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Sustainability: A Lens for National Security

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Introduction

At the strategic level the concept of sustainability has significant value as an explanatory variable in national security issues. Sustainability, which had its roots in the tactical level management of installations and factories, is an important strategic concept for the private sector and a potentially game changing strategic concept for U.S. national security policy. Strategic planning for U.S. national security should include variables such as the pillars of the Bretton Woods Accords, economic vitality, military strength, strong alliances, threat management, geopolitics, sea lines of communication, and resource access. Sustainability contributes to the United States understanding of the national security implementation of each.

It can identify vulnerabilities in the U.S. resource base and suggest regions or countries that should receive National Security Strategy (NSS) priority in order to mitigate shortfalls. At the same time it provides a framework for analyzing the vulnerabilities of peer competitors, explaining their geopolitical strategies designed to correct those vulnerabilities and identifying areas of mutual vulnerability and corresponding, potential for regional resource competition (Africa and the Arabian-Persian Gulf). Sustainability brings a valuable perspective to crafting national security policy roles and missions for the elements of national power. This chapter argues that sustainability is a valuable lens for viewing the national security landscape of the United States and should be a foundation for developing U.S. national security policy.

Common Definitions

Most definitions of sustainability relate to processes in pursuing resource sufficiency. In view of the U.S. Environmental Protection Agency (EPA), which treats sustainability, as a holistic concept, “Everything that we need for our survival and well-being depends, either directly or indirectly, on our natural environment.” The EPA’s view is that good stewardship of natural resources is required for there to be a future for humanity. Without the intelligent use of natural resources such as water, survival of future populations will be at risk as the already stressed world population grows towards 9 billion and precipitation patterns change (EPA 2011). Robert Gillman, editor of the *In Context Journal*, uses the biblical context of sustainability, stating that “sustainability refers to a very old and simple concept (The Golden Rule)...do unto future generations as you would have them do unto you” (Washington State University 2011).

In the business community, sustainability refers to creating the conditions necessary to maintain the function of the organization indefinitely. It recognizes that the output of the organization turns on a dependable supply of resources: human capital, funding, natural resources and technology. When economists address the allocation of scarce resources, they are describing the factors of production or conditions necessary to insure the successful achievement of organizational objectives or outputs.

In order to develop successful policies the question that must be asked is whether those factors of production can be maintained over time? The Coca Cola Company produces beverages in all but two countries around the world. It understands that quality prod-

ucts require access to clean water resources. Coca Cola created the Global Water Resource Manager position and wrote a water strategy to insure that it has a sustainable supply of clean water for its manufacturing plants. Sustainability guides its business decisions (Rozza 2010).

The United Nations (UN) has been a leader in conducting studies that addresses natural resources and population trends; their thoughts on sustainability are similar to those of the EPA. In their 1987 report, commonly called the Brundtland Report, the UN World Commission on Environment and Development defines sustainable development as development which “meets present needs without compromising the ability of future generations to meet their needs” (United Nations World Commission on Environment and Development 1987).

The application of sustainability to state security was encouraged by the 1987 Brundtland Report. The report defined the importance of sustainable development to regional security, and pointed out the dangers of unconstrained development and the chronic failure of many Western development programs that had benefited corrupt leaders and over harvested scarce or vulnerable renewable resources. In 1994, the UN Development Program published the *Human Development Report*, which defined the elements of human security. This report defined state security in terms of human security (freedom from want and freedom from fear) and encouraged the national security community to analyze the contribution human security made to building state stability. The idea that state security was related to human security and environmental sustainability provided a new framework for analyzing state security, failed states, and the underlying conditions

that terrorists seek to exploit. Sustainability of a state's resource base was essential for state governments to meet demands placed on the political system. Sustainability was also an objective for policymakers seeking to maintain regional security.

