

Penn State Journal of Law & International Affairs

Volume 3

Issue 2 *The 9 Billion People Question: The Challenge of
Global Resource Scarcity*

February 2015

Geopolitics of Resource Scarcity

Kent Hughes Butts

ISSN: 2168-7951

Recommended Citation

Kent Hughes Butts, *Geopolitics of Resource Scarcity*, 3 PENN. ST. J.L. & INT'L AFF. 1 (2015).
Available at: <http://elibrary.law.psu.edu/jlia/vol3/iss2/3>

The Penn State Journal of Law & International Affairs is a joint publication of Penn State's School of Law and School of International Affairs.

Penn State Journal of Law & International Affairs

2015

VOLUME 3 NO. 2

GEOPOLITICS OF RESOURCE SCARCITY

*Kent Hughes Butts, PhD**

INTRODUCTION

Geopolitics refers to the relationship of geographical settings to political processes.¹ The diversity and scale of the geography are important variables in the exercise of political power. Resources vary markedly in occurrence, giving rise to global patterns of trade and creating vulnerability to supply cutoff. National leaders should be aware of the occurrence of strategically important resources within their borders, understand which of these are critically important to sustain human and state security, and develop policies to achieve sufficiency from domestic or international sources. This paper addresses resource geopolitics, offers some examples, and provides concepts for reducing import vulnerability in an era of rising resource-focused policies by Russia and China.

I. GEOPOLITICS

One of the functions of statecraft is to secure the resources that sustain the nation state. When strategically important resources are not found within state borders, relationships with resource-producing countries and the security of trade routes take on added

* [Kent Hughes Butts](#), Senior Lecturer in Homeland Security, Public

¹ See generally SAUL B. COHEN, *GEOPOLITICS OF THE WORLD SYSTEM* (1st ed. 2002).

significance. These relationships are dynamic; often lost on practitioners of statecraft is that economics and technology constantly change and with it, the vulnerability of the state to the decisions made by other states.

The geopolitical focus of statecraft will vary with the geography of states and is not always determined by resource access, yet it played a significant role in the work of important geopolitical writers. Mahan wrote at length about the importance of securing warm water ports.² Kjellen stressed the importance of economics.³ Ports were important for trade and were bases for a navy, and economics turned on industrial production. The factor inputs of industrial production included, to no small degree, energy and mineral resources. Thus, geopoliticians such as Ratzel spoke of the strategic importance of autarky and resource access.⁴ Haushofer clearly had resources in mind when he wrote about the German need for Lebensraum in the years leading up to World War II.⁵ These scholars wrote in an era characterized by European wars and the application of Darwin's survival of the fittest concept to geopolitical theory. States were seen as organisms that were either growing, driven by a dynamic culture and industrial might, or becoming old and weaker. Thus, borders could be seen as shifting zones of assimilation driven by the need for vital resources.

The thinking of state leaders was influenced by these geopolitical concepts. The Versailles Treaty that ended World War I stripped Germany of its colonies and constrained resource access; this relegated Germany to a state of poverty and created a wellspring of discontent that Hitler used to his great advantage. As Germany's Minister of Economics Halmer Schacht stated in 1937 during his trip to the United States, "[n]o great nation willingly allows its standard of life and culture to be lowered and no great nation accepts the risk

² See generally A.T. MAHAN, *THE INFLUENCE OF SEA POWER UPON HISTORY, 1660-1783* (1890).

³ See generally RUDOLPH KJELLEN, *STATEN SOM LIFSFORM* (1916).

⁴ See generally FRIEDRICH RATZEL, *THE STATE AND ITS LAND CONSIDERED GEOGRAPHICALLY* (E.F. Bergman & T. Pohl trans., 1896).

⁵ KARL HAUSHOFER, *WELTPOLITIK VON HEUTE* 22-50 (1936).

that it will go hungry.”⁶ Germany, with ample coal resources in the Ruhr, required access to the iron deposits of French Alsace-Lorraine to rebuild its industry and prosper.⁷ The creation of the European Coal and Steel Community, which evolved into the European Union, was a stark recognition of the power of resource access as a driver of war and ushered in a new era of resource geopolitics built of resource access through permissive trade.

