

Naval Operations in Europe and Africa

Roundtable 4: Introduction

Ted Smyth

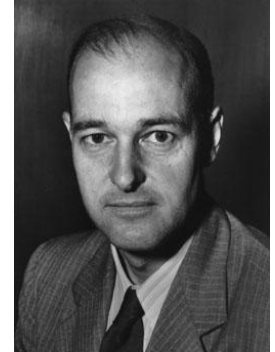
24 March 2010

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Climate, Energy, and National Security

- “The entire ecology of the planet is not arranged in national compartments; and whoever interferes seriously with it anywhere is doing something that is almost invariably of serious concern to the international community at large.”

George F. Kennan, *Foreign Affairs*, April, 1970



- “We also know that over the next 20 years and more certain pressures – population, resource, energy, climate, economic, and environmental – could combine with rapid cultural, social, and technological change to produce new sources of deprivation, rage, and instability.”

Robert M. Gates, Secretary of Defense, July 15, 2008



- “Climate change and energy are two key issues that will play a significant role in shaping the future security environment. Although they produce distinct types of challenges, climate change, energy security, and economic stability are inextricably linked.”

Quadrennial Defense Review Report, February 2010, p. 84

Europe and Africa

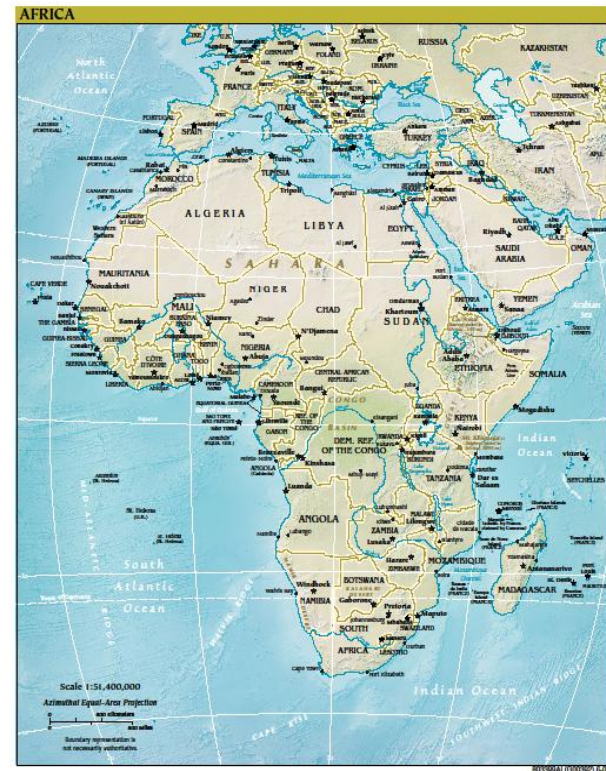
Europe

Area = 3,930,000 sq. mi.
Population = 731,000,000
Coastal length = 3,099 mi.



Africa

Area = 11,725,000 sq. mi.
Population = 922,011,000
Coastal length = 16,000 mi.



Europe and Africa: Economic, Energy, and Population

- **Population:**
 - Collectively, Europe and Africa contain 25% of the world's population; Africa = 14%, Europe = 11%
- **Economic:**
 - In 2009 in terms of national economic strength (measured by GDP in millions of U.S. dollars) five of the top ten countries in the world are European; conversely, eleven African nations rank below Somalia
- **Energy:**
 - Europe imports more than 8.6 million barrels of petroleum per day; 45% of European oil imports originate in the Middle East
 - 40% of European natural gas imports originate from Russia
 - In 2009 the U.S. imported 1,752,000 barrels of petroleum/day (13% of total) from African countries

Europe and Africa: Climate Issues

• Europe:

- more frequent hot-and-cold weather spikes
- increased intensity and variability in precipitation
- melting of glaciers and sea ice; rising sea levels
- creation of new international waterways/internal waters
- changes in river systems
- vulnerability of Southern Europe, the Alps, the Mediterranean basin, and the Arctic

• Africa:

- significant temperature increases
- dramatic decreases in precipitation (more than 20%)
- more frequent and intense tropical storms



Implications for Naval Forces

Premise:

- Europe and Africa are critical to U.S. national security interests
- Climate change and secure access to and distribution of energy sources may negatively impact U.S. national security interests in Europe and Africa
- Naval forces that possess the following capabilities:
 - forward presence, proximity, persistence
 - stealth/surprise
 - ability to deploy/employ large payloads
 - ability to maneuver independentlyare major contributors to the sustainment of U.S. national security

Discussant issue:

- Given the potential implications of climate changes and energy supply and demand issues, what imperatives are necessary to ensure the sustainment of naval force contributions to U.S. national security?

- **Admiral Harry Ulrich, USN (Ret), Distinguished Fellow, CNA Corporation**
- **Mr. Keith Eikenes, Counselor for Defense and Security Policy, Royal Norwegian Embassy**
- **Colonel James G. Welton, USAF, Strategy, Plans, and Programs Directorate, HQ, USAFRICOM**
- **Lieutenant Colonel Shannon Beebe, USA, Assistant Army Attache, Defense Attache Office, Luanda, Angola**