This chapter suggests that sustainability should be a lens through which U.S. national security is viewed at two levels. At the national level, it should inform national security policy designed to insure the freedom, vitality and security of the United States, guiding the policies to insure access to the resources necessary to sustain the U.S. economy and defense capabilities. Is China purchasing the available petroleum and strategic mineral deposits and limiting what the United States and its allies can obtain on the free market? Will defense technology be lost if U.S. magnet manufacturers are forced to move to China to ensure access to supplies of heavy rare earth elements? Will the piracy and terrorist activity in the Horn of Africa interfere with the shipment of Middle East oil to Europe and the United States?

At the regional level, it should also inform the application of the elements of national security to international security objectives. The sustainability of regional governments counted upon to support U.S. national security should be a common objective of the elements of national power. In Afghanistan 80% of the people depend directly on natural resources for their livelihood and 75% of the country is at risk of decertification (UNEP in Afghanistan 2011, 5).

Is the economy of a valuable ally, Egypt for example, sustainable? Will the food security of the country fail because its climate is changing and the rainfall that provides 95% of the country's water supply is no

longer reliable? Will the military that once defended its state borders be forced to deal with violent intra-state conflict between the resource haves and have nots? Will the development promised by donors be sustainable, or result in harvesting a renewable resource, such as fish, at a rate that destroys the carrying capacity of the fishery? Sustainability means developing resources in a way that ensures the availability of resources for future generations or operations while meeting current demands placed upon the political system by the population seeking to satisfy their human security needs. Sustainability can also be applied to political systems and foreign policy, providing new insights for national security political development, why states fail, and why populations support terrorist organizations.

The United States is not autarchic; it depends on foreign trade for approximately 60% of its petroleum supply and 80% of its most strategically important minerals (manganese, platinum group metals, cobalt and the rare earth elements). 61% of the 18 minerals on which the United States is 100% import dependent are produced in China (USGS Mineral Commodity Summary 2011, 6). To sustain its economy and defense capability the United States must have these resources. It is therefore vulnerable to instability or loss of influence in resource producing countries, or to supply cutoff. Second, the sustainability of the potential systems, economies, resource base and human security of countries essential to U.S. national security objectives is critical. Sustainability is an important lens through which to view national security. It informs the analysis of U.S. security vulnerabilities and the countries necessary to mitigate those vulnerabilities, and it provides valuable insights on the viability

of alliances, supply sources, state stability and regional stability. Thus, sustainability affects U.S. National security at both the national and regional levels.

Africa is a strategically important continent for the United States and typifies these levels of resolution. It is one of the few alternatives to the politically unstable Middle East for conventional petroleum reserves. Africa has long been recognized as the world's treasure house for strategic minerals, such as uranium, chromium, cobalt, platinum group metals, and manganese. It has large areas of fertile soil with abundant rainfall suitable for plantations. It borders several strategically important chokepoints along sea lines of communications (SLOCs) such as the Horn and the Cape routes. Importantly, its growing number of failed states is giving rise to ungoverned spaces into which extremist, anti-U.S. groups are expanding and establishing training bases. State and regional stability in Africa is particularly important to U.S. interests. Instability and failed states put resource access at risk, threatens the security of bordering states, and creates the potential for SLOCs to be penetrated by pirates, or terrorists seeking to create news worthy events (Gettleman 2011). Thus, at the national and regional levels, the importance of Africa to U.S. national security is defined by sustainability. Examining these security issues through the lens of sustainability can suggest essential policy options for dealing with evolving trends in the international security milieu.

Population and Affluence

Several key sustainability based trends are affecting the availability and adequacy of global resources in ways that threaten the national security of the United States and other import reliant states such as Chi-

na. Population growth is often mentioned but rarely given the recognition that it deserves as an element of security. In 1900 there were 1.6 billion people in the world, and 99 years later there were 6.1 billion. Recently, Carl Haub, a demographer for the Population Reference Bureau, remarked, “[c]urrently, world population is growing at the most rapid pace in history,” and an additional three billion people are expected by the year 2100 (El Nasser 2011).

