be too limited to undermine China’s nuclear deterrent. Moreover, not only did the NPR endorse maintaining “strategic stability” with China, but public testimony by Principal Deputy Undersecretary of Defense for Policy James Miller referred to the need to develop PGS capabilities without undermining strategic stability with Russia and China.

Several questions were also raised about the scope of U.S. nuclear commitments and the conditions of use of nuclear weapons. One Chinese expert noticed a new reference to “allies and

partners,” and asked if this meant that Taiwan was a partner that would fall under America’s nuclear umbrella. This expert was pleased at the reduced emphasis on the use of nuclear weapons, but asked if war between China and Taiwan would be an extreme circumstance under which the U.S. might consider using nuclear weapons. A Chinese participant also asked for clarification on the negative security commitment in the NPR, according to which the U.S. would not use or threaten to use nuclear weapons against non-nuclear weapons countries that were party to the NPT and in compliance. This expert asked who decided if a country was in compliance with the NPT. An American participant responded that the U.S. would make such a judgment, and emphasized that the aim of this approach was to incentivize states to fully comply with the NPT regime and see security benefits from being in full compliance. These issues on the conditions for use, especially as relate to Taiwan, are likely to come up in future dialogues.

Another Chinese expert was pleased with most aspects of the NPR, but asked for more information about increased funding for nuclear infrastructure, and wondered if this was a secret way to secure funding to develop more nuclear weapons. One American participant responded that this was not related to developing new nuclear weapons, but should probably be viewed as the domestic political price for getting approval for New START treaty with Russia. Another American emphasized that this infrastructure has been ignored for decades and improvements are required not only to guarantee the safety and security of U.S. nuclear forces, but this would become even more important as the U.S. reduces its number of nuclear weapons. Related to concerns about whether momentum for disarmament would last in the United States, one Chinese participant suggested that every administration does a new NPR and questioned whether the elements in this NPR would be enduring or if the next administration would likely change them. (The discussions of the BMD elements in the NPR are discussed in the section below on BMD.)

Chinese experts were still trying to figure out the meaning and implications of the NPR elevating China to the level of Russia. In the most negative response to this development, a Chinese expert argued that the assessment of China’s nuclear modernization as extending beyond deterrence was incorrect, and worried that elevating China’s status was also a way to overestimate the threat China posed to the United States.

Most of the discussion related to how each side defined a stable nuclear relationship and whether or not the NPR’s characterization of bilateral nuclear relations was a sufficient foundation for stability. Issues of stability were not only explored during discussions of the NPR, but also in the definitional breakout groups, as “strategic stability” was one of the terms that was discussed. The consensus definition was that a stable nuclear relationship required both sides to agree that they felt secure. Chinese participants argued that stability could look different in different bilateral relations. For example, U.S.-Russian stability is focused on numbers and parity, whereas China is not seeking parity. Therefore, from China’s perspective, nuclear relations could be stable with nuclear capabilities far weaker than the Russians might require. Discussions among Chinese participants also led to a distinction between “strategic balance” (*zhanlue pingheng*) and “strategic stability” (*zhanlue wending*), although all participants were clear that neither concept required numerical parity. Future engagement might do well to address the Cold War meanings of this term, as that will be reassuring to China.

In the discussions of the NPR, Chinese participants asked whether the U.S. had officially accepted mutual vulnerability as the basis of the nuclear relationship. The American participants

emphasized that the document did not use that phrase. Nevertheless, the U.S. participants emphasized that the U.S. does send intend to communicate a positive signal to China. American participants referred to language in the Ballistic Missile Defense Review (BMDR) and NPR that the U.S. does not intend to undermine strategic stability or affect the strategic balance with Russia or China. The American side asked whether the Chinese saw these statements, and unofficial endorsement of mutual vulnerability, as adequate to reassure them on this issue. There is some sign that the Chinese are beginning to find a degree of reassurance in them, but that will need to be reemphasized in a range of fora.