In the statecraft of today’s international political realm, the geopolitics of resources is taking on a new form. Resource geopolitics is no longer solely about controlling the land where the resources are produced, but is also about gaining access and securing supplies to drive the state’s economy. The behavior of a nation state is partially explained by its resource situation. What resources do they produce, what are the factor inputs essential to their manufacturing, and if resources must be imported, on which countries do they depend and how secure are those imports?

II. RESOURCES

Resources are anything that satisfies the needs of humankind; as culture and technology changes, so do resources. “Resources are not, they become.”⁸ Because of its limited supply and critical role as a preservative, salt was once a strategic resource, which drove foreign policy, created trade routes, and precipitated conflict.⁹ The discovery of new sources of salt and the development of technology in the form of refrigeration reduced salt’s strategic importance. Similarly, whale oil has been replaced by petroleum over the last century, reducing the importance of whale stocks and making the oil fields of the Middle East a vital resource to the United States.¹⁰ This resource,

⁶ Hjalmar Schacht, *Germany’s Colonial Demands*, FOREIGN AFFAIRS, Jan. 1937, at 233.

⁷ EUR. PARL. ASS. DEB. 32d Sess. 3 (Apr. 21, 1980).

⁸ ERICH ZIMMERMAN, *WORLD RESOURCES AND INDUSTRIES* 15 (2d ed. 1951).

⁹ See generally MARK KURLANSKY, *SALT: A WORLD HISTORY* (2003).

¹⁰ Brian Trumbore, *The Arab Oil Embargo of 1973-74*,

arguably, has underpinned the two Iraq wars. The dynamics of resource importance to political processes varies with technology and economics.

The petroleum resources of Canada provide a good example of the relationship between economics and technology, and the determination of resources. At the time of the 1973-74 oil embargo, Canada's reserves of petroleum were located on the East Coast in fields such as Hibernia.¹¹ The threefold increase in the price of petroleum as a result of the political decisions made by the governments of OPEC drove the development of experimental technology in the oil sands deposits of Western Canada.¹² In northern Alberta, petroleum is found embedded in the soil rather than contained in the conventional, easily recovered oil traps found in the Middle East.¹³

In 1978-79, a second oil shock drove the price of oil up to \$33 a barrel, making the recovery of oil from oil sands deposits an economic proposition for oil producers. This price, however, was not sustained. With sub-economic deposits, production was curtailed so that Canadian oil reserves totaled approximately three billion barrels in 2000. The unprecedented growth of the Chinese economy over the next decade and a half, however, drove the price of oil above \$130 a barrel.¹⁴ By 2012, Canada had revised its petroleum

<http://www.buyandhold.com/bh/en/education/history/2002/arab.html> (last visited Aug. 17 2014); *California Standard Newfoundland Well Shows Three Zones of Oil*, WALL ST. J., Jan. 4, 1980, at 4 [hereinafter *California Standard*].

¹¹ *California Standard*, *supra* note 10.

¹² See generally ANTHONY SAMPSON, *THE SEVEN SISTERS: THE GREAT OIL COMPANIES & THE WORLD THEY SHAPED* (1975).

¹³ CANADIAN ASS'N OF PETROLEUM PRODUCERS, *What Are Oil Sands?*, <http://www.capp.ca/canadaIndustry/oilSands/Energy-Economy/Pages/what-are-oilsands.aspx> (last visited Aug. 17, 2014).

¹⁴ WTRG ECONOMICS, *Oil Price History and Analysis*, <http://www.wtrg.com/prices.htm> (explaining that “[w]ith minimal Y2K problems and growing U.S. and world economies, the price [per barrel of oil] continued to rise throughout 2000 to a post 1981 high”) (last visited Aug. 17, 2014); see *Historical Oil Prices Chart: Spot Oil Price: West Texas Intermediate – 10 Year Chart*,

reserve totals up to 178 billion barrels, most of which were located in Western Canada's oil sands deposits. When the price of oil rose, the unconventional oil deposits of Western Canada became economic, and technology was developed to mine the deposits and produce a form of liquid petroleum. This rise in the price of oil caused the oil sands deposits to become economically viable again, and oil companies returned to large-scale, sustained production. With carbon fuels and minerals, producers ask if they could recover the raw material with existing technology at a profit. Often, it is the rise in price that stimulates technological development and increases known resources.

