

Sustainable Security Article – September 25, 2017

Marine Resource Scarcity, Fisheries Conflict and Maritime Insecurity

Robert Pomeroy and John E. Parks

Increasingly, non-traditional threats to maritime security are linked to resource scarcity and conflict. An overriding challenge for policymakers is how to address these threats.

The relatively new concept of ‘maritime security’ has received increasingly greater attention both within the marine resource management and national security communities, particularly since the early 2000s (Germond 2015; Bueger 2015a). While definitions of maritime security vary, there is broad agreement that maritime security generally encompasses the policies, regulations, and operations designed to secure the governance and management of a nation’s maritime jurisdiction (e.g., exclusive economic zones or territorial waters). This definition is broad enough to attract the relevant interest of and contributions from several fields of study, including: global policy; defense and security; natural resource economics; criminal justice; international development; and environmental management.

During the last two decades, a number of investigations have been conducted into the threats facing maritime security, particularly within the transnational waters of three regions: the Gulf of Aden and Horn of Africa in East Africa (see Sumaila and Bawumia 2014; Bueger 2013; Hansen 2011; Gilmer 2017); the Gulf of Guinea in West Africa (see Jacobsen 2017); and the South China Sea and Sulu-Sulawesi Seas of Southeast Asia (see Pomeroy *et al.* 2016; Chapsos and Malcolm 2017; Pomeroy *et al.* 2007).

Such research has encouraged careful analysis by the international community to identify relationships between relevant political, socioeconomic, and environmental factors with regional stability and maritime security. Such investigations are of increasing interest to those addressing national security, international policy, and sustainable development concerns.

Linking Marine Resource Scarcity and Maritime Security

Maritime security can be viewed as a non-traditional security threat, defined as “challenges to the survival and well-being of peoples and states that arise primarily out of nonmilitary sources, such as climate change, environmental degradation and resource depletion, infectious diseases, natural disasters, irregular migration, food shortages, people smuggling, drug trafficking, and other forms of transnational crime” (Caballero-Anthony 2007). Increasingly, non-traditional security threats are linked to natural resource scarcity (Evans 2009). Whether considering energy, food, or freshwater shortages, such resource scarcities exhibit common attributes (Pomeroy *et al.* 2016).

- First, they share common drivers, or factors that influence and cause or exacerbate scarcity.

- Second, they are linked to each other through feedback loops, which create a major risk of unintended consequences when one scarcity issue is tackled without reference to other scarcity issues.
- Third, they have common impacts. That is, they disproportionately impact poor and fragile states, cause economic stress, and result in the potential for increased and strategically-targeted resource competition and conflict.

Bueger (2015a) identifies four, interrelated concepts as an analytical foundation of maritime security: national security; human security; economic development; and the marine environment. Building from this economic-environment-security framework, other research has investigated the relationship between the relative abundance (or scarcity) of available marine resources, the type and degree of extractive effort for such marine resources, and the level of resource competition and conflict (Pomeroy *et al.* 2016; Bueger 2015b; Pomeroy *et al.* 2007). These studies highlight how various political, socioeconomic, institutional, and cultural factors are linked to and cumulatively influence maritime security. This research also illustrates how maritime insecurity can influence broader trends related to civil unrest (nationally or locally) and regional peace and order (Pomeroy *et al.* 2016; Bueger 2015b; Pomeroy *et al.* 2007).

In this work, there is growing recognition of how increasing fisheries scarcity, competition, and conflict exacerbates rates of illegal, unreported, and unregulated (IUU) fishing (Doorey 2017; Gilmer 2017; Pomeroy *et al.* 2016; Glaser *et al.* 2015; Sumaila and Bawumia 2014) and the poaching of endangered wildlife (e.g., sharkfin; see Biegus and Bueger 2017). In turn, IUU fishing further increases scarcity, competition, and conflict over remaining resources, eroding peace and order and decreasing maritime security (Pomeroy *et al.* 2016; Pomeroy *et al.* 2007). Declining marine resource availability and decreasing maritime security also threaten the conservation and sustainable management of *in situ* marine biodiversity within these regions (Mazaris 2017; Pomeroy *et al.* 2016).

The Role of Non-State Actors and Transnational Crime

Investigations into marine resource scarcity, competition, and conflict have also highlighted how non-state actors and non-traditional threats are influencing maritime security (Pomeroy *et al.* 2016; Pomeroy *et al.* 2007). Transnational crime has a notable influence on both marine resource scarcity and maritime security. For example, illicit maritime commerce (such as human trafficking and the smuggling of narcotics or small arms via ocean vessels) and piracy (including armed robbery at-sea, kidnapping for ransom, and oil bunkering) committed by non-state (and in some cases, stateless) actors are linked both to marine resource scarcity (via both illegal fishing and piracy of post-harvest fishing vessels) and increased armed conflict and civil unrest (via increased rates of armed conflict/violence at sea and logistical and supply support for insurgencies and acts of terrorism).

