The New Geography of Conflict

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ABSTRACT

During the Cold War, strategic planning focused on diverging ideological views between the United States and the Soviet blocs located in central and southeastern Europe and Northeast Asia. In the last decade these regions lost much strategic significance for the U.S. whereas other regions (e.g., Caspian Sea basin, the Gulf states, South China Sea) are receiving increased attention from Washington and other industrialized countries.

A renewed concern of global resources, especially oil and natural gas, has created a new international, national and local geography of conflict. China and Russia have made their presence felt in key energy producing areas through foreign policy emphasis while Japan has demonstrated its concern by strengthening its fleet of warships and aircraft. Also industrializing nations of the developing world (e.g., Brazil, Malaysia, Turkey) have similar energy concerns. On a local scale conflicts have occurred over control of valuable timber, diamond fields and other export commodities. The mapping and spatial analysis of natural resources reveals that many critical sources of vital materials are located in contested or chronically unstable areas. Resource shortages and conflicts extend into other problems such as environmental degradation, transnational crime and ethnic conflicts. An analysis of global resource trends and their associated geopolitical phenomena provide policymakers with a basic tool towards resolving or reducing the risk of violent conflicts.

KEYWORDS: geopolitics, natural resources, resource distribution, political conflicts

VITAL INTERESTS

In October 1999, in a rare alteration of U.S. military geography, the Department of Defense reassigned senior command authority over American forces in Central Asia from the Pacific Command to the Central Command. This decision produced no headlines or other signs of interest in the United States but nevertheless represented a significant shift in
American strategic thinking. Central Asia had once been viewed as a peripheral concern, a remote edge of the Pacific Command's main areas of responsibility (China, Japan, and the Korean Peninsula). But the region, which stretches from the Ural Mountains to China's western border, has now become a major strategic prize, because of the vast reserves of oil and natural gas thought to lie under and around the Caspian Sea. Since the Central Command already controls the U.S. forces in the Persian Gulf region, its assumption of control over Central Asia means that this area will now receive close attention from the people whose primary task is to protect the flow of oil to the United States and its allies.

The new prominence of Central Asia and its potential oil riches is but one sign of a larger transformation of U.S. strategic thinking. During the Cold War, the areas of greatest concern to military planners were those of confrontation between the U.S. and the Soviet blocs: central and southeastern Europe and the Far East. Since the end of the Cold War, however, these areas have lost much strategic significance for the United States (except, perhaps, for the demilitarized zone between North and South Korea), while other regions—the Persian Gulf, the Caspian Sea basin, and the South China Sea—are receiving increased attention from the Pentagon.

Behind this shift in strategic geography is a new emphasis on the protection of supplies of vital resources, especially oil and natural gas. Whereas Cold War-era divisions were created and alliances formed along ideological lines, economic competition now drives international relations—and competition over access to these vital economic assets has intensified accordingly. Because an interruption in the supply of natural resources would portend severe economic consequences, the major importing countries now consider the protection of this flow a significant national concern. In addition, with global energy consumption rising by an estimated two percent annually, competition for access to large energy reserves will only grow more intense in the years to come.

Accordingly, security officials have begun to pay much greater attention to problems arising from intensified competition over access to critical materials—especially those such as oil that often lie in contested or politically unstable areas. As the National Security Council observed in the White House's 1999 annual report on U.S. security policy, "the United States will continue to have a vital interest in ensuring access to foreign oil supplies." Therefore, the report concluded, "we must continue to be mindful of the need for regional stability and security in key producing areas to ensure our access to, and the free flow of, these resources."

FAULT LINES

Concern over access to global resources has, of course, long been an important theme in U.S. security policy. In the 1890s, for example, the nation's preeminent naval strategist, Captain Alfred Thayer Mahan, won widespread support for his argument that the United States required a large and capable navy in order to bolster its status as a global trading power. This perspective also shaped the geopolitical thinking of Presidents Theodore Roosevelt and Franklin Delano Roosevelt. During the Cold War, however, resource concerns were often subordinated to the political and ideological dimensions of the U.S.-Soviet rivalry. It is only now, with the Cold War safely over, that securing access to vital materials has again assumed a central position in American security planning.

