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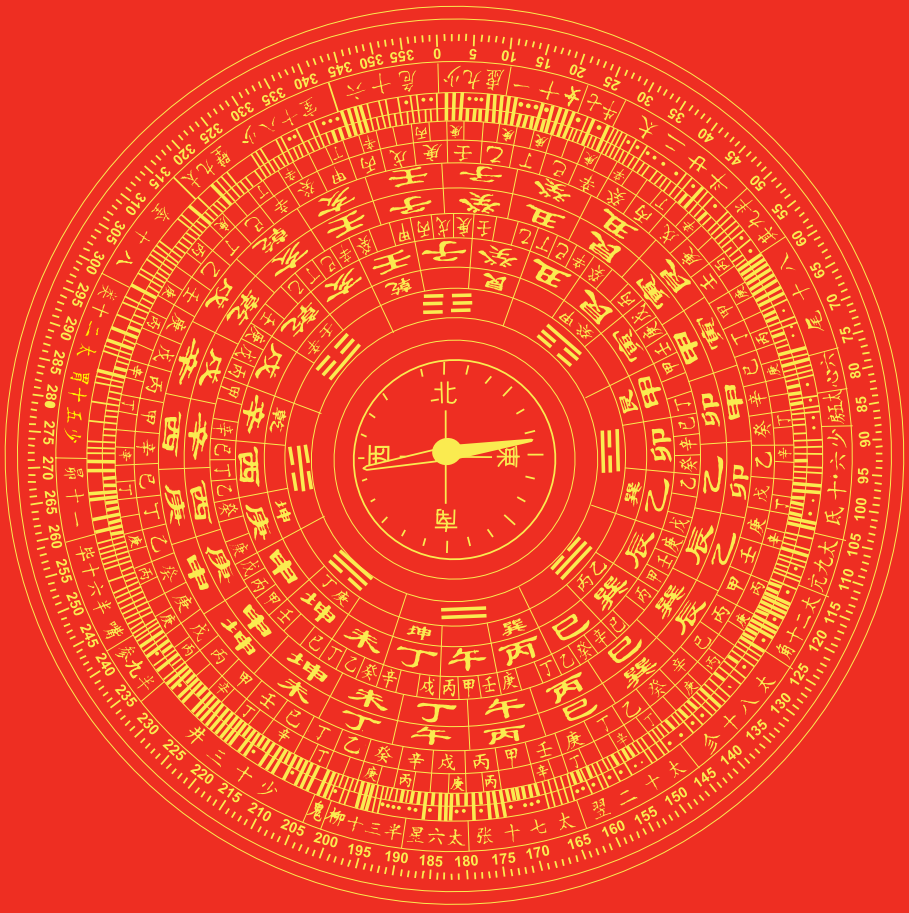
# Military Activities in the EEZ

## A U.S.-China Dialogue on Security and International Law in the Maritime Commons



Peter Dutton, Editor

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## A U.S.-China Dialogue on Security and International Law in the Maritime Commons

*Peter Dutton, Editor*

CHINA MARITIME STUDIES INSTITUTE
U.S. NAVAL WAR COLLEGE
Newport, Rhode Island

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The opinions expressed in this publication are the perspectives of the authors and do not necessarily represent the views of the U.S. Department of Defense or any of its components or the views of the government of the People's Republic of China or any of its components.

# Introduction

*Peter Dutton*

On the wall in the entranceway to the personal offices of the Commander, Pacific Fleet, there hangs prominently displayed a life-size portrait of Adm. Chester William Nimitz, the legendary architect of the American naval victory in the Pacific sixty-five years ago. The painting is specially lit, giving the admiral's thoughtful gaze a lifelike glow as if he were present, judging the decisions and actions of his successors in command as these officers find means to preserve regional peace and guard American interests. In the painting's background are the objects of naval war, standing as striking reminders of the heavy price in American blood and treasure paid for the nearly three generations since then during which the Pacific Ocean has been an American lake. It has been this freedom from serious threat that has provided room for American strategic and operational maneuver during the Korean conflict, the Vietnam War, and the Cold War, that has afforded an avenue for the movement of forces during conflicts in Iraq and Afghanistan, the capacity to deter conflict in East Asia, the access needed to assure the security of allies and partners, and the ability to provide support to populations devastated by disaster.

The responsibility to keep peace and find means to secure American interests for future generations must weigh heavily on each commander as he passes Nimitz's gaze, and never more so than today. Change is afoot in the Pacific. The Chinese military is developing the capacity to challenge American freedom of action in and around the Yellow Sea, the East China Sea, and the South China Sea—China's "near seas." China's naval modernization is efficiently focused on controlling access to these near seas in military crisis. For instance, China has long possessed one of the largest arsenals of naval mines in the world. Over the last three decades its navy has also developed a capable submarine fleet, to challenge the freedom of action of any naval force in the region. More recently, China has announced programs to develop antiship ballistic missiles and aircraft carriers and has demonstrated the capacity to employ antisatellite weapons and cyber-disruption. In short, China is attempting to assemble the technology to challenge the U.S. Navy's access to the western reaches of "its" lake and thereby challenge the political access that American naval power now ensures.

China has also mobilized its lawyers. Its international-law specialists have become adjunct soldiers in China's legal campaign to challenge the dominant, access-oriented norms at sea, especially for military freedoms of navigation in the exclusive economic zone. This expanse of waters, known as the EEZ, stretches two hundred nautical miles from a coastal state's shores and collectively constitutes more than a third of all ocean space. Because the EEZ is a rich resource zone and a region through which all major sea-lanes pass, its space is critical to regional political stability, national resource extraction, and global commerce. For the United States, the world's EEZs are therefore critical regions in which naval power must be brought to bear in support of two fundamental sources of stability for the global system: deterrence of international armed conflict and suppression of nontraditional threats to commerce and other activities. For China, however, its EEZ and other jurisdictional waters are zones in which outside interference is an unwelcome intrusion into domestic security issues, a zone of competition for resources with neighboring states that claim overlapping rights, and a region in which national, not international, maritime power should dominate.

These dichotomous perspectives flow from fundamentally different views about regional security, and they form the basis of a simmering tension between the Chinese and American maritime power. That tension occasionally erupts, such as it did in April 2001 during the EP-3 incident and in March 2009 during the USNS *Impeccable* incident. The *Impeccable* incident occurred when a collection of Chinese government and fishing vessels maneuvered in dangerously close quarters around the American survey vessel and interfered with the performance of its operations in the South China Sea more than seventy miles off China's nearest coastline.[1] The EP-3 incident occurred eight years earlier in nearly the same location when a Chinese intercept aircraft collided with an American patrol plane as it performed routine reconnaissance operations in the airspace over the South China Sea.[2]

This volume is the product of a workshop held in Newport in July 2009 to discuss the different perspectives held by the United States and China on the legitimacy of foreign military activities in a coastal state's EEZ. The conference, addressing "The Strategic Implications of Military Activities in the EEZ," was attended by fifty representatives of the American and Chinese policy, military, legal, and academic communities. Its aims were to increase mutual understanding of the bases for each state's perspectives and to add a dimension of richness to ongoing talks between the two countries under the framework of the Defense Consultative Agreement and the Military Maritime Consultative Agreement. Eight papers from workshop participants are reproduced here; during the two days of substantive discussions each attendee also made other significant contributions to the success of these objectives. We extend our thanks and gratitude to each of them.

The workshop, falling as it did just four months after the confrontation between Chinese civilian and government vessels and the USNS *Impeccable,* produced for American participants an extraordinary level of discussion and insight into the Chinese view of its security interests and China's perspective on the protections those security interests are guaranteed by international law. The *Impeccable* incident, like the 2001 EP-3 incident before it, focused a spotlight on American survey and intelligence operations in the South China Sea as a flash point in the larger dispute between the United States and China over the balance of coastal-state and user-state rights in the EEZ. The statements of the Chinese government in the aftermath of each of these events, claiming that such U.S. naval operations were illegal and threatening to China, demonstrate the sharp differences of perspective over what traditional military activities constitute legitimate uses of those waters.

Although the conflict is generally expressed by both Americans and Chinese in terms of international law, the friction is not fundamentally about correct legal interpretation of international law or of the provisions of the United Nations Convention on the Law of the Sea (UNCLOS). Rather, the legal conflict reflects a larger clash between China's objective of increasing its control over its near seas and the American interest in maintaining the freedoms of navigation on which the stability and security of the global maritime commons rely. The language of international law is nonetheless important, because it is the primary field of battle chosen by the parties to contest their claims.

For this perhaps we should all be grateful, since the ongoing friction and occasional incidents, tense as they are, are managed and contained by this resort to law rather than to force. It is important to observe that despite tension in military-to-military relations, the overall bilateral relationship remains one of productive strategic engagement, even if strategic cooperation is not entirely achieved. Thus, the dispute about U.S. military operations in China's near seas has not hampered overall bilateral economic, commercial, diplomatic, or even military cooperation (antipiracy operations in the Gulf of Aden and United Nations peacekeeping stand as ongoing examples). This should provide all parties reason for optimism that the friction can continue to be managed without escalation into larger conflict. That said, the friction remains tactically dangerous. One person—Chinese pilot Wang Wei, in the EP-3 incident—has already died, and it behooves all concerned to develop deeper understandings of the nature and sources of conflict so that, where possible, incidents can be avoided until a new modus vivendi for regional security can be achieved.

In that regard, the workshop highlighted three fundamental areas of contention between the United States and China concerning foreign military activities in East Asian seas. The first relates to China's rather ambiguously based assertion of jurisdiction over almost all the waters of the South China Sea, as expressed in the "U-shaped line," sometimes also

referred to as the "nine-dashed line" or "Cow's Tongue" (see figure 1). The second area of contention touches the American "third rail" of freedom of naval navigation for military purposes. China's claim that the balance of coastal-state jurisdiction and international freedoms for military activities in the EEZ favors the coastal state's right to limit foreign military activities presents, as the American authors in this volume describe, an unacceptable narrowing of traditional navigational freedoms. These divergent perspectives formed the core of discussions at the workshop and are the basis for the majority of chapters in this volume. The third area of serious debate was the sincerity of the United States in its desire to develop a more cooperative maritime relationship with China. While many American security experts accept cooperation almost as an article of faith, the Chinese participants were agnostic on this point.

## The U-Shaped Line

As Peng Guangqian's chapter points out, the Chinese have long viewed the Bo Hai Gulf, the Yellow Sea, the East China Sea, and the South China Sea—the so-called near seas—as regions of geostrategic interest and parts of a great defensive perimeter established on land and at sea to protect China's major population and economic centers along the coasts and major rivers. Indeed, in the 1930s China's Nationalist government formed the Land and Water Maps Inspection Committee to address concerns about foreign encroachment on Chinese territories, including the foreign forces that occupied islands in the South China Sea. The committee reported in 1935 that in the South China Sea China's southernmost territorial feature is the James Bank, which sits about fifty nautical miles off the north coast of Borneo, and that China's maritime boundary should therefore extend south to approximately four degrees north latitude. By 1947, the government of the Republic of China had begun to publish maps with a U-shaped dashed line in the South China Sea to delineate its maritime boundaries.[3] The Chinese government repeated this cartographic feature after the Communist Party came to power in 1949, and today it remains on maps published in China and Taiwan. However, no Chinese government has ever specified the nature of the claim over the expanse of water and the numerous islands, shoals, rocks, and islets contained within the nine dashes of the U-shaped line. Chinese participants at the workshop explained that among Chinese scholars and officials there are four dominant schools of thought as to the line's meaning, none of which is especially favored by the government. However, like layers of a cake, each perspective appears intended to build upon and strengthen the others. These four schools fall roughly into groups claiming, respectively, that the line denotes sovereignty interests, historical rights, jurisdictional rights, or security interests.

A review of relevant Chinese literature reveals the broad outline of the argument made by the sovereignty camp. One group of senior Chinese defense analysts, for instance,

**Figure 1.** The U-shaped line formed by the nine dashes reflects China's claim over the waters and islands of the South China Sea. Three types of legal disputes arise from the claim: sovereignty disputes related to the island features, disputes over resource jurisdiction in the surrounding waters, and disputes over the extent of coastal-state authority to prohibit foreign military activities. The latter dispute led to the 2001 EP-3 incident and the 2009 *Impeccable* incident, each of which occurred in China's EEZ, seventy-five to eighty miles southeast of Hainan Island. (United Nations, www.un.org)

describes Chinese offshore interests as "the area extending out from the Chinese mainland coastline between 200 nautical miles (to the east) and 1600 nautical miles (to the south)," or roughly to the latitude claimed in the 1935 report. They consider these "sea domains under Chinese jurisdiction . . . [as] the overlaying area of China's national sovereignty."[4] Additionally, the 1992 Law of the People's Republic of China on the Territorial Sea and Contiguous Zone specifically claims sovereignty over each of the island groups in the South China Sea—the Pratas Islands (Dongsha), Paracel Islands (Xisha), Macclesfield Bank (Zhongsha), and the Spratly Islands (Nansha). Those who assert that the line denotes a claim of sovereignty seem to suggest that since these islands groups are claimed as sovereign, the U-shaped line that surrounds them also defines some form of sovereignty, perhaps similar to a territorial or archipelagic sea.

The second group views the line as a claim of "historical waters" over which the government has a jurisdictional mandate based on China's long-standing historical presence in and power over the sea.[5] Reference to China's historical rights can be found in Chinese domestic law. The 1998 Law of the People's Republic of China on the Exclusive Economic Zone and Continental Shelf, for instance, states that legal developments "shall not affect the historical rights that the People's Republic of China enjoys." More recently, Chinese officials have asserted "administrative rights" that stem from these claimed historical rights over the South China Sea. In furtherance of the right to administer these waters, for instance, on 26 December 2009 the Standing Committee of China's National People's Congress approved the Law on Island Protection. The legislation assigns to various agencies of the Chinese government broad jurisdictional authority over all Chinese-claimed offshore islands, including enhanced administrative oversight for uninhabited islands, for the purpose of strengthening ecosystem protection, controlling use of natural resources, and promoting sustainable development. This law could be the basis for increased activity noted since 1 April 2010 in the South China Sea by the vessels of China's Maritime Surveillance Service, Fisheries Service, Coast Guard, and others.

The third Chinese view is that the U-shaped line reflects an assertion of sovereignty over all the islands, rocks, sandbars, coral heads, and other land features the line encompasses and accordingly claims whatever associated jurisdiction that international law of the sea allows to a coastal state based on its sovereignty over these small bits of land. Indeed, China's 1992 and 1998 laws claim sovereignty over the South China Sea's island groups and then claim a territorial sea, exclusive economic zone, and continental shelf emanating from all of its coastlines. Thus, in combination, these two Chinese laws assert jurisdictional control over nearly the entire South China Sea area within the U-shaped line.

The fourth perspective is that the U-shaped line reflects China's long-standing maritime security interests in the South China Sea and that these security interests should have protection under international law. This perspective is reflected in Xue Guifang's chapter

in her discussion of the differences of perspective on maritime issues between developing and developed states. Developing states, she suggests, "appreciate the importance of the ocean to their national security" and therefore seek stricter control over foreign military activities off their shores. Yu Zhirong's chapter also reflects a security-based legal perspective when it raises the issue of the proper interpretation of the "peaceful purposes" clauses in UNCLOS. Yu asserts that these clauses were meant to do more than simply reflect the requirements of the Charter of the United Nations and implies that intelligence gathering in the EEZ is a nonpeaceful activity. He states that "if a military survey activity is not undertaken for a peaceful purpose it . . . can be completely prohibited." An example of this perspective can also be found in Chinese literature that asserts, "The Navy is just one of the means of protecting our maritime rights and interests . . . the primary means should be to rely on the law, on international law, and internal legislation." To enforce these laws and China's sovereign interests at sea, "in recent years we have started to carry out periodic patrols to safeguard our rights in the East and South China Seas."[6] In this sense, the Chinese appear to see international and domestic law as means of establishing Chinese sovereign control over the near seas in support of the maritime security buffer discussed in Peng's chapter.

## Exclusive Economic Zone

The second major aspect of the maritime friction between the United States and China in East Asia stems from the divergent perspectives on the proper balance of rights and interests in the EEZ between coastal states and user states. This divergence lies at the heart of the *Impeccable* incident and the many similar, less publicized incidents that have threatened East Asian maritime stability.

The EEZ was negotiated as a carefully balanced compromise between the interests of coastal states in managing and protecting ocean resources and in ensuring high-seas freedoms of navigation and overflight, including for military purposes. In the exclusive economic zone the coastal state was granted sovereign rights to resources and given jurisdiction over several activities, including "marine scientific research." Perhaps to bring together a wide variety of negotiating positions, which are well described by Wu Jilu in his chapter, the definition of just what constitutes marine scientific research was left unspecified, leaving plenty of room for future legal maneuvering. Not surprisingly, therefore, the extent of this particular jurisdictional grant to coastal states has formed the narrative of the legal and operational contest between the United States and China concerning American naval activities in China's EEZ. It is also on this specific point that Chinese participants at the workshop chose to focus their papers.

In his chapter, Wu Jilu traces the history of oceanographic research as a scientific discipline, reviews the negotiation positions of various states in the lead-up to the final draft

of UNCLOS, and analyzes the text of the convention itself in order to support his argument that the proper understanding of the jurisdictional grant of authority to coastal states to regulate "marine scientific research" is much broader than mere regulatory power over resource-related research. Wu concludes that coastal states have regulatory power over all research in the EEZ, including hydrographic and military surveys. Xue's chapter picks up this point where Wu leaves it off, describing in detail the Chinese laws and regulations that require all "foreign organizations or individuals [to] obtain approval from the competent authorities of the People's Republic of China for carrying out marine scientific research in its exclusive economic zone." Yu's chapter acknowledges that such laws cannot be directly enforced against American naval vessels, including survey vessels, because of their sovereign immune status. But he suggests that the introduction of sound into the water by survey vessels can be considered a form of pollution and that the burden of proof is on the United States to demonstrate that such activities are not harmful. "Responsibility investigations," as Yu calls them, could be conducted by coastal states to show "responsibility" for damage, which he asserts is a different concept from immunity "and cannot be conflated" with it.

Other Chinese sources take a similarly dim view of the legal authority for foreign naval activities in the waters of their near seas. In a fashion similar to Yu's argument in his chapter that the UNCLOS grant of freedom of navigation through the EEZ does not equate to the freedom to perform military operations, some leading Chinese scholars assert that in the exclusive economic zone, freedoms of navigation and overflight "do not include the freedom to conduct military and reconnaissance activities in the [waters or their] superjacent airspace [since such activities] can be considered a use of force or a threat to use force against the State."[7] There have even been recent press reports that China is considering domestic legislation that would purport to make illegal all foreign surveillance and reconnaissance flights above its exclusive economic zone.[8]

American representatives to the workshop viewed the Chinese legal perspectives as "misplaced" and without foundation in international law, as Raul Pedrozo's chapter states. As a group, the Americans took a broader approach to military freedoms of navigation in and above the EEZ and prepared chapters explaining the lawfulness of U.S. hydrographic surveys, military surveys, and aerial reconnaissance and demonstrating the U.S. Navy's compliance with environmental standards.

Pedrozo's chapter makes the case that the EEZ "was established for the sole purpose of giving coastal states greater control over the resources adjacent to their coasts out to 200 nautical miles." Accordingly, he concludes, legal protections for "coastal-state security interests . . . simply do not exist in the EEZ." Pedrozo analyzes the balance of rights and interests expressed in the EEZ provisions of UNCLOS and concludes that any military activity that is lawful on the high seas—including military surveys and surveillance

activities—is lawful in the EEZ without the coastal state's consent. Andrew Williams's chapter extends the discussion of the freedoms of navigation from the waters of the EEZ to the airspace above it. Williams reviews the UNCLOS EEZ provisions in light of the Chicago Convention on International Civil Aviation and other international law and concludes that "the freedom of overflight is one of the important traditional uses of the high seas . . . [that] UNCLOS preserves . . . in the EEZ for all aircraft, including military aircraft." James Kraska's chapter makes the case that a coastal state's enforcement authority for environmental regulations is quite limited and in any case may not be applied against warships, since such vessels enjoy "comprehensive immunity" under UNCLOS. Additionally, Kraska points out that the issue raised by Yu of the potential for environmental harm caused by sonar was thoroughly litigated in American courts, which found that in forty years of use "there was no documented episode of harm to marine mammals under American jurisdiction caused by the use of sonar."

Pedrozo's and Yu's chapters do contain one important point of convergence: both deprecate the use of the term "international waters" to describe the EEZ. Pedrozo recommends against its use because it is easily misunderstood by coastal states as a rejection of their rights and interests in the zone. From Yu's perspective the term does indeed imply a rejection of the coastal state's interests and jurisdiction in the EEZ, or at least an attempt to "evade the concept of the EEZ . . . and deny the coastal countries' rights." Yu criticizes as "not persuasive" senior American officials who use it to justify U.S. naval activities.

## U.S. Maritime Strategy

That the Chinese doubt American naval intentions, especially in East Asian waters, was a third area of discussion at the workshop. It is a perception that presents a challenge for enhanced bilateral cooperation in the maritime domain as envisioned by the "Cooperative Strategy for 21st Century Seapower." The chairman of the Joint Chiefs of Staff, Adm. Michael Mullen, then Chief of Naval Operations, addressed the Seventeenth International Seapower Symposium in 2005 and outlined a new maritime strategy for a new era. The previous naval strategy had been crafted during the Cold War with a particular adversary in mind. Admiral Mullen charged those who would go on to develop the "Cooperative Strategy for 21st Century Seapower" to create for American maritime power a long-term vision that had no adversary as its focus but instead would serve as an organizing concept to provide maritime order through international partnerships and cooperation, deter regional conflict, and secure the seas as a highway for the increasingly globalized economy.[9]

Admiral Mullen saw that there would be a continuing need to support friends and allies and reassure them that American military power would be there if they were threatened or attacked by another member of the international community. However, he also saw

that whereas the attack on Pearl Harbor on 7 December 1941 was for the United States perhaps the defining moment of the twentieth century, the twenty-first may be defined most distinctly by the terrorist attacks on New York and Washington on September 11, 2001. Accordingly, Admiral Mullen charged maritime strategists to consider how best to bring stability and order to the maritime domain in a world perturbed by both traditional and nontraditional threats. What followed was a strategy that rests upon five propositions: that the security, prosperity, and vital interests of the United States are increasingly coupled to those of other nations; that our national interests are best served by fostering a peaceful global system comprising interdependent networks of trade, finance, information, law, people, and governance; that no one nation has the resources required to provide safety and security throughout the entire maritime domain, for which reason partnerships of common interest must be formed to counter emerging threats; that preventing wars is as important as winning wars; and that maritime force can be employed to build confidence and trust among nations through collective security efforts that focus on common threats and mutual interests.

The strategy takes these propositions and articulates two organizing strategic concepts. The first is that defense against nontraditional threats requires "persistent global presence." The strategic imperative driving the requirement for globally distributed maritime forces is not primarily threatening activity by other states but disruptive action by nonstate, or nontraditional, threats. Globally distributed forces are conceived as "contribut[ing] to homeland defense in depth [by] identifying and neutralizing threats as far from our shores as possible." Additionally, they should foster and sustain cooperative relationships with international maritime partners and prevent or contain local disruptions before they impact the global system. However, global dispersal of forces relies on legitimate access to all nonsovereign oceanic zones for the purpose of bringing constabulary maritime power to bear. Thus, the stark contrast between Chinese and American descriptions in this volume of the legitimacy of naval operations in the EEZ presents a serious challenge to the realization of the strategy's cooperative security objectives.

Chinese workshop participants especially challenged the strategy's second set of organizing principles, which focus on traditional interstate conflict. The strategy requires American maritime power to be able to limit regional conflict with forward-deployed, decisive maritime power. It requires maintenance of America's comparative seapower advantage in order to deter major-power war and, in time of war, to be prepared to win by imposing local sea control, overcoming challenges to access and force entry, and projecting and sustaining power ashore. Chinese participants saw in this language a return to "Cold War thinking," as General Peng puts it in his chapter. They saw it as treating China as an unnamed adversary, especially in light of America's continuing commitment

to Taiwanese security and to freedom of navigation for surveys and intelligence gathering in the South China Sea.[10]

## The Implications

The contributions to this volume make clear that the United States and China have fundamentally different views of coastal-state authority in the EEZ and that these views flow from strategic mistrust and from divergent conceptions of law of the sea and how law should serve the interests of order on the oceans. Recent history shows that these divergences create friction at sea, sometimes with serious consequences. China's broad claims of jurisdictional protection for security interests in the EEZ are seen by the United States as tantamount to claims of sovereignty similar to that which a coastal state enjoys in the territorial sea. Indeed, in the eyes of American participants, the formula for EEZ passage suggested by Yu Zhirong in his chapter—that the freedom of navigation enjoyed by other states is one of mere navigation and not of operation—reflects more the innocent-passage regime applicable to territorial seas than the freedoms associated with operations on the high seas. As the American authors articulate, such extension of coastal-state authority is an unacceptable encroachment on a critical national interest—a stable maritime order supported by broad freedoms of navigation for naval purposes.

Hoping to point toward a more productive future maritime relationship, Alan Wachman concludes the volume with an essay that sees the friction over military activities in the EEZ as reflective of the current state of "mutual insecurity and mistrust" and as a symptom of "the ambition each has of exercising [international] leadership." In this regard, Wachman believes, "both the United States and the PRC understand that there is a single international system, but both . . . are struggling to ensure that it reflects values they each prefer." He is even willing to consider that "the controversy concerning UNCLOS may be seen as one battle in the Sino-U.S. war for moral primacy and influence over global institutions." However, he urges each side to attempt to view the dispute through the eyes of the other to see more easily the ways in which its policies arouse feelings of insecurity. A bilateral compromise is possible, he suggests, only if each side is willing to exercise self-restraint by choosing not to exercise what it may continue to maintain are its rights. The essential ingredient is political will.

Alternatively, Lt. Gen. Ma Xiaotian, deputy chief of the People's Liberation Army General Staff, suggested in a speech at the Shangri-La Dialogue in Singapore in 2009 that a new international consensus is required—neither a Washington nor a Beijing consensus per se but a mutual consensus based on "fair and rational mutual relation norms [that] . . . give proper consideration to each other's . . . vital and significant security interests."[11] Perhaps General Ma is correct. It is worth observing, however, that China's regional objectives and activities exist in tension with its own increasing global interests. As a

rapidly rising economic power, China is one of the primary beneficiaries of the stable global system brought about by the American concept of maritime order, which in turn is provided in significant part through the cooperative efforts of naval powers large and small and is based on a common set of rules and norms guiding the actions of all at sea.

Although Chinese commentators object to the application of these rules and norms off China's coasts, the Chinese have yet to articulate how their approach to achieving regional objectives can be reconciled with the imperatives of managing the global maritime system. Such responsibility attends the leadership to which China aspires—and clearly, as the Sino-American "dialogue" from the 2010 Shangri-La Dialogue demonstrates, China desires to exercise a leading regional role. As Ma Xiaotian put it, "Maintaining security in the Asia-Pacific region serves China's interest, and it is also China's responsibility."[12] Ma also made clear that the mistrust that characterizes the military relationship between China and the United States has at its core sixty years of American support for Taiwan. American policies toward Taiwan are not the topic of this volume, but in any case they will almost certainly remain a constant in the evolving formula of Sino-American relations. Nonetheless, if cooperation remains a serious American objective, it falls to the United States, which possesses the only global navy, to exercise serious leadership by devising ways—political, legal, and operational—to foster in China, with the world's fastest-growing navy, a sufficient sense of security on its own shores to alter the tense dynamics of our relationship. If naval cooperation is truly in the interest of the United States, it is not enough, as Wachman points out, for Americans to continue simply to stand on principle and refuse to accommodate China's concerns in some way. That course of action will only increase tension and undermine the long-sought cooperation. Critics may counter that the Chinese do not actually want to cooperate and are simply keeping us engaged long enough to grow their naval power to the point where they can dictate events in the western Pacific without reference to the U.S. Navy. If so, American leaders owe it to future generations to seek the combination of regional strength and patient engagement that will dissuade the Chinese from this course. War would be a devastating alternative.

Ideally, the wisdom and strategic foresight with which American naval leaders preserved order in the Pacific and secured American regional interests for more than sixty-five years will be available to this generation of leaders as they seek peaceful adjustments to the Asian security dynamics in response to China's maritime rise. It is to be hoped too that Chinese naval leaders will find the same wisdom and will choose to accept the invitation to cooperate with the United States while the opportunity remains open to them. While this volume cannot even begin to sketch the outlines of a new security paradigm for the Pacific region, its modest ambition is to help each side see more clearly the nature of the existing friction. In seeing the nature and source of friction more clearly—even

through the lenses of the other's eyes—perhaps wise minds on both sides will be able to divine cooperative paths to peace and security in the Asia-Pacific region for generations to come.

## Notes

1. See Peter Dutton and John Garofano, "China Undermines Maritime Laws," *Far Eastern Economic Review* (3 April 2009), pp. 44–47.
2. See Peter Dutton, "*Caelum Liberum:* Air Defense Identification Zones outside Sovereign Airspace," *American Journal of International Law* 103, no. 4 (October 2009), pp. 691–709.
3. Li Jinming and Li Dexia, "The Dotted Line on the Chinese Map of the South China Sea: A Note," *Ocean Development and International Law* 34 (2003), pp. 287–95. For a full treatment of this issue, see Peter Dutton, "Through a Chinese Lens," U.S. Naval Institute *Proceedings* (April 2010), pp. 24–29.
4. Wang Shumei, Shi Jiazhu, and Xu Mingshun, "Carry Out the Historic Mission of the Army and Establish the Scientific Concepts of Sea Rights," *China Military Science* (1 February 2007), pp. 139–46.
5. "South China Sea: Controversies and Solutions—Interview with Liu Nanlai," *Beijing Review* (4–10 June 2009).
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# China's Maritime Rights and Interests

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China is a country with not only vast land territory but also a broad sea area. On the east side of mainland China and Taiwan Island, China owns five big sea areas from north to south, respectively named the Bo Hai Sea, Yellow Sea, East China Sea, South China Sea, and the Pacific area east of Taiwan. China's coastline begins at the mouth of the Yalu River in the north and runs to the mouth of the Beilun River in Guangxi Autonomous Region in the south, a distance of approximately 18,400 kilometers (about 11,400 miles). The country has more than 6,500 offshore islands of at least five hundred square kilometers (approximately two hundred square miles), and the total area of the island territories is 75,400 square kilometers (29,100 square miles). The main islands among them include Taiwan Island, the Penghus, the Diaoyu Islands, Hainan Island, the South China Sea Islands, Guangdong's Nan'ao Island, Fujian's Pingtan Island, Zhejiang's Zhoushan Islands, Shandong's Long Island, and Liaoning's Changxing Island.