Burgeoning populations in the two industrializing giants of China and India are driving their interest in African resources. The U.S. Census Bureau estimates that by 2025 India will overtake China as the most populous country in the world with the combined population of both nations at approximately 3 billion, and by 2050 India will surpass China with 1.657 billion people and China at 1.304 billion people (2point6billion.com 2011). Approximately half the people in the world will live in these two countries, which are competing for power and influence. Both countries have growing middle-class populations seeking a more affluent lifestyle and a poverty stricken lower tier that is putting sustainability pressure on the government. This means that their populations want more meat in their diets, access to technologically sophisticated communications products, and automobiles.

Natural Resources

The resources necessary to meet the growing demand for affluence are increasingly found in Africa, where the Chinese, in particular, have created multiple, multi-billion-dollar bilateral trade relationships with resource rich African countries. There is a legitimate concern that the Chinese agreements will enrich

African leaders while failing to provide sustainable development and political stability. For example, in March of this year, the “watch dog” group Global Witness warned, “[t]he huge potential of a multibillion-dollar deal between the Democratic Republic of Congo (DRC) and China risks being undermined because the agreement is opaque and key terms are ill-defined. Neither the Congolese nor the Chinese parties have properly explained how the minerals are to be priced, nor what infrastructure is to be built and at what cost. This ambiguity makes it very hard to measure whether pledges are being met.” This is not an isolated case; China is brokering these types of natural resource agreements across Africa and became a target of opposition political campaign rhetoric in the 2006 Zambian presidential election (Terra Daily 2011).

China’s foreign policy experience as a world power is limited. At the national level it recognizes that it cannot sustain the economic growth necessary to maintain social stability from domestic sources and has created a geopolitical strategy (its “Go Out” strategy) to gain access to foreign resources. At the regional level, however, China has been widely criticized for bilateral relationships that are not sustainable and reinforce African problems with corruption. It is a problem that could threaten China’s long term access to resource imports.

Nevertheless, China’s resources for infrastructure agreements help sustain both China and the DRC’s national security objectives and gives them control of resources. China will provide the DRC’s 60 million people massive road and rail infrastructure, schools, health clinics, hydroelectric dams and two universities. In return China will gain approximately 600,000 tons of cobalt, 10 million tons of copper and access to

other resources such as columbium-tantalum, cassiterite and the DRC's vast rain forest (Global Witness 2011).

The recognition of natural resources as contributors to instability and conflict has been slowed by the fact that most conflicts are underpinned by pre-existing or multiple issues. The failure of scholarly research to determine a link between resources and conflict in all regions often leads to the reductionist assertion that resources cannot cause conflict at all. Policy makers disagree. Ariel Sharon wrote, "People generally regard 5 June 1967 as the day the Six Day War began . . . That is the official date. But, in reality, it started two-and-a-half years earlier, on the day Israel decided to act against the diversion of the Jordan [River]." Further evidence of the link between resources and conflict was provided by the UN Environment Programme (UNEP). The UNEP stated in their 2009 report, *From Conflict to Peacebuilding*, that "[s]ince 1990 at least eighteen violent conflicts have been fuelled by the exploitation of natural resources. Looking back over the past sixty years at least forty per cent of all intrastate conflicts can be associated with natural resources (UNEP 2009)." This is particularly true on the continent of Africa, where eight of the 16 active UN Peacekeeping missions are located (United Nations 2011). Many of these have their roots in the unsustainable exploitation of resources. This is an age old story for the continent and can be traced back to at least 1885 at the Berlin Conference where the European colonial powers divided Africa into spheres of influence, providing access to areas of raw materials to fuel their growing economies. The agreement did not take into account the undocumented lines of demarcation separating the various ethnic groups that had

existed for centuries in some cases. European powers did not consider the sustainability of future independent African states. This purposeful omission would plague both the colonial powers and the new African nations and influences the sustainability and geopolitics in the region today. As a consequence, many newly independent nations evolved into “strong man” governments, backed by mineral resources wealth and a military that lacked the expertise to properly provide for the basic needs of their populations. The Cold War exacerbated this problem with one or both of the Super Powers bartering resources for weapons, while eroding the sustainability of their government, economy and culture. At the regional level, creating sustainability remains a challenge.