Evidence of this revival of interest in resources was especially plentiful during last year's global shortage of petroleum and natural gas. President Bill Clinton flew to Africa in August 2000 with the hope of obtaining additional oil from Nigeria—currently one of America's leading suppliers—and prodded the Caspian states to accelerate the construction of new pipelines to Europe and the Mediterranean. Meanwhile, then Governor George W. Bush used the presidential campaign debates to call for oil and gas exploration in U.S. wilderness areas in order to reduce the nation's dependence on foreign supplies. Once elected, he made
one of his earliest foreign policy initiatives a meeting with Mexican President Vicente Fox to discuss proposals for increasing the flow of energy from Mexico to the United States.

A similar focus on the acquisition or protection of energy supplies is evident in the strategic thinking of other powers. Large energy importers, such as China, Japan, and the major European powers, have made ensuring the stability of their supplies a top priority. Russia is placing greater foreign policy emphasis on energy-producing areas of Central Asia. Although Moscow continues to worry about developments on its western frontiers in the areas facing NATO, it has devoted considerable resources to strengthening its military presence in the south, in the Caucasus (including Chechnya and Dagestan), and among the former Soviet Central Asian republics. Similarly, the Chinese military has shifted its concentration from the northern border with Russia to Xinjiang in the west (a potential source of oil) and to offshore areas of the East and South China Seas. Japan has followed China to these seas and has boosted its own ability to operate there, procuring and deploying new warships and a fleet of missile-armed P-3C Orion patrol planes. Securing access to sufficient supplies of oil and gas is also a great concern of the newly industrializing nations of the developing world, such as Brazil, Israel, Malaysia, Thailand, and Turkey—many of which are expected to double or triple their energy consumption over the next 20 years.

Although obtaining sufficient supplies of energy is becoming the foremost resource priority for some states, the pursuit of adequate water will be the central focus for others. Water supplies are already insufficient in many parts of the Middle East and Southwest Asia; continued population growth and the increased likelihood of drought from global warming will likely create similar scarcities elsewhere. To further complicate the problem, water supplies do not obey political boundaries, and so many of the countries in these regions must share a limited number of major water sources.

With all the states that touch these waters seeking to increase their allotted supplies, the danger of conflict over competition for these shared supplies will inevitably grow.

In other parts of the world, localized conflicts have broken out for control of valuable timber and minerals. Typically, these conflicts entail a struggle between competing elites or tribes over the income derived from commodity exports. In Angola and Sierra Leone, for instance, rival groups are battling for control of lucrative diamond fields; in the Democratic Republic of the Congo (D.R.C.), the conflict concerns copper as well as diamonds; and in parts of Southeast Asia, various groups are fighting over valuable stands of timber. The recent bloodshed on Borneo arose from clashes between the indigenous Dayak, who have long occupied Borneo's extensive forests, and settlers from Java and Madura who were brought in by the Indonesian government to harvest all this timber. Although not a direct threat to the security of the major powers, these conflicts can lead to the deployment of U.N. peacekeeping forces—as in Sierra Leone—and thus impose significant demands on the world's capacity to manage ethnic and regional violence.

All of these phenomena—increased competition over access to major sources of oil and gas, growing friction over the allocation of shared water supplies, and internal warfare over valuable export commodities—have produced a new geography of conflict, a reconfigured cartography in which resource flows rather than political and ideological divisions constitute the major fault lines. Just as a map showing the world's tectonic faults is a useful guide to likely earthquake zones, viewing the international system in terms of unsettled resource deposits—contested oil and gas fields, shared water systems, embattled diamond mines—provides a guide to likely conflict zones in the twenty-first century.

A MAP OF THE WORLD

Political analysts have yet to devise a model that accurately represents the global power dynamic of the post-Cold
A comprehensive and predictive explanation of this dynamic must account for a variety of shifts in power politics and conflict zones. The bipolar face-off of the Cold War has been reconfigured to leave one global superpower—the United States—facing a group of smaller power centers, from western Europe to Russia, China, and Japan. In the early 1990s, violence in the former Yugoslavia, Kashmir, and Central Africa made the world community concentrate on preventing ethnic and intercommunal conflict, but this focus on ethnicity could not predict or address the violence in Africa over diamond fields, copper mines, and farmlands. Economic globalization is turning some poor areas into centers of prosperity and growth but leaving others behind in abject poverty, sparking conflicts that have more to do with resources than with nationalism. In short, contemporary world affairs defy exclusively political, security-related, and economic definitions.