## China's "Blue Colored" Land

According to the provisions of the 1982 United Nations Convention on the Law of the Sea (UNCLOS), China's "sea territory" includes its territorial waters, the contiguous zone, the exclusive economic zone, and the continental shelf, which in total are approximately one-third the size of China's land territory. China's sea territory, or "blue-colored land," is an important part of its entire national territory. Although it is different from land territory, sea territory is important strategic space for the country in the same way as land territory. It is the second cradle of the nation, with several strategic values.

First, China's sea area is the initial strategic barrier for homeland security. The coastal area was the front line of growth during China's economic development and the development of Chinese civil society. China's most developed regions are along the coastline: the Bo Hai Sea economic zone, which contains big cities such as Beijing, Tianjin, and Tangshan; the Yangtze River triangle economic zone; the Zhu River triangle economic zone; the area of Taiwan, Penghu, Jinmen, and Mazu; and Hong Kong and Macao. The coastal area also possesses the largest population of any of the country's regions, the highest concentration of high-technology industries, and the most modernized culture. If coastal defense were to fall into danger, China's politically and economically important

central regions would be exposed to external threats. In the context of modern warfare, military skills such as long-range precision strike develop gradually, which makes the coastal sea area more and more meaningful for homeland defense as a region providing strategic depth and precious early-warning time. In short, the coastal area is the gateway for China's entire national security.

In Chinese modern history, most invasions from powers exterior to China came from the sea. During China's history prior to 1949, China suffered 470 invasions from the sea, including seventy large-scale invasions, such as those during the Opium Wars. From Dagushan on Liaodong Peninsula to the port of Sanya on Hainan Island, nearly all of China's major harbors, ports, and islands suffered external invasions. Taiwan, Penghu, Hong Kong, Jiulong, Macao, Lüshun, Dalian, Weihaiwei, Jiaozhou Bay, and Guangzhou Bay were all forcibly ceded or "rented," becoming springboards and bridgeheads for exterior powers to attack China's inland regions. At the same time, the invaders grabbed coastal trading and navigation rights from China. Therefore, an important conclusion to be drawn from both history and reality is that China's coastal area is the linchpin of its national security.

Second, China's sea area is important as a channel and strategic pivot for the country to move outward. The Bo Hai Sea, Yellow Sea, East China Sea, and South China Sea are connected to each other and possess enormous geostrategic value. While China's Bo Hai Sea is an inland sea, the Yellow Sea, East China Sea, and South China Sea straddle the key north–south routes along the marginal seas of the westernmost portions of the North Pacific Ocean. These three seas provide openings to the Pacific Ocean, Indian Ocean, the Sea of Japan, and the Philippine Sea. China's southern coastal areas are accessed through the North Korea Channel in the northeast, the Bashi and the Ryukyu Islands straits in the east, and the straits of Malacca and Sunda in the south. These seas are therefore significant pivots for maritime transportation, connecting Northeast Asia with Southeast Asia and the Pacific Ocean with the Indian Ocean, and linking Europe, Asia, Africa, and Oceania.

The vast sea territory to the east of Taiwan Island is the only sea area over which China claims sovereignty and economic rights in the Pacific. These waters have always been economically important trading routes. As early as China's Xi Han dynasty more than two thousand years ago, the South China Sea was "the maritime Silk Road," the golden waterway connecting East and West.

When China undertook its "open door" policy beginning in the late 1970s, it began striding toward the outside world and building closer relations with other countries. The Chinese economy is now increasingly dependent on international trade. As a result of the connectivity of the world's oceans and the low cost of seagoing freight, most of

China's economic trade with other countries is conducted by sea carriage, including the import of energy and other strategic resources. China's seagoing freight represents 40 percent of its domestic shipment of goods and 95 percent of its foreign trade. China's offshore regions have therefore become a bridge between China and the world and the lifeline of China's external communication, transportation, and trade.

Third, China's sea area is a treasure trove of the strategic resources necessary for the country's survival and development. It is one of the largest and richest sea areas in the world, full of biological resources, energy resources, mineral resources, and seawater resources. Indeed, the ocean provides China's most important source of protein for human consumption. China's maritime regions contain two billion acres of sea area with a depth of thirty meters or less, amounting to a billion acres of Chinese "farmland." More important, the income from one Chinese acre of high-production seawater is equal to that from the production of ten acres of Chinese farmland. China's edible sea salt and industrial sea salt production provide 80 percent of the total national salt output, the highest percentage of any country in the world. Additionally, Chinese sea areas are a primary source of hydrocarbons in the Pacific Ocean. It is estimated that the petroleum reserves under traditional Chinese coastal territories in the South China Sea may reach twenty or thirty billion tons. Likewise, the natural gas reserves reach several trillion cubic meters in one of the four biggest maritime oil and gas fields in the world, sometimes called a "second Persian Gulf." Recently, the world's biggest field of natural gas hydrates (flammable ice) was discovered under the South China Sea, the explored reserve of which amounts to about half of China's total oil and gas resources.

In addition, rich manganese nodule deposits, cobalt, and other mineral resources have been found in China's sea areas, which also contain manganese, nickel, and molybdenum—essential raw materials for modern aerospace industrial uses. In recent times, China's resource consumption has kept growing while land resources have been simultaneously shrinking, making marine resources incontrovertibly crucial to China's future development. Finally, although China possesses a large sea area, its average length of coastline per unit of land area ranks only ninety-fourth in the world. The ratio of China's sea area to land area is less than one-third of the world's average, and China's average sea area per person is one-tenth of the world's median level. As such, China is also a country that possesses a small sea area. Therefore, every inch of "blue-colored territory" is extremely precious to China.

## From Inshore Defense to Offshore Defense

On 23 April 1949, the People's Liberation Army (PLA) crossed the Yangtze River and liberated Nanjing. From that point on, the PLA began to build a people's navy, drawing China out of the dilemma of "no defense of the sea." From the 1950s to the 1970s, China

suffered from containment and was blockaded by exterior powers. Its power on the sea was weak, and the primary mission of China's navy was to prepare for combat defense of inshore waters. Since the 1980s, the Chinese navy has gradually completed a strategic transition to offshore defense, along with the growth of China's maritime interests and naval operational capability. In the twenty-first century, in order to combat nontraditional maritime security threats and to meet the challenge of local war in the information age, the Chinese navy, by adhering to the nation's offshore defensive strategy, has strived to develop the capability for cooperating on the open sea, improving her naval transformation, and gradually developing a modernized naval force with multiarms capability and combat skills for both nuclear and conventional combat operations. The Chinese navy's primary missions are to

- Defend China's homeland territory and the national security of China's maritime regions by resisting external invasions from the sea
- Protect China's territorial integrity and unity and prevent any separatist forces from splitting the national territory
- Protect the sovereignty of national maritime territories and guarantee the security of national waters and their respective islands from invasion
- Protect national maritime interests and rights and guarantee the security of marine resources in China's lawful exclusive economic zone and continental shelf
- Defend the security and smooth operation of China's naval sea-lanes, maritime transportation lanes, and maritime trade lanes and guarantee China's main artery and lifeline from outward threats
- Maintain the stability of Chinese sea areas from piracy, maritime smuggling, illegal narcotics trafficking, transnational crime, and maritime terrorism
- Provide support for the fair and peaceful resolution of maritime disputes according to international law
- Participate in peacekeeping operations, based on United Nations resolutions and under a UN framework
- Conduct international maritime security discussions and cooperate in the area of nontraditional security in order to improve mutual understanding and trust between the navies of all countries.

Although China has made considerable progress in its naval modernization over the past several years, the Chinese navy is still a regional naval force, maintaining an active-defense military strategy, taking offshore defense as its substantive characteristic. Three main points clarify this strategy. First, the nature of China's naval force has always been

defensive, and the construction of China's new naval forces will not surpass, in either scale or operations, China's self-defense needs. China will not threaten other countries' legitimate rights and interests or undertake any invasion or expansion of territory from the sea. Second, China's naval forces will undertake operations in China's offshore waters as their main area in which to carry out national defense activities. Since the focus of China's marine interests is offshore waters, the structure and capabilities of China's naval forces will reflect this offshore approach. Nevertheless, China needs to develop certain open-sea mobility capabilities and to develop cooperation with others, but it will not patrol around the world. It is not necessary for China to do so, nor is China willing to compete, or capable of competing, with the United States on the open seas. Third, China is active and firm in defending its legitimate rights and interests. This is the most basic right and responsibility of a sovereign state. Given the lessons of history, including being invaded and divided, China is especially sensitive and firm on issues of sovereignty and territorial integrity. The Chinese government and the Chinese people will not compromise any vital interests related to national sovereignty and security.

## The Necessity of Building Mutual Trust between Chinese and American Maritime Forces

Both China and the United States are big powers in the world. One is the biggest developing nation, while the other is the biggest developed country. Under the context of globalization in the post–Cold War era, the interests between China and the United States keep interpenetrating and merging with growing interdependency. China and the United States must deal with more and more mutual security threats and security demands. Both countries are undertaking more responsibility for maintaining regional stability and world peace, while promoting humanity's civilization and progress. In dealing with issues such as climate change, the international financial crisis, nonproliferation, the security of international waterways, and antiterrorism, China and the United States must undertake active, close, and comprehensive security cooperation, including maritime security cooperation. The development of Chinese maritime forces increases the possibilities for the United States and China to undertake maritime security cooperation and undertake together the responsibility of international security.

The development of Chinese maritime forces is positive for American maritime interests, not a negative or even a zero-sum game. As Hillary Clinton, U.S. secretary of state, has stated, "Both sides will make contributions to each other's development and benefit from it." Nevertheless, Sino-U.S. maritime relations are far behind other, more developed aspects of the bilateral relationship—not only behind both parties' security needs but behind the development of Sino-U.S. relations in other areas. In a word, they are the

"short board" in bilateral relations.[1] The recent friction in China's exclusive economic zone in the South China Sea highlighted this point.

Three problems have to be solved to change this abnormal situation. First, the two countries need to get past Cold War thinking. Our world is composed of five continents and four oceans, so U.S. Navy vessels have enough space for sailing. However, it is hard to understand why American surveillance ships showed up off China's shores, thousands of miles from home. The Cold War ended more than twenty years ago, so Cold War concepts are already outdated. If the United States, in its strategic thinking, still regards China as the substitute of the former Soviet Union or a potential strategic adversary to defend against, bilateral military relations will be hard to improve, and bilateral friction will continue.[2]

Second, the two countries need to respect and take into account each other's key national security interests. Although the legal status of the exclusive economic zone is not exactly the same as territorial waters under international law, the exclusive economic zone is absolutely not equivalent to the high seas; rather, it is a special area governed by the coastal state. At the third summit on the law of the sea, a Canadian representative pointed out that "the exclusive economic zone is not only about the issue of resources, but also relates to the coastal state's marine environment and the authority to safeguard it." Both the United Nations and the law of the sea share the same mission: peace.

The American surveillance ship USNS *Impeccable* did not operate on the high seas. Even if it had, according to UNCLOS, "The high seas should be reserved for peaceful purposes."[3] The American surveillance vessel did not conduct general oceanographic research. Even if it had, according to UNCLOS articles 246 and 240, this kind of activity should only be undertaken for "peaceful purposes," as "the primary principle," and consent should be granted by the coastal state six months in advance of the start of the operations.

Respect for sovereignty and jurisdiction is a basic principle of international law. Although UNCLOS has no special article to define clearly the limits of military activities in the exclusive economic zones of other countries, the basic legislative purpose and legislative spirit of UNCLOS is that operations may be undertaken "only for peaceful purposes." Undoubtedly, compared with civilian oceanographic research, all military activities in the exclusive economic zone of another country should be undertaken with the highest respect for the coastal state's jurisdiction. Any military activity that is harmful to the coastal state's sovereignty or security in the exclusive economic zone is illegal and cannot be tolerated. To do otherwise would be to mock and blaspheme international law.

It is stated in UNCLOS that other states in the exclusive economic zone of a coastal state have freedoms of navigation, overflight, and laying submarine cables and

pipelines. However, the same provisions also specify that all states, in the exercise of these freedoms, "shall have due regard to the rights and duties of the coastal State and shall comply with the laws and regulations adopted by the coastal State in accordance with the provisions of [the] Convention and other rules of international law in so far as they are not incompatible" with other provisions related to the exclusive economic zone.[4] When a vessel navigates in the exclusive economic zone of a coastal state, its actions should be "harmless," undertaken in "good faith" and with "no abuse of rights." If a military surveillance ship conducts military intelligence-gathering activities in another state's exclusive economic zone, it is hard to explain this as friendly behavior that is "harmless" and undertaken in "good faith." Additionally, if the U.S. Navy does not plan to open its door for other countries' surveillance ships to conduct military intelligence-gathering operations in the sea areas off Norfolk and Newport, why does not the United States allow China the same?

Third, the two countries need to set rules for maritime activities and to undertake Sino-American confidence-building mechanisms. In order to avoid accidents on the sea, deal effectively with any friction, and prevent escalation of emergencies, it is necessary to set the rules for maritime activities and to establish Sino-American confidence-building mechanisms as soon as possible.

These mechanisms should at a minimum include the following several points. First, the United States and China should build a communication mechanism to provide advance notification or prompt reporting of maritime activities in order to avoid any misjudgments. Second, the two countries should build a negotiation framework. We should undertake dialogue and discussion about various issues on various levels regularly or irregularly, in order to coordinate and resolve problems in military interactions. It is more important to hold high-level strategic conversations regularly. Third, China and the United States should build restraint mechanisms. Both countries should restrain their own behavior, not pushing the envelope intentionally or against the interest of the other party. Fourth, we should build cooperation mechanisms. The Chinese and U.S. navies have many areas within the field of nontraditional security within which they can cooperate, such as the exchange of information, maritime search and rescue, counter-piracy, and antiterrorism.

## Notes

1. *Editor's note:* During the conference, General Peng elaborated on this point by describing the overall U.S.-Chinese relationship as a barrel filled with water. Just as water in a barrel can rise only to the level of its shortest board, so too is a more cooperative overall U.S.-Chinese relationship held back by the challenges in military relations between the two countries.
2. *Editor's note:* General Peng told a second story to elaborate this point. He described a Chinese-style house surrounded by a wall with few windows and a gated entrance. A home owner who sees a man peering in his window suspects him to be a thief and treats him accordingly, but a man who comes to the front gate and requests the home owner to allow him to enter is treated as a friend, welcomed in, and offered tea. The reference to U.S. surveillance flights and survey operations was quite clear.
3. United Nations, *United Nations Convention on the Law of the Sea of 10 December 1982,* effective 16 November 1994, art. 301.
4. Ibid., art. 58.

# Coastal State Jurisdiction over Marine Data Collection in the Exclusive Economic Zone

## U.S. Views

*Raul (Pete) Pedrozo*

The U.S. Navy Special Mission Program has twenty-five ships that conduct a variety of missions in foreign exclusive economic zones (EEZs) and on the high seas, including oceanographic surveys, underwater surveillance, hydrographic surveys, missile tracking, and acoustic surveys, to name but a few. All of these activities are conducted consistently with international law, including the 1982 Law of the Sea Convention (UNCLOS), and are not subject to coastal jurisdiction or control in the EEZ.[1] The special-mission ships (SMSs) are either U.S. government owned or operated and are used only on noncommercial government service; they are therefore entitled to sovereign immunity from coastal-state interference.[2] Most of the SMSs are unarmed vessels (except small arms for self-defense) and are operated by civilian crews who work for private companies under contract to the Navy's Military Sealift Command (MSC)—only three are manned by MSC civil-service mariners. Technical work and communication support are conducted by embarked military personnel and Department of Defense civilian technicians.

China's assertions that it can regulate SMS survey activities in the EEZ and that SMS activities are equivalent to marine scientific research (MSR) and are therefore subject to coastal-state jurisdiction are misplaced and have no foundation in international law, including the Law of the Sea Convention (LOSC, otherwise UNCLOS). Similarly, China's assertion that SMS activities are inconsistent with the "peaceful purposes" provisions of the LOSC (i.e., articles 88, 141, and 301) is also not supported by state practice or the plain language of the convention.

### Coastal-State Rights and Jurisdiction in the EEZ

The EEZ was created by UNCLOS and was established for the sole purpose of giving coastal states greater control over the resources adjacent to their coasts out to two hundred nautical miles. Article 56, which describes the rights, jurisdiction, and duties of the coastal state in the EEZ, does not, however, provide for residual coastal-state security

interests in the EEZ. In fact, early efforts by a handful of developing nations, like China, El Salvador, and Peru, to "territorialize" the EEZ in order to broaden coastal-state authority in the new zone to include residual competences and rights (such as security interests) in article 56 were rejected by the majority of the delegations at the Third United Nations Conference on the Law of the Sea (UNCLOS III).[3] What the conference negotiators finally agreed on was articles 55, 56, 58, and 86, which accommodate the various competing interests of coastal states and other states in the EEZ. Articles 55, 56, and 86 make clear that the EEZ is sui generis and that certain high-seas freedoms relating to natural resources and MSR do not apply in the EEZ. However, articles 58 and 86 make equally clear that all other high-seas freedoms (i.e., non–resource related) and other internationally lawful uses of the seas related to those freedoms (e.g., military activities) apply seaward of the territorial sea and may be exercised by all states in the EEZ without coastal-state notice or consent.[4] In this regard, it is also important to note that China did not reserve its position on this issue at the time it ratified the convention in 1996. Of the four statements China made at the time of ratification, only one—a requirement for prior notice to or consent of the coastal state before warships can transit the territorial sea in innocent passage—is related to military activities.[5] China's current efforts to use article 59 to argue that it retains certain residual rights in the EEZ is simply an attempt to resurrect the argument it made and lost at UNCLOS III regarding security interests in the EEZ. China's effort to include security interests in the bundle of rights retained by the coastal state in the EEZ was rejected at UNCLOS III. Therefore, there is no conflict with regard to coastal-state security interests to resolve under article 59—such interests simply do not exist in the EEZ. Moreover, even if the mistaken assumption is accepted that a coastal state retains residual security rights in the EEZ, since a "freedom" is a broader species than a "right" under international law, the high-seas freedoms enjoyed by the international community in the EEZ clearly trump any residual rights that coastal states may possess in the EEZ.[6]

The fact that articles 58 and 86 retain much of the "international" character of, and preserve most high-seas freedoms in, the EEZ should not be confused, however, as non-recognition of the EEZ regime. This issue was thoroughly discussed during UNCLOS III, as delegations struggled to define the "high seas" in article 86. By the fourth session, the emphasis had shifted away from defining the "high seas" and attention focused instead on ensuring that the regime of the high seas would apply in the EEZ to the extent it was not incompatible with Part V.[7] Discussions during the sixth session resulted in a text emphasizing that the high seas constituted a separate maritime zone from the EEZ but preserving certain user-state rights and high-seas freedoms in the EEZ.[8] The end result of this debate was article 86, the first sentence of which makes clear that the EEZ is a sui generis zone that is not part of the high seas. However, the second sentence indicates

that nothing in article 86 abridges the "freedoms enjoyed by all States in the exclusive economic zone in accordance with article 58." In other words, any activity that is lawful on the high seas, to include military oceanographic survey and surveillance activities, can be conducted in the EEZ without coastal-state notice or consent, subject only to the rights and jurisdiction conferred on the coastal state by Part V of the convention. So, for example, the high-seas freedoms of fishing, constructing artificial islands and other installations, and conducting MSR are all subject to coastal-state control in the EEZ. However, all other customary international law rights, duties, and freedoms reflected in Part VII—for example, navigation, overflight, laying of submarine cables and pipelines, hydrographic surveys, military activities (such as surveillance and reconnaissance operations, oceanographic surveys, military exercises, use of weapons, flight operations, etc.), immunity of warships and other noncommercial vessels, prohibition of slave trade, repression of piracy, suppression of unauthorized broadcasting, suppression of narcotics trafficking, approach and visit, rendering assistance, and hot pursuit—may lawfully be conducted in the EEZ without coastal-state notice or consent.

The bottom line is that the final text of article 86 recognizes the existence of the new regimes of the EEZ and archipelagic waters, which were previously considered high-seas areas, while at the same time retaining the distinction that had previously existed between the high seas, on one hand, and the territorial sea and internal waters on the other.[9] The term "sovereign rights" was deliberately chosen to make a clear distinction between coastal-state rights and jurisdiction in the EEZ and coastal-state authority in the territorial sea, where coastal states enjoy a much broader and more comprehensive right of "sovereignty."[10] China has argued that the United States is reluctant to recognize the existence of the EEZ and continues to refer to the area as "international waters." Such an argument is nonsense. The United States has itself claimed an EEZ consistent with the provisions of UNCLOS since 1983.[11] It is the largest EEZ in the world, encompassing an area over 3.4 million square nautical miles.[12] The United States, therefore, has nothing to gain and everything to lose by denying the existence of the EEZ.

American officials should, however, take note that early efforts in 1972 and 1973 to make a distinction between waters subject to coastal-state sovereignty (i.e., territorial sea, archipelagic waters, and internal waters) and the high seas by using the term "international seas" to define ocean areas not subject to coastal-state sovereignty or jurisdiction were rejected by UNCLOS III. Albeit well-intentioned, the U.S. tendency to use the term "international waters" to describe which navigational rights and freedoms apply in the EEZ has been misunderstood by China and others to reflect American opposition to the existence of the EEZ. The rejection of this term in 1973 emphasizes the need for the United States to refrain from using the term "international waters" when referring to legitimate military activities in foreign EEZs, particularly when referring to U.S. military activities

in China's claimed EEZ. Continued use of the term "international waters" appears to be an attempt by the United States to resurrect the 1970s discussions, clouds the current debate on this issue, and allows China to divert attention from the real issues—its illegal maritime claims and its unsafe and aggressive tactics when intercepting U.S. ships and aircraft engaged in legal activities in and over China's claimed EEZ.

Within the EEZ, article 56 provides that the coastal state has sovereign rights for the purposes of exploring, exploiting, conserving, and managing the natural resources of the zone and with regard to other activities for the economic exploitation and exploration of the zone. The coastal state also has jurisdiction limited to the establishment and use of artificial islands, installations and structures, MSR, and the protection and preservation of the marine environment.

Article 56 does not, however, provide for coastal jurisdiction over survey activities in the EEZ. In fact, various provisions of UNCLOS discussed below distinguish between research and survey activities. With regard to MSR, China correctly points out that it has the authority to regulate MSR in the EEZ. Article 246 of the convention provides that MSR in the EEZ and on the continental shelf "shall be conducted with the consent of the coastal State."[13] However, article 246 further provides that the coastal state shall normally grant its consent for MSR projects by other states in its EEZ or on its continental shelf. Consistent with UNCLOS, article 9 of the Law of the People's Republic of China (PRC) on the Exclusive Economic Zone and the Continental Shelf (1998) provides that MSR by any international organization, foreign organization, or individual in the EEZ or the continental shelf of the PRC "must be subject to the approval of the competent authorities" of the PRC and must conform to the laws and regulations of the PRC.[14] Specific guidelines for submitting MSR requests for approval by Chinese authorities are contained in the Provisions on the Administration of Foreign-Related Maritime Scientific Research.[15] Most of these guidelines also appear to be consistent with UNCLOS Part XIII, which contains, inter alia, detailed provisions on coastal-state jurisdiction over MSR in the territorial sea, in the EEZ, and on the continental shelf.

In 2002 China adopted the Surveying and Mapping Law of the People's Republic of China.[16] Although the law is mostly concerned with terrestrial surveying and mapping, article 2 provides that all surveying and mapping activities conducted in the domain of the PRC "and other sea areas under the jurisdiction" of the PRC "shall comply with this Law." Article 7 requires foreign organizations and individuals that conduct surveying and mapping in the domain of the PRC "and other sea areas under the jurisdiction" of the PRC to obtain the approval of the competent administrative department and competent department of the armed forces. Failure to obtain prior approval can result in a fine of up to 500,000 yuan and expulsion from the country.[17] Surveying and mapping are broadly defined in article 2 to include "surveying, collection and presentation of the

shape, size, spatial location and properties of the natural geographic factors or the man-made facilities on the surface, as well as the activities for processing and providing of the obtained data, information and achievements."

To the extent that this law purports to regulate hydrographic surveys and U.S. military activities in the EEZ, to include military oceanographic surveys and surveillance activities, it is inconsistent with customary international law, state practice, and the plain language of UNCLOS.

## Categories of Marine Data Collection

China's position with regard to coastal-state control over marine data collection in the EEZ misses one important point—that marine data collection is much broader than just MSR and includes all types of collection activities at sea, including hydrographic surveys and military marine data collection (e.g., oceanographic surveys and surveillance activities by SMSs). The use of the term "marine scientific research" was deliberate, intended to distinguish MSR from other types of marine data collection that are not resource related, such as hydrographic surveys and military marine data collection.[18] International law applies different rules to each of these activities, depending on where the activity takes place.

UNCLOS article 56 grants coastal states jurisdiction over MSR in the EEZ, but hydrographic surveys and military marine data collection are not MSR and are therefore not subject to coastal-state jurisdiction in the EEZ. In this regard, the Bureau of Oceans and International Environmental and Scientific Affairs, the office within the U.S. State Department responsible for formulating and implementing American policy with regard to the conduct of MSR in waters under American jurisdiction, excludes a number of data-collection activities from the scope of MSR, including hydrographic surveys (for enhancing the safety of navigation); military activities, including military marine data collection; environmental monitoring and assessment of marine pollution pursuant to Part XII of UNCLOS; the collection of marine meteorological data and other routine ocean observations (including the ocean observation programs of the WMO-IOC Joint Technical Commission on Oceanography and Marine Meteorology and the Argo program); and activities related to submerged wrecks or objects of an archaeological and historical nature.[19] Advance consent of the United States to engage in data collection in waters subject to U.S. jurisdiction is required only for MSR, and then only if any portion of the MSR is conducted

- Within the U.S. territorial seas; or
- Within the U.S. EEZ and involves the study of marine mammals or endangered species; or

- Within the U.S. EEZ and requires taking commercial quantities of marine resources; or
- Within the U.S. EEZ and involves contact with the U.S. continental shelf.[20]

All other data-collection activities, including hydrographic surveys and military marine data-collection activities, can be conducted in the U.S. EEZ without advance notice to or consent of the United States.

UNCLOS does not define MSR or hydrographic surveys with a great deal of specificity. However, MSR may be generally defined as "those activities undertaken in the ocean and coastal waters to expand scientific knowledge of the marine environment and its processes."[21] It includes physical oceanography, marine chemistry and biology, scientific ocean drilling and coring, geological and geophysical research, and other activities with scientific purposes. The data collected are normally shared freely with the public and the scientific community.

The term *hydrographic survey* is generally defined as the "obtaining of information for the making of navigational charts and safety of navigation."[22] It has been defined by the United Nations as "the science of measuring and depicting those parameters necessary to describe the precise nature and configuration of the sea-bed and coastal strip, its geographical relationship to the land-mass, and the characteristics and dynamics of the sea."[23] Hydrographic surveys involve collection of information about water depth, the configuration and nature of the natural bottom, the directions and force of currents, the heights and times of tides and water stages, and hazards to navigation. The data are collected for the purpose of producing nautical charts and similar products to support safety of navigation. Hydrographic surveys are, therefore, not the same as MSR, in that they include the collection and analysis of different types of data and have at their core a fundamentally different purpose.

Military marine data collection is also not MSR. It refers to marine data collected for military, not scientific, purposes. The data collected can be either classified or unclassified and are normally not released to the public or the scientific community unless they are unclassified and were collected on the high seas (i.e., beyond the two-hundred-nautical-mile EEZ). Military marine data collection can involve oceanographic, marine geological and geophysical, chemical, biological, or acoustic data.[24]

In short, the primary difference between MSR and military marine data collection and hydrographic surveys is how the data are used once they are collected. Although the means of data collection may be the same as or similar to that used in MSR, and though it may be difficult for the coastal state to differentiate between MSR and other data-collection activities, the information obtained during military marine data collection or a hydrographic survey is intended for use by the military or to promote safety of

navigation, respectively. It may be that China believes the United States is providing data collected by its SMSs to Japan to support and bolster the latter's EEZ and continental-shelf claims in the East China Sea. Or China may believe that data collected in the Yellow Sea are being shared with South Korea or that data collected in the South China Sea are being shared with the other Spratly claimants to bolster their maritime and continental-shelf claims in the region. However, nothing could be farther from the truth. While some of these data may have economic utility, even though they were not collected for that purpose, military marine data collected by the U.S. armed forces in foreign EEZs are used exclusively for military purposes and to promote safety of navigation and are not shared with the general public. Based on these distinctions and the plain language of UNCLOS, military marine data collection and hydrographic surveys remain high-seas freedoms and may be conducted in foreign EEZs without coastal-state notice or consent, consistent with article 58 of UNCLOS.

## U.S. Military Marine Data Collection in the EEZ

Military marine data collection by SMSs may be divided into two basic categories—surveys and surveillance. Both of these missions are lawful military activities that may be conducted in the EEZ without coastal-state notice or consent.

### *Surveillance Activities*

Five ocean-surveillance ships directly support the Navy by using both passive and active low-frequency sonar arrays to detect and track submarines. Additionally, these ships help provide locating data that promote the navigational safety of various undersea platforms. China has argued that such activities pose a threat to its national security and are inconsistent with the peaceful-purposes provisions of UNCLOS. China's position is not supported by state practice or a plain reading of the convention.

Intelligence collection is addressed in only one article of UNCLOS—article 19. Foreign ships transiting the territorial sea in innocent passage may not engage in "any act aimed at collecting information to the prejudice of the defense or security of the coastal state." No similar restriction appears in Part V of the convention regarding the EEZ. Under generally accepted principles of international law, any act that is not specifically prohibited in a treaty is permitted.[25] Therefore, intelligence collection by SMSs in the EEZ without coastal-state consent is implicitly permitted under article 58 of the convention.