The vulnerability of the United States and its allies to import supply disruption was critical to the geopolitical strategy of the Soviet Union and is well known to Chinese geopoliticians crafting tenets of its “Go Out” strategy. A quote long attributed to Soviet President Leonid Brezhnev from 1973 speaks volumes of the state of affairs between the Soviet Union and the United States during the height of the Cold War: “Our aim is to gain control of the two great treasure houses on which the West depends—the energy treasure house of the Persian Gulf and the mineral treasure house of Central and Southern Africa” (Nixon 1980, 23). The United States, Europe and Japan remain vulnerable to the cutoff of strategic resources. As did the Soviet Union during the Cold War, China has already embargoed the West from shipments of rare earth elements.

China does require African minerals for its dynamic economy. However, China does not trust the Western managed world financial and trade systems

and is reducing its exposure by pursuing a policy of equity ownership of mining and energy resource deposits and companies. Thus, China's trade agreement with the DRC, which produces over half of the world's cobalt, has national security implications for the United States (USGS 2011, 47).

National Security Concepts

As a mandate of the Goldwater-Nichols Department of Defense Reorganization Act of 1986 the United States requires a NSS that defines the U.S. national security interests, defines a strategic concept for protecting those interests and establishes objectives to achieve that strategy. Resources and the environment have been included in the NSS since its inception. As President Reagan said in his 1988 NSS: "The dangerous depletion or contamination of the natural endowments of some nations-soil, forests, water, air...create potential threats to the peace and prosperity that are in our national interests, as well as the interests of the affected nations (NSS 1988)." The growth of populations is pressing against the availability of resources and creating sustainability problems for, as President Reagan said, both the United States and the affected countries. If resources are important to the conflict and stability equation, should they not be considered in formulating the use of the elements of national power to achieve the goals of the national security strategy? Recent national security policy concepts recognize that it is much less costly to prevent conflict than to fight wars and are suggesting new foreign policy approaches to use the elements of national security to create sustainable conditions of government and economics.

Smart Power

In 2007 a bi-partisan committee at the Center for Strategic and International Studies (CSIS), headquartered in Washington D.C., published a report *CSIS Commission on Smart Power, A smarter, more secure America*. The report outlines a strategy on how America can best rebuild its sagging reputation in the world through a synergistic strategy. The concept emphasizes the use of all the elements of national power loosely translated into engagement programs. Sustainability would provide valuable guidance in applying the smart power concept. Developing countries often lack the capacity to manage their natural resources; much of the world's population lacks access to clean water, and clean water is a limit to industrial development. Working closely with allies and all elements of government, including the military, to build the capacity of a country to manage its watershed, teach dry land agricultural techniques build and maintain infrastructure to prevent flooding and preserve agricultural land, insures that the factors of economic and social productivity are maintained. Such an integrated approach prevents counterproductive competition among developers, and takes advantage of potential synergies in countries that may have a decided lack of capable governmental agencies. The report outlines five different areas to include alliances, partnerships, and institutions; global development; public diplomacy; economic integration; and technology and innovation.

Soft Power

Soft power refers to the use of other elements of national power besides the military element. These

may vary but generally include Information, Diplomatic, Legal, Intelligence, Financial or Environmental for the development of a foreign policy. Soft power is a term coined by Dr. Joseph Nye in 1990. Dr. Nye has been the Dean of the Kennedy School of Government at Harvard, Chairman of the National Intelligence Council, and Assistant Secretary of Defense in the Clinton administration. He describes soft power as “the ability to get what you want through attraction rather than through coercion.” Essentially Nye purports the use of other elements of national power such as allies, economic assistance and cultural exchanges to develop a comprehensive foreign policy instead of the long and sometimes overused military element of power as the cornerstone of America’s foreign policy (Jones 2011).