Relatedly, American participants tried to correct Chinese misunderstandings regarding its lack of a NFU policy, as they have repeatedly in past dialogues. First, they suggested that the long-standing American position is to only consider using nuclear weapons as a last resort. Second, as has been stated many times by American participants in these dialogues and in other settings, they argued that not having an NFU does not mean that the U.S. takes nuclear weapons lightly or that it has a policy of preemption.

Ballistic Missile Defense

The U.S. missile defense plans have been a source of deep anxiety for the Chinese and have been discussed in previous dialogues. Experts from the American side discussed the details of the evolution of BMD architecture and the plans under the Obama Administration. They characterized the current approach as less comprehensive than the Bush Administration's plans, more focused on theater missile defenses, and more focused on the terminal phase. The Obama administration's approach is designed to address near-term threats by relying on proven technology. Current plans also call for deployment of relatively limited BMD capabilities.

The analysis and discussion by the American participants directly addressed several of the worries and concerns from the Chinese side. The American experts emphasized that the BMD architecture will not pose a threat to China in the near term. Although unlikely to completely reassure China and address all of its concerns, future frank discussions regarding the evolution of America's BMD architecture may be able to correct some misunderstandings and eliminate some sources of mistrust.

Chinese participants did, however, express many military and political concerns with American BMD plans. First, Chinese participants argued that this capability does undermine China's nuclear deterrence and increases instability. One expert suggested that it was difficult to believe that the U.S. would undertake such a large expense merely to deter small and medium-sized powers, so most Chinese experts have concluded that BMD must be aimed at China. Several participants argued that BMD was a signal of America's hostile intent towards China and that developing these capabilities damages relations and reduces mutual trust. American experts responded by emphasizing the grave potential threat that the U.S. sees from small and medium-sized countries with nuclear weapons, and the importance of protecting the U.S. homeland from such rogues. In terms of BMD being aimed at China, several American participants pointed out that according to estimates of China's nuclear modernization program, it could easily overwhelm the limited BMD system that the United States is building.

Moreover, recent decisions in BMD architecture show that the U.S. is focusing on defending itself from the threats of small and medium-sized countries, rather than optimizing the BMD

plans to counter a potential threat from China. The U.S. emphasized that the ground based interceptor (GBI) arsenal was limited in current plans. This issue, as well as the discontinuation of multiple kill vehicle research on missile defense interceptors, is important issues for assessing the direction of U.S. missile defense plans.

Second, Chinese experts argued that America's cooperation with Russia on BMD, but lack of such cooperation with China, makes China feel unequal and undermines mutual trust in the U.S.-China bilateral relationship. Several Chinese participants called attention to U.S. exchanges of information and coordination with the Russians on missile defense, including suggestions that the United States takes Russian concerns seriously while ignoring Chinese concerns. In response, several American participants told the Chinese that they should not view the decision to change European BMD deployments as a concession to the Russians, but rather as a decision based on American interests. The United States does share information on BMD with Russia, but American participants argued that the United States has also made great efforts to explain BMD plans to China. U.S. participants emphasized that if China wanted greater cooperation on BMD, Chinese government officials needed to make formal requests through official channels.

Third, Chinese participants raised concerns about the implications of BMD for Taiwan. One participant argued that Taiwan was the most important element in Chinese concerns about BMD. Militarily, Chinese experts worried that the U.S. might extend its missile defense architecture to defend Taiwan, which would undermine Chinese deterrence and send the wrong signals to Taiwan independence forces. Others also worried that coordination with Taiwan on BMD would tighten both the military and political links between the U.S. and Taiwan. In response, an American expert emphasized that missile defense would be ineffective for defending Taiwan from the more than 1,000 short-range ballistic missiles aimed at Taiwan. Another American participant argued that although missile defense cooperation could strengthen ties overall, the military coordination and integration with Taiwan has been very limited. This is likely an issue that will need to be continuously addressed through official and unofficial channels.

Fourth, Chinese experts were worried that BMD would lead to the tightening of alliances, and feared that these alliances would be increasingly aimed at China. Several participants raised concerns not only with the tightening of U.S. alliance relations with Japan, but also with South Korea, and Australia. Fifth, one Chinese expert raised a concern that the development of BMD would lead to a weaponization of space. An American responded that there was nothing in the BMD architectures that was space-based, except for the sensors. Lastly, a Chinese participant said that some Chinese scientists talked about possible offensive uses for some of the technologies associated with BMD. Several American participants asked for clarification on this point and argued strongly that the technology would not have any offensive purpose.