A better analysis of stresses in the new international system, and a better predictor of conflict, would view international relations through the lens of the world's contested resources and focus on those areas where conflict is likely to erupt over access to or the possession of vital materials. The analysis would begin with a map showing all major deposits of oil and natural gas lying in contested or unstable areas (Fig. 1). These zones of potential trouble include the Persian Gulf, the Caspian Sea basin, and the South China Sea, along with Algeria, Angola, Chad, Colombia, Indonesia, Nigeria, Sudan, and Venezuela—areas and states that together house about four-fifths of the world's known petroleum reserves. The map would also trace the pipelines and tanker routes used to carry oil and natural gas from their points of supply to markets in the West; many of these routes pass through areas that are themselves subject to periodic violence. The energy supplies of the Caspian region, for example, must cross the troubled Caucasus (encompassing Armenia, Azerbaijan, Georgia, and parts of southern Russia) before reaching a secure outlet to the sea.

A map of contested resource zones would also show all major water systems shared by two or more countries in arid or semi-arid areas. These would include large river systems such as the Nile (shared by Egypt, Ethiopia, and Sudan, among others), the Jordan (shared by Israel, Jordan, Lebanon, and Syria), the Tigris and Euphrates (shared by Iran, Iraq, Syria, and Turkey), the Indus (shared by Afghanistan, India, and Pakistan), and the Amu Darya (shared by Tajikistan, Turkmenistan, and Uzbekistan). Also included would be underground aquifers that simply cross borders, such as the Mountain Aquifer lying beneath the West Bank and Israel.

Finally, this map would indicate major concentrations of gems, minerals, and old-growth timber in the developing world. These precious assets include the diamond fields of Angola, the Democratic Republic of the Congo, and Sierra Leone; the emerald mines of Colombia; the copper and gold mines of the D.R.C., Indonesia, and Papua New Guinea; and the forests of Brazil, Cambodia, the D.R.C., Fiji, Liberia, Mexico, the Philippines, and Brunei, Indonesia, and Malaysia on the island of Borneo.

Such a map, if properly designed, would truly delineate the places where armed combat is most likely to erupt in the years ahead. The mere presence of valuable resources in a particular area does not, of course, mean that conflict is likely to break out there. Other factors—including the relative stability of the countries or regions involved, the history of relations between them, and the local military balance—must be considered. Israel and Syria, for example, fight over the Golan Heights because of a sovereignty dispute dating back to the 1967 war, in addition to the fact that some sources of the Jordan River lie there. Conflict over valuable materials is a significant feature in this and most other conflicts around the world today, so a map of contested resource zones is a more reliable indicator of potential violence than any other single factor.
FIGURE 1. Possible flash points for resource conflict.
PREMONITORY TREMORS

Identifying areas of potential conflict over natural resources is also becoming increasingly important as the pressure on these fault lines grows. The pressure derives from a number of sources, beginning with the basic mechanics of supply and demand. As populations increase and economic activity expands in many parts of the world, the appetite for vital materials will swell more quickly than nature (and the world's resource firms) can accommodate. The result will be recurring shortages of key materials, becoming chronic in some cases. Technologies that introduce alternative materials and production techniques will help overcome some of these scarcities but can also present problems of their own—as shown, for example, by the soaring demand for electricity in Silicon Valley and other centers of digital technology. As shortages of critical materials rise in frequency and severity, the competition for access to the remaining supplies of these commodities will grow more intense.

The pressure on global petroleum supplies is likely to prove especially severe. According to the U.S. Department of Energy, global oil consumption is expected to rise from about 77 million barrels per day in 2000 to 110 million in 2020—an increase of 43 percent. If these estimates prove accurate, the world will consume approximately 670 billion barrels of oil between now and 2020, or about two-thirds of the world's known petroleum reserves. Of course, new reserves will be discovered during this period, and emerging technologies will allow us to tap into supplies previously considered inaccessible, such as those in remote northern Siberia and beneath the deep Atlantic. But the production of petroleum products is still not likely to keep pace with soaring demand; periodic shortages of the kind experienced in the summer and fall of 2000 will occur more and more often.