With regard to China's argument that the peaceful-purposes clauses of UNCLOS make it unlawful for states to collect intelligence in and above a coastal state's EEZ, article 301 of the convention provides that states shall refrain from "any threat or use of force against the territorial integrity or political independence of any State, or in any other manner inconsistent with the principles of international law embodied in the Charter of

the United Nations."[26] Similar language can be found in article 2(4) of the UN Charter.[27] The convention, however, makes a clear distinction between "threat or use of force" and other military activities, such as intelligence collection. Article 19(2)(a) mirrors the language of articles 39 and 301, providing that ships transiting the territorial sea in innocent passage shall not engage in "any threat or use of force against the sovereignty, territorial integrity or political independence of the coastal State, or in any other manner in violation of the principles of international law embodied in the Charter of the United Nations." However, because intelligence collection is not considered a "threat or use of force," drafters specifically enumerated additional military activities that would be considered a violation of innocent passage in the territorial sea. Articles 19(2)(b)–(f) reflect these additional restrictions. Article 19(2)(c), for instance, specifically restricts ships transiting the territorial seas in innocent passage from engaging in "any act aimed at collecting information to the prejudice of the defense or security of the coastal State." Intelligence collection is therefore not covered by the peaceful-purposes provisions of the convention. Rather, beyond the territorial sea it is a lawful, nonaggressive military activity that is consistent with UNCLOS and the UN Charter. Intelligence collection can therefore be conducted in the EEZ without coastal-state notice or consent.

State practice supports this conclusion.[28] Since the end of World War II, surveillance and reconnaissance operations (aerial, surface, and subsurface) beyond the territorial sea of another nation have become a matter of routine. Today, many nations, including China, engage in such activities on a routine basis. During the height of the Cold War, it was not uncommon for U.S. and NATO ships departing port to be met by a Soviet surveillance ship (AGI) at the outer edge of the territorial sea. Such activities were acceptable so long as the Soviet AGIs complied with their obligations under the 1972 International Regulations for Preventing Collisions at Sea (COLREGS) and the U.S.-USSR Prevention of Incidents on and over the High Seas agreement (INCSEA).[29] The United States and its NATO allies responded to these activities with great tolerance. For example, in February 1974 a Soviet reconnaissance aircraft that was conducting a surveillance mission off the coast of Alaska ran low on fuel and had to make an emergency landing at Gambell Airfield in Alaska.[30] The crew remained overnight and was provided space heaters and food by the American personnel. The plane was refueled the next day and allowed to depart without further incident. Similarly, in March 1994 a Russian surveillance aircraft monitoring a NATO antisubmarine warfare exercise ran low on fuel and made an emergency landing at Thule Air Base in Greenland.[31] Again, the crew was fed and the aircraft was refueled and allowed to depart without further delay. In short, reconnaissance and surveillance activities at sea and in the air beyond the twelve-mile limit are nothing new and are well understood. What is new today is the aggressive, unprofessional action being taken by Chinese ships and aircraft conducting the intercepts.

Chinese ships and aircraft, in particular, are increasingly operating in foreign EEZs throughout the Asia-Pacific region as China continues to develop a blue-water naval capability and expand its submarine fleet. As an example, in 2003, the Japanese government recorded six incursions into Japanese waters by Chinese naval vessels that were surveying "subsea routes for Chinese submarines to enter the Pacific"; two of the territorial-sea violations were by Chinese submarines near Kagoshima.[32] The number of Chinese incursions jumped to thirty-four in 2004.[33] Similarly, Chinese research ships have increased their operations in Japan's EEZ;[34] in addition, PLAN submarines are deploying farther from the Chinese coast to conduct survey and reconnaissance missions.[35] Other examples of increased Chinese military incursions in foreign EEZs, including survey and surveillance activities, include

- On 12 November 2003, a People's Liberation Army Navy (PLAN) Ming-class submarine was spotted by a Japan Maritime Self-Defense Force (JMSDF) P-3C twenty-five miles east of Kyūshū Island. The submarine transited the Osumi Strait between Kyūshū and Tanega-Shima. Chinese officials indicated that the submarine had been engaged in "routine maritime training" at the time.[36]
- On 6 July 2004, a Chinese naval survey vessel was spotted within Japan's EEZ by a JMSDF P-3C. When asked to explain the presence of the ship in Japan's EEZ, Chinese officials indicated that the "ship was engaged in military activities, thus obviating the need for [prior] notification" to the Japanese government.[37]
- On 12 July 2004, a Japanese coast guard P-3C spotted a Chinese maritime research vessel in Japan's claimed EEZ south-southwest of Okinotori Island.[38]
- On 13 July 2004, the *Xiangyanghong (9),* a Chinese government research vessel, was spotted conducting survey operations within Japan's EEZ by a Japanese coast guard cutter.[39]
- On 20 July 2004, the PLAN ship *Dongce (226)* was spotted taking soundings in Japan's EEZ.[40]
- On 21 July 2004, the *Xiangyanghong (9)* was again spotted in the Japanese claimed EEZ, southwest of Okinodaito Island, conducting oceanographic surveys and mapping the ocean floor.[41]
- From 6 to 9 August 2004, the PLAN survey ship *Nandiao (411)* was spotted conducting operations in Japan's EEZ.[42]
- On 10 November 2004, a PLAN Han-class submarine spent two hours submerged in Japanese territorial waters. Chinese officials indicated that the submarine was on a training mission and had entered the Japanese territorial sea for "technical

reasons."[43] The submarine is believed to have first deployed to waters near the U.S. territory of Guam before transiting to Japan.[44]

- On 26 October 2006, a Chinese Song submarine shadowed the USS *Kitty Hawk* (CV 63) and surfaced about five miles from the carrier. The *Kitty Hawk* battle group was conducting routine exercises in the vicinity of Okinawa.[45]
- In October 2008, two Chinese submarines were detected conducting underwater surveillance of the USS *George Washington* (CVN 73) off the coast of South Korea.[46]
- On 11 June 2009, a Chinese submarine collided with the towed sonar array of USS *John S. McCain* (DDG 56) off the Philippine coast approximately 144 nautical miles from Subic Bay.[47]

China has argued that its military activities in the East China Sea have occurred in areas that are in dispute with Japan and that Japan, therefore, cannot accuse China of encroaching on its EEZ, because the two countries have yet to delimit their EEZ boundaries.[48] If that is true, however, the United States could also argue that it is not encroaching on China's EEZ in the East China Sea because the area is in dispute with Japan, or in the South China Sea because of the overlapping claims by the five other Spratly Islands claimants. A similar argument could be made in any EEZ area claimed by China using its illegal straight baselines, none of which are recognized by the United States. If China wishes to rely on this argument, it must be prepared to accept reciprocal arguments by the United States and Japan in all of these contested waters.

### *Military Oceanographic Surveys*

The Navy operates six multipurpose oceanographic survey ships that perform acoustic, biological, physical, and geophysical surveys to enhance its information on the marine environment. These ships use multibeam, wide-angle, precision sonar systems that allow them to chart broad areas of the ocean floor. A seventh oceanographic survey ship collects in coastal regions around the world data that are used to improve technology in undersea warfare, enemy ship detection, and charting of the world's coastlines. These vessels do not engage in MSR. Data collected by these ships are used exclusively by the U.S. armed forces for military purposes.

## Restrictions on Marine Data Collection

Various provisions of UNCLOS place restrictions on marine data collection. However, these provisions also clearly distinguish between research activities, on the one hand, and survey activities, on the other. Article 19(2)(j) provides that carrying out "research or survey activities" is inconsistent with innocent passage through the territorial sea. Similarly, article 40 provides that ships engaged in transit passage, "including marine

scientific research and hydrographic survey ships, may not carry out any research or survey activities without the prior authorization of the States bordering straits." The same restrictions apply to ships engaged in archipelagic sea-lanes passage (article 54) or ships transiting archipelagic waters in innocent passage (article 52). Article 56, on the other hand, grants coastal states jurisdiction in the EEZ only over MSR—survey activities are not mentioned in article 56. Similarly, Part XIII of the convention applies only to MSR, not to other "survey" activities.

Based on these provisions, it is clear that coastal-state consent is required for MSR and survey activities in the territorial sea and archipelagic waters, as well as for MSR and survey activities in international straits and archipelagic sea-lanes. Coastal-state consent is required for MSR in the EEZ. It is equally clear, however, that coastal-state consent is not required for survey activities, including hydrographic and military oceanographic surveys, in the EEZ. These activities remain high-seas freedoms that may be exercised freely in the EEZ, without coastal-state interference, consistent with UNCLOS article 58.

China's position on the legality of military activities in the EEZ, including oceanographic surveys and surveillance activities, clearly represents the minority view. Of the 192 member states of the United Nations, only sixteen support China's position—twenty-three, if one counts the seven nations that claim territorial seas in excess of twelve nautical miles.[49] Of these twenty-three nations, despite the fact that American SMSs have charted over three-fourths of the world's coastlines, only China has operationally interfered with U.S. military marine data-collection activities in the EEZ.[50] State practice therefore clearly supports the American position that military activities that are consistent with the UN Charter may be conducted in the EEZ without prior notice to, or consent of, the coastal state.

## Conclusion

The EEZ encompasses nearly 38 percent of the world's oceans, an expanse that twenty-five years ago was considered to be high seas. If the PRC argument that military activities in general and military marine data collection in particular are prohibited in the EEZ without coastal-state consent were to become generally accepted, SMSs would be denied access to all of the South China Sea, the Yellow Sea, the East China Sea, the Sea of Japan, the Philippine Sea, the Sea of Okhotsk, the Caribbean Sea, the North Sea, the Baltic Sea, the Mediterranean Sea, the Gulf of Aden, the Red Sea, the Persian Gulf, most of Oceania, and large swaths of the Indian Ocean. Such a result was clearly not envisioned during the UNCLOS negotiations and would never have been accepted by the maritime powers. As noted above, China's attempt to assert more security jurisdiction was specifically rejected during the UNCLOS negotiations. The position accepted by the overwhelming

majority of the delegations present at UNCLOS III was clearly articulated by the American delegation in 1983:

> All States continue to enjoy in the [EEZ] traditional high seas freedoms of navigation and overflight and the laying of submarine cables and pipelines, and other internationally lawful uses of the sea related to those freedoms, which remain qualitatively and quantitatively the same as those freedoms when exercised seaward of the zone. *Military operations, exercises and activities have always been regarded as internationally lawful uses of the sea. The right to conduct such activities will continue to be enjoyed by all States in the exclusive economic zone.*[51]

China can therefore expect the United States to continue to conduct oceanographic surveys and surveillance activities in any state's EEZ, including China's, without prior notice or consent.

## Notes

1. United Nations [hereafter UN], *United Nations Convention on the Law of the Sea of 10 December 1982,* effective 16 November 1994 [hereafter UNCLOS], arts. 56, 58, and 87.
2. Ibid., art. 96.
3. Myron H. Nordquist, ed. in chief, Satya N. Nandan and Shabtai Rosenne, gen. eds., *United Nations Convention on the Law of the Sea 1982: A Commentary* (Herndon, Va.: Brill, 1993), vol. 2 [hereafter *Commentary,* vol. 2], pp. 529–30.
4. Myron H. Nordquist, ed. in chief, Satya N. Nandan and Shabtai Rosenne, gen. eds., *United Nations Convention on the Law of the Sea 1982: A Commentary* (Herndon, Va.: Brill, 1993), vol. 3 [hereafter *Commentary,* vol. 3], pp. 60–71.
5. "Oceans and Law of the Sea," *United Nations,* www.un.org/.
6. Sir Robert Jennings and Sir Arthur Watts, eds., *Oppenheim's International Law* (London: Longman, 1992), vol. 1, pp. 802–803, para. 342.
7. *Commentary,* vol. 3, pp. 63–65.
8. Ibid., pp. 67–68.
9. Ibid., p. 69.
10. UNCLOS, art. 2; *Commentary,* vol. 2, pp. 531–44.
11. Proclamation No. 5030, 48 Fed. Reg. 10605 (10 March 1983), available at www.reagan.utexas.edu/.
12. Wikipedia.org, s.v. "Exclusive Economic Zone: United States."
13. Of note, the LOSC makes a distinction between coastal-state jurisdiction over MSR in the territorial sea (article 245) and that in the EEZ/continental shelf (article 246). Coastal-state jurisdiction over MSR is more expansive in the territorial sea, where the coastal state, in the exercise of its sovereignty, has the "exclusive right to regulate, authorize and conduct" MSR.
14. "Laws of the People's Republic of China: Law of the People's Republic of China on the Exclusive Economic Zone and the Continental Shelf," *Asian Legal Information Institute,* www.asianlii.org/; *Collection of the Sea Laws and Regulations of the People's Republic of China,* 3rd ed. (Beijing: State Oceanic Administration, 2001).
15. "Laws of the People's Republic of China: Provisions on the Administration of Foreign-Related Maritime Scientific Research," *Asian Legal Information Institute,* www.asianlii.org/.
16. "Surveying and Mapping Law of the People's Republic of China," *Asian Legal Information Institute,* www/asianlii.org/cn/legis/cen/laws/samlotproc506/; *Collection of the Sea Laws and Regulations of the People's Republic of China.*
17. *Surveying and Mapping Law of the People's Republic of China,* art. 51.
18. In accord is UNCLOS, arts. 19(2)(j), 40, 54, 87(1)(f), and Part XIII.
19. "Marine Scientific Research Authorizations," *U.S. Department of State,* www.state.gov/.
20. Ibid.
21. J. Ashley Roach and Robert W. Smith, *United States Responses to Excessive Maritime Claims,* 2nd ed. (The Hague: Martinus Nijhoff, 1996), p. 425. In accord is A. Soons, *Marine Scientific Research and the Law of the Sea* (Deventer, Neth.: Kluwer, 1982), p. 124.

22. Roach and Smith, *United States Responses to Excessive Maritime Claims,* p. 426.
23. UN, *Consolidated Glossary of Technical Terms Used in the United Nations Convention on the Law of the Sea* (New York: UN Office for Ocean Affairs and the Law of the Sea, 1989), definition 40, s.v. "The Law of the Sea: Baselines."
24. Roach and Smith, *United States Responses to Excessive Maritime Claims,* p. 427.
25. *S.S. Lotus (Fr. v. Turk.),* 1927 PCIJ (ser. A), No. 10, at 18 (Sept. 7); *Legality of the Threat or Use of Nuclear Weapons,* Advisory Opinion, 1996 ICJ REP. 226, 238, para. 20 (July 8).
26. Identical language is found in article 39 of the convention.
27. Art. 2(4) provides: "All Members shall refrain in their international relations from the threat or use of force against the territorial integrity or political independence of any state, or in any other manner inconsistent with the Purposes of the United Nations."
28. See Raul Pedrozo, "Close Encounters at Sea: The USNS *Impeccable* Incident," *Naval War College Review* 62, no. 3 (Summer 2009), pp. 101–11, and Peter A. Dutton, "Caelum Liberam: Air Defense Identification Zones outside Sovereign Airspace," *American Journal of International Law* 103 (2009).
29. COLREGS: International Regulations for Preventing Collisions at Sea, 1972, 1050 UNTS 16, 1143 UNTS 346, 28 UST, TIAS no. 8587. INCSEA: *Agreement with the United States on the Prevention of Incidents on and over the High Seas,* 25 May 1972, 23 UST 1168, TIAS no. 7379, 852 UNTS 151, as amended by the Protocol of May 22, 1973, 24 UST 1063, TIAS no. 7624, and by the 1998 exchange of diplomatic notes.
30. U.S. Defense Dept., "DoD News Transcript, Secretary Rumsfeld Briefs on EP-3 Collision, Apr. 13, 2001—2:00 p.m. EDT," Defenselink.mil.
31. Ibid.
32. John J. Tkacik, Jr., *China's New Challenge to the U.S.-Japan Alliance,* WebMemo 533 (Washington, D.C.: Heritage Foundation, 13 July 2004), www.heritage.org/.
33. See Peter A. Dutton, "International Law and the November 2004 'Han Incident,'" *Asian Security* 2, no. 2 (2006), p. 96; Peter Dutton, *Scouting, Signaling, and Gatekeeping: Chinese Naval Operations in Japanese Waters and the International Law Implications,* China Maritime Studies 2 (Newport, R.I.: Naval War College Press, 2009).
34. James J. Przystup, *Japan-China Relations: Not the Best of Times* (Washington, D.C.: Institute for National Strategic Studies, National Defense Univ., n.d.), available at csis.org/.
35. Bernard D. Cole, "Beijing's Strategy of Sea Denial," *China Brief* (Jamestown Foundation) 6, no. 23 (9 May 2007), www.jamestown.org/; Sean Alfano, "Chinese Sub Came Close to U.S. Ships," CBSNews.com, 14 November 2006.
36. "Hot Spot: East China Sea," Sinodefence.com.
37. Tkacik, *China's New Challenge to the U.S.-Japan Alliance;* Przystup, *Japan-China Relations.*
38. Przystup, *Japan-China Relations.*
39. Tkacik, *China's New Challenge to the U.S.-Japan Alliance.*
40. Przystup, *Japan-China Relations.*
41. Ibid.; "Hot Spot: East China Sea."
42. Przystup, *Japan-China Relations.*
43. "Hot Spot: East China Sea"; Dutton, "International Law and the November 2004 'Han Incident,'" p. 96.
44. "China Sub Stalked U.S. Fleet," *Washington Times,* 13 November 2006; Dutton, "International Law and the November 2004 'Han Incident,'" p. 96.
45. "China Sub Stalked U.S. Fleet"; Cole, "Beijing's Strategy of Sea Denial"; Alfano, "Chinese Sub Came Close to U.S. Ships."
46. "Chinese Nuke Sub Spotted by Japanese Tracking USS *George Washington* near Korea," WorldTribune.com, 11 November 2008.
47. Barbara Starr, "Sub Collides with Sonar Array Towed by U.S. Navy Ship," CNN.com, 12 June 2009; David Carter and Erik Slavin, "USS *McCain* arrives at Sasebo after Suffering Damage to Sonar Array," *Stars and Stripes,* 17 June 2009.
48. Ji Guoxing, "The Legality of the '*Impeccable* Incident,'" *China Security* (World Security Institute) 5, no. 2 (Spring 2009), p. 18, www.chinasecurity.us/.
49. The sixteen nations that with China purport to restrict military activities in the EEZ are Bangladesh, Brazil, Burma, Cape Verde, India, Indonesia, Iran, Kenya, Malaysia, Maldives, Mauritius, North Korea, Pakistan, the Philippines, Portugal, and Uruguay. The seven nations claiming territorial seas in excess of twelve nautical miles are Benin, Republic of the Congo, Ecuador, Liberia, Peru, Somalia, and Togo. All of these nations—except Togo, which claims a thirty-nautical-mile territorial sea—claim a two-hundred-nautical-mile territorial sea. U.S. Defense Dept., *Maritime Claims Reference Manual,* DOD 2005.1-M, www.dtic.mil/.
50. For SMSs, "United States Navy Fact File: Oceanographic Survey Ships—T-AGS," Navy.mil.

51. UN, *Official Records of the Third U.N. Conference on the Law of the Sea,* vol. 17, *Plenary Meetings,* Doc.A/CONF.62/WS/37 and ADD.1 and 2 (New York: n.d.), p. 243 [emphasis added].

# Jurisprudential Analysis of the U.S. Navy's Military Surveys in the Exclusive Economic Zones of Coastal Countries

*Yu Zhirong*

Since the beginning of the twenty-first century, the U.S. Navy has constantly sent ships of all kinds to the national sea waters of many coastal countries to perform military surveys.[1] This has provoked strong repercussions and deep concerns among the countries in whose waters the surveys are performed and has drawn close scrutiny from the international community as well. With the passage of time, the U.S. Navy has carried out more and more frequent military surveys in coastal countries' exclusive economic zones that involve wider regions and longer periods. The coastal countries have sent ships or airplanes to warn the U.S. naval ships verbally against approaching or sent diplomatic notes to ask for reasonable explanations, but the efforts have had little effect, and the U.S. Navy has continued to carry out what it calls military survey activities.[2] Therefore, it is common to see confrontations or even friction between the U.S. side and the coastal countries concerned, which later gives rise to hype in the press and to public outcry. This has greatly affected normal bilateral ties between the nations.

For instance, regarding the USNS *Impeccable* incident that occurred in the South China Sea in part of China's exclusive economic zone, China and the United States have quite different understandings concerning the incident to date. Top U.S. military officers, including Admiral Michael Mullen, chairman of the Joint Chiefs of Staff, defended the *Impeccable*'s activities.[3] Mullen said that exclusive economic zones extend to two hundred nautical miles and every state has the right to enter them. He added that *Impeccable* was carrying out activities in "international waters," which in his view was quite in line with international law.[4]

Huang Xueping, the spokesman from China's Ministry of National Defense, refuted Mullen's argument. He said the U.S. surveillance ships conducted illegal surveys in China's exclusive economic zone without obtaining prior permission from the Chinese side, which went against relevant regulations provided in the United Nations Convention on the Law of the Sea (UNCLOS), the Law on the Exclusive Economic Zone and the Continental Shelf of the People's Republic of China, and the Provisions of the People's Republic of China on the Administration of Foreign-Related Maritime Scientific Research.[5]

This shows that the Chinese side differs from the U.S. side concerning its perspectives on the correct law governing the incident.

More than arousing significant attention from the military circles of both sides, the *Impeccable* incident caused a stir between top Chinese and U.S. leaders. Foreign ministers from both countries held special talks on the issue. U.S. Secretary of State Hillary Clinton said that U.S.-Chinese military relations are expected to strengthen to ensure that no unpredictable consequences result from such incidents.[6] Regarding the *Impeccable* incident, President Obama stressed in his talks with Foreign Minister Yang Jiechi on 12 March 2009 that the U.S.-Chinese military dialogues need to be improved either in level or in frequency to prevent such incidents from recurring.[7] It can be seen that top government officials from both sides have very positive attitudes and expect no more such unhappy incidents. But goodwill does not necessarily lead to good results.

The USNS *Victorious* incident, which was similar in nature to the *Impeccable* incident, occurred in the Yellow Sea in May 2009.[8] Why did the common understanding reached between the two sides go up in smoke? High-level officials hoped this kind of incident would not happen again, but it happened again within two months. And why did such an incident recur and will perhaps continue to occur? The major reason lies in the fact that neither the U.S. side, nor the Chinese side, nor the international community has conducted an in-depth jurisprudential analysis according to international law of the sea of the U.S. Navy's so-called military surveys in the exclusive economic zones of coastal countries. Additionally, no fair, impartial understanding or opinion has been expressed based on correct, objective, and scientific definitions of the activity. Though both Chinese and U.S. top officials show positive attitudes toward the development of solutions and some level of agreement has been reached, jurisprudential assessments of the nature of such incidents remain at a very basic level of understanding. Discussions on the topic will definitely result in a variety of views. Therefore, it is time to launch a round of extensive and in-depth discussion in the academic world on foreign ships' military surveys in coastal countries' exclusive economic zones.

Since the U.S. Naval Ship *Bowditch* carried out its survey in China's Yellow Sea in 2001, activities that were considered by the Chinese side to be unlawful U.S. naval incursions into China's exclusive economic zone, the author has conducted studies on the so-called military surveys carried out by maritime powers. The author has reviewed press releases, government statements, actual marine military surveys of the countries concerned, and related information. The author has conducted an in-depth analysis of these materials and then developed unique ideas based on international law of the sea, particularly the coastal countries' two "sovereign rights" and three "exclusive jurisdictions" described in UNCLOS.[9] Additionally, the author has two favorable experiences useful for studies and discussions of the said issue. First, the author has frequently participated in cruises

undertaken by China's surveillance organizations to observe military surveys conducted by U.S. naval ships in China's sea areas and obtained a large number of firsthand materials. This has helped increase the author's perceptual understanding, thus greatly reducing the role of imagination or guesswork in analysis and making the author's conclusions more objective, correct, and in line with the facts. Second, on 26 April 2001, the writer led a team to go on board R/V *Roger Revelle,* a U.S.-operated ship that carried out marine scientific research in China's sea areas with prior permission from the Chinese side.[10] This has helped improve the writer's knowledge and understanding toward marine scientific research and of the relationship between marine scientific research and military surveys.

At present, the Chinese side and U.S. side still hold different opinions on military survey activities carried out by foreign ships in sea areas under the jurisdiction of coastal countries. The differences mainly involve three aspects: different understandings of the law governing the areas under the jurisdiction of coastal countries; different perspectives on the nature of military surveys; and different ideas about ways of addressing military surveys.

## Jurisprudential Analysis of the U.S. Navy's Claim to Be Operating in "International Waters"

Every time a Chinese marine surveillance ship or airplane has found a U.S. naval ship operating in China's sea areas and asked for an explanation of its activities, the U.S. ship always replies that it is a U.S. naval ship that enjoys the right of immunity and that it is carrying out military surveys in "international waters." Admiral Mullen also claimed, as noted above, in the wake of the *Impeccable* incident in the South China Sea, that exclusive economic zones extend out to two hundred nautical miles and every country has the right to enter them. He further claimed that *Impeccable* was operating in international waters and therefore did not break any international laws. So it can be concluded that the U.S. naval operations in coastal countries' exclusive economic zones are carefully planned, or at least involve great efforts to study such international law of the sea as UNCLOS. The U.S. Navy called the coastal countries' exclusive economic zones, in which their ships were carrying out military surveys, "international waters" but did not publicly explain what the term "international waters" means. This suggests that the U.S. Navy's intent is clearly to evade the concept of the exclusive economic zone as explicitly stipulated in UNCLOS and thus to deny the coastal countries' rights under the convention.

It is widely known that the law of the sea as reflected in UNCLOS was shaped following fifteen sessions of eleven general meetings that spanned a whole decade and that UNCLOS was the result of discussion and compromise among over 150 states, including the United States.[11] Its provisions have been recognized and accepted by

an overwhelming majority of the countries across the world and have been taken as the common code of a new maritime order.[12] The system of exclusive economic zones is particularly well known and accepted worldwide. Though the United States has not acceded to UNCLOS, it has the responsibility and obligation to observe all of its provisions. International law of the sea certainly requires the development of practices by all states that will help enrich and improve the law itself, and the law requires further development as well, but no practices are lawful if they go against or even conflict with the fundamental rules of UNCLOS. The convention classifies the whole ocean into numerous regions: internal waters (article 8), territorial seas (articles 2, 3), contiguous zones (article 33), exclusive economic zones (article 55), continental shelves (article 76), the high seas (article 86), and international seabed areas (article 1[1]). No "international waters" can be found in UNCLOS, and the only term that is even a little close to the phrase "international waters" is "strait used for international navigation" (article 37). The latter, however, definitely has no relationship with the former concerning the locations in which the U.S. military surveys are conducted. Since 2001, the U.S. naval ships' military survey operations discovered by Chinese marine surveillance airplanes or ships have all been carried out in waters within the Chinese exclusive economic zone; the closest location was only twenty-four nautical miles from China's territorial-sea baseline. Therefore, the U.S. argument that the coastal countries' exclusive economic zones are "international waters" is only a lame excuse for its attempt to evade the coastal countries' rights of jurisdictional competency.

The U.S. perspective is in apparent conflict with the provisions under UNCLOS and is unconvincing from a jurisprudential perspective. The United States, as a maritime power, has the obligation to help improve the legal system of the exclusive economic zone through its practice. But it brazenly replaced the "exclusive economic zone" with "international waters," ignoring or denying the rights of jurisdictional competency of the coastal states and even depriving them of the rights they deserve, which is not advisable at all. As a matter of fact, it is ironic that the United States denies the existence of exclusive economic zones, for the existence of the exclusive economic zone and continental shelf systems have their roots in the U.S. practices, specifically the two "declarations on marine policies" released by President Truman on 28 September 1945 to protect fishery resources and the oil resources under the continental seabed.[13] These U.S. maritime policies were not only significant advancements in American domestic legislation but pushed forward the development of international law of the sea as well.

In fact, the U.S. Navy's position is very clear that the authority of UNCLOS will not be shaken even if exclusive economic zones are defined as "international waters," which is only an excuse for avoiding the coastal states' inspection of its illegal actions. Admiral Mullen's explanation was self-contradictory and weak. He claimed first that *Impeccable*

was in international waters and acting in accordance with international laws. He then stated that any country has the right to enter the exclusive economic zone of another country, an area that extends two hundred nautical miles from the coastline. He stressed the legality of military surveys. My views are very definite: international waters do not exist in UNCLOS and are not generally accepted. The American policy of conducting unauthorized military surveys in sea areas under the jurisdiction of another coastal state should be scrutinized for its illegality. So how can Admiral Mullen say these operations are completely in accordance with international law? Moreover, the statements that the exclusive economic zone is two hundred nautical miles wide and that any country has the right to access are, taken separately, true. The exclusive economic zone is free for navigation, overflight, and laying seabed cables.[14] However, the activities of the U.S. Navy's military survey ship do not belong to the categories mentioned above. An investigation of the activities of *Impeccable* as it undertook military surveys in China's exclusive economic zone determined that the U.S. ship displayed at the mainmast the ball-diamond-ball operations signal during the day and shined the red-white-red operations signal light at night indicating that it was restricted in maneuvering, undertaking operations instead of merely navigating.[15] So Admiral Mullen's explanation is self-contradictory, lacks a serious legal basis, and is not persuasive. His excuses make no contribution to proving the lawfulness of the U.S. military ship's military survey operations in waters under the jurisdiction of coastal states but completely expose the illegality of the vessel's conduct.