One Chinese participant argued that in response to American BMD efforts, China could either invest in countermeasures or increase the quality or quantity of its nuclear forces. In response to BMD, this participant argued that such modernization would only reflect China's attempts to maintain its minimum deterrent. Another Chinese participant was pleased to hear some American experts recognize that this modernization would simply reflect China's desire to guarantee the reliability and credibility of its nuclear deterrent. This expert expressed a fear that some in the U.S. would perceive this defensive and reactive nuclear modernization as a great threat to the U.S. and as evidence of an aggressive China.

Prompt Global Strike and NFU

The interaction between American emerging long-range precision strike capabilities (generally known now as prompt global strike) and China's NFU pledge was discussed in several ways. Conventional attacks against China's nuclear facilities drew more attention from the Chinese side given the discussion in the Nuclear Posture Review (NPR) on prompt global strike (PGS). One Chinese expert suggested that the possibility of such strikes might lead to a change in China's NFU policy. This expert suggested that if the U.S. has this intention (and made it clear in declaratory policy), China might need to rethink its NFU policy. This participant further declared that the Chinese leadership might take such conventional attacks on nuclear facilities as a type of nuclear strike against China. It was not clear (and likely deliberately ambiguous) if Chinese perceptions of U.S. intentions, changes in U.S. declaratory policy, or actual conventional attacks would be enough to trigger a reconsideration of the NFU policy.

Similarly, the Chinese participants expressed different views on a potential role for Chinese nuclear weapons in deterring or responding to conventional attacks, although no one suggested this would violate Beijing's NFU. But, if conventional strikes threatened to eliminate Chinese nuclear forces, or even its conventional short-range ballistic missiles in Fujian, some role for nuclear deterrence in the absence of actual use might be possible. It was not very clear, however, what role nuclear forces or nuclear deterrence might play in such a situation, though it is reasonable to conclude that one possibility would be nuclear signaling to enhance the credibility of nuclear threats.

Arms Control and Disarmament Policy

Beyond the NPR, of course New START and the broader Prague vision of the Obama Administration were important, timely topics to be discussed. The Chinese participants unanimously viewed President Obama's support for disarmament as a positive step in the right direction. One Chinese expert was happy that President Obama endorsed a vision of a world without nuclear weapons in his Prague speech, and reminded the American participants that China had advocated a world without nuclear weapons since 1964. Chinese participants were also pleased that U.S. and Russia agreed to reduce their nuclear arsenals as part of the New START treaty. They were equally unanimous however, as discussed below, that the new nuclear superpowers will need to make much greater cuts in nuclear forces before China would be ready to engage in multilateral nuclear discussions or negotiations. Both these initiatives are discussed below.

New Start

Although the Chinese participants viewed new commitments and reductions under New START as a positive development, several experts had questions and concerns. One expert suggested that before the treaty was signed, there were expectations that total warheads would be reduced to 1,000. This expert not only expressed some disappointment at the final figure of 1,550, but wondered if reducing to 1,000 would be difficult for the United States. An American responded that the smaller cuts were a result of an urgent need to reach an agreement that kept the inspection and verification regime intact, and that the treaty had to be acceptable to both parties in order to be concluded.

Another Chinese participant highlighted that the cuts were not as deep as some might think because the negotiation only addressed deployed warheads and did not reduce the huge number in nuclear stockpiles. This expert characterized this as shifting warheads, and not real disarmament. American participants recognized the limited nature of these cuts, but highlighted that the process was moving in the correct direction and the importance of preserving the inspection and verification regime. The American side highlighted the explicit aim in the new NPR not only to have further cuts, but also to move to count all warheads, not just deployed warheads, in such cuts.

