National Security Watch

NSW 09-1 29 May 2009

# Emerging Global Trends and Potential Implications for National Security

by David J. Kay

## Introduction

Since the end of the Cold War, many political scientists, economists and observers of international affairs have attempted to theorize about what the future will hold. Some have predicted an "end of history" wherein democracy and free markets would reign supreme, while others foresee a "clash of civilizations" under which cultural-religious blocs would determine the order of the world. Meanwhile, the ascendance of China, Russia and other illiberal states suggests that a strong authoritarian state may better enable national development than an open, free-market, democratic government. A corollary to this argument, known as the "China threat," is that China will overtake the United States in economic and military power and impose a new world order. On the other hand, some theorists of globalization suggest that in a "flatter," more globalized world, people, multinational corporations and technology, rather than states, will be the determining factors of the future.

Unlike science and mathematics, which are predicated on a set of fixed principles and laws, international politics is the result of human decisions informed by personal judgments, perceptions and other external factors. While it is possible to generalize about why world leaders make certain decisions, it is not possible to scientifically map what they would do in any given situation. Thus, rather than attempting to arrive at an all-encompassing theory on the future of the world or the international relations between states, it is more useful to look at future global trends that will emerge. These trends—demographics, the environment, technology, energy and other external factors—can, unlike human behavior, be scientifically and statistically tracked and modeled. It is these trends, and the behavior taken in anticipation of or as a result of these trends, that will impact the future course of international affairs.

## What the World Will Look Like in the Future

While the world will become "flatter" with the continuing globalization of people, money, ideas, technology and even diseases moving quickly and boundlessly, there will also be a greater number of localized or regional problems. Local conflict will increase as warring factions vie for control of areas with access to water, food, energy and other scarce resources. Global climate change, environmental degradation, population growth and urbanization will lead to greater demand and intensified friction over diminishing resources and living space. Moreover, global powers such as the United States and China, or smaller interlopers like Iran, violent extremists, pirates and other transnational and criminal elements, will exacerbate these local and regional conflicts. At the intersection of globalization, environmental calamity, resource scarcity, demographic strain and international political-military competition lies a complex, interconnected future that will be filled with persistent conflict and instability.

- Urbanization and population growth: By 2050, world population will have increased by 2.5 billion to 9.2 billion, and close to 70 percent of the world's population will live in urban areas (currently it is about 50 percent).[1]

People migrate to cities in search of jobs, services and a better future; however, this crowding also has negative environmental and social impacts, leading to increased pollution, crime and conflict between different ethnic and social groups.