Sustainability offers a framework for assessing the value of different potential approaches to foreign assistance. Viewing the governments of developing countries as political systems that will succeed only if they meet the demands placed on them by their populations allows one to identify factors of economic and political production necessary for these governments to maintain legitimacy. Such a lens should allow, for example, developers to avoid programs that harvest natural resources at an unsustainable rate, and favor programs that provide renewable resources and environmentally aware waste management. The United States has put itself at a disadvantage by reducing the budget of the State Department (DoS), cutting its budget by \$3.5 billion in April, 2011. China on the other hand is engaged in an all out effort using soft power to garner fuel and other natural resource markets to fuel its economy and increased the funding for the China Development corporation from \$200 billion to \$300 billion (Nye 2011). In his 2011 article, Steve Jones

described soft power as “a nation’s use of co-operative programs and monetary aide to persuade other nations to ascribe to its policies.” In July 2010, President Obama signed into law the Dodd-Frank Wall Street Reform and Consumer Protection Act. Of particular note is Section 1504 of the act, which is focused on discouraging powerful leaders of developing countries from accepting payoffs from resource developers who are not interested in managing scarce natural resources, often non-renewable resources, for the benefit of future generations (Orrick 2011).

While the United States is cutting its funding for diplomacy and development, the Asian giants are making soft power a key tenet of their foreign policy. A prime example of the use of soft power is the competition in Asia between China and India. In his article, “*India’s Edge Over China: Soft Power*,” author John Lee points out that India and not the economic giant China, seems to be winning the battle for influence in the Southeast Asia region for several reasons. India, as the world’s largest democracy is appealing. It approaches nations void of recent political violence. As a flourishing democracy, India has demonstrated that even with internal political issues, it can succeed (Lee 2010).

The 3-D’s

Coined during the Bush Administration, and reiterated by Secretary of State Hillary Clinton of the Obama administration, the “three Ds” (Defense, Diplomacy and Development) provide the elements of national power to create a comprehensive U.S. foreign policy (Finney 2010). While the U.S. Department of Defense (DOD) is well postured to execute an integrated strategy other U.S. Government entities such

as the DoS and the United States Agency for International Development (USAID) are less so. Neither is properly funded or resourced to fully execute its national security mission. This is one of the reasons Secretary Clinton introduced the Quadrennial Defense and Diplomatic Review (QDDR) and as the Center for a New American Security puts it, the QDDR is “a process intended to reassess State and USAID’s roles in the 21st-century world and define new priorities, resources, and reforms going forward” (Center for a New American Security 2011).

As elements of national security, DoS and USAID are now involved in promoting regional sustainability and stability, preventing conflict and the erosion of the resource base, as is DOD. Through the Joint Staff and service doctrine, stability operations have been given high priority by DOD and not just in Iraq and Afghanistan. Through their Theater Engagement and Security Cooperation programs, the Combatant Commands have been actively engaged in building the capacity of host nation militaries to support their civilian governments’ sustainability programs for nearly two decades. Responding to the requests of regional militaries, these programs have addressed: water security; agriculture; climate change adaptation and environmental security. Many activities have been in partnership with DoS and USAID.

The DOD aims to conduct operations in a war torn country or region at the same level of effective sustainability as the management of installations and has been proactive in addressing challenging sustainable resource issues “in the field” using a whole of government approach in both Iraq and Afghanistan. Often accomplished through Civil Affairs channels, DOD has incorporated a series of programs and activities aimed at supplying expertise to local governance to

ensure the sustainability in water, energy and agriculture when the United States and its allies depart.

In both Iraq and Afghanistan, the United States and its allies have made use of a variety of “teams” that have made inroads in creating a more security and productive environment such as the Provincial Reconstruction Teams or PRTs. While predominately composed of military personnel, PRTs also have representatives from other United States Government departments such as USAID, DoS and the U.S. Department of Agriculture. Since their inception first in Afghanistan in 2002, then Iraq in 2005, the teams first focused on improving the infrastructure to address the basic needs of the population with initiatives such as access to clean water, and building a sustainable agriculture industry.