Several Chinese experts questioned whether domestic support for nuclear reductions would continue and was concerned that this positive momentum would not last. They argued that there were several specific factors—such as the Democrats returning to power, expiration of START, and the NPT Review Conference—that pushed the U.S. government to focus on this issue now. But when these factors are no longer as prominent, they wondered if U.S. policy or U.S. focus on disarmament might change as well. One expert specifically cited the domestic opposition to the U.S. ratification of the Comprehensive Test Ban Treaty (CTBT) as an important factor that might limit the U.S. ability to follow through on disarmament commitments. Chinese participants also wondered about the implications for U.S. support for disarmament if the Republicans were successful in the mid-term elections or if they won the presidency in 2012.

Lastly, one Chinese participant expressed a worry that one goal of U.S. disarmament efforts, and especially its efforts to bring China into this process, was to “get China trapped” into disarmament and limit its nuclear modernization. Some suggested that such worries were fairly widespread, although the most suspicious views did not hold at highest political levels.

Future of Nonproliferation and Nuclear Disarmament

Chinese participants recognized growing U.S. expectations for China to become more involved in disarmament and arms control, but they unanimously argued that China is not ready for multilateral negotiations aimed at reduction of strategic weapons. They forcefully argued that the large gap in nuclear weapons between China and the nuclear superpowers needed to be dramatically reduced before China would consider getting involved in such negotiations or discussions. Although China is not ready to engage in multilateral negotiations, Chinese experts expressed a willingness to strengthen the non-proliferation regime. One participant strongly averred that after the U.S. ratified the Comprehensive Test Ban Treaty (CTBT), China would as well; domestic political opinion in China had prevented China from ratifying it first. Chinese experts also expressed some support for putting the Fissile Material Cut-off Treaty (FMCT) at the center of non-proliferation regimes moving forward. China and the U.S. both recognize that Pakistan is the major obstacle to advances on the FMCT, but they each look to the other as the solution. The U.S. wants China to put pressure on Pakistan. China, on the other hand, views U.S. policy as the impediment, especially the nuclear deal with India. China wants the U.S. to make security guarantees to Pakistan or offer a similar nuclear deal as with the Indians. Although China has expressed support for strengthening the FMCT, there was no ground broken in this discussion on putting pressure on Pakistan to make that a reality.

Although China is clearly not ready to engage in multilateral negotiations anytime soon, Chinese participants were more specific than they have been in the past about the requirements and conditions under which China might join such negotiations, and their preferred modalities. One

Chinese expert argued that President Hu Jintao's decision to attend the September 2009 UN Security Council summit on nuclear proliferation and disarmament and the April 2010 nuclear security summit showed the leadership's sincere interest in participating in this process. Several other Chinese participants repeated Hu's new commitment at the UN in September 2009 that China would participate in multilateral cooperation when the time and conditions were right. Chinese interlocutors emphasized that they viewed this as a positive step by the Chinese leadership.

Chinese participants described the conditions that might need to be met before China would join in negotiations. All Chinese experts noted the huge gap in capabilities between the nuclear superpowers and China. One expert suggested that China was not asking for equal numbers before China participated, but it would require some drastic cuts in overall nuclear capabilities. These cuts would also have to include significant reductions in nuclear stockpiles and the elimination of tactical nuclear weapons before China would participate. Several participants argued that their preference would be for any multilateral negotiations to be preceded by a NFU agreement or a non-use convention between the negotiating parties. Another Chinese expert also suggested that if such an agreement or convention was reached, China would be interested in moving very quickly into verification talks.

Chinese participants preferred that any multilateral process would be comprehensive in terms of the issues discussed and the players involved. In terms of issues, they did not want to have a narrow discussion focused solely on nuclear weapons, but preferred wide-ranging discussions and negotiations that included missile defense, space capabilities, and PGS. The Chinese experts argued that all of these issues were closely linked. In terms of players, there was a lack of consensus on the Chinese side as to who might engage in discussion. Some Chinese preferred any expanded nuclear dialogue to include at least the P-5, but others suggested the P-5 plus three (India, Pakistan, and Israel). Other Chinese experts, however, argued that if India was not involved then any Chinese cuts might give India an incentive to "sprint to parity" and challenge China. One expert argued that China would not be an obstacle, and that if other countries were willing to participate, it would be difficult for China not to do so as well.