## Jurisprudential Analysis of the Nature of Military Surveys

One of China's concerns about military surveys is that they cause pollution to the ocean environment. In at least one such case, the Chinese Ministry of Foreign Affairs raised this concern to the American government. Specifically, on 20 September 2006, the Ministry of Foreign Affairs of the People's Republic of China issued a note to the U.S. embassy in China that on 8 August of the same year, China's sea surveillance aircraft and ships observed four American navy ships undertaking military surveys in waters under Chinese jurisdiction in the East China Sea without authorization from the Chinese government, seriously infringing upon the ocean rights and interests of China as the relevant coastal country, and requested reasonable explanations from the American ambassador. The ambassador promised to give feedback after getting information. As had been done after the USNS *Impeccable* incident occurred on 5 March 2009 in an area under Chinese jurisdiction in the South China Sea, China's Foreign Ministry spokesperson Ma Zhaoxu said that the U.S. Navy ship's unauthorized access into waters in the East China Sea under the jurisdiction of China for the purpose of undertaking military surveys violated UNCLOS and China's laws.[16]

In his remarks, Ma pointed out that there is a jurisprudential basis available to conclude that the U.S. military ship's unauthorized operations to perform military surveys in waters under the jurisdiction of China is illegal. According to UNCLOS, "'pollution of the marine environment' means the introduction by man, directly or indirectly, of substances or energy into the marine environment, including estuaries, which results or is likely to result in such deleterious effects as harm to living resources and marine life, hazards to human health, hindrance to marine activities, including fishing and other legitimate uses of the sea, impairment of quality for use of sea water and reduction of amenities."[17] USNS *Impeccable* is a catamaran with an operating speed of four to six knots, hanging or burning operational and signal lights in the mainmast when operating, with a shielded cable at the aft end of the vessel, and a survey sensor tied at the cable tip.[18] The ship does not issue navigation notices concerning its random operation areas, sometimes navigating on the sea routes and sometimes among fisheries. This is sufficient to conclude that military survey operations by the U.S. Navy's sea surveillance ship constitute pollution of the marine environment.

Additionally, the definition of pollution of the marine environment in UNCLOS favors the coastal states in its general description. "The introduction by man, directly or indirectly, of substances or energy into the marine environment" quite matches the operations mode of USNS *Impeccable,* which introduces a shielded cable into the sea and emits sound waves in order to investigate underwater targets, conduct surveys, undertake instrument experiments, or investigate the ocean's environment.[19] If the United States argues that military surveys do not cause such deleterious effects as harm to living resources and marine life, hazards to human health, impairment of quality for use of seawater, and reduction of amenities, the United States must undertake the *onus probandi* and provide a persuasive explanation to the satisfaction of the coastal state. Once the U.S. Navy ship's military survey is defined as pollution of the marine environment, unless the surveys can otherwise be exempted from the definition of pollution of the marine environment, the coastal states may make claims against the United States for pollution of the marine environment, in addition to diplomatic negotiations in accordance with relevant regulations in UNCLOS. This is my understanding of the point made by China's Foreign Ministry Spokesman Ma that the military surveys conducted by the U.S. Navy's surveillance ship violated relevant UNCLOS provisions.

The media reported that the USNS *Impeccable* used water hoses to warn off the Chinese fishing boats during the March incident;[20] in May USNS *Victorious* did the same, using the excuse that the close maneuvering of the Chinese vessels hindered the *Victorious*'s operations.[21] The United States said that the Chinese operations reflect "an intentional and dangerous strategy" and that the "Chinese actions are not professional."[22] However, the jurisprudential analysis above clearly indicates that the U.S. Navy's ships entered

into Chinese waters to perform a military survey without approval or authorization, seized the sea route, occupied the fishery and seriously hindered the fishermen's normal fishing operation, and caused pollution to the marine environment, all of which are self-evidently illegal activities. When their fishery was occupied and their legal interests and rights were seriously infringed, it was unavoidable that the fishermen responded as necessary. However, the U.S. Navy's ships caused the incidents and should accept fundamental responsibility for them. The United States should realize that it has breached the provisions of UNCLOS and should take timely corrective actions by following the provisions of UNCLOS and stopping any illegal activities. The United States should not blame the Chinese fishing boats. Instead, it should apologize to Chinese fishermen and guarantee that no similar mistakes will occur in the future. It should also compensate the loss incurred by the Chinese fishermen, if necessary.

In addition to concerns about environmental pollution caused by military surveys, a second concern relates to the definition of "marine science." At present, UNCLOS and the laws and regulations of coastal countries fail to define clearly what constitutes marine scientific research and fail to define clearly what military survey activities are permissible. The U.S. Navy does not attempt to define marine scientific research in a way that favors its country. Instead, it differentiates its activities from marine scientific research by labeling them military survey activities and thereby attempts to evade the jurisdiction of coastal countries.

Over many years devoted to the practice of marine management, the author has conducted substantial research and study of international maritime law. Thus, the author has profound knowledge of the term "marine scientific research" and defines it as follows:

- Marine scientific research involves the use of various vessels to investigate the marine environment or to survey the marine environment, in specific waters and at a specific time, by means of modern scientific and technical approaches, including academic study and the study of integrated applications of the information collected.
- The "military survey activities" that U.S. Navy vessels conduct in waters under the jurisdiction of coastal countries bear no essential differences from marine scientific research in working form or content. Thus, the so-called military survey activities are completely subsumed under the category of study called marine scientific research.

It is therefore an illegal activity to conduct military survey activities in the exclusive economic zone of a coastal country without its approval. This conclusion may seem arbitrary, but actually it is much to the point, fully reflecting the objective facts. If military survey activities do have any obvious differences from marine scientific research, the differences mainly lie, seemingly, in the different attributes of the vehicles and vessels

used. So-called military survey activities generally use military vessels. Of course, it is not essential to identify whether the activities undertaken fall within the category of marine scientific research, the definition of which bears no relation to the attributes of the vessels performing it. At present, not a single law or regulation clearly specifies that marine environmental investigations and survey operations using military vessels are military survey activities or that the military survey activities do not fall under the category of marine scientific research and thus are not subject to the coastal-state laws and regulations.

By contrast, the author, in his experience in marine management, has observed typical cases in which U.S. naval vessels conducted marine scientific research, offering powerful support to the idea that military survey activities do indeed fall within the study category of marine scientific research and thus are subject to the provisions of UNCLOS and the laws and regulations of the coastal states. On 26 April 2001, the author was ordered to board and inspect R/V *Roger Revelle,* a U.S. maritime research vessel, which performed acoustic tomography tests in the shallow waters of the East China Sea in collaboration with the Chinese Academy of Sciences and operated from Shanghai. Although the vessel was marked "Scripps Institution of Oceanography, University of California," it was owned by the U.S. Navy, and its use had to be approved by the U.S. Navy.[23]

R/V *Roger Revelle* is therefore typical of U.S. Navy research vessels, and the studies it conducted were also typical of military survey activities. The vessel's activities were approved before it arrived and operated in waters under the jurisdiction of China. All its activities during this research period were subject to the provisions of UNCLOS and China's laws and regulations on marine scientific research and to Chinese management. This proves again that even though R/V *Roger Revelle* is a military vessel, the marine environmental investigations or marine environmental surveys it made were military survey activities and that the argument holding they do not belong to the category of marine scientific research is wrong. It is improper to categorize and name marine environmental investigations or marine environmental surveys conducted by military vessels as military survey activities. The argument that purposely excludes such activities from the study category of marine scientific research in order to evade the legal constraints imposed by coastal states is also inappropriate. Any country has the right to advance explanations of the law that favor its own interests, but it cannot break the principles and tenets of UNCLOS and act inconsistently with them.

## Clarification of Several Vague Topics

One vague topic that needs clarification is the "peaceful purposes" principle. In the above section the author presented his view that military survey activities are in fact within the category of marine scientific research, based on his experience in the practice

of marine management, and enumerated typical examples. A question remains, however. Although UNCLOS fails to define the study of marine scientific research, it establishes general principles. For instance, it establishes that the study of marine scientific research shall be undertaken for peaceful purposes.[24] That is to say, if a military survey activity is not undertaken for a peaceful purpose, it does not meet the criteria for the study of marine scientific research and thus can be completely prohibited. However, to date, not a single U.S. official or military authority has ever stated in public that its military survey activities made in the exclusive economic zone of the coastal countries are made for nonpeaceful purposes. This offers powerful support for the idea that military survey activities are within the category of marine scientific research. Of course, it cannot be excluded that the military survey activities could be deliberately explained as having the purpose of preparing for future war and are not for a peaceful purpose, thus making them at odds with UNCLOS. In this case, the nature of the issue would change completely. It would no longer be an issue of the law; it would turn into an issue of national defense, and coastal countries could seek solutions from a political perspective. With a powerful enemy in front of it, a country will make war preparations and will use force to crack down on military survey activities made by foreign vessels that raise a threat to its national security.

In addition, some people may ask a sharp and astonishing question concerning the concept of sovereign immunity. So far, the vessels that have entered the waters under the jurisdiction of coastal countries and conducted military survey activities have all been military vessels in the service of the U.S. Navy with sovereign immunity. Then, why are their activities considered illegal? If these people who put forward the question are not deliberately trying to confound right and wrong or call white as black, they must have a problem understanding international law of the sea. The sovereign immunity of military vessels means that even though a military vessel with immunity has undertaken illegal conduct, the concerned coastal country has no right to board and inspect it and the coastal state can only negotiate a diplomatic resolution. But a proper understanding of the facts based on a "responsibility investigation," conducted according to legal procedures, reveals that immunity and the findings of an investigation into illegal conduct and responsibility are two different concepts and cannot be conflated. When the vessels and planes of China's Marine Surveillance Force communicate with the U.S. vessels at sea, the U.S. vessels always first say, "This is U.S. naval vessel XXX with sovereign immunity." In fact, their announcement of immunity makes no sense except to show their guilty conscience.

A third area that needs clarification concerns the rights and obligations under UNCLOS of nonsignatory states. There are also some people who may paradoxically propose that since the United States has not acceded to UNCLOS, it is not subject to the provisions of

UNCLOS. This perspective suggests that even though a U.S. naval vessel intrudes in the exclusive economic zone of a coastal country and undertakes military survey activities, which is at odds with the provisions of UNCLOS and violates the laws of the coastal country, it can be free from investigation into its legal responsibility just because the United States is not a state party. This is a perspective based in ignorance. As a treaty, UNCLOS, which now has more than 150 states parties, was concluded after long-term preparations, discussions, and compromises that included U.S. participation. Its provisions have become universally accepted law for the purpose of safeguarding the new maritime order. In consequence, both the signatory states and nonsignatory states must follow and abide by its provisions. Of course, all countries have the responsibility and obligation to enrich and improve the meaning of UNCLOS through state practice, but they cannot violate the convention's elementary principles and tenets. They can offer explanations in favor of their own interests, but they cannot argue irrationally or resort to force to justify illegal conduct. Fortunately, U.S. high officials have stated that the United States will respect and abide by the regulations of UNCLOS, although it is still not a state party. As a result, the above worry is unnecessary.

## Conclusion

In summary, when U.S. naval vessels enter the exclusive economic zone of coastal countries and undertake military survey activities, their actions should be considered within the category of marine scientific research and must therefore be subject to the relevant regulations of UNCLOS and the laws and regulations of the coastal country. Military survey activities undertaken without approval are illegal conduct and shall be investigated for legal responsibility. It violates the regulations of UNCLOS that the oceanic surveillance vessels of the U.S. Navy enter waters under the jurisdiction of coastal countries and boldly conduct survey activities, which also result in marine environmental pollution. Once the illegal fact is confirmed, the United States should take legal responsibility and pay compensation for its pollution of the marine environment. If the state undertaking the survey activities does not accept the existence of pollution as an effect of its operations, it must provide convincing proof. Although the United States is not a state party of UNCLOS, it must abide by the common rules recognized by most countries in the world. Every country can advance explanations of the provisions of UNCLOS that favor its own interests, but the explanations and innovation must not violate the convention's principles and tenets or be at odds with it. The U.S. forces insist that their military survey activities are undertaken in "international waters." They take this perspective with the goal of evading the jurisdiction of coastal countries. In fact, the U.S. forces are penny-wise and pound-foolish. Their speech and conduct have violated China's maritime rights and interests. Moreover, they ignore

and deny in public the exclusive-economic-zone system, which is universally recognized by countries around the world. They have violated the regulations of UNCLOS and go against the international community. This significantly affects the U.S. image as a civilized maritime power and also spoils the outstanding contributions that President Truman made for the establishment of the exclusive-economic-zone system sixty-five years ago.

If the United States desires to conduct marine scientific research in the exclusive economic zone of a coastal country, the best way is to first apply to the coastal country concerned and then to conduct the study after approval is given, just as in the case of the R/V *Roger Revelle.* In addition, another easy and feasible way forward is to conduct the study jointly with the coastal country, which avoids unwanted cases of maritime confrontation and conflict between the two parties and fully eases the differences and contradictions concerning the correct understanding of international maritime law.

## Notes

Additional references are *UN Convention on the Law of the Sea* (New York: Ocean, 1996); Sun Shuxian, ed. in chief, *Collection of Legal Theoretical Bases for Marine Administrative Implementation,* State Volume (New York: Ocean, 2007); and Lu Shouben, *General Theory on Marine Management* (New York: Ocean, 1997).

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13. *The Truman Proclamation on the Continental Shelf* (No. 2667, 28 September 1945) and *The Truman Proclamation on Fisheries* (No. 2668, 28 September 1945), available in Lawrence Juda, *Ocean Space Rights: Developing U.S. Policy* (New York: Praeger, 1975), apps. A and B, respectively.

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19. See, e.g., the U.S. Navy website's description of the Military Sealift Command's Special Mission Program at www.msc.navy.mil/PM2/. The description states, "Five ocean surveillance ships [including USNS *Impeccable*] directly support the Navy by using both passive and active low frequency sonar arrays to detect and track undersea threats."
20. "Pentagon Says Chinese Vessels Harassed U.S. Ship."
21. "U.S. Ship in Yellow Sea Standoff with Chinese Vessels," *South China Morning Post,* 6 May 2009.
22. "Chinese Vessels Harassed Unarmed USNS *Impeccable,*" *Los Angeles Times,* 9 March 2009.
23. See, e.g., the description of the vessel's ownership at the website of the California Cooperative Oceanic Fisheries Investigation, a partnership of the California Department of Fish and Game, the National Oceanic and Atmospheric Administration, and the Scripps Institute of Oceanography. It describes R/V *Roger Revelle* as "a 274-foot (83 meter) AGOR 24–class research ship operated by the Scripps Institution of Oceanography, a graduate division of the University of California, San Diego, . . . [with] title held by U.S. Navy [and] operated [by] agreement with Office of Naval Research." *California Cooperative Oceanic Fisheries Investigation,* www.calcofi.org/.
24. UNCLOS, art. 240(a).

# Aerial Reconnaissance by Military Aircraft in the Exclusive Economic Zone

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The United Nations Convention on the Law of the Sea (UNCLOS) created a new zone—the exclusive economic zone (EEZ)—with its own legal regime.[1] Although prior to the completion of the convention in 1982 some states had already claimed two-hundred-nautical-mile exclusive fishery zones, the EEZ as such had not previously been recognized in international law. As the history of the development of the EEZ demonstrates, the zone's legal regime seeks to balance the rights and interests of the coastal state with the rights and interests of all other states in the EEZ. The coastal state's rights and duties relate to preservation and exploitation of the natural resources in the EEZ (arts. 56, 60–73). The rights of all other states in the EEZ relate to the traditional uses of the high seas (art. 58).

The freedom of overflight is one of the important traditional uses of the high seas mentioned in UNCLOS. UNCLOS preserves this right of overflight in the EEZ for all aircraft, including military aircraft. Article 58(1) of UNCLOS states:

> In the exclusive economic zone, all States, whether coastal or landlocked, enjoy, subject to the relevant provisions of this Convention, the freedoms referred to in article 87 of navigation and overflight . . . and other internationally lawful uses of the sea related to these freedoms, such as those associated with the operation of ships and aircraft . . . , and compatible with the other provisions of this Convention.

The cross-reference to article 87 makes clear that the freedom of overflight in the EEZ is the same as it is over the high seas. The phrase "and other internationally lawful uses of the sea related to these freedoms" means that there are other, unspecified freedoms in addition to the ones listed in article 58(1). This latter phrase makes clear that the right of overflight is not limited to mere transit over the EEZ but that aircraft may perform operations previously permitted under international law.

Under UNCLOS, all aircraft also enjoy the right of transit passage over international straits and archipelagic sea-lanes.[2] Such passage is available for travel "between one part of the high seas or an exclusive economic zone and another part of the high seas or an exclusive economic zone" (arts. 38[2], 53[3]).[3] UNCLOS specifically requires military aircraft to comply with certain safety measures during transit passage, thereby

confirming that military aircraft enjoy the right of transit passage in addition to the right of overflight in the EEZ (arts. 39[3], 54).

Moreover, UNCLOS specifically authorizes certain military activities in the EEZ. Article 58(2) makes a general cross-reference to articles 88–115, stating that those high seas provisions and "other pertinent rules of international law apply to the exclusive economic zone in so far as they are not incompatible with this Part." Some cross-referenced provisions describe the rights, duties, and immunities of warships and military aircraft. For example, military aircraft may exercise the right of visit and the right of hot pursuit over the high seas (arts. 110–11). The cross-reference to these provisions in article 58(2) indicates that military aircraft may exercise these same rights in the EEZ. Hence, UNCLOS sanctions at least some types of foreign military activity in the EEZ. Article 56(2) would encompass foreign military activity when it requires the coastal state to have due regard for the rights and duties of other states in its EEZ.

UNCLOS thus expressly authorizes the presence of military aircraft in the EEZ and it expressly allows certain military operations in the EEZ, just as it does in the airspace over the high seas. The remaining issue is whether aerial reconnaissance of coastal-state activities by foreign military aircraft remains a permitted use of the airspace above the EEZ under international law.

## Due Regard for Coastal-State Interests

Although UNCLOS preserves in the EEZ the freedom of overflight and other internationally lawful uses of the seas related to the operation of aircraft, there are at least two limitations on this freedom. The first is found in article 58(3), which requires states to show due regard for the rights and interests of the coastal state. Article 58(3) states:

> In exercising their rights and performing their duties under this Convention in the exclusive economic zone, States shall have due regard to the rights and duties of the coastal State and shall comply with the laws and regulations adopted by the coastal State in accordance with the provisions of this Convention and other rules of international law in so far as they are not incompatible with this Part.

This provision means, at a minimum, that foreign military activity in the EEZ may not unduly interfere with the rights and interests of the coastal state in the marine environment and its natural resources. Examples of military activities that would run afoul of this provision include weapons exercises that cause significant damage to a valuable resource being exploited by the coastal state, that deny access to traditional fishing grounds, or that create hazards to commercial fishing.[4]

The second limitation is stated in article 56(1)(b)(ii), which confers jurisdiction on the coastal state to regulate marine scientific research in the EEZ.[5] Even with this limitation,

intelligence-gathering activities of a military nature are not prohibited, since they would not affect the marine environment or resources. Hydrographic surveys, for example, are not subject to coastal-state regulation.[6] These two limitations on the high-seas freedom of overflight provide the essential differences between the legal regimes of the EEZ and the high seas. In all other senses, the EEZ remains a portion of the high seas for purposes of the freedoms of overflight.

Nonetheless, some argue that the "due regard" clause of article 58(3) also means that states must have due regard for the *security* interests of the coastal state and that, for this reason, no aerial reconnaissance of the coastal state may be conducted in the EEZ.[7] UNCLOS addresses the security interests of coastal states by specifying the rights and duties they enjoy in distinct and successive maritime zones that emanate seaward from their land territories. Coastal states enjoy the highest degree of legally protected security interests in the zone closest to their land territory—the territorial sea—and fewer legally protected security rights in the outer zones. UNCLOS expanded the breadth of the territorial sea to a distance of twelve nautical miles. Most states previously recognized territorial seas of only three nautical miles, prompting some states during the negotiations to express concern that three nautical miles was no longer adequate for their security;[8] this is especially the case in the age of airpower, where the edge of the territorial sea marks the limits of its national airspace.[9] Even in the contiguous zone the coastal state's jurisdiction is limited in the convention to only four specific areas: customs, fiscal, immigration, and sanitary laws. Opposition to extending contiguous zone rights to cover security interests reflected concern during the negotiations "that security zones represent a particular threat to the freedom of navigation."[10] Because the contiguous zone is not part of the territorial sea, the high-seas freedom of overflight for military aircraft that applies in the EEZ is also applicable in the contiguous zone.[11]

States may establish air-defense identification zones (ADIZs) beyond national airspace; however, ADIZs are merely a reporting and identification regime for aircraft bound for coastal and island states. Although there are no relevant provisions in UNCLOS, ADIZs are recognized under customary international law and state practice and are legally justified on the basis that a state has the right to establish reasonable conditions of entry into its national airspace. Accordingly, an aircraft approaching national airspace may be required to identify itself while in international airspace as a condition of entry approval.

Were a state to attempt to require all aircraft penetrating an ADIZ to comply with ADIZ procedures, whether or not the aircraft intended to enter national airspace, such regulations would violate international freedoms of navigation and could be ignored. International law does not recognize the right of a coastal state to apply its ADIZ procedures to foreign aircraft in such circumstances. Accordingly, military aircraft not intending to enter national airspace need not identify themselves or otherwise comply with ADIZ

procedures established by other nations.[12] International law does not recognize the right of coastal states to exclude or regulate the activities of foreign military aircraft in areas outside their national airspace.

Chinese scholars have tried to assert "security interests" as a protected coastal-state interest in the EEZ, even though earlier efforts to have such interests included in UNCLOS failed.[13] In particular, they have tried to prohibit military exercises, weapons practice, and maneuvers in the EEZ. These efforts have been operationally challenged. Yet it is noteworthy that the negotiating history of UNCLOS does not record any specific objection to aerial surveillance or reconnaissance of the coastal state in the EEZ.[14]

## The EEZ and ICAO

China's arguments in favor of a coastal state's right to curtail international military freedoms in the airspace above the EEZ have been considered and rejected by the community of states. With the introduction of a new legal regime in the EEZ, Brazil requested that the International Civil Aviation Organization (ICAO) examine the EEZ's impact on international air law and consider treating the EEZ the same as national airspace with respect to overflight.[15] ICAO is a specialized United Nations (UN) agency created by the Chicago Convention on International Civil Aviation and is designed to promote the safety of air navigation.[16] Its executive body—the ICAO Council—has exclusive and plenary authority to adopt international standards, known as "Rules of the Air," for flight over the high seas.[17]

Before UNCLOS was negotiated, the world's airspace was generally classified as either *national* (that over the state's land areas and territorial waters) or *international* (that over areas traditionally considered high seas). This classic division of the world's airspace is reflected in the Chicago Convention, within which each state is granted complete and exclusive sovereignty over its territorial airspace but by which over "the high seas" (which now includes the EEZ) civil aircraft are subject to the Rules of the Air adopted by ICAO.[18]

The Rules of the Air apply to all international civil aviation, without exception.[19] The binding nature of these rules over the high seas is derived from article 12 of the Chicago Convention: "Over the high seas, the rules in force shall be those established under this Convention."[20] If a civil aircraft cannot comply with ICAO standards, the aircraft may not legally fly over the high seas. Moreover, every state has an international obligation "to insure the prosecution of all persons violating the regulations applicable."[21] In the words of Professor Michael Milde, "It is a unique feature in international law-making that an executive body of an international organization can legislate . . . with binding

effect for all 156 [now 190] contracting States with respect to the Rules of the Air applicable over the high seas which cover some 70 percent of the surface of the earth."[22]

Brazil's request in effect sought to remove ICAO's jurisdiction to legislate binding Rules of the Air for the airspace above the EEZ, which previously had been a portion of the high seas. In evaluating Brazil's request, ICAO had to determine whether for purposes of the Rules of the Air the EEZ is still part of the high seas (with new additional rights of the coastal state relating to the natural resources) or a jurisdictional zone of the coastal state (that retains high-seas freedoms but would be subject to substantial coastal-state regulation, much like the innocent-passage regime). If it is the former, ICAO retains exclusive jurisdiction to legislate Rules of the Air. If it is the latter, national laws and regulations would apply in the EEZ.

The ICAO Legal Committee directed the ICAO Secretariat in 1983 to prepare a detailed study to consider the possible impact of UNCLOS on the application of the Chicago Convention and other international air law instruments. The results of this study were published in 1987 and reached an important conclusion with respect to the airspace above the EEZ.[23] The study declared:

> 19.4 *Exclusive economic zone:* full freedom of navigation and overflight is to be enjoyed by all States and the coastal States cannot impose their aeronautical laws and regulations in that zone; for greater certainty about the general legal status of the EEZ, it would appear desirable if the ICAO member States were to reach a consensus and accept an interpretative determination that, for the purpose of the Chicago Convention, its Annexes and other international air law instruments, the exclusive economic zone is deemed to have the same legal status as the high seas and any reference in these instruments to the high seas should be deemed to encompass the exclusive economic zone.[24]

The desired consensus with respect to the legal status of the EEZ's airspace was instantly reached, in practice if not in a formal declaration. The study's results have not been challenged, disputed, or superseded. ICAO did not further pursue the matter, and the study's results inform ICAO's governance to this day. ICAO's jurisdiction to legislate Rules of the Air over all areas previously considered high seas, to include the EEZ, continues unabated. Coastal states remain without authority to subject foreign civil aircraft transiting the EEZ to their domestic air regulations as they could do for civil aircraft flying over their territory.[25] For its part, ICAO continues to employ the term "high seas" when referring to the airspace above the EEZ.[26] In this sense, the EEZ has the same legal status as the high seas. Although ICAO's competence in the EEZ is limited to prescribing Rules of the Air for civil aircraft, its conclusion as to the EEZ's legal status as a portion of the high seas is also consistent with state practice with regard to the treatment of military aircraft in this same airspace.

International law applies this same division of the world's airspace to military aircraft. The Chicago Convention contains two provisions applicable to military aircraft. The first concerns national airspace, whereby the military aircraft are prohibited from entering another state's territorial airspace without special authorization or diplomatic clearance.[27] The second deals generally with international airspace, in which military aircraft must exercise due regard for the safety of navigation of civil aircraft.[28] The Chicago Convention does not otherwise regulate military aircraft.[29]

## UNCLOS Contributions to the Treatment of Military Aircraft

UNCLOS's treatment of military aircraft in international airspace is not only consistent with the Chicago Convention's treatment of these aircraft but makes several important contributions to international law. First, UNCLOS confirms that military aircraft enjoy sovereign immunity.[30] The only other multilateral treaty to recognize expressly the sovereign immunity of military aircraft was the 1919 Paris Convention, which provides that military aircraft are entitled to "the privileges which are customarily accorded to foreign ships of war."[31] Because this provision was not carried forward in the Chicago Convention, Professor John Cobbs Cooper, the chairman of the committee that drafted and reported article 3 of the Chicago Convention, stated: "It is felt that the rule stated in the Paris Convention that aircraft engaged in military services should, in the absence of stipulation to the contrary, be given the privileges of foreign warships when in national port is sound and may be considered as still part of international air law even though not restated in the Chicago Convention."[32] UNCLOS thus reaffirms the customary law concerning the privileges and immunities of military aircraft.

Second, UNCLOS recognizes that military aircraft enjoy certain constabulary powers in the EEZ and over the high seas, such as the rights of visit and of hot pursuit.[33] Military aircraft play an important role in ensuring the public order of the oceans.

Third, UNCLOS expressly reaffirms that all aircraft, including military aircraft, enjoy the freedom of overflight in international airspace, a general principle of international law that was only implied in the Chicago Convention.[34] In national airspace, military aircraft likewise enjoy the right of transit passage over international straits and archipelagic sea-lanes, the same as civil aircraft.[35] Transit passage over international straits or archipelagic sea-lanes is treated as similar to passage through international airspace, in that civil aircraft must comply with ICAO Rules of the Air, while military aircraft need only monitor certain emergency radio frequencies and have due regard for the safety of navigation of other aircraft.

Fourth, UNCLOS requires all aircraft to have due regard for the safety of navigation of *all* other aircraft.[36] The Chicago Convention requires only that military aircraft exercise

due regard for the safety of navigation of *civil* aircraft.[37] It does not require military aircraft of one state to have due regard for the safety of military aircraft of other states. Thus, under UNCLOS, a coastal state may dispatch military aircraft to shadow foreign military aircraft approaching its territorial airspace for the purpose of safeguarding national security;[38] however, it is also clear that the coastal state must not endanger the foreign military aircraft, except in self-defense. To endanger another state's military aircraft would be contrary to the coastal state's obligation to have due regard for the rights and duties of the foreign state in the EEZ.

## The ICAO Manual on Military Activities

Shortly after publishing the study on the EEZ's impact on international air law, ICAO in 1990 published the *Manual Concerning Safety Measures Relating to Military Activities Potentially Hazardous to Civil Aircraft Operations.*[39] Since ICAO does not have authority to regulate the activities of military aircraft, the guidance material is advisory in nature—that is, not binding on any state.[40] However, its key assumptions are especially noteworthy, because the manual was developed by the ICAO Secretariat with the assistance of an air navigation study group consisting of both civil air traffic services and military experts from seven contracting states and three international organizations.[41]

The guidance material carries forward the traditional air-law perspective on the two types of airspace. The manual calls for the coordination of military activities with the appropriate air traffic services authorities "whether over the territory of a State *or* over the high seas," with no mention of the EEZ.[42] The manual provides that coordination of military activities should be effected "whether the military and the ATS [air traffic services] authorities belong to the same or different states."[43]

This latter stipulation reflects ICAO's recognition that military activities may occur in areas outside of the coastal state's territory, where the coastal state provides air traffic and flight services for international civil aviation. Such services are usually part of a flight information region (FIR). FIRs are allocated to coastal states by ICAO for the safety of civil aviation and encompass both national and international airspace. FIRs often extend to the airspace beyond the territorial sea and into the EEZ.

The manual further anticipates that military activities may be carried out in the FIR of a coastal state without the coastal state's consent. The manual advises that military activities in international airspace administered by the coastal state should be coordinated "even if the States whose military organization and ATS authorities concerned find themselves temporarily in *diplomatic disagreement.*"[44] This last statement confirms ICAO's understanding that the coastal state's consent is not required.

If direct coordination with the appropriate ATS authorities via aeronautical or diplomatic channels is not possible, the coordination should be effected with the assistance of the appropriate regional office of ICAO or the ATS authorities of another state.[45] The manual suggests that the state whose military organization is planning the potentially hazardous activities should initiate the coordination process with the appropriate ATS authorities:

> For example, a naval force of State A, operating in the FIR of (friendly) State B, plans a potentially hazardous activity in the FIR of State C and States A and B agree through prior arrangements, the ATS authority of State B may coordinate the potentially hazardous activity directly with the ATS authority of State C. The ATS authority will be able to provide information and assistance in achieving coordination with all appropriate ATS authorities and ATS units and to give advice as to the impact which the planned activity is likely to have on civil aircraft operations in the area.[46]

The implication of the manual's example is clear—international law permits military activities to be conducted in a FIR administered by a foreign state even when those activities are unwelcome. The EEZ is an area within the FIR where military activities can be conducted without the coastal state's consent. The legal regime of the airspace over the EEZ remains what it was before the EEZ was created—international airspace.