- Global food and water supply: Global climate change and desertification[2] greatly threaten the world's food and water supply and economic vitality.[3] The world's fisheries, agricultural lands and water supply are also burdened by overfishing, pollution and overuse, and will be hard pressed to keep up with growing populations. China, the world's most populous state and fastest growing economy, clearly illustrates the detrimental effect of unrestrained economic growth on the local environment. About 70 percent of China's lakes and rivers are severely polluted, half its population does not have access to clean drinking water and the glaciers that feed its two greatest rivers are receding by 7 percent annually.[4] As will be seen below in the discussion of the Darfur conflict, the struggle over water and arable land—essential resources for survival and agricultural productivity—is at the root of the conflict between the Darfurian tribes.
- Oil: Prior to the recent economic crises, there was a major surge in both the demand for and the price of oil due to steady consumption and the growing appetites of developing countries such as China and India. As the price of oil reached $147 a barrel, producers were unable to keep up with the growing demand (while enjoying the near-record high prices) and as a result the price skyrocketed—this record high price also spurred investment in the expansion of supply and alternative energy sources. However, now that the world economy has slowed, there is little incentive and capital to invest in future production and alternative sources. Thus, when the global economy begins to recover and oil demand increases, the world will again be hampered by high, growth-hampering prices and slumping supply. Moreover, the prospect of "peak oil," a ceiling on global oil supply capacity, will have a devastating impact on global security, trade and food supplies resulting in soaring energy costs as the global supply dwindles and there is no suitable energy replacement for the transportation sector.[5]
- The globalization of extremism and crime: American and European heroin use contributes to domestic crime and addiction while funding criminality, instability and insurgency in South Asia—in the process killing American and NATO troops, undermining the Afghan and Pakistani governments and facilitating global terrorism. In 2005 an obscure Danish newspaper printed 12 cartoons of the Islamic prophet Muhammad, leading to global protests and riots, more than 100 dead and a boycott of Danish goods. Even something as seemingly innocuous as buying "conflict" diamonds and gems helps fund civil war, genocide and even al Qaeda.[6] Now more than ever, due to globalization and technology, the collective behaviors of individuals can directly and indirectly impact events on the other side of the planet in rapid and unforeseen ways.
- Global climate change and rising sea levels: According to the Intergovernmental Panel on Climate Change (IPCC), the melting of polar ice caps from global warming will cause the sea level to rise between 7.8 and 24 inches by 2100.[7] As a result, nations such as Nigeria[8] and Bangladesh could end up with millions of environmental refugees while others may be submerged by rising seas. Low-lying nations like the Maldives and Kiribati are currently considering purchasing real estate on higher ground in other countries as a contingency once their countries become uninhabitable. Moreover, a University of Arizona model found that a three-foot rise in the sea level would overwhelm much of South Florida.[9] According to a study by the CNA Corporation's Military Advisory Board, "climate change acts as a threat multiplier for instability in some of the most volatile regions of the world . . . pos[ing] a serious threat to America's national security."[10] In addition to already discussed problems such as rising sea levels and food and water scarcity, climate change will also increase the spread of disease, hinder economic productivity and erode public order, leading to an increase in ungoverned areas and failed states.
- Geopolitical tension: The rise of the BRICs (Brazil, Russia, India and China) has major implications for regional and global balances of power, especially in the case of China, which is not yet certain how to deal with its growing interests and responsibilities. Russia, along with its fellow petrostates Venezuela and Iran, has formed a loose alliance with other dictatorial states that use oil wealth to advance an anti-American and antidemocratic geopolitical strategy. India and especially Brazil have not yet asserted themselves on the global stage, but their growing resource demands and political, economic and military power will have a major impact on regional and global relationships.

These trends are already significant drivers in current conflicts and will present themselves in future conflicts and the evolving international order.

### Present-Day Case Study: Darfur

The current situation in Darfur is a telling example of how a tribal/territorial dispute over land and water has grown into a major international controversy with ethnic and religious overtones, and has drawn in neighboring states and outside players such as China, the United States and multilateral organizations. For a long time, African-oriented farmers and Arab-oriented grazing nomads enjoyed a somewhat peaceful coexistence in the western Darfur region of Sudan. That arrangement was shattered in the 1980s and 1990s as drought and a population explosion[11] made many more people dependent on a much smaller amount of arable land. As the dispute intensified, the Sudanese government took the side of the Arab-oriented nomads and armed the Janjaweed,[12] leading the African-oriented farmers to openly revolt in 2003. The subsequent systematic murder and pillage of the African farming tribes garnered worldwide attention, spread to neighboring states and drew in outside powers.

The lawlessness in Darfur has added fuel to the fire of internal conflicts in Chad and the Central African Republic, and threatens peace and stability in the entire region. Chad's capital of N'Djamena is currently under siege by Sudanese government-backed rebels, and ongoing fighting in the Central African Republic partially results from and contributes to the crises in Sudan and Chad. China, a major trade partner and oil importer, supports Sudan while France backs Chad, a former colony. The U.S. policy is a delicate balance between enlisting the Sudanese government's assistance in the struggle against global extremism and strongly condemning the crimes against humanity perpetrated against the people of Darfur. As the United States works with others to resolve the conflict, Osama bin Laden and other extremists have threatened to wage a jihad against any American or European military force that deploys to Sudan. On 4 March 2009, the International Criminal Court (ICC) indicted Sudanese leader Omar al-Bashir on five counts of crimes against humanity and two counts of war crimes. Al-Bashir responded by expelling 13 international aid groups that operate in Darfur. Further confusing and distorting the issue, he is pointing to the indictment as a symbol of the Western conspiracy against Arabs and Islam. While this accusation is routinely dismissed by Westerners, among Arabs, Muslims and others it has a significant following.