III. RESOURCE GEOPOLITICS

During the Cold War the Soviet Union was economically self-sufficient, produced an abundance of strategic minerals, and was the world's leading producer of petroleum. The Soviet Union cut off supplies of manganese and chromium to the United States during the Korean War and the Berlin Blockade, and was willing to manipulate resource exports for political advantage. Because the United States and its Japanese and European allies were heavily dependent on mineral and petroleum imports, they were vulnerable to Soviet supply cut off or manipulation of the mineral and oil markets. In his book, President Richard Nixon describes the Soviet resource geopolitical strategy as: "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."¹⁵ Today, Russia practices resource geopolitics by using its leverage as the dominant regional natural gas producer and frequently cuts off supplies of gas to Europe for political purposes. With the rise of China as a potential peer competitor to the United States, China's geopolitical strategy to assure resource security has become important to U.S. national security.

<http://www.forecast-chart.com/chart-crude-oil.html> (illustrating the increase in price per barrel of oil).

¹⁵ RICHARD M. NIXON, *THE REAL WAR* 23 (1980).

Unlike the autarkic Soviet Union and resource-rich Russia, China's requirement for resource imports is similar to that of the United States. With a dynamic economy growing at a rate of approximately ten percent for the last thirty years and the threat of domestic social instability, China has made resource security a priority. Its geopolitical "go out" strategy targets petroleum, strategic minerals, and food-producing countries and regions around the world. A major player in global commodity markets, China has driven up resource prices to new levels through its mass demands; for example, the price of copper escalated from \$.70 a pound in 2002 to over \$4 a pound in 2010.¹⁶ While China is import-dependent for many critical resources, in some minerals, such as the rare earth elements (REE), China is a leading producer.¹⁷ With over ninety percent of global rare earth production, China can—and has—manipulated REE production and export quotas to affect the profitability of new mining ventures and send a signal to its political adversaries, such as Japan and the United States.¹⁸ At the same time, China's profitable trade relations with mineral-producing states have heightened its political influence in South America, Australia, and Africa. Importantly, China does not trust the global commodity markets, which were largely established by the West, and uses its \$652 billion China Investment Corporation¹⁹ to gain control of international resource producing concessions.²⁰

¹⁶ Javier Blas & Jack Farchy, *Miners Bullish on Outlook for Copper*, FIN. TIMES, Oct. 13, 2010, at 25.

¹⁷ Keith Bradsher, *Challenging China in Rare Earth Mining*, N.Y. TIMES, Apr. 21, 2010, <http://www.nytimes.com/2010/04/22/business/energy-environment/22rare.html?pagewanted=all&r=1&>.

¹⁸ Keith Bradsher, *Trade Officials Ponder How to Respond to China's Rare Earth Stance*, N.Y. TIMES, Oct. 13, 2010, <http://www.nytimes.com/2010/10/14/business/global/14rare.html?pagewanted=all>.

¹⁹ *China Investment Corporation Releases Annual Report*, SOVEREIGN WEALTH FUND INST. (Aug. 08, 2014) at <http://www.swfinstitute.org/swf-news/china-investment-corporation-releases-annual-report/>.

²⁰ *China Investment Corporation*, SOVEREIGN WEALTH FUND INST., <http://www.swfinstitute.org/swfs.china-investment-corporation/> (last visited Aug. 17, 2014).

The vulnerability of industrial states to a cut off of resource imports by a producing state is determined by several factors. First, are there alternative geographically dispersed sources of supply? The loss of access to the approximately seventeen million barrels of conventional petroleum production that flows out of the Persian Gulf daily would be devastating to the global economy.²¹ Second, as is the case with REE and China and natural gas and Russia, the concentration of resource production in one adversarial country creates political leverage over the consuming country.