Finally, although military aircraft enjoy the high-seas freedom to fly in the EEZ, the manual does identify military activities that could pose a threat to civil aircraft and that should be coordinated with ATS authorities.[47] Aerial reconnaissance and surveillance were not included in this list. Accordingly, there is no duty to notify a coastal state of upcoming surveillance and reconnaissance flights in a FIR beyond its national airspace.

## UNIDIR on Aerial Reconnaissance

In 1990, after UNCLOS was opened for signature and ICAO had published the results of its study on the legal status of the EEZ's airspace, the UN Institute for Disarmament Research (UNIDIR) published a document in which the UN agency expressed the view that aerial reconnaissance conducted in international airspace—or "peripheral reconnaissance"—is legally permissible:

> There is nothing illegal *per se* in aerial reconnaissance. In time of peace its legality depends upon whether it is being conducted in national or international airspace. If reconnaissance aircraft of State A is flying in international airspace, at no time entering the territorial airspace of State B whose territory it is photographing or otherwise monitoring, then State A commits no offense. This is termed "peripheral reconnaissance." In contrast, should the aircraft of State A stray into the territorial airspace of State B, although it performs the same act, its locus converts this into an illegal activity, provided it has not obtained the prior consent of State B. The latter is termed "penetrative reconnaissance."[48]

UNIDIR cited two incidents in 1960 to support its views about "peripheral" and "penetrative" reconnaissance. The first incident concerned a U-2 aircraft shot down in 1960 deep in Soviet airspace. The Soviet Union captured the U-2 pilot and convicted him of espionage. The United States did not deny that the U-2 pilot had violated Soviet airspace, and it did not protest the Soviet prosecution of its pilot.

The second incident occurred two months after the first incident. A Soviet fighter shot down an RB-47 reconnaissance aircraft over the Barents Sea in international airspace. The United States strenuously protested the shoot-down, noting that the RB-47 aircraft had at all times remained outside the territorial sea of the Soviet Union and arguing that its destruction was a clear breach of international law. The Soviet Union implicitly admitted its error by expeditiously repatriating the survivors without charging them with espionage, even though the RB-47 had flown close to its territory and was conducting military reconnaissance.[49] The distinguishing feature of this last incident was the aircraft's presence in international airspace.

Although the legal views expressed by UNIDIR do not bind UN member states, these views have persuasive value in that they accurately reflect the prior acceptance within the international community of "peripheral reconnaissance" as a lawful use of the sea. The aircraft's presence in international airspace determines whether its activities are legally permitted.

In this way, aerial reconnaissance in the EEZ is like space-based reconnaissance and surveillance. Although space-based reconnaissance and surveillance may be directed at the surface of the earth, the right to conduct them is generally accepted. Such activity originates in outer space, an area that is beyond the sovereignty of any state and is open for use by all states. Just as outer space is not subject to national appropriation by claim of sovereignty, "no state may validly purport to subject any part of the high seas to its sovereignty," a provision that applies equally to the EEZ by virtue of article 58(2) of UNCLOS.[50]

## The Debate over "Peaceful Purposes"

Some critics nevertheless oppose aerial reconnaissance in the EEZ by calling for a complete demilitarization of the seas.[51] These critics usually cite four provisions in UNCLOS—articles 19, 58, 88, and 301.

Article 19(2) of UNCLOS lists activities prohibited during "innocent passage" by ships in the coastal state's territorial sea. One such activity is "any act aimed at collecting information to the prejudice of the defence or security of the coastal State."[52] The critics stress that under UNCLOS collecting information on a coastal state in its territorial sea can be

prejudicial to the peace, good order, and security of the coastal state, thus rendering a ship's passage in the territorial sea as not "innocent."

Additionally, article 88 of UNCLOS provides that "the high seas shall be reserved for peaceful purposes." Article 58(2) incorporates by reference this provision into the EEZ's legal regime. Finally, article 301 concerns the peaceful uses of the seas: "In exercising their rights and performing their duties under this Convention, States Parties shall refrain from any threat or use of force against the territorial integrity or political independence of any State, or in any other manner inconsistent with the principles of international law embodied in the Charter of the United Nations."

In citing these provisions, the critics reason that "an activity considered to violate innocent passage in the territorial sea cannot be considered to be a 'peaceful activity' in the EEZ."[53] These critics argue that intelligence gathering, no matter where it occurs, is prejudicial to the coastal state's security, because it constitutes a threat or use of force against the coastal state. They conclude that UNCLOS prohibits aerial reconnaissance in the EEZ.

The difficulty with this logic, however, is that it would lead to the complete demilitarization of the seas, as some critics acknowledge.[54] The peaceful-purposes clauses do not impose any blanket restrictions on military activities at sea. The term "peaceful purposes" is not defined anywhere. Intelligence-gathering activities have historically constituted one of the traditional uses of the sea and until recently were undertaken without protest from coastal states. Many states have flown aerial reconnaissance missions in the EEZ, including China and Russia.[55]

### *The Real Meaning of "Peaceful Purposes"*

Article 301 of UNCLOS provides the most plausible explanation of what is meant by "peaceful purposes." Article 301 was clearly inspired by article 2(4) of the UN Charter, repeating verbatim the latter's ban on the threat or use of force.[56] It should be noted, however, that the UN Charter does not prohibit just any threat or use of force.[57] It must be a threat or use of force against the territorial integrity or political independence of a state or otherwise be inconsistent with the principles of international law embodied in the charter.

For example, the concentration of naval forces in the EEZ of another state accompanied by certain political demands against that state would violate the UN Charter. A coastal state could consider foreign military maneuvers in its EEZ a threat of force, if the maneuvers were conducted in an atmosphere of high political tension and accompanied by tacit or overt demands.[58] The point is that the threat or use of force must be accompanied by a coercive intent to intimidate the other state into taking or not taking certain action, and the threat must be directed against the territorial integrity or political

independence of that state in a manner inconsistent with the UN Charter.[59] It is difficult to understand how aerial reconnaissance by an unarmed military aircraft in international airspace would on its own constitute a threat or use of force in violation of the UN Charter. State practice reveals a high degree of tolerance toward mere reconnaissance or surveillance of the coastal state from international airspace.

### *Misapplication of the Innocent-Passage Regime*

The critics' argument misapplies the innocent-passage regime to aircraft. Innocent passage is available only to ships, not to aircraft. No aircraft of any type—state or civil—can claim a customary right of "innocent passage" through any part of another state's national airspace, except for transit passage over international straits and archipelagic sea-lanes. Civil aircraft fly over, and land in, the territory of other states only because a privilege is conferred by the Chicago Convention or other treaty.[60] The privilege to fly over another state or land in its territory may be suspended in time of armed conflict or national emergency.[61] When an aircraft makes an unwelcome intrusion into national airspace, the mere violation of national airspace may be viewed as a direct threat to the state's security, especially when the destructive power of a nuclear weapon or other weapon of mass destruction potentially on board an aircraft is taken into consideration. The coastal state cannot always know whether the aerial intrusion is deliberate and with illicit intent or innocent and essentially harmless. On the other hand, an aircraft's mere flight in international airspace does not in itself constitute a threat to the coastal state.

Moreover, the critics' argument ignores the territorial sea's proximity to the coastal state as well as the legal distinctions in UNCLOS between the various zones emanating outward from the territory. To appreciate this distinction, one need only consider other activities that are also expressly proscribed during innocent passage in the territorial sea—such as the launching, landing, or taking on board of aircraft on a ship. Yet this activity is lawful when done outside the territorial sea or during transit passage over international straits or archipelagic sea-lanes. In fact, military aircraft may fly in formation during transit passage. The exclusion of certain activities from the territorial sea—the zone closest to a coastal state—suggests that these activities are permitted elsewhere. Otherwise, UNCLOS would flatly prohibit these activities no matter where they occur.

## Aerial Reconnaissance of Coastal States Promotes International Peace and Security

Information about the coastal state collected from the EEZ can apprise neighbors and interested states about the coastal state's ambitions or potential to threaten the region or beyond. Additionally, the UN Security Council, which is responsible for maintaining international peace and security, does not have its own intelligence service. It depends on

information it receives from UN member states. Yet new threats to international peace and security continue to arise, including from a number of coastal states, especially states that are secretive and closed.

Recent examples of coastal states with programs that pose grave concern to other states include the Democratic People's Republic of Korea and the Islamic Republic of Iran. North Korea recently conducted a second nuclear test in defiance of UN Security Council resolutions.[62] This test came shortly after North Korea launched from within its territory a long-range rocket, also in defiance of UN Security Council resolutions.[63] Additionally, the Islamic Republic of Iran is reportedly developing a nuclear weapons program and is itself the subject of several UN Security Council resolutions.[64]

Without reliable information, the UN Security Council cannot reach agreement on appropriate and effective collective action to respond to threats. Through aerial reconnaissance, the international community may refine its strategic assessment of a country and acquire a better understanding of the threat it may pose. The collection of intelligence can protect against surprise attack and reduce tension.

## Conclusion

UNCLOS preserves in the EEZ the right of overflight as well as other "internationally lawful uses of the sea" related to the operation of aircraft. Historically, aerial reconnaissance constituted an internationally lawful use of the sea. In this respect, UNCLOS makes important contributions to international law by clarifying the treatment of military aircraft in international airspace. UNCLOS confirms that military aircraft enjoy sovereign immunity, and it recognizes the right of military aircraft to enter into another state's EEZ and to exercise rights and duties within it—in particular, the rights of visit and hot pursuit. UNCLOS requires coastal states to exercise due regard for the rights and duties of other states in the EEZ.

Other states must likewise have due regard for the rights and duties of the coastal state in the EEZ. However, the coastal state's rights, duties, and jurisdiction in the EEZ relate solely to the natural resources and the maritime environment. UNCLOS does not identify the security interests of the coastal state in the EEZ as a legitimate area for legal protection and does not favor the security interests of the coastal state over the security interests of other states in the EEZ.

Because UNCLOS created a new legal regime, ICAO examined the potential impact of UNCLOS on air-law instruments—in particular, the Chicago Convention. ICAO determined that for purposes of international civil aviation the legal status of the EEZ's airspace remains essentially the same as it was before UNCLOS was negotiated, and it

concluded that no coastal state may impose its aeronautical regulations in the EEZ on international civil aviation.

ICAO continues to refer in its publications to only two kinds of airspace: territorial airspace and airspace "over the high seas." ICAO has also published recommendations on the coordination that should occur between a state's military authorities and the coastal state's ATS authorities when the coastal state administers the FIR where military activities occur. This coordination should occur even if the two states are in temporary diplomatic disagreement but is not necessary for reconnaissance and surveillance.

Aside from the "due regard" provisions relating to the EEZ's natural resources, the only limitation imposed by UNCLOS on military activities is that they be peaceful—that they not violate the UN Charter's prohibition against the threat or use of force against a state's political independence or territorial integrity. Although aerial reconnaissance may be unwelcome, intelligence gathering in the EEZ involves neither the threat nor the use of force prohibited by the UN Charter. In fact, aerial reconnaissance can be vital to international peace and security.

## Notes

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1. United Nations [hereafter UN], *United Nations Convention on the Law of the Sea of 10 December 1982,* effective 16 November 1994 [hereafter UNCLOS], art. 55.
2. Ibid., art. 38(1) (international straits), art. 53(2) (archipelagic sea-lanes).
3. Ibid., arts. 38(2), 53(3).
4. Moritaka Hayashi, "Military and Intelligence Gathering Activities in the EEZ: Definition of Key Terms," *Marine Policy* 29 (2005), p. 133.
5. UNCLOS, art. 246(1).
6. See ibid. at art. 19(1)(g) (permitting the coastal state to regulate marine scientific research [MSR] and hydrographic surveys during innocent passage); art. 40 (same for transit passage); but see art. 56(1)(b)(ii) (permitting the coastal state to regulate MSR without any mention of hydrographic surveys).
7. "Spokesman Zhu Bangzao Gives Full Account of the Collision between US and Chinese Military Planes," *Ministry of Foreign Affairs of the People's Republic of China,* 4 April 2001, www.fmprc.gov.cn/.
8. R. R. Churchill and A. V. Lowe, *The Law of the Sea,* 3rd ed. (Manchester, U.K.: Manchester Univ. Press, 1999), p. 138.
9. See the text accompanying notes 30–31 below.
10. Churchill and Lowe, *Law of the Sea,* p. 138.
11. Myron H. Nordquist, ed. in chief, Satya N. Nandan and Shabtai Rosenne, gen. eds., *United Nations Convention on the Law of the Sea 1982: A Commentary* (Herndon, Va.: Brill, 1993), vol. 2 [hereafter *Commentary,* vol. 2], p. 267.
12. For the American position on ADIZ, see U.S. Defense Dept., *Use of Airspace by U.S. Military Aircraft and Firings over the High Seas,* DODD 4540.1 (Washington, D.C.: 28 March 2007), paras. 4.1 and 6.4, available at www.dtic.mil/.
13. See *Commentary,* vol. 2, pp. 521–44.
14. According to one scholar, the sole reference to intelligence gathering as a form of objectionable military activity is contained not in a published declaration on signature or ratification of the convention but in legislation of Iran of 1993 that claims the right to prohibit "foreign military activities and practices, *collection of information* and any other activity inconsistent with the rights and interests of Iran." Ivan Shearer, "Military Activities in the Exclusive Economic Zone: The Case of Aerial Surveillance," *Ocean Yearbook* 17 (2003), p. 556 (citations omitted).

15. See UN Docs. ICAO/C-WP/8077, 1 October 1985, pp. 9–10, and ICAO/LE 4/41-84/33, 1984, pp. 17–20; Hayashi, "Military and Intelligence Gathering Activities in the EEZ," p. 127; Duk-ki Kim, "A Korean Perspective," *Marine Policy* 29 (2005), p. 159; and Barbara Kwaitkowska, "Military Uses in the EEZ: A Reply," *Marine Policy* 11 (1987), pp. 249–50.
16. *Convention on International Civil Aviation,* 7 December 1944, 15 UNTS 295, TIAS 1591 [hereafter Chicago Convention]. The Chicago Convention has been ratified by 190 states, nearly the entire international community. See *International Civil Aviation Organization,* www.icao.int/.
17. International Civil Aviation Organization [hereafter ICAO], *International Standards, Rules of the Air, Annex 2 to the Convention on International Civil Aviation,* 9th ed., July 1990.
18. See ibid., art. 12.
19. See ibid., arts. 12, 37. Additionally, every state should comply in its territory with ICAO standards to the "highest practicable degree" (ibid., art. 37). Of course, this obligation depends on the state's ability to do so. Some states lack the resources, the technology, or the expertise to comply with certain standards. When a regulation is beyond the power of a state to comply with it, international law does not require the state to do the impossible—or, as it is said, *ultra posse nemo tenetur.* If a state "finds it impracticable to comply in all respects with any such international standards or procedure," it must file a "difference" with ICAO, notifying it of "the differences between its own practice and that established by the international standard"; ICAO will then notify all other states of this difference. Over the high seas, however, states may not file differences or deviate from the Rules of the Air.
20. Ibid., art. 12.
21. Ibid.
22. Michael Milde, "Interception of Civil Aircraft vs. Misuse of Civil Aviation (Background of Amendment 27 to Annex 2)," *Annals of Air and Space Law* 11 (1986), p. 106.
23. *Consideration of the Report of the Rapporteur on "United Nations Convention on the Law of the Sea—Implications, If Any, for the Application of the Chicago Convention, Its Annexes and Other International Air Law Instruments,"* ICAO Doc. No.: LC/26/WP/5-1, 4 February 1987, reproduced in *International Organizations and the Law of the Sea Documentary Yearbook* 3 (1987), p. 243.
24. Ibid., para. 19.4.
25. See Chicago Convention, art. 11 (air regulations); art. 35 (cargo restrictions); art. 3*bis*(b) (right to order aircraft flying over territory to land for inspection); art. 5 (right to require landing of aircraft in nonscheduled service).
26. The ICAO use of the phrase "over the high seas" to describe the airspace over areas traditionally considered high seas, including the EEZ, can lead to confusion. Although "international airspace" does not appear in UNCLOS or in any air-law instrument, the term may be useful in referring to airspace outside of national airspace where all states enjoy the freedom of overflight.
27. Chicago Convention, art. 3(c).
28. Ibid., art. 3(d), art. 3*bis*.
29. Ibid., art. 3(a).
30. UNCLOS, art. 42(5) (addressing international responsibility of state of registry for loss or damage caused by aircraft entitled to sovereign immunity during transit passage); art. 236 (like warships, military and other governmental aircraft are expressly immune from provisions regarding the protection and preservation of the marine environment).
31. *Convention Relating to the Regulation of Aerial Navigation,* 13 October 1919, 297 LNTS 173 (1922), art. 32.
32. John Cobb Cooper, "A Study on the Legal Status of Aircraft," in *Explorations in Aerospace Law,* ed. Ivan A. Vlasic (Montreal: McGill Univ. Press, 1968), p. 243.
33. See UNCLOS, art. 58(2) ("Articles 88 to 115 and other pertinent rules of international law apply to the exclusive economic zone in so far as they are not incompatible with this Part"); arts. 99–107 (repression of piracy); art. 108 (illicit traffic in narcotic drugs); art. 109 (unauthorized broadcasting); art. 110 (right of visit); art. 111 (right of hot pursuit); and art. 224 (exercise of powers of enforcement). It is noteworthy that the right of hot pursuit ceases only when the ship pursued enters the territorial sea of its own state or of a third state (UNCLOS, art. 111[3]), not when it enters the EEZ of its own or a third state.
34. Ibid., art. 58(1).
35. Ibid., art. 38(1). UNCLOS requires military aircraft in transit passage to monitor continuously certain emergency radio frequencies to ensure the safety of navigation of other aircraft in those straits or sea-lanes. Military aircraft are obligated to possess this capability if they operate in straits or sea-lanes; ibid., art. 39(3)(b) and art. 54. (Article 39 applies, mutatis mutandis, to archipelagic sea-lanes passage.)
36. Ibid., art. 87(2), art. 58 (applying in the EEZ the freedom of overflight referred to in article 87).
37. Chicago Convention, art. 3(d).

38. See Bi Guifang and Xiong Xuyuan, "A Legal Analysis of the Establishment of Air Defense Identification Zones," in "Social Sciences," special issue, *Journal of Ocean University of China,* no. 6 (2007), p. 39 (defending "normal" military exercises by Chinese warplanes and warships within the Japanese ADIZ against criticism by the Japanese).
39. Doc. 9554-AN/932 (first edition, 1990).
40. Ibid., para. 1.2.
41. Ibid., foreword.
42. Ibid., para. 2.16.1 [emphasis added], para. 3.1 [phrase repeated].
43. Ibid., para. 3.1.
44. Ibid., para. 3.4 [emphasis added].
45. Ibid., para. 3.4.
46. Ibid., para. 3.5.
47. These military activities are "a) practice firing or testing of any weapon air-to-air, air-to-surface, surface-to-air or surface-to-surface in an area or in a manner that could affect civil air traffic; b) certain military aircraft operations such as air displays, training exercises, and the intentional dropping of objects or of paratroopers; c) launch and recovery of space vehicles; and d) operations in areas of conflict, or the potential for armed conflict, when such operations include a potential threat to civil air traffic." Ibid., para. 3.2.
48. Allen V. Banner, Andrew J. Young, and Keith W. Hall, *Aerial Reconnaissance for Verification of Arms Limitation Agreements: An Introduction* (New York: UN Institute for Disarmament Research, 1990) [hereafter UNIDIR], p. 19 (footnotes omitted), citing with approval F. Fedele, "Overflight by Military Aircraft in Time of Peace," *The United States Air Force Judge Advocate General's Corps Law Review* 9, no. 5 (1967), p. 8.
49. UNIDIR, p. 20; Fedele, "Overflight by Military Aircraft in Time of Peace," p. 21.
50. UNCLOS, art. 89.
51. See, e.g., Li Guang-Yi, "On Legal Issues Associated with the Military Usage of Exclusive Economic Zone," *Journal of Xi'an Politics Institute* 18, no. 2 (April 2005), p. 57 ("the substantial spirit of the 'for peaceful purposes only' principle is complete demilitarization").
52. UNCLOS, art. 19(2)(c).
53. See, e.g., Ji Guoxing, "The Legality of the *Impeccable* Incident," *China Security* 5, no. 2 (Spring 2009), p. 19.
54. See, e.g., Li Guang-Yi, "On Legal Issues Associated with the Military Usage of Exclusive Economic Zone."
55. For China, Hayashi, "Military and Intelligence Gathering Activities in the EEZ," p. 135; Bi Guifang and Xiong Xuyuan, "Legal Analysis of the Establishment of Air Defense Identification Zones"; Ji Guoxing, "Legality of the *Impeccable* Incident," pp. 19–20 (defending the right of transit passage by Chinese warships through the Tsugaru and Tsushima Straits into the Japanese EEZ).

    For Russia, Michael Evans, "Russian 'Spy' Planes Put RAF on Cold War Alert," *Times* (London), 10 May 2007, www.timesonline.co.uk/; Christian Neef, "Why Is Moscow Risking a New Cold War?" *Der Spiegel,* www.spiegel.de/.
56. B. Oxman, "The Regime of Warships under the United Nations Convention on the Law of the Sea," *Virginia Journal of International Law* 24 (1984), p. 832.
57. See Raul Pedrozo, "Military Activities in and over the Exclusive Economic Zone," in *Freedom of Seas, Passage Rights and the 1982 Law of the Sea Convention,* ed. M. H. Nordquist, Tommy Koh, and John Norton Moore (The Hague: Martinus Nijhoff, 2009), p. 241 ("UNCLOS Article 19 makes a clear distinction between a 'threat or use of force against the sovereignty, territorial integrity or political independence of the coastal State' and 'any act aimed at collecting information to the prejudice of the defense or security of the coastal State.' Both are prohibited in the territorial sea for ships engaged in innocent passage, but they are clearly distinct and independent activities").
58. Hayashi, "Military and Intelligence Gathering Activities in the EEZ," p. 126.
59. Ibid., p. 136.
60. For civil aircraft on nonscheduled international air service, see Chicago Convention, art. 5. For civil aircraft on scheduled international air services, see Chicago Convention, art. 6, and *International Air Services Transit Agreement,* signed at Chicago on 7 December 1944, available at www.icao.int/icao/en/leb/transit.pdf.
61. Chicago Convention, art. 89. The coastal state may also suspend "innocent passage" in peacetime for a variety of reasons, to include weapons exercises; UNCLOS, art. 25(3).
62. "North Korea Claims to Conduct 2nd Nuclear Test," *New York Times,* 25 May 2009.
63. UN SCOR S/RES/1874 (2009).
64. See UN SCOR S/RES/1737 (2007), UN SCOR S/RES/1747 (2007), and UN SCOR S/RES/1803 (2008).

# The Concept of Marine Scientific Research

*Wu Jilu*

The United Nations Convention on the Law of the Sea (UNCLOS) does not permit other states to conduct marine scientific research in the exclusive economic zone (EEZ) without the permission of the coastal state. However, UNCLOS does not define "marine scientific research" or some related terms, such as "hydrographic survey" or "military survey." The United States maintains that hydrographic and military surveys do not relate to coastal-state resources and are not for scientific purposes and are therefore high-seas freedoms retained by all states in the EEZ therefore outside the jurisdiction of coastal states.[1] China holds the view that hydrographic surveying is part of marine scientific research and has specific laws governing both marine scientific research and hydrographic surveying.[2] To understand which position reflects the current state of international law, it is necessary to analyze the concept of "marine scientific research" (MSR) and related terms.

## The History of Marine Scientific Research as a Scientific Concept

As a scientific discipline, MSR, or oceanography, developed over the past 150 years or so. The first significant step in this development was the cruise of the British research vessel HMS *Challenger* in 1872–76.[3] The ship, a corvette-type military vessel, departed Portsmouth, England, on 21 December 1872 and traveled for more than three years circumnavigating the globe and studying the scientific characteristics of the ocean. During the voyage, HMS *Challenger* visited every continent, including Antarctica, allowing scientists to take depth soundings, collect deep-sea water, take sea-bottom and biological samples, investigate deepwater motion, and measure temperatures at all depths and in all the world's oceans.[4] It was on this expedition that the existence of manganese nodules on the deep-sea bed was first noted. The results from the expedition were staggering and filled fifty volumes, leading to increased scientific study of the oceans and to the use of the terms "marine science" and "oceanic research" as scientific disciplines. Oceanography as a modern science is generally considered to have begun with the cruise of HMS *Challenger,* which set the pattern for all expeditions for the next fifty years.

The major scientific emphasis of HMS *Challenger*'s cruise was on marine biology, and in this field significant progress was made during the early days of marine scientific

research. After this initial period, the emphasis of MSR shifted gradually from biological to physical oceanography.[5] World War II marked the beginning of "postmodern" oceanography, and after the war oceanography grew rapidly.[6] There are three factors that contributed to this rapid growth. The first and probably the most important factor was a boost in terms of technology and knowledge enhancement caused by military necessity. The second was the need to satisfy the world's growing requirements for resource extraction from the oceans, maritime transportation, and naval strategy. The third factor was the increase in scientific capacity itself.[7] The emphasis during the postwar period has been on geological and geographical studies. In recent years, global climate change and the environmental problems of the oceans have strengthened the position of oceanography as an interdisciplinary science. Valuable input has come from an unlikely source—previously classified data from military observations and systematic surveys that are now available to the general public.[8]

U.S. oceanography grew rapidly after World War II, and in the years immediately after the war the Office of Naval Research (ONR), which was established in 1946, provided most of the support and much of the leadership. The Bureau of Ships and other naval operations groups supplied significant funds for a variety of research activities related to their military mission, but ONR funded research activities at the Scripps and Woods Hole institutes and thereby fostered a broader research agenda.[9] One federal report for fiscal year 1969 shows that the U.S. Navy's contractual oceanographic program was 40 percent larger than the program of the National Science Foundation. Another report shows them essentially equal. The current structure of the science of oceanography—which involves an interdisciplinary grouping of marine physicists, biologists, engineers, chemists, and geologists—was largely created by the U.S. Navy to meet its specific needs.[10] During the past century, and especially since World War II, the major provider of technological capabilities was the U.S. Navy, resulting in a long and distinguished list of scientific accomplishments derived from Navy-developed instruments and technologies.[11] The development of oceanography in the United States grew in large part as a result of increased national security interests, with the U.S. Navy taking overall responsibility for marine scientific research and supporting extensive scientific investigations to provide a more complete understanding of the ocean environment.[12]

Marine scientific research in China lags behind that in the United States. Nonetheless, at an early stage of the development of marine surveys and marine scientific research as scientific disciplines, the Chinese navy played an important role. In 1953, the Chinese navy headquarters and other departments set up China's first ocean-wave observatory, in Qingdao.[13] In 1956, the navy compiled a tide table of China.[14] In July 1957 the Chinese navy and the Chinese Academy of Sciences, with other government agencies and academic institutes, began to carry out multivessel, simultaneous observations in

the Bo Hai Sea and the northwestern Yellow Sea over the period of one year, which was the beginning of China's large-scale comprehensive marine survey program.[15] Before 1964, China's marine survey and scientific research was conducted under the guidance of the Marine Group in the State Science and Technology Commission, organized and implemented by the navy.[16] In 1964, China established the National Bureau of Oceanography (which was later translated as "the State Oceanic Administration"), whose principal function was to organize marine surveys. Initially, the State Oceanic Administration was under the People's Liberation Army Navy until it was returned to control of the State Science Commission in 1980. The results of marine scientific research in China have been widely used in resource development and protection, enhance the safety of maritime navigation, protect national security, and support military activities at sea.

Recalling the history of the development of marine scientific research, the broad disciplines it encompasses, and the many purposes for which it was undertaken, marine scientific research or oceanography, generally speaking, can be defined as any study or related experimental work designed to increase humankind's knowledge of the marine environment. As a discipline it consists of a number of subdisciplines, which are concerned respectively with the physical, chemical, biological, geological, and other features of the oceans. The many purposes for which marine scientific research can be undertaken include protection of maritime safety, the study of marine living and nonliving resources, and support to military activities at sea. Thus, the purpose for which the oceanographic research is undertaken cannot be used as the basis for determining whether an activity constitutes marine scientific research for the purposes of UNCLOS, nor does the publication or nonpublication of research results determine whether specific research falls within the UNCLOS definition.

## Defining Marine Scientific Research

In the 1950s, the Geneva Convention on the Continental Shelf introduced the concept of "fundamental oceanographic research" as distinct from marine exploration for resources:[17]

> The exploration of the continental shelf and the exploitation of its natural resources must not result in . . . any interference with fundamental oceanographic or other scientific research carried out with the intention of open publication. . . . [Art. 5(1)]

> [Additionally, the] consent of the coastal state shall be obtained in respect of any research concerning the continental shelf and undertaken there. Nevertheless, the coastal state shall not normally withhold its consent if the request is submitted by a qualified institution with a view to purely scientific research into the physical or biological characteristics of the continental shelf, subject to the proviso that the coastal State shall have the right, if it so desires, to participate or to be represented in the research, and that in any event the results shall be published. [Art. 5(8)]

After the 1970s, the term "marine scientific research" began to earn currency in the debates of the United Nations Conference on the Law of the Sea, and the final draft of UNCLOS adopted the term, without defining it, to provide coastal-state jurisdiction to regulate the conduct of non-resource-related oceanographic research in the exclusive economic zone.[18]

The Ad Hoc Committee to Study the Peaceful Uses of the Sea-Bed and the Ocean Floor beyond the Limits of National Jurisdiction held three sessions in 1968. In the course of its work reference was made to the increasing role of marine science and technology in the exploration and exploitation of the seabed. Some members of the committee pointed out that a distinction should be made between fundamental, or pure, scientific research and resource-oriented, or applied, research.[19] The distinction between "fundamental" (or "pure" or "basic") scientific research and "applied" scientific research was the source of major conflict at these sessions. The proponents of this distinction insisted that fundamental research in the EEZ be carried out in accordance with the principle of the freedom of scientific investigation on the high seas. The opposing view was that it would be extremely difficult to draw distinctions between the various kinds of research, since any data acquired from scientific investigations could be used for commercial or other practical purposes.[20] In the course of the debates in the following years, it proved extremely difficult to develop a consensus definition of marine scientific research. The emphasis in the discussions shifted from the development of distinctive criteria to the development of rules to govern the conduct of such research.