The widening or prolonging of the Darfur conflict threatens to undermine the Comprehensive Peace Agreement between northern and southern Sudan and in turn aggravate existing disputes in many countries throughout the Horn of Africa and Central Africa.[13] In addition, the United Nations estimates that as many as 300,000 have been killed and approximately 2.5 million have been left homeless due to the fighting and its effects.[14] This type of conflict—an intersection of resource disputes, environmental degradation, demographic strains and external interference—could easily play out in other parts of Africa and the world. While the situation in Darfur began as a typical resource dispute between local tribes, it has since become a horrifying humanitarian catastrophe and expanded into a major regional and global geopolitical issue with wide-reaching ramifications.

### Future Scenario: The Arctic

The looming battle over the Arctic Sea and the North Pole's natural resources is another potential conflict point. Unlike the Antarctica Treaty System which banned all military and most commercial activity on and around Antarctica, there is no similar treaty governing the North Pole and other remote areas of the Arctic region.[15] Until recently, geography and weather conditions made most of the Arctic inaccessible. However, as a result of climate change and the slow melting of the polar ice caps, much of the region can now be easily navigated and reached, especially with the use of maritime icebreaker vessels.[16] In July 2008 the U.S. Geological Survey estimated the Arctic's undiscovered petroleum resources at 90 billion barrels of oil, 1.7 trillion cubic feet of natural gas and 44 billion barrels of natural gas liquids.[17] The Arctic also offers access to lucrative fishing waters and the opportunity for more expedient maritime navigation routes such as the Northwest Passage, a sea route connecting the Pacific and Atlantic Oceans via waterways in northern Canada and the Arctic Ocean.

On 2 August 2007 a Russian submarine planted a rust-proof titanium flag on the seabed directly beneath the North Pole. That symbolic act was part of a Russian campaign to lay claim to large swaths of the Arctic Ocean and seabed by arguing that the Arctic's underwater Lomonosov and Mendeleev Ridges are extensions of (and thus part of) the Russian Eurasian continental shelf.[18] In March 2009 Russia announced the creation of an "Arctic

force" to protect its regional interests and Arctic resource base.[19] There are also less contentious Arctic territorial disputes between Canada and Denmark (on behalf of Greenland) over Hans Island, and between Canada and the United States over the Beaufort Sea. Furthermore, Canada claims that the Northwest Passage, which it officially refers to as Canadian Internal Waters, is under full Canadian sovereignty and control, giving Canada the right to fully regulate and deny any usage. The other territorial Arctic states—Denmark, Norway, Russia and the United States—contend that the Northwest Passage is an international strait that cannot be closed under normal circumstances.

The thawing of the Arctic's ice due to global warming will create serious tension as each of the five polar states seeks to claim and exploit the Arctic's vast potential energy and other riches—resources made even more valuable by the growing worldwide demand for them and by Russian geopolitical competition with the United States and Europe. Moreover, the international competition to exploit the Arctic will greatly threaten the fragile indigenous Inuit population and ecosystem while accelerating global warming and the melting of the polar ice caps.[20] This controversy is another example of a potential conflict caused by environmental changes and intensified by international geopolitical competition and other external factors. How this controversy plays out will have serious environmental and political repercussions possibly leading to war, environmental catastrophe or the extinction of the fragile Inuit culture and Arctic wildlife.

### The Rise and Fall of the Petrostates

Among the many different sources of energy, oil and natural gas have a special role. While coal, nuclear and other sources of energy help produce food, make homes warm (or cool) and keep the economy running, the portable nature of oil and natural gas is unique. The transportation sector, i.e., travel and trade, overwhelmingly relies on these types of fuel, as do the world's militaries.[21] Further heightening their value is the acknowledgment that the oil and natural gas supply is finite, slow and expensive to develop, and limited mostly to a handful of inefficient, unstable and corrupt producer countries. To make matters worse, producers such as Iran, Russia and Venezuela use energy as a weapon, manipulating global markets and investing their proceeds in military expansionism and violent extremist movements. Thus the global economy, hungry masses and world security simultaneously fund and are held hostage by this unfortunate phenomenon.