Still, and consistent with past interaction with the Chinese at this sort of forum, there was interest in learning more about the U.S.-Russian negotiations.

It may be premature to include China in any formal arms control negotiations, but American experts argued that China should not wait until all of its conditions are met before becoming involved in discussions. An American expert suggested that it is too early to ask China to make commitments, but it is not too early to talk about principles and concepts. Another American argued that discussions involving the P-5 countries on how to implement the visions of the Prague speech and nuclear summits are necessary as soon as possible. Rather than waiting until the U.S. and Russia make deeper cuts in nuclear weapons, regional problems are solved, or other conditions are met, China should engage in discussions with other nuclear powers in parallel. American participants argued that early discussions on nuclear disarmament would not only make real breakthroughs easier once the preconditions were met, but China's greater commitment to the disarmament process might also push others to be more committed to the process as well.

American participants also suggested several specific issues that China should pay more attention to in the short-term. Several American experts mentioned verification techniques and technologies as a difficult issue that would likely require many years of discussion and negotiation, and the earlier such discussions begin, the better. Even though further cuts by the U.S. and Russia would be required before any negotiations could occur, discussions could also begin on delivery systems, nuclear infrastructure, and production of fissile material. China is the only one of the P-5 that has not committed to stop production of fissile material for nuclear weapons; such a commitment would strengthen the non-proliferation regime and give new impetus to multilateral disarmament. One American suggested that because the U.S. and Russia are discussing issues that affect China, such as counting rules on bombers and deployed warheads, technology for verification, and notification for inspections, it is in China's own interest to become more involved in these discussions.

The Chinese response to these suggestions was inconclusive. One participant responded that it was too early to talk about verification; other countries needed to reduce their number of nuclear warheads as a precondition. Still, future discussions on these issues would be useful, drawing a clear distinction between formal arms control negotiations which would occur much later and more informal discussions which could occur much sooner.

If China requires significant reductions in nuclear stockpiles before it will participate in multilateral negotiations, then it may be many years before China will consider such meaningful participation. According to an American expert, even with the positive momentum for disarmament, the next round of nuclear reductions will prove much more difficult. It is not clear that Russia will support deeper cuts or intrusive verifications, and it is also unclear whether American domestic politics will support such reductions. Although it may be many years before China participates in significant multilateral arms control negotiations, one American recommended a ban on testing physical ASAT weapons as a measure worthy of consideration. In the meantime, the U.S. and China should strengthen their relationship by cooperating in combating nuclear terrorism and exploring confidence building measures in the nuclear realm.

A world without nuclear weapons is a vision that the U.S. and China both support, but both countries recognize that there is a long way to go to achieve it. Experts from both countries agreed that preconditions not only included resolving current challenges such as the Iranian and North Korean nuclear weapons programs, but also deeper issues such as a resolution of regional conflicts and no threat of future proliferation. Although both sides agreed on the great challenges in achieving such a vision, experts from the U.S. and China had very different understandings of the institutions that would be most important. The American side emphasized the importance of strengthening the non-proliferation regime by bringing countries into compliance with the NPT, strengthening the Nuclear Suppliers Group (NSG), and adding verification power to the IAEA. A Chinese expert, on the other hand, focused on the importance of UN Security Council and the creation of regional security regimes as the key institutions for achieving a world without nuclear weapons. Although reaching "global zero" is an unrealistic goal in all but the distant future, these differences in the preferred institutions to support disarmament may prove to be an obstacle to China's future involvement in non-proliferation in the near term.

Miscellaneous Topics

Finally, a few topics were raised in passing: North Korea, India, and space issues.