Still, three official proposals discussed the definition of marine scientific research. A Canadian working paper defined marine scientific research and its objectives:

> 2. Marine scientific research is any study, whether fundamental or applied, intended to increase knowledge about the marine environment, including all its resources and living organisms, and embraces all related scientific activity.
>
> 3. The objectives of marine scientific research include achievement of a level of understanding which allows accurate assessment and prediction of oceanic processes and provide the basis for the development of a management policy which will ensure that the quality and resources of the marine environment are not impaired, and for the rational use of this environment, in the service of human welfare, international equity and economic progress, and in the interest of peace and international cooperation among States.[21]

Four Eastern European states jointly proposed that MSR could be defined as follows:

> Scientific research in the world ocean means any fundamental or applied research and related experimental work, conducted by States and their juridical and physical persons, as well as by international organizations, which does not aim directly at industrial exploitation but is designed to obtain knowledge of all aspects of the natural processes and phenomena occurring in ocean space, on the seabed and in the subsoil thereof, which is necessary for the peaceful activity of States for the further development of navigation and

> other forms of utilization of the sea and also utilization of the air space above the world ocean.[22]

Finally, article I of a proposal submitted by Malta read, "In these articles the term scientific research means any systematic investigation, whether fundamental or applied, and related experimental work the primary aim of which is to increase knowledge of the marine environment for peaceful purposes."[23]

The Working Group on Marine Scientific Research and Transfer of Technology produced a text containing a draft definition of marine scientific research: "Marine scientific research is any study and related experimental work, excluding industrial exploration and other activities aimed at the direct exploitation of marine resources, designed to increase mankind's scientific knowledge of the marine environment and conducted for peaceful purposes."[24]

It should be noted that the above definitions of marine scientific research contain elements indicating the nature and objectives of the research activity, in order to distinguish marine scientific research from resource exploration.[25] But two proposals submitted during the third session of the conference (UNCLOS III, 1975) did not contain an indication of the nature of the research. The definition in the proposal submitted by a group of nine Eastern European states reads, "Marine scientific research means any study of, or related experimental work in, the marine environment that is designed to increase man's knowledge and is conducted for peaceful purposes."[26]

Colombia, El Salvador, Mexico, and Nigeria submitted the following draft: "For the purpose of this Convention, marine scientific research means any study and related experimental work conducted in the marine environment designed to increase mankind's knowledge thereof."[27]

It seems that the term "marine scientific research" as defined in these two texts included not only research activities unrelated to resource exploration but also research activities related to resource exploration. However, both proposals made a distinction between these two categories of marine scientific research in their substantive provisions. According to these provisions different rules would apply to the two kinds of research. As a result, the problem of establishing criteria to define the scope of scientific research activities to which the substantive provisions would apply was shifted from the discussions on the definitional article to the discussions on the substantive provisions. At the fourth session of the conference (spring 1976), consensus was reached to abandon the definition of marine scientific research—at least not to consider the question for the time being.[28] Consequently, the definition was absent from the final text of UNCLOS and remains absent today.

## Marine Scientific Research in UNCLOS

UNCLOS does not contain a definition of marine scientific research because there was a consensus at the conference that the substantive provisions of the convention clearly establish the meaning intended, making a definition of the term unnecessary.[29] Examining the substantive provisions related to marine scientific research in the various regimes established by UNCLOS, it can be found that the activities that can be regarded as marine scientific research vary in the various maritime zones established by the convention, although the term might otherwise seem to have a clear ordinary meaning, as discussed above.

Under the regime of the high seas, the term "marine scientific research" can be understood in a general sense. According to article 87, scientific research is one of the six fundamental freedoms that can be exercised under the conditions laid down by UNCLOS and by other rules of international law.[30] The marine scientific research activities within the high seas can be either fundamental or applied. The results can be used either for civilian purposes or for military activities. The research can either have no direct links with resource development and environmental protection, or it can have as its main objective the protection of the marine environment or marine-resource exploration and development. The only exception is that scientific research on the high seas cannot be related to the development of the resources of the continental shelf beyond a coastal state's exclusive economic zone.[31]

The "Area" regime is a new system established under the convention to regulate mineral resource development activities on the seabed of the high seas so as to protect these resources as the "common heritage of mankind."[32] The provisions of UNCLOS Part IX dealing with the Area (i.e., the seabed under the high seas) seem to have as their main purpose the regulation of the activities of states in investigating, researching, and developing the resources in the Area. How to protect the environment in the Area while states carry out the development of its resources has recently become an important issue.

The meaning of research and the activities under the jurisdiction of coastal states are also different, depending on the maritime zone. In the territorial sea, the general meaning of research is used in UNCLOS, which specifies that research and survey activities are a violation of the innocent-passage regime in the territorial sea.[33] Hydrographic surveys and military surveys for the safety of navigation can be seen as applied scientific research.

In the EEZ regime, coastal states exercise sovereign rights over exploration, development, conservation, and management of marine resources and exercise jurisdiction over marine environmental protection and marine scientific research.[34] It is very clear that in the exclusive economic zone, the convention treats activities related to resource development

and environmental protection separately from marine scientific research, which is in sharp contrast with the convention's approach to the issue in the high seas and the Area. Thus, within the EEZ research activities directly related to resource development and environmental protection are not marine scientific research. All remaining activities, including hydrographic and military survey activities, are therefore considered part of marine scientific research, subject to the jurisdiction of the coastal state.

Since in the relevant provisions of the EEZ regime survey activities were not distinguished from marine scientific research, Sam Bateman concludes that "marine scientific research, hydrographic surveying and military surveys all overlap to some extent. Some so-called military surveys, particularly military oceanographic research, are virtually the same as marine scientific research."[35]

As for intelligence collection, if the collection is limited to the activities of warships, submarines, etc., of the coastal states in order to increase understanding of their performance and to activities and not directly related to the marine environment research, it cannot be considered marine scientific research. However, that is a problem beyond the scope of this paper.

## Conclusion

Although UNCLOS does not fully and finally define marine scientific research, such activities are generally divided into fundamental research and applied scientific research. Having examined the relevant provisions of UNCLOS, we can find that marine scientific research has different usages depending on whether it is directly related to the activities of resource exploration and development and of environmental protection.

Under the regime of high seas, the term "marine scientific research" has its most expansive meaning. In the Area, the main purpose of marine scientific research activities is exploration and development of the resources of the Area and the protection of the environment of the Area. In the territorial seas, marine scientific research can be seen as fundamental research that is different from hydrographic survey.

Under the regimes of the exclusive economic zone and the continental shelf, the exploration, development, conservation, and management of marine resources are considered to be the sovereign right of coastal states, and the coastal states exercise jurisdiction over marine environmental protection and marine scientific research activities. Here, marine survey and research activities directly related to resource development and environmental protection are not considered marine scientific research. As for the hydrographic and military surveys in the exclusive economic zone, they are within the scope of activities over which the coastal state has the right to exercise jurisdiction, because they fall under the definition of marine scientific research for those zones.

## Notes

1. J. A. Roach and R. W. Smith, *Excessive Maritime Claims,* International Law Studies 66 (Newport, R.I.: Naval War College, 1994), p. 247; U.S. Navy Dept., *The Commander's Handbook on the Law of Naval Operations,* Naval Warfare Publication (NWP) 1-14M (Washington, D.C.: 1995), sec. 2.4.2.2.
2. See Zou Keyuan, *China's Marine Legal System and the Law of the Sea* (Leiden, Neth.: Martinus Nijhoff, 2005), pp. 280–83.
3. A complete set of the reports of HMS *Challenger*'s voyage can be found at *eScholarship: University of California,* escholarship.org/.
4. Florian H. Th. Wegelein, *Marine Scientific Research: The Operation and Status of Research Vessels and Other Platforms in International Law* (Leiden, Neth.: Martinus Nijhoff, 2005), pp. 22–24.
5. Alfred H. A. Soons, *Marine Scientific Research and the Law of the Sea* (Dordrecht, Neth.: Kluwer Academic, 1982), p. 13.
6. Ocean Studies Board, National Research Council, *50 Years of Ocean Discovery: National Science Foundation 1950–2000* (Washington, D.C.: National Academies Press, 2000), p. 107.
7. Wegelein, *Marine Scientific Research,* pp. 25–26.
8. Ibid., p. 35. "A significant amount of previously classified ocean data collected on the high seas has been made public and the multiagency MEDEA group will continue to bridge the national security and civil communities for access to classified environmental data. Releasable unclassified data and products are routinely made available to the civil sector." See: "Department of Defense Meeting of the Commission on Ocean Policy, November 14, 2001," *United States Commission on Ocean Policy,* p. 2, oceancommission.gov/.
9. Ocean Studies Board, *50 Years of Ocean Discovery,* p. 3.
10. Ibid., p. 8.
11. Ibid., p. 131. These instruments and technologies include SWATH bathymetric sonar, laser line-scan optical sensors, the global positioning satellite system, ocean bottom seismometers, seagoing fluxgate total-field magnetometers, *Alvin* and *Flip,* acoustic Doppler current meters, bioluminescence sensors, and long-term mooring technologies.
12. Ibid., p. 201.
13. Luo Yuru and Zeng Chengkui, eds., *Marine Affairs of Contemporary China* [in Chinese] (Beijing: China Social Science, 1985), p. 84.
14. Ibid., p. 90.
15. Ibid., p. 38.
16. Ibid., p. 20.
17. *Convention on the Continental Shelf,* concluded 29 April 1958, available at untreaty.un.org/.
18. Adopted in UNCLOS, art. 56. Montserrat Gorina-Ysern, *An International Regime for Marine Scientific Research* (Ardsley, N.Y.: Transnational, 2003).
19. Myron H. Nordquist, ed. in chief, Satya N. Nandan and Shabtai Rosenne, gen. eds., *United Nations Convention on the Law of the Sea 1982: A Commentary* (Dordrecht, Neth.: Martinus Nijhoff, 1991), vol. 4, p. 430.
20. Ibid., p. 433.
21. Ibid., p. 441.
22. Ibid.
23. Ibid., p. 442.
24. A/CONF.62/C.3/L.17.
25. Soons, *Marine Scientific Research and the Law of the Sea,* p. 124.
26. A/CONF.62/C.3/L.26.
27. A/CONF.62/C.3/L.29.
28. Soons, *Marine Scientific Research and the Law of the Sea,* p. 123.
29. Ibid., p. 124.
30. UNCLOS, art. 87(1)(f).
31. See, e.g., ibid., arts. 77(1) and 81.
32. Ibid., Part IX, and especially art. 136.
33. Ibid., art. 19(2)(j). "Hydrographic surveys" are generally made to obtain information for the making of navigational charts and the safety of navigation and include determination of one or more of several classes of data in coastal or relatively shallow areas—depth of water, configuration and nature of the natural bottom, direction and force of currents, heights and times of tides and water stages, and hazards of navigation—for the production of nautical charts and similar products to support safety of navigation. "Military surveys" refers to activities conducted in the ocean and coastal waters involving marine data collection (whether or not classified) for military purposes and can include oceanographic, marine geological, geophysical, chemical, biological,

and acoustic data. Equipment used can include Fathometers, swath bottom mappers, side-scan sonars, bottom-grab and coring systems, current meters, and profilers. Moritaka Hayashi, "Military and Intelligence Gathering Activities in the EEZ: Definition of Key Terms," *Marine Policy* 29 (2005), p. 131.

34. UNCLOS, art. 56(1).

35. Sam Bateman, "Hydrographic Surveying in the EEZ: Differences and Overlaps with Marine Scientific Research," *Marine Policy* 29 (2005), p. 174.

# Resources Rights and Environmental Protection in the Exclusive Economic Zone

## The Functional Approach to Naval Operations

*Cdr. James Kraska, JAGC, U.S. Navy*

The 1982 United Nations Convention on the Law of the Sea (UNCLOS) is perhaps the most comprehensive environmental treaty ever adopted.[1] As an umbrella or framework treaty, UNCLOS contains broad guidelines for addressing preservation of the marine environment. During its negotiation, the United States and other states sought to create a treaty that would promote preservation of the marine environment without impairing legitimate ocean activities, and this objective was accomplished.[2] Nevertheless, the enforcement rights demanded by some coastal states in the exclusive economic zone (EEZ) raised the specter of the creation of national lakes, where no foreign-flagged maritime activity could occur without the permission of the coastal state. Before the negotiation of UNCLOS struck a balance between coastal-state and user-state interests, creeping jurisdiction threatened to upend completely the existing global system of marine transportation. Some feared that such a jurisdictional change could effectively terminate world maritime commerce, especially if the world's coastal states began to enforce widely divergent rules or demand the payment of some form of compensation, tribute, or rent by foreign-flagged vessels to transit through their offshore waters.[3]

A workable balance, however, was reached. UNCLOS obligates states parties to take measures necessary to protect and preserve fragile marine ecosystems;[4] it also, however, provides that the International Maritime Organization (IMO) may "establish rules and standards to prevent and control pollution of the marine environment from vessels."[5] States have a general obligation to act through the IMO or a general diplomatic conference to establish international rules and standards regarding vessel-source pollution and to reexamine them from time to time as necessary.[6] More specifically, UNCLOS provides that in cases in which generally accepted standards are inadequate to protect the environment, member states may work through the IMO to obtain consensus and approval for special measures to control vessel-source pollution within the EEZ.[7]

Some UNCLOS provisions are to be read as directly operative, immediately applicable, and complementary to other IMO instruments. For example, the provisions on

navigational rights and freedoms are complete and should be implemented by all states as operative provisions. The individual articles contain specific rules that are binding on states and require no additional implementing authority. Similarly, some of the environmental provisions of the convention contain operative language as well. The provisions contained in article 226 on investigation of foreign vessels, for example, may be compared with regulations in article 5 of MARPOL 73/78. Both articles indicate how certificates should be inspected and what measures are to be taken when vessels do not have proper certificates.[8]

UNCLOS recognizes that where international rules are inadequate to meet special circumstances and a coastal state has reasonable grounds to believe that a particularly defined area in the EEZ is required "for recognized technical reasons in relation to its oceanographic and ecological conditions," the coastal state may work through the IMO to adopt special rules applicable in the area.[9] The special rules may apply to "certain clearly defined" areas of the EEZ, which suggests that they are not intended to apply throughout the entire EEZ of a coastal state. To justify adoption of such measures, evidence must suggest that the existing international rules and standards are inadequate for the special circumstances occurring within the limited area. The designation process requires an IMO determination that the conditions in a particular area correspond to the special measures being requested by the coastal state. The coastal state should consult with the IMO and other states concerned, and proposals for mandatory measures should be supported by scientific and technical evidence and information on reception facilities. Any such rules, moreover, shall not require vessels to observe construction, design, equipping, and manning (CDEM) rules that depart from "generally accepted international rules and standards."[10] UNCLOS adopted a bright-line rule against coastal-state enforcement of national CDEM standards in the EEZ, the prospect of which "struck terror" into the hearts of ship operators.[11] If coastal states had been permitted individually to enforce separate CDEM standards, the commercial shipping industry and flag-state registries would have been unable to build ships in accordance with uniform design, creating an enormous artificial inefficiency in the world transportation system.

The greatest consideration for understanding coastal-state enforcement within the rules of UNCLOS, however, is the distinction between prescriptive jurisdiction and enforcement authority. The authority of the coastal state to prescribe environmental regulations in the EEZ is broader than the coastal-state authority to enforce such regulations. That is, there is no natural corresponding balance of authority by the coastal state between prescription and enforcement. Coastal states have authority to prescribe laws and regulations in the EEZ under article 56 of the convention, provided those rules comply with the other rules of the treaty (such as articles 58 and 87, which protect the rights of all

states to enjoy high-seas freedoms in the zone). But coastal states do not enjoy a broad enforcement mandate in the zone.

## Coastal-State Prescription and Enforcement

The architecture for coastal-state enforcement of environmental rules is set forth in UNCLOS article 220. In order to bypass its more stringent rules, since 1990 states have begun advocating establishment of particularly sensitive sea areas (PSSAs), which are IMO-recognized marine sanctuaries beyond the territorial sea of a coastal state. The United States, for example, obtained IMO approval for an enormous PSSA in the northwestern Hawaiian Islands in 2008, even though the area has no discernible international shipping and no record of foreign-flagged vessels connected to environmental incidents in the area. The PSSA process may be thought of as a shortcut, bypassing UNCLOS and other instruments like MARPOL 73/78. This and other treaty-based regimes also provide authority for creation of special areas or marine environmental sanctuaries but, due to their legally binding nature, require greater procedural fidelity at IMO. The PSSA, on the other hand, sometimes captures the same purpose without the burdens of treaty negotiations.

It is important to note that PSSA designation of a particular area does not provide any additional authority for coastal-state enforcement of environmental regulation in the EEZ beyond what is provided in article 220. That is, informal and nontreaty processes of the PSSA, driven by IMO's consensus procedures and "spirit of cooperation," cannot usurp the rights of all states to freedoms of the seas that are protected in UNCLOS.

In other words, UNCLOS established an environmental framework that affords certain rights and duties to the coastal state, and the fact that a coastal state has secured a PSSA designation does not undo that part of the bargain. UNCLOS provides that in cases in which a coastal state has "clear grounds" (based on "reasonable suspicion") that a foreign-flagged vessel in its territorial sea has violated laws and regulations adopted in accordance with the convention or other applicable international rules and standards, the coastal state may undertake physical inspection of the vessel in relation to the suspected violation.[12] It is important to note that this provision contains a two-part test for launching a physical inspection of the vessel: the coastal state must have clear grounds or reasonable suspicion of a violation of its laws, and more important, those laws must have been adopted in accordance with the guidance set forth in the convention. Coastal-state laws that are inconsistent with those contained in UNCLOS, such as Canada's Arctic Waters Pollution Prevention Act, are not eligible for coastal-state assertion of enforcement authority under the convention.[13] The coastal state may also, where the evidence so warrants, institute proceedings, including detention.[14] This action by the coastal state, however, triggers the convention's provisions for prompt release.[15]

Where a coastal state has "clear grounds" that such a violation has occurred in the EEZ, the coastal state may require the foreign-flagged vessel to provide information regarding its identity and port of registry, last and next ports of call, and "other relevant information" in order to make a final determination as to "whether a violation actually occurred" (art. 220[3]). In cases in which a state has clear grounds of a "substantial discharge causing or threatening significant pollution" in the EEZ, that coastal state may initiate a physical inspection of the foreign-flagged ship if the vessel refuses to provide relevant information or if the information provided turns out to be "manifestly at variance" with the facts (art. 220[5]).

In cases presenting "clear objective evidence" that a foreign-flagged vessel in the EEZ or territorial seas has committed a violation of laws consistent with UNCLOS, thereby causing "major damage or threat of major damage to the coastline" or marine resource, the coastal state may institute proceedings against the ship. This may involve detention of the vessel, seizing it in rem (art. 220[6]). Such a course of action taken by the coastal state, however, once again would set in motion the provisions for the posting of a bond or surety and prompt release (art. 220[7]).

## Transport of Radioactive Material

When judiciously applied, the environmental provisions of UNCLOS are not inconsistent with the broad mandate of navigational freedoms, also reflected in the treaty. For example, the treaty entitles ships carrying hazardous cargoes to navigate freely throughout the territorial sea and the EEZ. In innocent passage, for example, article 23 states, "foreign nuclear-powered ships and ships carrying nuclear or other inherently dangerous or noxious substances shall, when exercising the right of innocent passage through the territorial sea, carry documents and observe special precautionary measures established for such ships by international agreements."

Article 23 is important because it presupposes the right to transit a coastal state's territorial sea with radioactive material and the idea that such transit should be in accordance with internationally developed standards rather than unilateral, coastal-state rules. UNCLOS is quite clear that coastal states lack competence to circumscribe passage of vessels carrying hazardous or nuclear materials merely because of the type of cargo, class of vessel, or flag of registry. In this respect, the outcome of the negotiations shows evidence of a preference for the protection of navigational freedoms over unilateral coastal-state environmental authority. The negotiators avoided—or at least reduced—the mischief that flows from the politicization of coastal-state environmental regulations or the purported imposition of environmental regulations by coastal states to achieve nonenvironmental purposes (such as asserting political control over an offshore area).

## Exclusive Flag-State Jurisdiction

The jurisdictional framework reflected in UNCLOS for prescription and enforcement of safety rules and standards is based on exclusive flag-state jurisdiction. The concept is further implemented by IMO, through which complementary regulations are adopted concerning construction, design, equipment, seaworthiness, and manning of ships used for international voyages. The exercise of flag-state jurisdiction is the primary mechanism for control of shipping. Some other areas, including signals, communications, prevention of collisions, ship-routing measures, and recommendatory or mandatory ship reporting, involve shared flag-state and coastal-state jurisdiction. Article 94 contains the basic obligations imposed on the flag states, requiring adoption of safety measures to reflect "generally accepted international regulations, procedures and practices."[16] Because of their worldwide acceptance, the IMO considers the following instruments to fulfill the "generally accepted" requirement: the International Convention for the Safety of Life at Sea, 1974 (SOLAS 1974); the Protocol of 1978 relating to the International Convention for the Safety of Life at Sea, 1974 (SOLAS Protocol 1978); the International Convention on Load Lines, 1966 (Load Lines 1966); the International Convention on Tonnage Measurement of Ships, 1969 (TONNAGE 1969); the Convention on the International Regulations for Preventing Collisions at Sea, 1972 (COLREG 1972); International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978 (STCW 1978); and the International Convention on Maritime Search and Rescue (SAR 1979).[17] The effort to broaden enforcement of IMO safety and marine pollution standards was further strengthened by the incorporation into SOLAS of the International Safety Management Code, under which shipping firms are subject to a safe management system administered by the flag state.

It has long been recognized that some flag states have not lived up to their responsibility to implement and enforce generally accepted international standards on vessels flying their flags. The "flags of convenience" or "open registries," such as those of Panama and Liberia, have been particularly vulnerable to the charge. In order to strengthen flag-state efforts, the IMO adopted Guidelines to Assist Flag States in the Implementation of IMO Instruments.[18] The resolution provides flag states with more refined direction on establishing and maintaining application and enforcement of a range of IMO treaties.[19] A subsequent IMO resolution assists flag states in conducting self-assessments of their performance.[20] Finally, IMO's Measures to Further Strengthen Flag State Implementation provide guidance for more rigorous flag-state implementation of IMO standards.[21]

The IMO Sub-Committee on Flag State Implementation (FSI) was established in 1992 upon the recommendation of the Maritime Safety Committee (MSC) for a stricter and more uniform application of existing regulations. The move followed several high-profile marine accidents, including the *Exxon Valdez*. Since its creation, additional marine

disasters have reinforced the importance of strengthening flag-state implementation of IMO standards. The FSI seeks to identify measures needed to ensure consistent global instruments. Many of the shortfalls are related to a lack of capacity, particularly in developing states, and the FSI has contributed to increased training among flag states. In November 2003, the IMO Assembly adopted the Voluntary IMO Member State Audit Scheme.[22] The goal of the scheme is to enhance the performance of member states in implementing the IMO instruments relating to maritime safety and the prevention of vessel-source pollution. Significantly, the IMO Assembly adoption of a voluntary scheme specifically did not foreclose the possibility that in the future it could become mandatory.

This regulatory architecture means that except in rare cases, usually involving port-state interests, flag states bear exclusive responsibility for enforcement of international standards.[23] Port states may elect to impose port-state control measures, but such regulations may be implemented only against foreign-flagged vessels that are bound for a port of the coastal state.[24] Despite the broad and liberal regime of innocent passage in the territorial sea, some coastal states purport to prescribe and enforce special environmental measures against vessels exercising their right of navigation.[25] More onerous still, coastal states are becoming increasingly willing to impair the enjoyment of high-seas freedoms of navigation and overflight in the EEZ, often purportedly for environmental purposes. Antigua and Barbuda, Argentina, Chile, Colombia, Dominican Republic, Mauritius, New Zealand, and South Africa, for example, all have sought to exclude foreign-flagged vessels carrying radioactive "ultra-hazardous" cargo through their EEZs.[26] In several examples in the 1990s, vessels carrying highly radioactive material attracted widespread protest. The voyages of *Pacific Pintail, Pacific Teal, Pacific Swan,* and *Akatsuki Maru* drew protest on several continents. In 1992 the *Akatsuki Maru,* a refitted tanker, left Cherbourg, France, with a cargo of 2,200 pounds of plutonium oxide bound for Japan for use in an experimental breeder reactor. The twenty-seven-thousand-kilometer journey wound around the Cape of Good Hope in Africa, dipped south of Australia, then headed north toward Japan.[27] Greenpeace targeted the ship, and the transit became a global sensation.[28] Such policies are plainly inconsistent with the plain terms of UNCLOS.

## Zoning the Zone

In other circumstances, coastal states abuse their pollution-control jurisdiction by trying to use it as a mechanism for extracting prior notification or imposing coastal-state consent requirements for foreign-flagged ships.[29] One of the principal tools emerging for tightening coastal-state control over the EEZ is intra-EEZ zoning.

These efforts, often cloaked in environmental idiom, are troublesome. Even as they attempt to push the boundaries of environmental protection, they are also inconsistent with the Rio Declaration, one of five agreements adopted at the 1992 "Earth Summit"

in Rio de Janeiro. Although the Rio Declaration is a nonbinding instrument of international law, it is regarded as an expression of important principles concerning international environmental protection and sustainable development. Principle 12 of Rio says, "Unilateral actions to deal with environmental challenges outside the jurisdiction of the importing country should be avoided. Environmental measures addressing transboundary or global environmental problems should, as far as possible, be based on an international consensus."[30] Thus, states asserting excessive environmental prescription and enforcement authority in the EEZ may be viewed not as champions at the forefront of a vanguard movement but as willful actors, proceeding in a direction contrary to basic precepts of international environmental law. Governments risk overreaching and creating a backlash against legitimate and consensus-based efforts to achieve stronger marine environmental protection.

## Sovereign Immunity

Additionally, coastal-state environmental regulations in the EEZ should have no effect on naval operations, as UNCLOS provides comprehensive immunity for warships and other public vessels. Article 95 underlies the principle of complete immunity in its first sentence, which corresponds with article 8(1) of the 1958 High Seas Convention.[31] Article 96 of UNCLOS, setting forth the broad categories of exempt vessels, is derived from article 9 of the High Seas Convention and is consistent with article 3 of the Chicago Convention on Civil Aviation of 1944.[32] Notwithstanding the enjoyment of sovereign immunity, the flag states of registry for warships and other public vessels and state aircraft have obligations to ensure that their platforms act in a manner that is consistent with UNCLOS.[33] The article is subject to two qualifications that ensure the vessels and aircraft are not deterred in mission accomplishment—the operational capabilities of the platforms cannot be impaired, and compliance with the rules of UNCLOS is required only insofar as is "reasonable and practicable." Similarly, article 236 states:

> The provisions of this Convention regarding the protection and preservation of the marine environment do not apply to any warship, naval auxiliary, other vessels or aircraft owned or operated by a state and used, for the time being, only on government noncommercial service. However, each state shall ensure, by adoption of appropriate measures not impairing operations or operational capabilities of such vessels or aircraft owned or operated by it, that such vessels or aircraft act in a manner consistent, so far as is reasonable and practicable, with this Convention.

Despite the provisions of articles 95, 96, and 236, a handful of coastal states are adding environmental protection to their quiver of arguments for trying to deny foreign military vessels access to their EEZs. China is one of the leading offenders in this regard, suggesting that concern for the environment is one of the bases for impeding the transit of sovereign immune vessels.[34]

## Due Regard

The term "due regard" appears again and again in UNCLOS.[35] During the drafting of the convention, the term "reasonable regard" evolved first to "due consideration" before settling at "due regard."[36] The U.S. Navy views the "reasonable regard" and "due regard" standards as essentially identical. The Navy adds fidelity to the definition, asserting that the "reasonable regard" of the High Seas Convention and the "due regard" of the Law of the Sea Convention "are one and the same and require any using nation to be cognizant of the interests of others in using a high seas area, and to abstain from nonessential, exclusive uses which substantially interfere with the exercise of other nations' high seas freedoms."[37]

Naval forces still are required to exercise due regard in the EEZ, just as coastal states have a due-regard requirement. There are instances when a warship inside the EEZ might choose not to conduct certain operations because of due regard for the natural environment. For example, a gunnery exercise intentionally targeting a whale migration would display a lack of due regard for economic and environmental interests of the coastal state. Similarly, a proposed weapons exercise in close proximity to an active offshore oil platform also could be expected to violate the principle of due regard.[38] But as Raul Pedrozo has said, "these situations are the exception, not the rule, and cannot be dictated unilaterally by the coastal state."[39]

The U.S. Navy, for example, conducts naval maneuvers using low- and midfrequency sonar systems around the world. In order to mitigate any potential impact from these exercises, the Navy voluntarily applies marine-mammal mitigation measures that were developed by the Office of the Chief of Naval Operations and that take into account operational imperatives, as well as the best available science on the effect of sonar on marine mammals. In January 2007, the Navy instituted a series of twenty-nine mitigation measures to avoid the possibility of interfering with marine mammals.[40] Scientific research now suggests that there is no evidence that the Navy's sonar use, when protective measures are applied, affects either marine mammals or fish.[41] The U.S. Navy's practices have been subjected to litigation and ultimately to review by the U.S. Supreme Court. In the case, *Winter v. Natural Resources Defense Council,* the NRDC sued the Secretary of the Navy over sonar use during military maneuvers and exercises. The Supreme Court found that in forty years of sonar training there was no documented episode of harm to marine mammals under American jurisdiction caused by the use of sonar.[42]

Article 2 of the High Seas Convention employs the phrase "reasonable regard" as a rule applicable to the exercise of high-seas freedom, which "shall be exercised by all States with reasonable regard to the interests of other States in their exercise of the freedom of the high seas." The 1958 High Seas Convention also uses the term "due regard" in

article 26, requiring the coastal state to pay "due regard" to cables and pipelines already positioned on the seabed. The term is also reflected in article 24 of the Territorial Sea Convention and article 3 of the Continental Shelf Convention.[43] The International Court of Justice has determined that the provision of "reasonable regard" is declaratory of customary international law.[44]

Article 58(3) of UNCLOS provides that in exercising their rights and performing their duties in the EEZ, states have complementary obligations to exercise due regard for the rights and duties of the coastal state. Specifically, article 58(3) provides, "In exercising their rights and performing their duties under this Convention in the exclusive economic zone, States shall have due regard to the rights and duties of the coastal State and shall comply with the laws and regulations adopted by the coastal State in accordance with the provisions of this Convention and other rules of international law in so far as they are not incompatible with this Part."