The global water situation is similarly fraught. Water is considered a renewable resource since we regularly receive fresh supplies from rain and snowfalls. But the amount of replaceable water that is available for human use in any given year is actually quite limited. At present, we use about half this amount—for drinking, bathing, food production, manufacturing, navigation, and waste treatment—and the need for additional supplies is growing all the time. Already, many areas of the Middle East and Asia suffer from persistent water scarcity, and the number of countries experiencing such conditions is expected to double over the next 25 years as the world population rises and more people settle in urban areas. By 2050, the demand for water could approach 100 percent of the available supply, producing intense competition for this essential substance in all but a few well-watered areas of the planet.

Environmental trends such as global warming will also affect the worldwide availability of many resources, including water and arable land. Although higher temperatures will produce increased rainfall in areas located near oceans and other large bodies of water, inland regions will generally experience drier conditions, with prolonged drought a recurring phenomenon. Higher temperatures will also increase the rate of evaporation from rivers, lakes, and reservoirs. It is likely, therefore, that many important farming areas will be lost, either to drought and encroaching desert inland, or to coastal flooding and the rise of global sea levels in maritime regions.

Market mechanisms can alleviate most of the increased pressures on the world's existing supply of vital materials. Rising demand, coupled with higher prices, will stimulate the development of new materials and processes that allow resource firms to search for new deposits and bring those that were once considered inaccessible within reach. But technology cannot completely reverse demographic and environmental pressures, and some countries and regions will be unable to afford the higher costs of alternative technologies. In these circumstances, global supply and demand will become increasingly unbalanced.

DANGEROUS NEIGHBORHOODS

What makes this trend so worrisome is the fact that many important sources of
vital materials are located in contested or chronically unstable areas. Some of the most promising sources of oil and natural gas lie in offshore areas whose ownership is a matter of fierce dispute. The five coastal states of the Caspian Sea, for example, have yet to agree on a plan for dividing up its offshore resource zones; the situation in the South China Sea is even more chaotic, with seven states claiming all or part of the region. Major disagreements over the ownership of oil-bearing border regions and offshore fields are also found in the regions of the Persian Gulf, the Red Sea, the Timor Sea, and the Gulf of Guinea.

Even when the ownership of particular reserves is not in dispute, as in the major onshore fields in Colombia, Iran, Iraq, Saudi Arabia, and Venezuela, the future availability of these supplies cannot be taken for granted; political and social unrest that may be completely unrelated to resource issues could nevertheless endanger the supplies. Although the Saudi regime has so far succeeded in suppressing all expressions of antigovernment sentiment, opposition to the monarchy appears to be growing (as reflected, for example, in the frequency of terrorist attacks), and there is no guarantee that it can be contained forever. The internal strains in Iran and Iraq are more evident, and in neither case do the tensions appear to be diminishing. Colombia is in the midst of a civil war, and political conditions in Venezuela have become highly volatile. Many other countries with significant supplies of oil and gas—Algeria, Angola, Indonesia, Nigeria, Sudan—are also prone to political and social disorder.

The threats to water supplies are roughly similar. Because many of the important sources of water in the Middle East and Asia are shared by two or more countries, it is essential that these states reach mutually acceptable agreements for the allocation of the available supplies. Few governments have chosen to do so, however. Egypt and Sudan agreed to divide up the Nile's flow in 1959 but declined to provide any supplies for Ethiopia and the other states that depend on the river's waters—an obviously unstable arrangement. Iraq and Syria have reached agreement on their respective appropriations from the Euphrates, but the river itself arises in Turkey, which has heretofore refused to sign a water-sharing agreement. Israel has yet to reach agreement with Syria over the Jordan River's headwaters and has not carried through with promises made to Jordan in 1994 regarding cooperative water projects in the Jordan River valley. The only major water-sharing agreement that has demonstrated any degree of durability is the Indus Waters Treaty of 1960 between India and Pakistan—and even this pioneering agreement remains hostage to the future stability of these two countries' relations. There and elsewhere, international disputes over the allocation of existing supplies will grow more and more intense as populations increase and the greenhouse process accelerates global warming.

STAND AND DELIVER

Devising ways to peacefully resolve the increasing competition over natural resources is all the more urgent because many states continue to view controlling certain natural resources as a national security requirement—and something worth fighting for. In the United States, for example, President Jimmy Carter declared in 1980 that any attempt by hostile powers to cut off the flow of Persian Gulf oil would "be regarded as an assault on the vital interests of the United States of America," which the United States would repel "by any means necessary, including military force." Subsequent presidents have made similar statements, and substantial U.S. forces are now permanently deployed in the Persian Gulf to enforce this policy.