North Korea

Unlike some past dialogues, North Korea was not the subject for any of the panels, but there were some discussions about events on the Korean peninsula. One Chinese expert argued that although some have said China has accepted a nuclear North Korea, this was not correct. This participant suggested that China had no desire to protect North Korea, and was in a “great panic” over how to convince North Korea to abandon its nuclear weapons. The Chinese side emphasized that they perceived a nuclear North Korea as a real threat to China’s security interests, but China was in a difficult position because it needed to pressure the North Korean regime while still maintaining stability on the peninsula, which was China’s most important concern. Other participants echoed the importance of avoiding collapse of the regime. Chinese experts emphasized that China had continued to play a constructive role in resolving the North Korean nuclear crisis. Some American participants, however, suggested that China’s continued support for the regime and unwillingness to punish North Korea even after aggressive behavior showed that China’s behavior was not particularly helpful or constructive. Chinese participants did not offer views on how China should respond to the North Korean torpedo attack on a South Korean warship (the Cheonan Incident).

The future of the Korean peninsula was also raised in discussions of what kind of ultimate resolution of the issue would be required to move towards a world without nuclear weapons. One expert summarized the Chinese position on the future of the peninsula as any reunified Korea should be: (1) nuclear free, (2) be accomplished through peaceful means, and (3) have no foreign interference before, during, or after unification. The United States was specifically mentioned in this context. Interestingly, another participant seemed to portray Chinese policy somewhat more moderately, suggesting that a West German model of reunification might be acceptable. It was unclear if the West German model simply meant a pro-U.S. tilt or incorporation within the U.S. alliance system (NATO in the German case, and thus the hub-and-spoke alliance system in the Korean case).

India

The potential threat to China from India’s nuclear weapons received more attention from Chinese participants at this dialogue than at previous dialogues. Even though India’s nuclear forces are currently smaller than China’s, one Chinese expert cited some Indian defense analysts who talked about India’s plans to surpass China in nuclear forces. Chinese participants seemed worried that if China became involved in nuclear disarmament talks with the U.S. and Russia, this might provide India with incentives to rapidly modernize and surpass Chinese capabilities. Chinese concerns about India’s “sprint to parity” seem similar to American concerns about a Chinese “sprint to parity.” These Chinese concerns may limit China’s willingness to engage in disarmament talks that do not involve India.

Space

Space was not the subject of any of the panels, but participants discussed space in the context of missile defense and arms control. Chinese participants argued that even though China’s missile defense test was not part of an effort to weaponize space, they believed the U.S. had already weaponized space, in part through its missile defense program. One expert argued that U.S. weaponization of space was a major obstacle to nuclear disarmament and creating a world

without nuclear weapons. Some Chinese participants suggested that contrary to the U.S., China opposed the weaponization of space and would be interested in negotiating treaties that limited military use of space. An American expert acknowledged that there was not much support in the U.S. for limitations or space arms control measures, but suggested that a test ban on physical ASAT weapons was worthy of discussion. In a brief discussion of China's ASAT test, a Chinese participant noted the importance for China's prestige, but also highlighted the coercive utility of the test, which made the U.S. more interested in discussing such issues. It is not clear if some Chinese also saw the potential coercive value of China's missile defense test. Space issues will become more important in bilateral military exchanges as well as future nuclear dialogues.

Conclusions, Policy Recommendations, and Way Forward

This was one of the most open discussions between the two sides on this topic that has occurred in this series of meetings. Several factors likely account for this. Substantively, the new NPR clearly played a positive role. Additionally, the substantial continuity in participants led to a degree of shared understanding that facilitated communication.

Several areas would seem to merit consideration for the future. These are grouped into categories of U.S. policy, Chinese policy, negotiations/arms control, and process.

United States Policy

- More discussion about the continuing evolution of U.S. missile defense plans and capabilities would likely reduce misperceptions on the Chinese side. Formal government presentations as well as informal diplomacy, to a lesser extent, can advance this goal. China's modernization responds in part at least to American missile defense programs. Since a more complete discussion of the changes in the current U.S. program should reduce Chinese concerns, increased U.S. transparency on BMD will likely advance U.S. interests.
- A similar point can be made for PGS capabilities and policy. The emphasis in PDUSD Miller's testimony repudiating a desire to undermine China's deterrent capability should be emphasized in other fora.
- Additional elucidation of "strategic stability" will be useful. The term has a cold war context. The comparison with the adversarial relationship with the Soviet Union will not be viewed favorably. But the elements of that term that touch on avoiding threatening the other sides' deterrent force would be. This can be discussed by academics as they can characterize the context within which the term originates.