The recent significant drop in global energy demand due to the global economic downturn has been very hard on oil- and natural gas-producing countries. Accustomed to high energy prices, these petrostates have been forced to cut domestic programs used to keep them in power, as well as limit their support to antidemocratic client states and violent extremist movements that share their worldview. Recently Venezuelan President Hugo Chavez was forced to cut spending by 6.7 percent, increase the sales tax and cancel a plan to build a petroleum refinery in regional ally Nicaragua.[22] In addition, current low oil prices have resulted in significant gains for the world's poorest populations due to cheaper food and energy, while also removing an important obstacle to global economic recovery. According to the International Monetary Fund, the sustained drop in oil prices, from $147 per barrel in July 2008 to about $50 per barrel in May 2009, has resulted in a 1.5 percent gain in global GDP.[23]

The specter of peak oil on a global and national scale is also an alarming scenario. As demand for oil increases and global supply reaches its peak, states will be forced to spend extravagantly more on energy and diversify their energy supplies, a long and costly process. The transition will be extremely difficult in the short term and will lead to severe economic and human dislocation as prices across the board will rise, since every good and service depends on some type of energy or transportation. Oil producers with considerable reserves will continue to prosper, while those who have reached their peak in production will suffer. The Mexican government, which is already in the midst of a bloody war with drug cartels, relies on oil proceeds for nearly 40 percent of its budget.[24] Mexico is already plagued by drug-related violence and corruption, and without its petroleum revenue it would likely become a failed state of 110 million people on the southern U.S. border.[25]

The issue of peak oil will provide a number of challenges and opportunities for the world. Countries across the globe will be forced to find new (and hopefully cleaner) sources of energy while populations and economies suffer from mild to severe dislocation. On the other hand, Iran, Russia and other autocratic producer states stand to lose most of their influence, dealing a serious blow to extremism and anti-Americanism. Depending on the policies it chooses, the United States may also suffer from severe dislocation—or it may be in a position to help ease world suffering and capitalize on the setbacks of its opponents.

## Coping with the Future

The key to dealing with these future issues is thinking about how they will affect American and global interests and developing a strategy for dealing with their implications. While some of these trends, such as global climate change, are irreversible and are already manifesting, targeted action is still necessary to minimize the negative effects and to plot a forward course of action. In the case of other developing issues, such as the looming energy crisis, it is still possible to prevent and even capitalize on the negative trends. For example, the United States could immediately undertake a massive energy project to wean itself off foreign oil, develop viable alternative and renewable energies and recapitalize its domestic energy infrastructure. The United States would then avoid direct vulnerability from the looming energy crisis and profit handsomely from exporting revolutionary energy technologies and services while simultaneously undercutting and enfeebling its rivals, such as Iran and Venezuela, and their client states.

The United States needs not only to develop comprehensive approaches for dealing with the most alarming trends but also to put in place a mechanism for monitoring and responding to future threats. This "futures" mechanism must be truly multidisciplinary, monitoring developments in politics, economics, national defense, science and technology, health, demographics, the environment and other areas of expertise, to gain the best possible understanding of the many forces in motion in a very complex, interconnected and rapidly changing world. Near-term challenges still deserve a lion's share of the resources and attention, but this should not lead to the exclusion of all realistic future threats in national security and public policy planning and budgeting. Failure to consider emerging threats and future trends will result in the nation's being overtaken by events and suffering a strategic surprise.

## Endnotes

1 United Nations Department of Economic and Social Affairs Population Division, *World Urbanization Prospects: The 2007 Revision*, February 2008, http://www.un.org/esa/population/publications/wup2007/2007WUP_Highlights_web.pdf.