Loss of access can also result when trade with friendly countries is interrupted due to natural or man-made disasters, social unrest or labor strife, or damage to critical infrastructure. This vulnerability may be mitigated by several proven but often costly policies. Stockpiling resources may cover all or portions of the resource import shortfall for a critical portion of time. Minerals can be reused or recycled, providing substantial supplies over the short term. Energy and mineral substitutes may be developed. Alternative domestically produced sources of supply may be created, although this may take time. It is important to either institute these policies or plan for their implementation before import cut off occurs. This means that the national security community of a state must maintain awareness of the constantly changing patterns of important vulnerability. And, quite often, it means that the leaders must prioritize funding to create this virtual insurance against resource vulnerability.

In spite of mandated resource vulnerability assessments and watershed studies such as the Paley Report, the United States has proven repeatedly that it does not maintain awareness of its patterns of strategic resource consumption and sources of supply, nor does it prioritize the mandate of the Paley Report to “ensure an adequate and dependable flow of materials at the lowest cost consistent with

²¹ *World Oil Transit Choke Points*, U.S. ENERGY INFO. ADMIN. (Aug. 22, 2012), <http://www.eia.gov/countries/regions-topics.cfm?fips=wotc&trk=p3>.

the welfare of friendly nations.”²² For example, the United States was unaware of the political implications of its overwhelming dependence on Middle East petroleum in the early 1970s.²³ As frankly observed by former Secretary of State Henry Kissinger, “it was the October 1973 Arab-Israeli War and subsequent embargo that exposed the vulnerability of the energy system. This came as somewhat of a surprise. . . . To say we were complacent is an understatement.”²⁴

While developed countries have substantial capacity to address their geopolitical vulnerabilities, developing countries do not. The same principles of resource scarcity or imbalance of supply and demand that call into question the resource security and governmental legitimacy of developing countries affect developing countries as well. Quite often, however, the resources are markedly different. Agricultural land and water are the two resources that most affect food security and the human condition. The political system of a developing country must meet the demands placed on it by the population, which is often driven by human security priorities of freedom from want and freedom from fear. In a milieu increasingly affected by climate change, the inability of developing countries to successfully implement adaptation measures calls into question the food security and governmental legitimacy of those countries. As was demonstrated by the recent Arab Spring phenomenon, rising food costs or inadequate supplies can easily exacerbate previous tensions and rapidly erode the legitimacy of the government. The resulting instability can threaten U.S. security interests by bringing to power a government dedicated to extremist ideology, or creating a

²² PRESIDENT’S MATERIALS POLICY COMMISSION, RESOURCES FOR FREEDOM: FOUNDATIONS FOR GROWTH AND SECURITY 148 (1952) (referred to as the “Paley Report”).

²³ U.S. DEP’T OF STATE: OFFICE OF THE HISTORIAN, Oil Embargo, 1973-1974 (Oct. 31, 2013), <http://history.state.gov/milestones/1969-1976/oil-embargo>.

²⁴ Henry Kissinger, Former U.S. Sec’y of State, Address for the 35th Anniversary of the International Energy Agency: The Future Role of the IEA (Oct. 14, 2009) (transcript available at <http://www.henrykissinger.com/speeches/101409.html>).

power vacuum and large areas of ungoverned land in which terrorist training may occur.

CONCLUSION

Regardless of its level of development, resource scarcity and the imbalance of resource supply and demand are concepts with which the national security community of a state must be intimately aware. For non-autarkic states, resource imports may be existential. As the global population rises from seven billion to nine billion people over the next thirty-five years, resource demand will rise dramatically and necessitate the development of resource driven geopolitical strategies to ensure resource efficiency. It is quite likely that there will be heightened competition for these resources and increased tensions between consuming nations. Avoiding resource conflict can best be achieved by promoting conservation measures, proactively developing alternative products, and moving aggressively to mitigate climate change and help developing countries build their capacity to adapt to its effects. The geopolitical importance of resource scarcity will continue to evolve and give heightened importance to planning and international cooperation.