Chinese Policy

- China should provide more clarity about the analytical link between "lean and effective" and force postures. The term seems to have an analytic component that would be beneficial to elucidate.
- Chinese claims on transparency have typically depended on its characterization of it as a greatly weaker and more vulnerable power. As the growth in Chinese warhead numbers reduces

the potential for transparency to undermine China's deterrent, China should explain what sorts of transparency will be forthcoming.

- The potential for catastrophe in North Korea should be discussed. If the North collapses, both the United States and China will face difficult choices. These should be probed more widely through official and unofficial channels. Any coordination of military activity in the context of a North Korean scenario will be highly challenging. Still, given the highly escalatory nature of that sort of crisis, even a deeper understanding of Chinese potential actions—absent explicit coordination with them—would be highly stabilizing.

Formal Negotiations and Arms Control

- Further discussion of the interaction between Chinese modernization plans and subsequent arms control negotiations is warranted. Clearly, future cuts cannot occur in the context of any rapid growth of the Chinese arsenal. This is likely to be a useful area for Moscow, Beijing, and Washington to discuss.
- It is premature to engage China officially on strategic arms control issues as a negotiating partner, for many reasons. That said, there is a range of possible ways for the two sides to talk about nuclear issues that would be helpful. Track II meetings, official briefs, discussions of the full range of diplomatic negotiations—beyond arms reduction talks—can advance both sides' understanding of the potential here.
- Further engagement on both CTBT and FMCT seems warranted, as there may be grounds for progress there.

Process Related

- More discussion on terminology, its context, and relevant definitions would be highly valuable. The Chinese side was interested in engaging actively on this, and was willing to provide a list of key terms in China's nuclear strategy and policy to be addressed in future dialogues. U.S. participants too found this to be an important discussion. This is ideal for track II work. Most important among these would be a discussion of "strategic stability," per above.

Appendix I: Conference Agenda, Participant List and Biographies

U.S.-China Strategic Dialogue, Phase V

Conference Agenda

Conference organized by U.S. Naval Postgraduate School and Pacific Forum-CSIS for the Advanced Systems and Concepts Office of the U.S. Defense Threat Reduction Agency.

2-4 May 2010

Hilton Hawaiian Village, Honolulu, Hawaii

Sunday, May 2, 2010

6:30pm Reception and Dinner – Rainbow Suite (Rainbow Tower)

Monday, May 3, 2010

8:30am Continental Breakfast – Tapa Ballroom 3 (Tapa Tower)

9:00-10:00am Welcome and Introductions – Tapa Ballroom 3 (Tapa Tower)

Prof. Christopher Twomey

Mr. David Hamon, Analytical Services, Inc.

Col. (ret.) Zhang Tuosheng, CFISS

10:00am-12:00pm Session 1: Global Zero, a declared goal of both

How does each side visualize the regional and global security environment in a world without nuclear weapons? (In particular, how would global and regional stability be affected?) What new threats or challenges would each country need to take more seriously in such a world? Working backward from such a future, what does the world look like during the period leading up to the elimination of the last weapon? What role does the NPT regime play in this evolution? What are the major obstacles to accomplishing this goal?

Chair: Prof. Christopher Twomey, NPS

Presenters: Dr. Li Hong, CACDA

Ms. Sharon Squassoni, CSIS

12:00-1:30pm Lunch – Palace Lounge

1:30-3:15pm Session 2: Contemporary Strategic Doctrine

Each side has recently expanded on its nuclear doctrine. By April 2010, the United States should have completed its Nuclear Posture Review. In 2009, the leaders of the Second Artillery published articles in *Qiushi* and *Zhongguo Junshi Kexue* and the 2008 White Paper on China's National Defense included a more extensive deliberation of the Chinese' strategic doctrine than previous White Papers. Continuities with the past in both sides' policy are well understood. However, further discussion of changes is warranted. What is the fundamental nature of the changes in each side's policy? What are the sources of changes? What steps are being taken to carry out such changes? What interaction between the two sides developments does each side see? What is the relation between capabilities and the policy changes?