As highlighted recently by an INTERPOL study (2016), 80% of the world's nations today recognize environmental crime as one of their nation's highest national security priorities (INTERPOL and UN 2016). INTERPOL investigations reveal how environmental crimes are linked to both transnational criminal networks and terrorism (INTERPOL and UN 2016; Nellesmann 2016). Such crimes include the illegal exploitation of high-value natural resources from conflict areas (and in some cases, to fuel or sustain conflict in such areas).

Criminal supply chains trafficking in high-value natural resources (e.g., timber, oil, fisheries, diamonds, and gold) are documented as often converging under broader, networked

operations of organized transnational crime (INTERPOL and UN 2016; Nellemann 2016). Such transnational crime networks include actors operating within high-value fishery supply chains, including those for tuna, shark fins, and live reef fish (Pomeroy *et al.* 2016; INTERPOL and UN 2016). Such criminal supply chains illustrate how closely linked marine resource scarcity and maritime security are.

Moving from Investigation to Prediction and Intervention

Building upon the recommendations outlined by INTERPOL and the UN (2016), we propose that the international community move beyond investigating the relationships between political, socioeconomic, and cultural factors with maritime security (now documented), and move toward supporting three, focused interventions to bolster maritime security, particularly in sensitive or destabilized regions of transnational waters.

First, we propose the development of a predictive model of observed versus forecasted changes to the relative level of maritime security within a specific nation or region. To do this, an empirical approach must be taken to build a predictive, multivariate model of national and regional maritime security trends (as the dependent or outcome variable), based on observable, real-time data related to political, socioeconomic, and cultural factors that are known to be correlated (independent variables). By periodically monitoring such multivariate models at the national and regional levels, ‘tipping points’ in maritime security and regional stability can be identified prior to being reached, thus allowing opportunities for timely and focused interventions. Such a model would require identification and measurement of an adequate, sensitive, reliable, and practical set of maritime security indicators across relevant dimensions; for example, Germond (2015) identifies geopolitical indicators of maritime security.

Next, we argue that current and future maritime security operations be redesigned from being largely specialized, narrowly-defined efforts to becoming broader, multidisciplinary efforts that account for the correlation and interdependence of relevant political, socioeconomic, institutional, and cultural factors present. This will require the deliberate and focused recruitment, consultation, and active participation of non-traditional actors (e.g., fisheries managers; resource economists; rural development experts) into national security operations and defense policy.

By redesigning such maritime security activities, they can interfere with the ability of such factors to converge and cumulatively exacerbate civil and environmental insecurity. Such maritime security activities include: coastal defense and security operations or missions; national marine resource management policies and actions; ‘good’ governance programs relating to nautical jurisdictions; economic development programs for coastal and marine industries; international foreign aid and development programs.

To be effective, redesigned security activities must address a broad suite of relevant factors rather than narrowly focus in on a specific aspect of maritime security; e.g., redesigning counterterrorism activities within coastal areas of unrest to include targeted marine resource livelihood and community-supported enforcement projects. Case studies of successful models of broader, multidisciplinary maritime security operations can be documented and shared across nations and regions.

Finally, we propose that maritime security operations move away from being largely single country-specific efforts that are driven by national security agendas to that of collaborative,

multinational efforts that are driven by a mutual, regional maritime security strategy. Addressing transnational maritime threats and regional criminal networks in the seafood supply chain requires a collaborative approach that relies on coalition building and shared (negotiated) tactical objectives. In some cases, such regional processes and multinational policy fora already exist, and can serve as a platform for targeted, collaborative, multinational maritime security operations; e.g., transnational security forces patrolling regional seas under the Regional Plan of Action to Combat IUU Fishing by the Association of Southeast Asian Nations (ASEAN). Such collaborative, multinational efforts to reduce marine resource conflicts and improve maritime security would be a logical, strategic, and high-value approach commensurate with addressing the multiple operating conditions.

Conclusion

Maritime security is an important but often overlooked dimension of the broader “sustainable security” framework. A complex web of multivariate drivers influencing maritime security are increasingly documented and recognized as being interconnected with the emerging security challenges of the 21st century, including by non-state actors through non-traditional threats. Addressing the contributions of marine resource scarcity, competition, and conflict in eroding maritime security is an important step that must be taken to uphold the rule of law, strengthen national security, and promote regional peace and order.