Article 56(2), in turn, requires the coastal state to have due regard to the rights and duties of other states operating in the EEZ. That article sets forth the complementary standard: "In exercising its rights and performing its duties under this Convention in the exclusive economic zone, the coastal State shall have due regard to the rights and duties of other States and shall act in a manner compatible with the provisions of this Convention."

Furthermore, volume 3 of the authoritative University of Virginia *Commentary* on UNCLOS explains the "due regard" requirement as a

> qualification of the rights of States in exercising freedoms of the high seas. The standard "due regard" requires all States, in exercising their high seas freedoms, to be aware of and consider the interests of other States in using the high seas. As the [International Law Commission] stated in its Commentary in 1956, "States are bound to refrain from any acts that might adversely affect the use of the high seas by nationals of other States." The construction in paragraph 2 recognized that all States have the right to exercise high seas freedoms, and balances consideration for the rights and interests of all States in this regard.[45]

In sum, in the EEZ, coastal states shall have due regard for the rights and freedoms of the other states, and in turn other states shall have due regard for the rights and duties of the coastal state. In the exercise of these rights and in performing their duties, states conducting military activities in a coastal state's EEZ shall observe "due regard" for the rights and duties of the coastal state. Moreover, because of the protections provided by sovereign immunity, the flag state, not the coastal state, has the sole right to enforce upon its naval vessels the obligation to exercise "due regard."[46]

## The "Dueling Due Regards"

The existence of "dueling due regards" that apply to the exercise of concurrent rights, duties, and jurisdiction demonstrates that UNCLOS reflects a functional rather than an exclusive model. Articles 58(3), 87(2), and 56(2) reflect identical language. "Due regard" consists of two elements: first, an awareness of and consideration for other states' interests, and second, a weighting of those interests or sources of authority.[47] Since "freedom" is a broader genus than "right," freedom of navigation may logically be said to trump some coastal-state rights.[48]

In light of this analysis, the definition proposed by Professor George K. Walker, of the Law of the Sea Committee of the American Branch of the International Law Association, is the best restatement of the term "due regard."

> "Due regard" as used in the 1982 LOS Convention, art. 87, is a qualification of the rights of states in exercising the freedoms of the high seas. "Due regard" requires all states, in exercising their high seas freedoms, to be aware of and consider the interests of other states in using the high seas, and to refrain from activities that interfere with the exercise by other states of the freedom of the high seas. States are bound to refrain from any acts that might adversely affect the use of the high seas by nationals of other states. Article 87 recognizes that all states have the right to exercise high seas freedoms, and balances consideration for the rights and interests of all states in this regard.[49]

The coastal state is in an equal position vis-à-vis the flag state in this regard only in cases in which it is weighing under article 234 the right of coastal-state regulation over foreign-flagged shipping in ice-covered areas. Article 234 departs from normal practice, or the typical rules that apply in the EEZ, and permits a heightened level of authority for the coastal state. In ice-covered areas of the EEZ coastal states may adopt and enforce nondiscriminatory laws and regulations for preventing, reducing, and controlling marine pollution from ships. In this case, such laws "shall have due regard to navigation and the protection and preservation of the marine environment."[50]

The terms also have application in the law of international aviation and the law of naval warfare. The Chicago Convention requires state parties to ensure that their state aircraft exercise "due regard" for the navigational safety of civil aircraft.[51] Within the context of the law of naval warfare, "due regard" is used as a principle for regulating belligerent rights and duties.[52]

Chinese scholars suggest the "two due regards" do not automatically cancel the other and that they should be read as providing the coastal state with the superior right.[53] Since coastal states enjoy sovereign rights of ownership, exploration, exploitation, conservation, and management of natural resources, jurisdiction over protection of the marine environment, control of access to the zone for marine environmental research, and the

establishment of artificial islands and installations, Chinese international lawyers argue that the actions of other states are subordinate to these rights.

The claim is that the sovereign rights of the coastal state in the economic sphere create a higher right generally for the coastal state vis-à-vis all other activities in the EEZ. Specifically, these scholars assert that the coastal state has "indisputable" superiority when conflicts arise between the rights of the coastal state and those of other states.[54] A more sophisticated, and correct, interpretation, however, is that the sovereign rights and jurisdiction of the coastal state in the zone are superior only in matters pertaining to its exclusive economic status and its sovereign rights in the zone. The rights of the international community are superior in matters pertaining to freedom of navigation and overflight and "other lawful uses" of the area. The coastal state indeed has a superior right, but only to those competencies specifically cut from the high seas and granted by UNCLOS to the coastal nation.

## Due Regard Is a Procedural Obligation

Perhaps more important, the term "due regard" is a procedural right. It does not create any substantive new legal right—it requires only that states observe the legitimate and existing rights of other parties. Otherwise, the term simply becomes an empty vessel, requiring the international community to observe as "due regard" any rule imposed by the coastal state, no matter how unreasonable.

Warships and military aircraft operating in China's EEZ are exercising "due regard" so long as they do not attempt to diminish China's exclusive rights and jurisdiction to its oceanic living and nonliving resources, such as intentionally interfering with a fishing vessel or hazarding an oil platform. In evaluating what constitutes an actual interference with the coastal state's exploitation of the resources of the EEZ, one has to apply a test of reasonableness. For example, it would not be reasonable to suggest that a foreign-flagged submarine transiting submerged through a coastal state's EEZ might injure marine mammals and is therefore failing to exercise "due regard" for the coastal state's interests in the living resources and as a result is not permitted to pass without coastal-state permission.

It is important not to become carried away with theoretical effects of foreign-flagged vessels and aircraft on the resources of the EEZ, effects that are so remotely insignificant that their proximate connection to causative fact becomes extremely doubtful. The inquiry becomes progressively more hopeless in proportion to the degree to which the coastal state's claim of enjoyment and exploitation of the living and nonliving resources of the EEZ hinges on the "horseshoe nail" or "butterfly" effects of foreign military activities.[55] Thus, an occurrence that is possible but likely to be irrelevant, such

as a foreign-flagged submarine striking a marine mammal in a coastal state's EEZ, does not justify coastal-state regulations that trump age-old high-seas freedoms. On the other hand, it is equally specious for the coastal state to posit that foreign military activities in the EEZ risk something that is at once highly portentous but nearly impossible. For example, the fact that a foreign-flagged nuclear submarine transiting the EEZ might be an instrument of nuclear war—and thereby invite nuclear retaliation that would devastate marine resources—would not justify coastal-state regulation of such submarines.

## Conclusion

Environmental aspects of creeping coastal-state jurisdiction are being misapplied in order to obtain greater authority over foreign-flagged offshore shipping. Most coastal states succumb to the temptation to attempt to regulate offshore foreign-flagged shipping, a trend that threatens to unravel the package deal of the 1982 convention. The United States has often taken a relatively cautious approach in asserting environmental jurisdiction over foreign-flagged vessels, doing so usually only as a condition of port entry. The United States is inclined to rely on conditions of port entry and port-state control measures to protect the marine environment rather than attempting to assert coastal-state jurisdiction in waters beyond the territorial sea, because it seeks to strengthen the UNCLOS framework.

Furthermore, a feature of U.S. marine environmental laws, the "international law savings clause," protects the rights and freedom of navigation of foreign-flagged vessels, notwithstanding other provisions of the statute that might otherwise impair those rights. Foreign-flagged vessels transport more than 90 percent of international commercial freight entering and departing ports of the United States.[56] Foreign-controlled shipping accounts for 95 percent of passenger ships and 75 percent of cargo ships operating in U.S. waters.[57] As one of the beneficiaries of a globalized economy, the United States understands that it needs foreign-flagged shipping, and its laws accommodate such ships in accordance with UNCLOS. Typically, American law exempts foreign-flagged vessels from regulatory requirements that interfere with innocent passage in the territorial sea, transit passage through the Bering Strait, or the exercise of freedom of navigation and other high-seas freedoms throughout the exclusive economic zone. In these ways, the United States acts responsibly to respect the rights of all states at sea, while also undertaking its obligations to protect and preserve the marine environment.

## Notes

1. *The Law of the Sea: Official Texts of the United Nations Convention on the Law of the Sea of 10 December 1982 and of the Agreement relating to the Implementation of Part IX of the United Nations Convention on the Law of the Sea of 10 December 1982* (New York: United Nations, 1997) [hereafter UNCLOS], available at www.un.org/.
2. Article 1, for example, sets forth definitions of pollution of the marine environment and dumping. States have a general obligation to protect and preserve the marine environment and prevent marine pollution on the high seas, the EEZ, and the territorial sea.
3. D. P. O'Connell, *The International Law of the Sea,* ed. I. A. Shearer (Oxford, U.K.: Clarendon, 1982), vol. 1, p. 194.
4. UNCLOS, art. 194(5).
5. Ibid., art. 211(1).
6. The main IMO treaty in this area is the 1973 *International Convention for Prevention of Pollution from Ships and the Protocol of 1978 relating to International Convention for Prevention of Pollution from Ships* (MARPOL 73/78). The convention and protocol are available at *SEDAC: Socioeconomic Data and Applications Center,* sedac.ciesin.org/.
7. UNCLOS, art. 211(6)(a). Article 234 created special dispensation for coastal states to prescribe and enforce certain regulations in "ice-covered areas," a fairly narrow exception to the general rules.
8. Agustín Blanco-Bazán, Senior Deputy Director/Head Legal Office, Legal Affairs and External Relations Division, IMO (paper presented at the seminar on current maritime issues and the work of the International Maritime Organization, Twenty-third Annual Seminar of the Center for Ocean Law and Policy, University of Virginia School of Law, 6–9 January 2000), available at www.imo.org/.
9. UNCLOS, art. 211(6).
10. Ibid.
11. O'Connell, *International Law of the Sea,* vol. 1, p. 194.
12. UNCLOS, art. 220(2). The "reasonable suspicion" standard is articulated in article 206, and it is a useful reminder that states may not act unreasonably in their suspicions: "When States have reasonable grounds for believing that planned activities under their jurisdiction or control may cause substantial pollution of or significant and harmful changes to the marine environment, they shall, as far as practicable, assess the potential effects of such activities on the marine environment and shall communicate reports of the results of such assessments."
13. *Arctic Waters Pollution Prevention Act,* R.S. (1985), c. A-12, available at laws.justice.gc.ca/.
14. UNCLOS, arts. 220(2) and (6).
15. Ibid., arts. 292, 220(7), and 226(1)(b).
16. Ibid., arts. 94(3), (4), and (5).
17. *Implications of the United Nations Convention on the Law of the Sea for the International Maritime Organization,* IMO Doc. LEG/MISC.6, 10 September 2008, p. 16.
18. *Guidelines to Assist Flag States in the Implementation of IMO Instruments,* IMO Res. A.847(2), 27 November 1997.
19. The instruments include SOLAS 1974, MARPOL 73/78, Load Lines, and STCW 1978.
20. *Self-assessment of Flag State Performance,* IMO Res. A.912(22), 22 January 2002 (superseding and revoking resolution A.881[21]).
21. *Measures to Further Strengthen Flag State Implementation,* IMO Res. A.914(22), 22 January 2002.
22. *Voluntary IMO Member State Audit Scheme,* IMO Res. A.946(23). See also *Framework and Procedures for the Voluntary IMO Member State Audit Scheme,* IMO Res. A.974(24). The IMO Assembly also adopted a *Code for the Implementation of Mandatory IMO Instruments,* which provides the standard for audits.
23. For an excellent treatment of the balance of law between port and flag states, see chapter 7 of Louis B. Sohn and John E. Noyes, *Cases and Materials on the Law of the Sea* (Ardsley, N.Y.: Transnational, 2004), p. 357 et seq.
24. See, e.g., A. R. Thomas and James C. Duncan, *Annotated Supplement to the Commander's Handbook on the Law of Naval Operations,* International Law Studies 73 (Newport, R.I.: Naval War College, 1999), p. 115, which states: "Because entering internal waters is legally equivalent to entering the land territory of another nation, that nation's permission is required." See also UNCLOS, art. 25: "In the case of ships proceeding to internal waters, the coastal State . . . has the right to [set] conditions to which admission of those ships . . . is subject." Cf. art. 9, which limits a coastal state's authority over vessels merely exercising innocent passage in the territorial sea without the intention to enter the coastal state's internal waters.
25. See, e.g., France's Decree 185/85 of February 1985, which regulates passage of foreign ships through territorial waters, including a

requirement that tankers, nuclear-powered ships, and ships with nuclear cargoes use designated sea-lanes or traffic separation schemes.

26. See, e.g., Jon M. Van Dyke, "The Legal Regime Governing Sea Transport of Ultra-hazardous Radioactive Materials," *Ocean Development and International Law* 33 (2002), pp. 78–80.
27. Ibid.
28. Ibid.
29. John Negroponte, "Analytical Summary," National Security Council staff, Washington, D.C., n.d., in *Foreign Relations, 1969–1976,* vol. E-1, *Documents on Global Issues, 1969–1972,* available at www.state.gov/.
30. *Rio Declaration on Environment and Development,* UN Doc. A/CONF.151/26 (vol. I), 31 ILM 874 (1992), available at www.unep.org/.
31. *Convention on the High Seas Done at Geneva on 29 April 1958,* available at untreaty.un.org/.
32. *Convention on Civil Aviation,* Doc. 7300/9 (9th ed.), 2006, available at www.icao.int/.
33. Myron H. Nordquist, ed. in chief, Satya N. Nandan and Shabtai Rosenne, gen. eds., *United Nations Convention on the Law of the Sea 1982: A Commentary* (Dordrecht, Neth.: Martinus Nijhoff, 1991), vol. 4 [hereafter *Commentary,* vol. 4], ¶ 236.6(b), p. 421.
34. Raul Pedrozo, "Close Encounters at Sea: The USNS *Impeccable* Incident," *Naval War College Review* 62, no. 3 (Summer 2009), p. 101.
35. UNCLOS, arts. 27(4), 39(3)(a), 56(2), 58(3), 60(3), 66(3)(a), 79(5), 87(2), 142(1), 148, 161(4), 162(2)(d), 163(2), 167(2), 234, and 267, as well as represented in app. II, art. 2(1), and app. IV, arts. 5(1) and (2).
36. Myron H. Nordquist, ed. in chief, Satya N. Nandan and Shabtai Rosenne, gen. eds., *United Nations Convention on the Law of the Sea 1982: A Commentary* (Herndon, Va.: Brill, 1993), vol. 3 [hereafter *Commentary,* vol. 3], ¶ 87.8, p. 80. See also R. R. Churchill and A. V. Lowe, *The Law of the Sea,* 3rd ed. (Manchester, U.K.: Manchester Univ. Press, 1999), p. 206.
37. Thomas and Duncan, *Annotated Supplement to the Commander's Handbook on the Law of Naval Operations,* p. 131 note 65.
38. Pedrozo, "Close Encounters at Sea," p. 104.
39. Ibid.
40. Office of the Assistant Secretary of Defense (Public Affairs), "Navy Granted Authority to Use Sonar in Training off of California," News Release 0041-07, 16 January 2008, available at www.defenselink.mil/; Kristen Noel, "Navy Invests in Protecting Marine Mammals," American Forces Press Service, 20 December 2007, available at www.navy.mil/.
41. Pedrozo, "Close Encounters at Sea," p. 104.
42. *Secretary of the Navy Winter v. Natural Resources Defense Council,* 555 U.S. 1, 23 (2008).
43. *Convention on the Territorial Sea and the Contiguous Zone Done at Geneva on 29 April 1958,* and *Convention on the Continental Shelf Done at Geneva on 29 April 1958,* both available at untreaty.un.org/.
44. *Fisheries Jurisdiction Case* (U.K. v. Iceland), 1974 ICJ 3, 22, 29.
45. *Commentary,* vol. 3, ¶ 87.9(1), p. 86.
46. *U.S. Commentary on the Law of the Sea Convention,* Sen. Treaty Doc. 103-39, p. 24. See also J. Ashley Roach and Robert W. Smith, *United States Responses to Excessive Maritime Claims,* 2nd ed. (The Hague: Martinus Nijhoff, 1996), p. 407.
47. George K. Walker, "Defining Terms in the 1982 Law of the Sea Convention IV: The Last Round of Definitions Proposed by the International Law Association (American Branch) Law of the Sea Committee," *California Western International Law Journal* 36, no. 1 (Fall 2005), p. 174.
48. Sir Robert Jennings and Sir Arthur Watts, eds., *Oppenheim's International Law* (London: Longman, 1992), vol. 1, pp. 802–803.
49. Walker, "Defining Terms in the 1982 Law of the Sea Convention IV," p. 174.
50. *Commentary,* vol. 4, ¶ 234.1 and 234.5(a) and (e), pp. 394–97.
51. *Convention on Civil Aviation,* art. 3(d).
52. Louise Doswald-Beck, ed., *San Remo Manual on International Law Applicable to Armed Conflicts at Sea* (Cambridge, U.K.: Cambridge Univ. Press, 1995), arts. 12, 34, 36, 88, and 106(c).
53. Ren Xiaofeng and Cheng Xizhong, "A Chinese Perspective," *Marine Policy* 29 (2005), pp. 139, 145.
54. Ibid., p. 145.
55. Philip E. Tetlock and Richard Ned Lebow, "Poking Counterfactual Holes in Covering Laws: Cognitive Styles and Historical Reasoning," *American Political Science Review* 95 (December 2001), p. 829.
56. U.S. House, *Vessel Operations under Flags of Convenience and National Security Implications,* statement of Rear Adm. Paul J. Pluta, USCG, before the Armed Services Committee, 108th Cong., 1st sess., 13 June 2003.
57. "Origins of the Port State Control Program, U.S. Coast Guard," *United States Coast Guard,* www.uscg.mil/.

# Surveys and Research Activities in the EEZ

## Issues and Prospects

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The advancement of science and technology requires adjustments in state practices regarding the appropriate interpretation of provisions of the United Nations Convention on the Law of the Sea (UNCLOS) in order to address current inadequacies in the international framework. With today's ever-changing circumstances, more survey activities conducted in the exclusive economic zone (EEZ) should be included in the jurisdictional scope of coastal-state authority to regulate marine scientific research (MSR) under UNCLOS article 56. Additionally, researching states should be expected to implement faithfully the coastal state's MSR regime, and coastal states should make an effort to facilitate research and survey activities that have peaceful purposes. Moreover, the development of practical procedures and guidelines for research and surveys in the EEZ may be a useful development to avoid the potential for conflict and to foster cooperation.

### The UNCLOS Regime

UNCLOS, also called "the Ocean Constitution," was concluded in 1982 and formally entered into force in 1994.[1] It provides a general regime, set forth dominantly in Part XIII of UNCLOS, articles 238 through 265, to regulate the conduct of MSR activities in the world's oceans. Within this regime all states, irrespective of their geographical location, and competent international research organizations have the right to conduct MSR subject to the rights and duties of other states (art. 238). States are obliged to promote and facilitate the development and conduct of MSR (art. 239); MSR is to be conducted for peaceful purposes only, with appropriate scientific methods compatible with UNCLOS, is not to interfere unjustifiably with other legitimate uses of the sea, and is to be in accordance with national regulations adopted in conformity with UNCLOS, including those for the protection and preservation of the marine environment (art. 240). MSR activities shall not constitute the legal basis for any claim to any part of the marine environment or its resources (art. 241).

UNCLOS also sets forth particular provisions for MSR conducted in various maritime zones, including the territorial sea (art. 245), international straits (art. 40), and archipelagic waters (art. 54). UNCLOS further provides that a coastal state can regulate MSR and hydrographic surveys in its territorial seas (art. 21[1][g]). Access and the conditions of access to the territorial sea for these activities are under the exclusive control of the coastal state (art. 245); during transit passage of international straits and archipelagic sea-lanes MSR and hydrographic survey ships "may not carry out research or survey activity without the prior authorization of the States bordering the straits" (arts. 54, 40, respectively). MSR may be carried out on the high seas and in the Area (the seabed of the high seas), but exclusively for peaceful purposes.[2]

The EEZ regime is the most creative part of UNCLOS, and much attention is given by coastal states to their sovereign rights and jurisdiction in it. Coastal states are granted sovereign rights over resource-related matters and exclusive jurisdiction over artificial islands, MSR, and the protection of the marine environment out to two hundred nautical miles (art. 56). Part XIII of UNCLOS, plus some provisions of Part V, provides a regime for MSR in the EEZ and on the continental shelf (arts. 246–53). Coastal states may at their discretion decide whether to grant or withhold their consent for MSR activities in their EEZs. Coastal states enjoy the right to formulate and implement relevant national laws and regulations and the right to exercise supervision over or to board and monitor any MSR platforms in their EEZs and on the continental shelf (art. 246). Access for MSR by other states or competent international organizations to a coastal state's EEZ and continental shelf is subject to the consent of that state. Coastal states are normally required to grant consent for MSR projects carried out in accordance with the provisions of UNCLOS in order to increase scientific knowledge of the marine environment for the benefit of all humankind.

There are five situations when the coastal state may at its discretion withhold consent to certain MSR activities. Consent from the coastal states may be denied if the MSR is of direct significance for resource exploration or exploitation, whether living or nonliving; involves drilling into the continental shelf, the use of explosives, or the introduction of harmful substances into the marine environment; or involves the construction, operation, or use of artificial islands, installations, or structures (art. 246). Consent may also be withheld if inaccurate information regarding the nature and objectives of the project was supplied to the coastal state or if the researching state or international organization has outstanding obligations to the coastal state from a prior research project (art. 246). UNCLOS thus emphasizes the exclusive jurisdiction of the coastal state over MSR in the EEZ and on the continental shelf.

The consent of the coastal state may be either expressed or implied. Four months after the request by an international organization of which the coastal state is a member (art.

247), or six months after a request by a foreign state (art. 252), if no objection is lodged by the coastal state concerned, consent is implied. When conducting MSR in a coastal state's EEZ, the foreign state has the obligation to provide information to the coastal state (art. 248), to comply with certain conditions (art. 249), and to be responsible and liable for any damage resulting from MSR activities (art. 263).

It is noted that "survey activities" are primarily dealt with in UNCLOS Parts II, III, and XI and Annex III, rather than in Part XIII. This may be taken as an indication that survey activities do not fall under the MSR regime, although as discussed above it is clear that a coastal state's permission is required for both MSR and survey activities in the territorial sea, straits used for international navigation, and archipelagic sea-lanes passage. Nevertheless, views differ concerning whether hydrographic surveys in the EEZ need the prior authorization of the coastal state. Uncertainties and different interpretations also arise concerning whether the MSR regime applies to military surveys. Some believe that not all marine data-collection activities are regulated by the MSR regime in Part XIII; others oppose that view.[3]

## Contentious Issues

It is obvious that international law encourages the performance of MSR in order to enrich knowledge of the world oceans, a right granted to all states by the provisions and requirements of UNCLOS.[4] However, the debates during the third United Nations Conference on the Law of the Sea (UNCLOS III) failed to provide agreement on a definition of the term "marine scientific research." Even today, UNCLOS does not provide a legal definition regarding that term or other marine data-collecting activities, such as surveys, which has resulted in divergent views and conflicting positions regarding a coastal state's jurisdictional control over research and survey activities in the EEZ. Clarification is provided below for these terms and the various aspects of their application.

In general, "marine scientific research" refers to any activity undertaken in the ocean and coastal waters *with the purpose of expanding scientific knowledge of the marine environment and its processes.*[5] MSR activities include physical and chemical oceanography, marine biology and chemistry, fisheries research, scientific ocean drilling and coring, geological and geophysical surveying, and any other activity *having a scientific purpose*. MSR is of great significance as an important component of contemporary natural science, and it plays a key role in supporting the long-term use of marine resources and sustainable ocean development. The results of MSR are generally made publicly available.

MSR has been an important trigger for legal development, supporting states in advancing their political and economic interests in the ocean domain. Emerging issues have brought forth legal implications of the MSR regime in recent years. Such issues relate to

the implementation of some provisions of Part XIII, such as the confusion as to which marine data-collection activities come within its scope. UNCLOS gives coastal states jurisdiction to regulate MSR in their EEZs but fails to provide specific provisions on jurisdiction over survey activities.

Survey activities may be further categorized into two kinds, hydrographic and military.[6] The former were mostly left untreated as MSR, but developments in recent years have complicated matters. Hydrographic surveys are activities *with the purpose of collecting data for the production of navigational charts to support safety of navigation.* Data collected from hydrographic survey activities may include the depth of water, configuration and nature of the natural bottom, directions and force of currents, heights and times of tides and water stages, and hazards to navigation.[7]

Military surveys are generally activities undertaken in the ocean and coastal waters involving classified and unclassified marine data collection conducted by military vessels *for military purposes.* Military surveys can include collection of oceanographic, hydrographic, marine geological, geophysical, chemical, biological, acoustic, and related data that may not be normally available to the public. There is hot debate over the term "military survey" and its legal implications. However, the term is not found in either international or national law. Some believe that military surveys fundamentally bear the same nature as MSR and should be regulated by the MSR regime of UNCLOS. Others argue that military surveys should not be regarded as MSR, since they are conducted for military, not scientific, purposes.[8] Disagreement regarding military surveys conducted in the EEZ of a coastal state is wide.

Again, although UNCLOS provides some treatment of surveys, it does not define the term. Because there are no universally accepted, unambiguous definitions of MSR or surveys that take into account the nature of these activities, their operational methods, and means used or that establish objective criteria to determine the purposes and motivations for undertaking them, many issues have arisen over how to put the relevant provisions of UNCLOS into practice. These issues relate to the application of the regime, particularly in the EEZ. There has been heated debate about the relationship between MSR and hydrographic surveys, including surveys conducted by military vessels. The crucial part of the debate concerns whether the latter conducted in the EEZ should be treated as MSR and put under the jurisdiction of the coastal state.

The root cause of the debate is related to differing perspectives on the EEZ. Two trends are noticeable. One is the territorialization of the EEZ, as represented by the developing coastal states. These states appreciate the importance of the ocean to their national security and the sustainable development of their social and economic institutions. Limited by such factors as technology, human resources, and national strength, their capacities to

undertake research and surveys are not on par with those of developed states. They cherish the waters under their jurisdiction and hope to become able to explore and exploit them in the future. These states have expressed concern that their interests are not sufficiently taken into consideration during the planning and execution of research projects and are suspicious that they will not benefit from the research results. They tend to seek stricter control over the research and survey activities in their EEZs than international law currently grants.

Not surprisingly, another trend is the internationalization of the EEZ by developed costal states. Most MSR projects are undertaken by a relatively small number of developed states, in many cases off the coasts of developing states. However, since the EEZ was originally high seas, some states find it difficult to accept that MSR is now within the scope of coastal-state jurisdiction. These states are reluctant to admit the legal status of the EEZ and even call it "international waters." They hold the view that the residual rights of high-sea freedoms are applicable to the EEZ, except for resource-related activities. These states rely on the incorporation in the EEZ by UNCLOS article 58(2) of the provisions of articles 88–115, which relate to high-seas freedoms. As researching states, they refuse to abide by the conditions established by coastal states.[9] Some of their research and survey activities may also conflict with coastal states' national interests. Friction can easily lead to conflict and "lose-lose" situations. A balance needs to be struck between the proponents of maximum freedom for research and surveys and maximum coastal-state control over the same activities.

Practical problems arise from the distinction between research and surveys involving the determination of the intended use of the data collected. Based on UNCLOS Part XIII, some argue that *the methods of the data collected and their motives or intended use* constitute the primary differences among MSR, hydrographic surveys, and military surveys and thus determine whether a particular marine data-collection activity is MSR and what therefore are the applicable rules. This presents difficult questions, such as how the motives for MSR, hydrographic surveys, or military surveys are to be determined. What constitutes a "scientific purpose" or a "military purpose," and who determines that? When does the gathering of information to "make navigational charts and [ensure] safety of navigation" become a military survey and not a hydrographic survey? These questions are especially difficult to answer in a general climate of mistrust and suspicion. Ultimately, it is difficult to distinguish hydrographic and military surveys from MSR as the methods of data collection are often the same, regardless of the data type and intended use.[10]

In many cases, the same data collected from the marine environment may be used for more than one purpose.[11] For instance, the data from a hydrographic survey can be applied to much wider uses than making navigational charts for safety of navigation. Some

are also used for the monitoring and forecasting of ocean-state estimates and weather and climate prediction. Some are used for military purposes. Others are used for the exploration and exploitation of living or nonliving natural resources. In these cases, hydrographic data collected in an EEZ have clear economic value to a coastal state and should therefore be subject to the coastal state's MSR laws.[12]

Along with the advancement of technology in recent decades, tremendous capabilities have been employed to collect large amounts of marine data using various instruments deployed from ships, such as balloons, profiling floats, moored and drifting buoys, remotely operated vehicles, and offshore or near-offshore fixed platforms. The data for MSR can also be collected by satellite or by equipment on civilian or military aircraft or ships. More and more research projects use remote-sensing technologies on platforms located outside the jurisdictional waters of coastal states. The coastal state can find attempting to distinguish among hydrographic surveys, military surveys, and MSR in its EEZ very frustrating. This state of affairs may eventually lead to a collapse of the present MSR regime in the EEZ.