Chair: S. Col. Yao Yunzhu, AMS

Presenters: Prof. Chu Shulong, Tsinghua

Ms. Elaine Bunn, NDU

3:15-3:30pm Break

3:30-5:15pm Session 3: A few definitions: breakout session

– Tapa Ballroom 3, Iolani 6/7

The participants will be divided into three breakout sessions that will each be asked to come up with short definitions of a designated set of four of the following terms as they understand them. Clearly, "consensus" definitions will not be possible in all cases; caveats and dissensions should of course be related as well.

Group A

- nuclear threshold
- escalation control
- counter-coercion

Strategic Insights

- key point counterattack

Group B

- extended deterrence
- inadvertent escalation
- no first use
- qualitative arms race

Group C

- deterrence by denial
- crisis stability
- effective and reliable deterrence
- first strike

Other possible terms

- strategic deterrence
- conventional deterrence
- spiral (of escalation)
- secure second strike
- peaceful use of space

Chairs for each group: Zhu Feng/Teng Jianqun/Yao Yunzhu

Wirtz/McDevitt/Kamphausen

Strategic Insights

6:00pm Reception and Dinner – Rainbow Suite (Rainbow Tower) Tuesday, May 4, 2010

8:00am Continental Breakfast – Tapa Ballroom 3 (Tapa Tower)

8:30-10:15am Reports from breakout session – Tapa Ballroom 3 (Tapa Tower)

Chairs: Zhu Feng/Teng Jianqun/Yao Yunzhu

Wirtz/McDevitt/Kamp

Chairs: Zhu Feng/Teng Jianqun/Yao Yunzhu

Wirtz/McDevitt/Kamphausen

10:15-10:30am Break

10:30am-12:15pm Session 4: Missile Defense

How has the each side's missile defense posture (capabilities, doctrine, and incorporation in broader national strategy) evolved? What are the sources of these changes? How do they contribute to security and stability?

What aspects of each nation's policies are regarded as constructive and what as problematic? How has each side reacted to the other's missile defense posture evolution? What is the range of possible future developments in this area faced by each side, and how might they interact? Do such systems suggest desires by each side for "absolute security."

Chair: RADM (ret.) Michael McDevitt, CNA

Presenters: Dr. Dean Wilkening, CISAC, Stanford

Dr. Wu Chunsi, SIIS

12:30-2:00pm Lunch – Palace Lounge

2:00-4:00pm Session 5: The Next Negotiations

What issues belong at the table for future formal negotiations on confidence building measures and arms control discussions? In particular, after the current round of US-Russian negotiations what categories of issues should be American and Chinese priorities for international arms control, broadly conceived, negotiations? What should China's role be in global or narrower multilateral fora? On space in particular, what concrete steps would advance the process beyond those already taken? What opportunities and challenges lie down such a path in general for each side?

Chair: Col. (ret.) Teng Jianqun, CIIS

Presenters: Mr. Gu Guoliang CASS

Amb. Linton Brooks, CSIS

4:00-4:15pm Break

4:15-4:45pm Session: 6 Lessons Learned and Way Forward

Facilitator: Prof. Christopher Twomey, NPS

4:45-5:00pm Closing Remarks

Mr. David Hamon, Analytical Services, Inc

Col. (ret.) Zhang Tuosheng, CFISS

Prof. Christopher Twomey, NPS

6:15pm Meet at Kalia Tower Lobby to walk to:

Chart House Waikiki Restaurant

1765 Ala Moana Blvd. (boat harbor side)

References

1. To some extent, these breakout sessions were already building on the foundations laid by the National Academy of Sciences and their Chinese counterparts in the publication of the 274 page *English-Chinese, Chinese-English Nuclear Security Glossary* (2008).
2. One Chinese expert offered a preferred translation of this term as “effective and assured deterrence.” However, assured, as in “mutual assured destruction,” is usually translated as *quebao*, not *kekao*.
3. One Chinese expert suggested that this phrase came from General ZHANG Aiping who in the mid-1990s developed an 8-character requirement for nuclear forces. This requirement was “tight defense, key point counterattack” (*yanmifanghu, zhongdianfanji*).