These teams have progressively improved their focus areas providing a modicum of governmental legitimacy, particularly in the partially inhabited regions of Afghanistan and enhancing sustainability. Further, a variety of other “team” types of organizations have been utilized for specialized missions, with Agribusiness Development Teams or ADTs as subject matter experts designed to assist the host nation farming industry to increase crop yields. These units, sponsored by the National Guard, reflect the variety of civilian acquired skills that have been a welcome addition to U.S. overseas campaigns since the early 1900s.

Environmental Security

Environmental Security is an element under the larger rubric of Human Security outlined in the 1994 *United Nations Development Program’s Human Development Report*, and has been incorporated into the thought processes of decision makers when defining

state security. No longer is state security simply defined by military might or the occupation of territory, but, as a result of the 1994 report, that definition has been expanded to include the human security element of which environmental security is a part. The U.S. government definition of environmental security is that environmental issues become national security issues when they affect U.S. national security. For example, in Botswana water, particularly in the Okavango River Region of Northern Botswana, is a national security issue. Because approximately 75% of the land of Botswana is part of the Kalahari Desert, water is a precious commodity for humans and for fauna. The tourist industry depends on seasonal rains to provide flood waters to the inland Okavango Delta region, a favorite grazing area for the many animal herds that frequent the area. The tourist industry in that area of Botswana is a major employer and foreign exchange earner. The destruction of the delta region would severely impact Botswana's economy and hence is a national security issue.

Geopolitics

The relationship of political power to its geographical setting is often overlooked by policymakers and national security professionals (Gray 1999). From the landing at Normandy, where offensive maneuvers were complicated by organizations of hedgerows, to the 1973-1974 Organization of the Petroleum Exporting Countries' oil embargo, important security policy decisions have been complicated and U.S. interests placed at risk by the policymakers' ignorance of geo-

graphic relationships (Kissinger 2009). The imbalance of resource supply and demand accounts for the phenomenon of comparative advantage and thus, underpins trade relationships. The current control of the world rare earth element market by China illustrates the importance of understanding resource geopolitics and the potential political power available to countries that *are* aware and design geopolitical strategies to take advantage of geography. Sustainability is a critical concept to crafting a resource-based geopolitical strategy.

Summary

Sustainability has greatly enhanced the management of military installations, and the engagement strategies of the Geographic Combatant Commands. It contributes markedly to the country plans of USAID and may be seen reflected in the objectives of the QDDR. Yet, it has not surfaced as an overarching concept to help frame U.S. national security policy, and as a result it is not consistently applied or synchronized across the 3Ds or considered by policymakers addressing regional security issues.

Regional instability has been the chief threat to U.S. national security interests since the end of the Cold War. The ability of the United States to influence the behavior of regional states essential to protecting U.S. national security objectives quite often turns on the sustainability of that country's economy and political system, which in turn will depend upon the sound management of a dynamic resource base. Former colonial powers, India and China, both understand the importance of regional stability and addressing sustainability as a way to promote their influence with

regional states. China, for example, has multiple billion-dollar bilateral development projects with resource rich African states or states and organizations that control the region's transportation network and economies (Enrich 2011). These relationships are guided by a geopolitical strategy that recognizes the importance of resource access to the Chinese economy and the tenure of the Chinese Communist Party, and are appealing to the regional states because they develop the social and physical infrastructure necessary for government sustainability.

It is time for national security policymakers to make sustainability a foundation for U.S. national security policy. The Cold War vulnerability of U.S. security to a lack of resource access and the failure of strategically important regional states is being rekindled by key trends in the political landscape. Population growth, long highlighted by intelligence community publications, is driving the world population from 2 billion in 1927 to a projected 9 billion by 2054 (United Nations, Population Division Department of Economic and Social Affairs). Peak oil is already a recognized term in the United States and rising peer competitor China has made resource access and *control* one of its key geopolitical variables. The scramble for economic resources is well underway and the United States is vulnerable. The concepts of soft and smart power, resource geopolitics and environmental security all recognize the importance of sustainability at a strategic level. Integrating the three U.S. elements of power (Defense, Diplomacy and Development) to proactively address sustainability issues as they affect U.S. national security, is essential to preventive defense and geopolitical strategies designed to preserve U.S. vitality and security for future generations.

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