2 The transformation of arable or habitable land to desert, as by a change in climate or destructive land use.

3 Food and Agricultural Organization of the United Nations, "Climate Change and Food Security: A Framework Document," May 2008. Peter Backlund, Anthony Janetos & David Schimel, *The Effects of Climate Change on Agriculture, Land Resources, Water Resources, and Biodiversity in the United States*, U.S. Climate Change Science Program, Interdepartmental Working Group on Climate Change, May 2008. Edward H. Allison et al., "Vulnerability of National Economies to the Impacts of Climate Change on Fisheries," *Fish and Fisheries*, 4 February 2009. Alister Doyle, "Fish Seen Shifting 125 Miles by 2050 Due to Warming," *Reuters*, 12 February 2009.

4 Brook Larmer, "Bitter Waters," *National Geographic*, May 2008, p. 154. John Pomfret, "A Long Wait at the Gate to Greatness," *Washington Post*, 27 July 2008, http://www.washingtonpost.com/wp-dyn/content/article/2008/07/25/AR2008072502255.html.

5 Economist Jeffrey Rubin argues that oil at $200 a barrel would negate global tariff reduction gains since the 1960s, leading to "a fundamental realignment in trade patterns." Neil King, Jr., "Peak Oil: A Survey of Security Concerns," September 2008, Center for a New American Security, http://www.cnas.org/files/documents/publications/CNAS_Working%20Paper_PeakOil_King_Sept2008.pdf.

6 Douglas Farah and Richard Shultz, "Al Qaeda's Growing Sanctuary," *Washington Post*, 14 July 2004, http://www.washingtonpost.com/wp-dyn/articles/A48221-2004Jul13.html.

7 Juliet Eilperin, "Clues to Rising Seas Are Hidden in Polar Ice," *Washington Post*, 16 July 2007, http://www.washingtonpost.com/wp-dyn/content/article/2007/07/15/AR2007071500882.html.

8 In Nigeria a rise of 20 centimeters in sea level could displace 740,000 people, while as many as 10 million would be left homeless by a two-meter rise. Klaus Paehler, "Nigeria in the Dilemma of Climate Change," Konrad-Adenauer-Stiftung (Foundation), Abuja, Nigeria, 19 July 2007, http://www.kas.de/proj/home/pub/33/2/dokument_id-11468/index.html.

9 The CNA Corporation's Military Advisory Board, *National Security and the Threat of Climate Change*, 2007, http://securityandclimate.cna.org/report/National%20Security%20and%20the%20Threat%20of%20Climate%20Change.pdf. (The Military Advisory Board, chaired by former Army Chief of Staff General Gordon R. Sullivan, comprises 11 senior, retired military officers, including former U.S. Central Command commander General Anthony C. Zinni, USMC, and former U.S. Pacific Command commander Admiral Joseph W. Prueher, USN.)

10 *Ibid.*

11 Between 1983 and 1990 Sudan had an annual growth rate of approximately 3.1 percent, far higher than the 2.1 percent average for developing countries. Sudan also experienced frequent droughts and weak economic growth, forcing it to cope with less income and food for a growing population. Helen Chapin Metz, ed., *Sudan: A Country Study* (Washington, D.C.: Government Printing Office for the Library of Congress, 1991), http://countrystudies.us/sudan/.

[12] The Janjaweed are a paramilitary force of Arab-oriented grazing nomads armed and supported by the Sudanese government to oppose the anti-government Darfurian rebels. In the course of their operations they have committed widespread crimes against unarmed Darfurian civilians.

[13] In January 2005 the Comprehensive Peace Agreement (CPA) was signed between the Arab Muslim Sudanese "north" and the African Christian and Animist "south," ending a civil war that started in 1983 and had resulted in millions dead, injured and displaced.

Sudan, currently supporting anti-government rebels in Chad, has a long history of meddling in its neighbors' affairs, including supporting the brutal Lord's Resistance Army (LRA) of Uganda, giving safe passage to anti-Egyptian and global terrorists (such as Osama bin Laden) and assisting armed groups in Ethiopia, Somalia and other neighboring countries.