Other nations have been less explicit about their resource-protection policies, but there is no doubt that they hold similar views. China, for example, has declared the South China Sea part of its national maritime territory and has asserted its right to employ force to protect it. Although not mentioning China by name, Japan has warned of a threat to its vital trade routes (approximately 80 percent of
Japan's oil supply comes by tanker through the South China Sea) and vowed to take appropriate protective measures. China's assertive posture has also spurred other neighboring countries, including Indonesia, Malaysia, the Philippines, Thailand, and Vietnam, to beef up their own air and naval capabilities.

Water, like oil and natural gas, has prompted talk of national security. "Water for Israel is not a luxury," the nation's second prime minister, Moshe Sharett, once declared. "It is not just a desirable and helpful addition to our natural resources. Water is life itself." In a similar vein, Boutros Boutros-Ghali, when he was Egypt's minister of state for foreign affairs, dramatically claimed in 1988 that "the next war in our region will be over the waters of the Nile, not politics." Some governments have also threatened to use their control over water supplies as an instrument of coercion: in 1989, for example, then President Turgut Özal of Turkey warned Syria that his government would cut off the flow of the Euphrates unless Syria curbed the activities of Kurdish terrorists operating from Syrian bases. The actual use of force in resolving water disputes—the Middle East war of 1967, for example, was sparked in part by the Arab states' plan to divert the headwaters of the Jordan River around Israel to Jordan—has been relatively rare. But the growing pressure on vital supplies, combined with the paucity of viable water-sharing agreements, will create more frequent clashes.

Finally, the protection of valuable mines, fisheries, and timber stands has become a matter of vital interest to poor countries that have few other sources of wealth. The governments of Angola and Sierra Leone, for example, have devoted much of their national incomes to protracted efforts to reassert control over diamond fields now occupied by rebel organizations. Similarly, the government of Papua New Guinea has launched several campaigns to reconquer the island of Bougainville—a rebellious territory that houses the world's largest copper mine. Contests of this sort will continue to arise so long as warlords and other internal factions in these countries perceive a potential benefit from seizing and exploiting major deposits of valuable materials.

SUITABLE ACCOMMODATION

Resource shortages and conflicts represent only a small part of international policymakers' crowded agenda. But these disturbances often tie into other problems such as environmental degradation, economic disorder, population growth, and transnational crime. Resource issues also figure in many conflicts that are characterized in other ways—for example, as ethnic wars or political rivalries. An analysis of global resource trends and their associated political and geographic phenomena would, therefore, provide policymakers a powerful lens through which to examine the larger array of world security problems.

An analysis of this sort would also help leaders to craft broad policy prescriptions. Governments must devote greater effort to the development of alternative fuels and transportation systems, whether through increased financial support for research and development or via incentives for the private sector to invest in these areas. To ensure an adequate supply of water, moreover, more money should go toward exploring new desalination techniques and more efficient crop irrigation. Efforts to negotiate a new international regime for the protection of tropical forests also require increased support.

But these endeavors must be accompanied by multilateral initiatives specifically aimed at reducing the risk of violent conflict over the use of shared or contested sources of vital materials. For example, the world community should bring pressure on the states bordering the Caspian and South China Seas to peacefully resolve all outstanding disputes over the ownership and development of offshore resources. International organizations and institutions could also urge that similar disputes around the Persian Gulf, the Red Sea, and the Gulf of Guinea be settled in this fashion. At the same time, the world community needs to persuade the states bordering on the
Nile, Jordan, and Tigris-Euphrates river systems to negotiate a cooperative regime for the distribution of shared water supplies. On another front, multilateral cooperation could implement plans for the certification of diamonds from Africa, so as to exclude any originating in rebel-held areas of Angola and Sierra Leone.

This is by no means a definitive list of policy prescriptions, but it suggests the sort of steps that officials might take to prevent future crisis and conflict. Progress of this sort, however, can occur only if policymakers pay greater attention to global resource issues and address these matters in a coordinated, comprehensive manner. This means, at the very least, mapping global resource trends and identifying problem areas requiring international attention. Moreover, it means developing plans at the highest level to avert future resource emergencies and ensure the continued availability of vital materials. Only in this fashion can we have any confidence that the planet will safely accommodate the nine or ten billion people expected to inhabit it by 2050.

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