References

- Biegus, O. and C. Bueger (2017) “Poachers and pirates: Improving coordination of the global response to wildlife crime.” *South African Crime Quarterly* 60: 29-36.
- Bueger, Christian (2013) “Practice, Pirates and Coast Guards: the grand narrative of Somali piracy.” *Third World Quarterly* 34(10): 1811-1827.
- Bueger, Christian (2015a) “What is maritime security?” *Marine Policy* 53: 159-164.
- Bueger, Christian (2015b) “Learning from piracy: future challenges of maritime security governance.” *Global Affairs* 1(1): 33-42.
- Caballero-Anthony, M. 2007. *Nontraditional Security and Multilateralism in Asia: Reshaping the Contours of Regional Security Architecture?* Policy Analysis Brief. The Stanley Foundation, Muscatine, IA
- Chapsos, I. and J.A. Malcolm (2017) “Maritime security in Indonesia: towards a comprehensive agenda?” *Marine Policy* 76: 178-184.
- Doorey, T. (2017) “IUU Fishing in the developing world: a growing threat to regional and global security.” *National Security Forum*. The Stimson Center, Washington, D.C. Accessed 07 September 2017: <https://www.stimson.org/content/iuu-fishing-developing-world-growing-threat-regional-and-global-security>
- Evans, A. 2009. *Managing scarcity: the institutional dimensions*. Presentation at DPA Non-traditional Security Threats Program, New York, 25 August. Center on International Cooperation, New York University.
- Germond, B. (2015). “The geopolitical dimension of maritime security.” *Marine Policy* 54: 137-142.
- Gilmer, B. (2017) “Fishermen or pirates? Somalia’s registration programme in focus.” *Sustainable Security*. Accessed 08 September 2017: <https://sustainablesecurity.org/2017/08/17/fishermen-or-pirates-somalias-registration-programme-in-focus/>
- Glaser, S.M., Roberts, P.M., Mazurek, R.H., Hurlburt, K.J., & Kane-Hartnett, L. (2015). *Securing Somali Fisheries*. One Earth Future Foundation. Denver, CO. 103 pp.

- Hansen, S.J. (2011) "Debunking the piracy myth: how illegal fishing really interacts with piracy in East Africa."
- INTERPOL and UN (2016) Strategic Report: Environment, Peace and Security – A Convergence of Threats. INTERPOL and UNEP. International Criminal Police Organization (INTERPOL) and the United Nations Environment Programme (UNEP). Lyon. France. 80pp.
- Jacobsen, Katja Lindskov (2017) "Maritime security and capacity building in the Gulf of Guinea: On comprehensiveness, gaps, and security priorities." *African Security Review* 26(3): 237-256.
- Mazaris, Antonios (2017) "Manifestation of maritime piracy as an additional challenge for global conservation." *Marine Policy* 77: 171-175.
- Nellemann, C., ed (2016) *The Rise of Environmental Crime – A Growing Threat to Natural Resources Peace, Development and Security*. A UNEP-INTERPOL Rapid Response Assessment. United Nations Environment Programme and RHIPTO Rapid Response–Norwegian Center for Global Analyses. 104 pp.
- Pomeroy, R., J. Parks, K. L. Mrakovcich, and C. LaMonica (2016). "Drivers and impacts of fisheries scarcity, competition, and conflict on maritime security." *Marine Policy* 67: 94-104.
- Pomeroy, R., J. Parks, R. Pollnac, T. Campson, E. Genio, C. Marlessy, E. Holle, M. Pido, A. Nissapa, S. Boromthanarat and N. T. Hue (2007). "Fish Wars: Conflict and Collaboration in Coastal Fisheries Management in Southeast Asia." *Marine Policy* 31(6): 645-656.
- Sumaila, Rashid & Bawumia, Mahamudu. (2014). "Fisheries, ecosystem justice and piracy: A case study of Somalia." *Fisheries Research* 157: 154–163.

About the Authors

Robert Pomeroy is currently a Professor in the Department of Agricultural and Resource Economics and Connecticut Sea Grant College Fisheries Extension Specialist at the University of Connecticut – Avery Point in Groton, Connecticut USA. Dr. Pomeroy has his PhD in Resource Economics from Cornell University. His areas of professional interest are marine resource economics and policy, specifically small-scale fisheries management and development, coastal zone management, aquaculture economics, international development, policy analysis, and seafood marketing. Dr. Pomeroy has worked on research and development projects in over 70 countries in Asia, Africa, the Caribbean and Latin America.

John Parks has worked, for more than twenty years, with local communities, indigenous leaders, resource users, government agencies, non-governmental groups, and donors to design and implement marine resource management solutions that strengthen both environmental and civil security within coastal communities around the world. He has served in a number of non-government and government organizations, including as a federal officer with the United States National Oceanic and Atmospheric Administration and as senior staff with the Nature Conservancy, the World Resources Institute, and World Wildlife Fund. John assists government and non-government clients around the world design and implement marine management solutions, including for fisheries management, marine protected area design and management, citizen-supported maritime enforcement, and climate change adaptation in coastal communities. John earned his undergraduate and graduate degrees from the Rosenstiel School of Marine and Atmospheric Science at the University of Miami, with a dual focus on behavioral science and tropical coastal ecology. He is a member of the IUCN World Commission on Protected Areas, and has been a contributing or lead author on numerous peer-reviewed journal articles, books, and other publications.

Copyright © Oxford Research Group 2017.

Some rights reserved. This article is licensed under a Creative Commons Attribution-NonCommercial-NoDerivs 3.0 Licence. For more information please visit

<http://creativecommons.org/licenses/by-nc-nd/3.0/>.