[14] Mike Corder, "Officials: Warrant for Sudan Leader by Month's End," *Associated Press*, 12 February 2009, http://www.google.com/hostednews/ap/article/ALeqM5gGMdSABFlisRcwowJDR_hdVUbnRQD96A27GO5.

[15] The United Nations Law of the Seas Treaty (UNLOS) is intended to govern the use of the world's oceans and address competing territorial claims over them, but was not designed to deal with bodies of water partially or fully covered by ice for periods of the year. UNLOS' Article 234 allows for coastal states to enact environmental protection for "ice-covered areas," but does not address territorial claims or economic activity. All Arctic states are a party to UNLOS, except for the United States, which has signed but not ratified. U.S. President Barack Obama pledged to seek Senate ratification of UNLOS.

The Arctic Council, a voluntary and non-binding organization established in 1996, is composed of Canada, Denmark, Finland, Iceland, Norway, Russia, Sweden, the United States and Arctic indigenous groups. The council deals cooperatively with issues such as development, cultural and wildlife protection, climate change and other issues.

[16] The U.S. Coast Guard owns three polar icebreaker ships; only two of them are operational. The Russian Navy has 20 polar icebreakers, seven of them nuclear-powered.

[17] U.S. Geological Survey, *USGS Arctic Oil and Gas Report*, July 2008, http://geology.com/usgs/arctic-oil-and-gas-report.shtml.

[18] Under UNLOS a country may extend its Exclusive Economic Zone (EEZ, the area in which a state exercises exclusive control of the seabed, fishing and other economic resources) beyond the accepted limit of 200 miles if it can scientifically demonstrate that its continental shelf extends further than 200 miles.

[19] "Russia's New Arctic Force to Focus on Border Protection," *RIA Novosti*, 30 March 2009, http://en.rian.ru/russia/20090330/120816974.html.

[20] The melting of the polar ice caps is both a cause and a result of global warming. The melting of the polar caps will result in large quantities of methane frozen within Arctic permafrost being released into the atmosphere. Like carbon dioxide, methane is also a greenhouse gas, but much more potent. Also, a major decrease in Arctic ice or snow cover will result in greater warming as heat from the sun will be absorbed by the earth's surface rather than being reflected.

[21] The U.S. Department of Defense (DoD), the world's greatest petroleum buyer, spent $18 billion on fuel in 2008, nearly 41 percent more than in 2007. DoD estimates that every $10 increase in the price per barrel of fuel costs it $1.3 billion. Rebekah Kebede, "U.S. Military Oil Spending up 41 Percent in 2008," *Reuters*, 28 February 2009, http://in.reuters.com/article/oilRpt/idINN2734955520090227. Bernie Woodall, "Military Wants to Lead U.S. into the Green," *Reuters*, 7 August 2008, http://www.reuters.com/article/environmentNews/idUSN0746438420080807?pageNumber=1&virtualBrandChannel=0.

[22] "Chavez Cuts Budget over Oil Price," *BBC News*, 22 March 2009, http://news.bbc.co.uk/2/hi/americas/7957536.stm. "An Axis in Need of Oiling," *Economist*, 23 October 2008.

[23] Richard Mably and Simon Webb, "Saudi Content with $50 Oil to Help World Economy," *Reuters*, 2 April 2009, http://www.reuters.com/article/GCA-Oil/idUSTRE5316UQ20090402?pageNumber=1&virtualBrandChannel=0.

[24] Neil King, Jr., "Peak Oil: A Survey of Security Concerns," Center for a New American Security, September 2008, http://www.cnas.org/node/182.

[25] DoD's *Joint Operating Environment 2008* raises the "possibility" of Mexico becoming a failed state and equates the danger to U.S. national security with that of a collapse of the Pakistani state. U.S. Joint Forces Command. *The Joint Operating Environment 2008*, http://www.jfcom.mil/newslink/storyarchive/2008/JOE2008.pdf.

***David J. Kay is a National Security Analyst with AUSA's Institute of Land Warfare.***

**Association of the United States Army**
2425 Wilson Boulevard, Arlington, Virginia 22201-3385
703-841-4300 www.ausa.org