## General State Practice and the Chinese Approach

The Intergovernmental Oceanographic Commission (IOC) of the UN Educational, Scientific and Cultural Organization (UNESCO), an organization that deals with the implementation of the MSR regime through its Advisory Body of Experts on the Law of the Sea (ABE-LOS), has produced several documents in recent years reviewing the general practices of its member states with respect to MSR.[13]

According to these reports, considerable ambiguities exist in the interpretation and implementation of UNCLOS provisions regarding research and survey activities in the EEZs of coastal states.[14] Some countries have yet to enact national legislation to prescribe the application procedures for foreign or international organizations to conduct MSR, not to mention the publication and management of available research data so as to advance marine science and marine technology.[15]

Nonetheless, as far as implementation is concerned, state practice in general is consistent with the UNCLOS regime on MSR. Many states have set up standard procedures for foreign-related MSR application. For example, Australia adopted the 1996 Foreign Research Vessel Guidelines, which authorize the Department of Foreign Affairs and Trade to determine whether a vessel enjoys public vessel status.[16] The Australian guidelines provide detailed information in support of a request by a foreign research vessel to conduct marine scientific research within the territorial sea, exclusive economic zone, fishing zone, and on the continental shelf (including research involving a port visit). The department

normally grants public-vessel status to foreign research vessels entering Australian ports. In addition, Australia also has well-established procedures for military vessels.

To implement the UNCLOS regime on MSR and to regulate research and survey activities under its jurisdictional waters, China too has adopted a series of national laws and regulations. China maintains records of coastal research and oceanography surveys, most of them performed in its territorial seas. Deep-ocean surveys began only in the early 1980s, as a result of the initiation of multiship programs.[17] In recent years, China has made further efforts to develop marine sciences and technologies and has amended its law and policy to promote the advancement of research and surveys.

China signed UNCLOS on 10 December 1982 and ratified it on 15 May 1996.[18] China implemented its regimes by declaring maritime zones and enacting or revising national maritime laws in accordance with UNCLOS provisions. In the field of MSR management, the Law of the People's Republic of China (PRC) on the Exclusive Economic Zone and the Continental Shelf enacted in 1998 (known as the 1998 EEZ/CS Law) has been the most important legal document setting up the basic stance and fundamental regulations of the Chinese government in this area.[19] With its sixteen articles the 1998 EEZ/CS Law not only ensures China's sovereign rights and jurisdiction over its EEZ and continental shelf and safeguards its national interests but also provides the framework policy directives concerning MSR.[20] In particular, article 3 of this law echoes the provision of article 56 of UNCLOS regarding sovereign rights over natural resources and jurisdiction over matters in the EEZ, including MSR.

The 1998 EEZ/CS Law provides that "all international organizations, foreign organizations or individuals shall obtain approval from the competent authorities of the People's Republic of China for carrying out marine scientific research in its exclusive economic zone and on its continental shelf, and shall comply with the laws and regulations of the People's Republic of China" (art. 9). It also reaffirms the residual rights of all states to high-seas freedoms in the Chinese EEZ relating to navigation, overflight, and laying submarine cables and pipelines (art. 11).

China emphasizes its enforcement authority over the EEZ in paragraph 2 of article 12, which provides that "the People's Republic of China shall have the right to take necessary measures against violations of its laws and regulations in the exclusive economic zone and on the continental shelf."[21] The 1998 EEZ/CS Law thereby improved China's maritime legislation and provided a legal basis for China to control research and survey activities in its EEZ. Analysis of the provisions of the 1998 EEZ/CS Law and China's EEZ practice indicates that China's implementation of international law is consistent with the general principles of the Law of the Sea (LOSC) provisions. For instance, articles 2, 3, and 5 of the 1998 EEZ/CS Law are virtually a verbatim copy of articles 56(1) and 77(1)

of the LOSC. Article 10 of the 1998 EEZ/CS Law specifies that China is to prevent and control marine pollution.

The 1998 EEZ/CS Law is, however, rather brief and contains only skeletal provisions. It would be difficult to implement such legislation without detailed regulations. The better to regulate MSR activities, China adopted the Regulations of the PRC on Management of Foreign-Related Marine Scientific Research in 1996 (known as the MSR Regulations).[22] The fifteen articles of the MSR Regulations lay out specific application procedures and major requirements for foreign-related MSR projects in China's jurisdictional waters. Its opening provision spells out the motivations for such legislation: to improve the management of foreign-related research activities, to promote international exchange and cooperation in MSR, and to safeguard China's national security and maritime rights and interests.

From the listed motives, it is clear that China allows MSR in its jurisdictional waters but emphasizes its national security and maritime interests. The text of the MSR Regulations sets out conditions for foreign-related research applicable to all waters under the jurisdiction of the Chinese government. Approval of an MSR application depends on whether the research project is of a fundamental nature or related to the resources of the sea area (mineral resources, fisheries resources, or wild marine creatures). Research activities with a resource orientation are subject to more strict control.[23]

The MSR Regulations also contain provisions specifying the duty of a researching state to provide information to the authorizing agency of China, namely, the State Oceanographic Administration (SOA).[24] SOA will inform the researching state of any conditions, which may include Chinese participation or representation in the research projects, provision of preliminary and final reports to China, and access for Chinese representatives to data and samples collected and assistance in their assessment. If these conditions are not met during the conduct of the research, China may require suspension or even termination of the project.

According to article 5 of the MSR Regulations, a written application to conduct research projects must be made through official channels at least six months in advance of the expected starting date of the project. Consent or denial of the application can be expected within four months.[25] If any violations occur during the ongoing research, the designated Chinese authority for MSR management has the right to terminate the operations; it may also confiscate all the research instruments and equipment involved and the data and samples obtained or impose a fine, or both.[26] For serious cases, criminal liabilities may apply, according to the relevant laws of the PRC.

To facilitate the applications of foreign researchers or states, SOA, as the authority responsible for MSR operational management, has promulgated additional working

procedures that supplement the MSR Regulations. They provide a "Flow Diagram of Foreign-Related Marine Scientific Research Projects," with the following steps: first, submit the application to SOA six months before the project starts; second, submit to SOA the "Application Form for Foreign-Related Marine Scientific Research Projects," with all required information; third, the application is processed by the SOA; fourth, SOA consults with the Ministry of Foreign Affairs and the military department concerned; and finally, a decision for approval or denial is made by SOA within four months of submission of the application.

When an application is approved, the researching states or individuals are required to submit the operational plan of the research vessel to SOA two months before the cruise starts. The "Application Form of At-Sea Operational Plan for Foreign-Related Marine Scientific Research Projects" must also be filled out.

These publicized regulations guarantee the flow of communication through clearly identified official channels, as required by article 250 of UNCLOS. It may be observed from the provisions of China's MSR Regulations and its practice that China has made an effort to fulfill its obligations to implement an MSR regime in accordance with the UNCLOS framework of Part XIII in its jurisdictional waters.[27]

Nevertheless, there have been problems in applying the legal framework of MSR because of the lack of agreed definitions and specific distinctions between MSR and hydrographic and military surveys. One particular example of this difficulty occurred between the United States and China. The United States has been a world leader in most areas of global affairs, including expanding and strengthening its MSR globally. In recent years, U.S. naval vessels have engaged in military activities involving operation of research and survey equipment in the EEZ of China, causing serious arguments between the two countries.[28] This has also caused heated debate in international arenas concerning the nature of a coastal state's jurisdiction over MSR, hydrographic surveys, and military activities.[29]

Partially in response to the frequent appearance of American military vessels conducting survey activities in its jurisdictional waters, China has updated its laws and regulations to manage various aspects of foreign-related survey activities in its EEZ.[30] These include amendment of the Law of the PRC on Surveying and Mapping in 2002 at the 29th Meeting of the Standing Committee of the Seventh National People's Congress.[31] The amended Surveying and Mapping Law takes more strict measures to control survey activities in China's jurisdictional waters.[32] Article 1 of this law stresses its threefold purpose: first to ensure the smooth conduct of surveying and mapping, second to promote national economic development, and third to build up national defense and scientific

research. Article 2 highlights that this law applies to all surveying and mapping activities conducted in Chinese national airspace, land, and sea areas.

Article 7 of the Surveying and Mapping Law permits survey activities in the sea areas under the Chinese jurisdiction, subject to the approval by the competent authorities of the State Council and the relevant military department and in compliance with the relevant laws and regulations of China. This article also stipulates that any foreign-related surveying and mapping must be carried out in the form of a joint venture or in cooperation with a Chinese partner and cannot involve state secrets or harm state security. According to article 51 of the law, it is a violation for a foreign organization or individual to conduct surveying and mapping activities without the approval of the Chinese government. It is also a violation for a foreign organization or individual to conduct surveying and mapping activities alone in areas under China's jurisdiction, and severe criminal penalties are authorized if the results obtained from any survey involve state secrets.

To adapt to the changed circumstances and to implement better the Surveying and Mapping Law, China also updated the Regulations of the People's Republic of China on the Management of Surveying and Mapping Results.[33] This new law asserts the ownership by China of the results of all surveying and mapping activities conducted jointly or cooperatively in areas under the sovereignty of China.[34] In the case of surveys conducted in nonsovereign areas under China's jurisdiction, duplicate copies of the results are to be submitted to the competent department for surveying and mapping administration under the State Council.[35] In a similar manner, China declared Regulations of the PRC on the Protection of Surveying Markers.[36]

On 19 January 2007, China adopted Temporary Management Measures on Surveying and Mapping Activities Conducted by Foreign Organizations or Individuals in China.[37] Article 1 of the Management Measures states the threefold purposes of this law: to enhance control over survey activities conducted in areas under Chinese sovereignty or jurisdiction by a foreign organization or individual (that is, foreign surveying in Chinese areas), to safeguard national security and interests, and to promote international communication and cooperation in areas of economy and science.

Article 3 articulates three principles to be observed by foreign surveying vessels within the Chinese areas: they must comply with the Chinese laws, regulations, and relevant rules; their activities may not involve state secrets of China; and they may not damage China's national security.

Articles 4 and 5 designate the competent agencies for administration of foreign-related surveying and mapping activities. Article 6 specifies avenues for a foreign organization or individual to apply for a surveying permit, namely, in joint-venture or cooperative form with departments or organizations of China. Even under the two forms, article

7 prohibits certain activities, including ocean surveying and mapping. Articles 8 and 9 detail the conditions and documentation required to apply for a permit. Article 10 lists the procedures and communication channels for permit processing, including filing the application; initial assessment within twenty working days; further investigation by a higher administrative authority, involving the relevant military department; release of the result within eight working days; and finally the issuing of a permit. The rest of the articles deal with the management of survey results (art. 15), periodic inspections during the conduct of the survey (art. 16), and legal liability for violations (arts. 17, 18, and 19).

The State Bureau of Surveying and Mapping, which is under the same ministry as SOA, is the competent authority for survey management. It has established an International Department to handle foreign-related surveys. To facilitate the implementation of the Surveying Law, it issued Regulations on Scenic Spots and Historic Sites and other detailed regulations. To give effect to the above-mentioned laws, the bureau issued Directives on the Procedures for Administrative Punishment regarding Surveying and Mapping.[38]

To implement these national laws and regulations, a total of twenty-three provinces, autonomous regions, and municipalities directly under the central government have subsequently revised local measures for surveying and mapping management after the Surveying and Mapping Law was put into effect in 2002.[39] These instruments require Chinese agencies to carry out their responsibilities fully, adopt proper measures, and ensure forceful supervision of survey activities in the areas under Chinese jurisdiction. In this way, the Chinese legal system for overseeing surveying and mapping was further improved and consolidated.

In the international arena, China has been active in participating in international organizations related to MSR promotion, such as the North Pacific Marine Science Organization (PICES). China has also signed bilateral and multilateral agreements with the United States, Canada, Germany, France, Russia, Spain, Japan, the two Koreas, and India, among others, regarding cooperation in the development of marine science and technology. These actions are indicative of China's positive attitude toward MSR-related activities.

## Implications and Suggestions

Many changes have occurred in international law and state practice since the entry into force of UNCLOS. The uncertainty and limited details of the UNCLOS regime regarding jurisdictional rights to MSR and hydrographic and military surveys have resulted in many cases of disagreement over practices and concepts.

In today's active media environment, for a government to refuse to deal with well-publicized matters is not a viable strategy. Even though there are no clear-cut boundaries between research and survey activities, some states intentionally make distinctions between these terms so as to avoid the jurisdiction of a coastal state. They claim surveys to be high-seas freedoms separate from MSR and not subject to coastal-state regulations applicable to MSR in foreign EEZs and on foreign continental shelves. The international community has a common understanding of the concept of sovereign rights and jurisdiction, but not all states accept this interpretation.

If "hydrographic surveys" or "military surveys" were to be excluded from the scope of MSR, "hydrographic surveys" and "military surveys" could be carried out in the EEZs of coastal states without any restrictions. Eventually, this would lead to the collapse of the present MSR regime, particularly in the EEZ. This was certainly not what UNCLOS intended. The increased importance of EEZ management and state practice suggest that hydrographic and military surveys in the EEZ should be under the jurisdiction of the coastal state.

Further, MSR activities are very diverse. The numerous processes, operations, characteristics, and goals of MSR cannot be adequately captured by this simple term. From the perspective of coastal states, it is difficult to differentiate MSR from hydrographic and military surveys. Additionally, the technology of MSR is advancing. The development of aerial and space-based remote-sensing platforms will make it more challenging for coastal states to apply their jurisdiction and control over MSR in the EEZ.

Moreover, it is true that the EEZ was previously considered high seas, but UNCLOS now separates the EEZ from the high seas, and residual freedoms in the EEZ are no longer the same as freedoms of the high seas in the traditional sense. UNCLOS, as a "package deal," reaffirms the centuries-old principle of freedom of the seas and maintains such freedoms as navigation and overflight in the EEZ (art. 58). The compromises reflect the substantial conceptual change in freedoms of the seas and the balance of jurisdictional functions among states. There is also allowance for constant modification to resolve newly developing problems. UNCLOS achieves a balance between ocean enclosure by coastal states, on the one hand, and traditional freedoms, on the other. UNCLOS also balances the rights and duties of developing costal states with those of maritime powers.[40] Maritime powers emphasize the principle of freedom of the seas and hope to maximize these freedoms, while developing coastal states stress sovereignty and security.[41]

Although criticized for maintaining excessive expectations of the MSR regime, over the years coastal states have expanded their control over their EEZs by exercising jurisdiction over non-resource-related activities, including many military activities. More restrictions have also been imposed on the freedom of the seas by the international community

through UNCLOS and other rules of international law.[42] When states exercise these freedoms in a foreign EEZ, they are required by UNCLOS article 58 not to contravene the regime of the EEZ but to have "due regard" for the rights and duties of the coastal state and to comply with the laws and regulations established by the coastal state.

Over time, the uses of data collected during surveys have changed dramatically. Data obtained from hydrographic survey can be used not only for navigation safety but also for resource exploration and exploitation, defining maritime boundaries for jurisdictional control, and coastal-zone management. In this context, hydrographic surveys and military surveys should be included within the scope of MSR, regulated by the same MSR regime, and subjected to coastal-state jurisdiction.

Until an acceptable and fair regime on research and survey is established, practical guidelines need to be worked out to promote international cooperation. A precautionary approach has been adopted in many areas, such as the management of fisheries resources and protection of the marine environment. It may also be helpful to adopt the precautionary approach to control research and survey activities in order to avoid potential conflicts caused by the widely divergent views of coastal states and maritime states.

## Concluding Remarks

The sea is a medium of navigation and communication, a vital link in the earth's life-support system. Today, mankind looks toward the seas for sustenance more than ever before, as growing populations and higher living standards have intensified demands for sources of food, fuel, and other resources, including expansion of national space. Through advances in science and technology the once-unexplored ocean depths are now within mankind's reach. The need to obtain more knowledge about the marine environment will only increase.

In many important respects, the provisions of UNCLOS were regarded as reflecting customary international law even before its entry into force, and this has been confirmed by subsequent state practice. However, some of its provisions were not regarded as such, or their status was unclear. Moreover, any legal regime is subject to change because of new developments.

According to UNCLOS, the EEZ is an area of shared rights and responsibilities between the coastal state and all other states.[43] China holds the view that a coastal state is entitled to control its EEZ more strictly according to its needs.[44] The EEZ is subject to a special regime. It is neither territorial sea nor high sea.[45]

All marine data may be used for research, no matter what the means and location of collection. Therefore, in a broad sense, MSR could cover all forms of data-collecting activities. It can be very difficult not to include surveys as MSR: they bear a close relationship

to other research activities, and it is becoming more and more difficult to distinguish between them. Without research concerning hydrographic data, it is basically impossible to implement any provisions of UNCLOS.

The real concern is that the amount of "research" conducted by military vessels in the name of "surveys" would increase, with the consequential possibility that more maritime conflicts or harassment will occur. Instead of blaming the problems inherent in the existing international legal framework, it is wiser and more practical to strive for a collaborative operational framework—that is, to release tension, build trust, and cooperate.

The issue of the developmental imbalance among countries will continue to exist and will inevitably influence the field of research and survey activities. This is the root cause of the problem, but no solution can be offered at a time when the level of development among states is yet to be balanced. It is obvious that some drawbacks exist in UNCLOS regarding the MSR regime in the EEZ. It does not define MSR on the basis of the activity. Nor does it define the operational methods and means of conducting MSR. Neither does it establish objective criteria to determine the purposes and motivation behind the conduct of MSR activities. The MSR regime in the EEZ is largely undefined, leading to conflicting positions regarding jurisdiction.

Eventually, common ground may be found to address the regulatory gaps and implementation concerns that are present in the existing MSR regime. However, there is still a long way to go to build a practical and realistic MSR system, given the great variety of new issues. Along with the development of science and technology, more and more marine data-collection activities will be conducted in the world's oceans. To protect the oceans and their resources better, the lack of international law provisions regulating marine data collection, including hydrographic and military surveys, will have to be resolved.

It is necessary for coastal states to develop national legislation to enhance EEZ management and improve enforcement in the area of marine data-collection activities.[46] For the international community it is also essential to resolve the major issues regarding the MSR regime. Among these issues: Should all marine data-collection activities be subject to coastal-state regulation in the EEZ? Are there means to capture diversified MSR activities, including surveys, in terms of processes, operations, characteristics, and motives? Should advances in technology, changed circumstances, and emerging issues be incorporated into the MSR regime? Can cooperation be promoted through faithful implementation of the MSR regime, with goodwill, without taking advantage of this general framework? Can a code of conduct or practical guidelines for MSR and surveys be developed to diminish the existing disagreement and potential for conflict? Advances of knowledge and skill also make it necessary to update the MSR legal regime of UNCLOS to close legal loopholes.

These challenges can best be addressed through cooperative action that promotes the peaceful use of the oceans instead of confrontation. For the purpose of peaceful exploration and exploitation of the oceans, coastal states should make every effort to reach consensus by enhancing communication and strengthening cooperation. A proper way to make full use of the oceans without abusing the right to conduct MSR granted by UNCLOS may also include the development of practical guidelines to govern such particular forms of MSR activities as hydrographic and military surveys.

## Notes

1. United Nations [hereafter UN], *United Nations Convention on the Law of the Sea of 10 December 1982,* effective 16 November 1994 [hereafter UNCLOS]. As of 1 March 2010, UNCLOS has 160 ratifications, including that of the European Union. See www.un.org/.
2. The "Area" is defined in article 1 of UNCLOS as the seabed, ocean floor, and subsoil beneath the high seas and beyond national jurisdiction. For "peaceful purposes," arts. 87, 143, 256, and 257.
3. Countries such as Argentina and Japan support this view, whereas the United States and the United Kingdom are against it. At the 39th Intergovernmental Oceanographic Commission (IOC) Executive Council's meeting in June 2006, the United Kingdom took the view that the routine collection of data by Argo floats should not be considered as MSR but rather as an operational activity that should be treated in a similar way to meteorological activities; IOC, Thirty-ninth Session of the Executive Council IOC/EC-XXXIX/3 (Paris 21–28 June 2006), p. 37, para. 262, available at http://ioc-unesco.org. Japan and Argentina disagreed. They considered that the Argo floats are MSR tools and that the data collected by them are of benefit to marine meteorology (para. 263).
4. This is evidenced from the earlier international conventions and treaties—such as the four conventions adopted at the 1958 UNCLOS I—in which no restrictions may be found regarding MSR and survey activities, though that is partly due to the limited capacity of science and technology applied to the world oceans at the time those treaties and conventions were developed.
5. For a detailed discussion on this term, see Zhang Haiwen, "The Conflict between Jurisdiction of Coastal States on MSR in EEZ and Military Survey," in *Recent Developments in the Law of the Sea and China,* ed. M. H. Nordquist, J. N. Moore, and K. Fu (Leiden, Neth.: Martinus Nijhoff, 2006), pp. 317–31.
6. According to the International Hydrographic Organization, hydrography is the branch of applied sciences that deals with the measurement and description of the physical features of oceans, seas, coastal areas, lakes, and rivers, as well as with the prediction of their evolution, for the primary purpose of safety of navigation and all other marine purposes and activities, including economic development, security and defense, scientific research, and environmental protection. See *International Hydrographic Organization,* www.iho-ohi.net/.
7. For various aspects regarding the definitions of hydrographic survey, see Wikipedia, s.v. "hydrographic survey," chartmaker.ncd.noaa.gov/hsd/hydrog.htm, and www.msq.qld.gov.au/Home/Waterways/Hydrographic_survey_standards/.
8. J. A. Roach and R. W. Smith, *Excessive Maritime Claims,* International Law Studies 66 (Newport, R.I.: Naval War College, 1994), p. 248.
9. The UN General Assembly and the IOC Executive Council both adopted resolutions that required the IOC to draft and issue a questionnaire surveying the practice of states with respect to Parts XIII (MSR) and XIV (Transfer of Marine Technology [TMT]) of UNCLOS. The resolutions that embody that requirement include the UN General Assembly Resolution A/RES/56/12 and IOC Executive Council 35 Resolution EC-XXXV.7 (Paris, 4–14 June 2002). The purpose of the survey and the subsequent data compilation and analysis was to assess the problems encountered in the implementation of the MSR regime as established by Part XIII of UNCLOS; to assist states in establishing generally accepted guidelines, criteria, and standards for TMT in accordance with article 271 of UNCLOS; and to inform the international community as to the status of MSR and TMT and of practical issues raised in their implementation. On IOC's Advisory Body of Experts on the Law of the Sea (IOC/ABE-LOS) IV, a considerable number of countries expressed interest in receiving guidance/assistance in updating or creating legislation

for MSR. Most countries listed security as the rationale for not employing the implied-consent regime. More details are available from "Questionnaire N.3," *UNESCO/IOC/Law of the Sea,* ioc3.unesco.org/.

10. Quite often hydrographic surveys are regarded as MSR. See Atsuko Kanehara, "Marine Scientific Research in the Sea Zones Where Claims of Two States for the Exclusive Economic Zone Overlap under the United Nations Convention on the Law of the Sea" (presented to the 7th Conference of Science Council of Asia Conference, Workshop D: Security of Ocean in Asia), available at www.scj.go.jp/.

11. See Sam Bateman, "Hydrographic Surveying in the EEZ: Differences and Overlaps with Marine Scientific Research," *Marine Policy* 29, no. 2 (March 2005), pp. 163–74.

12. See Chang-Wee Lee and Chanho Park, "Joint Marine Scientific Research in Intermediate/Provisional Zones between Korea and Japan" (presented to the 7th Conference of Science Council of Asia Conference, Workshop D: Security of Ocean in Asia), available at www.scj.go.jp/.

13. For more details of IOC/ABE-LOS, see "IOC/LOS," *UNESCO/IOC/Law of the Sea,* ioc3.unesco.org/.

14. For a summary see "Practices of Member States," *UNESCO/IOC/Law of the Sea,* ioc3.unesco.org/.

15. More examples of national legislation, such as the *Regulations of the People's Republic of China on the Management of Foreign-Related Marine Scientific Research* [hereafter MSR Regulations] and the *Regulations Relating to Foreign Marine Scientific Research in Norway's Internal Waters, Territorial Sea, Exclusive Economic Zone and on the Continental Shelf,* are available from "National Legislations," *UNESCO/IOC/Law of the Sea,* ioc3.unesco.org/.

16. According to the guidelines, public vessels include those owned, chartered, temporarily employed, contracted, or commissioned by any foreign state, agency, or instrumentality of that state, when such ships are not engaged in any commercial activity.

17. The first single-ship expedition was carried out by the Chinese-built, four-thousand-ton R/V *Xiangyanghong 16* in the western Pacific (latitudes 7–13 degrees north, longitudes 167–78 degrees west, in 1983). See the "Development of China's Marine Programs (White Paper)," www.china.gov.cn/.

18. See "Decision of the Standing Committee of the National People's Congress of the People's Republic of China on the Ratification of the United Nations Convention on the Law of the Sea, 1996." For the English version see State Oceanographic Administration [hereafter SOA], *Collection of the Sea Laws and Regulations* (Beijing: Ocean, 2001), p. 199.

19. For the Chinese and English versions of the 1998 EEZ/CS Law, see SOA, *Collection of the Sea Laws and Regulations,* pp. 11–14, 210–15.

20. China employed the relevant provisions of UNCLOS to define its EEZ and sovereign rights. See article 2 of the 1998 EEZ/CS Law and articles 55 and 57 of UNCLOS.

21. It states: "In the event of a violation of the laws and regulations of the People's Republic of China in the exclusive economic zone or the continental shelf, the People's Republic of China shall have the right to take the necessary investigative measures in accordance with the law and may exercise the right of hot pursuit."

22. The regulations were promulgated by Decree No. 199 of the State Council on 18 June 1996 and put into effect on 1 October 1996.

23. MSR Regulations, art. 2.

24. Ibid., arts. 3–13.

25. There are ongoing discussions in China about revising the MSR Regulations to confirm the adoption of a broad definition of MSR that includes all survey activities in the waters under the jurisdictional control of the Chinese government.

26. MSR Regulations, art. 13.

27. For more details on implementation of MSR regulations by other states, see "Marine Scientific Research," *UNESCO/IOC/Law of the Sea,* ioc3.unesco.org/.

28. One example of such correspondence occurred in September 2006, in the EEZ of China. The Chinese maritime surveillance ship *No. 27* had the following VHF radio exchange with U.S. Naval Ships *Sumner* (T-AGS 61) and *Mary Sears* (T-AGS 65) at 28° 32.93'N, 124° 19.65'E. *No. 27:* "You are in China's EEZ and conducting MSR, thus subject to the Chinese laws on MSR." *Sumner/Mary Sears:* "I'm engaged in lawful military activities in international waters. I'm not engaged in marine scientific research. I'm operating with due regard for the safety of others and facility and in accordance with international law." For more on this account, see www.chinanews.com.cn/gj/news/2007/04-10/912056.shtml.

29. For a fuller account, see M. J. Valencia and K. Akimoto, eds., "Military and Intelligence Gathering Activities in the Exclusive Economic Zone: Consensus and Disagreement II," *Marine Policy* 29, no. 2 (March 2005), pp. 95–187.

30. For the details of the laws and regulations related to survey and mapping activities, see www.sbsm.gov.cn. For discussions, see M. J. Valencia, "Summary of the Bali Dialogue," *Marine Policy* 28, no. 1 (2004), pp. 7–12.

31. The Surveying and Mapping Law was promulgated in December 1992 by Presidential Decree No. 66 and became effective on 1 July 1993.

32. See SOA, *Collection of the Sea Laws and Regulations,* pp. 64–70, 300–13. The announcement of this new law followed a confrontation of the American navy's ocean survey ship *Bowditch* with a Chinese maritime surveillance patrol vessel in the southern part of the Yellow Sea in September 2002. See B. Gertz, "China Enacts Law Extending Its Control," *Washington Times,* 27 January 2003, p. 1.

33. The law was amended at the 136th Meeting of the State Council on 17 May 2006 by Decree No. 469 of the State Council and was put into effect on 1 September 2006. It supersedes the law adopted on 21 March 1989.

34. *Law on Surveying and Mapping Results,* art. 8, para. 1.

35. Ibid., art. 8, para. 2.

36. State Bureau of Surveying and Mapping, "Regulations of the PRC on the Protection of Survey Markers" (in Chinese), available at hgs.sbsm.gov.cn/article/zcfg/flfg/200709/20070900000661.shtml.

37. This law was proclaimed by Ministerial Order No. 38 of the Ministry of Land and Resources and was put into force on 1 March 2007. State Bureau of Surveying and Mapping, "Temporary Management Measures for Survey and Mapping Activities Conducted by Foreign Organizations or Individuals in China" (in Chinese), available at www.sbsm.gov.cn/article//zcfg/bmgz/200709/20070900000644.shtml for the Chinese text.

38. The regulation was issued in December 1999 (Serial No. 6) and made effective on 4 January 2000.

39. For more information on this account, see www.sbsm.gov.cn.

40. Extract from the *Official Records of the 134th Plenary Meeting of the Resumed Ninth Session of the Third United Nations Conference on the Law of the Sea,* 25 *August 1980* (1982), vol. 14, p. 15.

41. Wang Yi-Zhou, *International Politics* (Shanghai: Shanghai People's, 1995), p. 80.

42. The extension of the jurisdiction of coastal states is observed from the evolution of the laws of the sea, the four Geneva Conventions adopted in 1958, the crystallization of the EEZ regime, and the implementation of the MSR regime and associated discussions at the IOC/ABE-LOS of UNESCO. See "UNESCO/IOC/LOS at a Glance," *UNESCO/IOC/Law of the Sea,* ioc3.unesco.org/.

43. UNCLOS article 56 provides coastal states sovereign rights and jurisdiction over natural resources, whereas article 58 provides that foreign states retain certain freedoms, such as navigation and overflight.

44. China is of the view that the use of the EEZ for nonpeaceful purposes, such as military and electronic intelligence gathering, is illegal. See X. Cheng, "A Chinese Perspective on 'Operational Modalities,'" *Marine Policy* 28, no. 1 (2004), pp. 25–27.

45. For a supporting view: "EEZ is subject to a 'special regime.' The regime is specific in the sense that the legal regime of the EEZ is different from both the territorial sea and the high seas. It is a zone which partakes of some of the characteristics of both regimes, but belongs to neither." UN, *The Law of the Sea: National Legislation on the Exclusive Economic Zone, the Economic Zone and the Exclusive Fishery Zone* (New York: 1986), p. 13.

46. It is suggested that China strictly control foreign MSR and hydrographic and military surveys in its jurisdictional waters. With an expansion of the administrative scope of its EEZ to two hundred nautical miles, the Maritime Safety Administration of China will increase its future input in science and technology and further improve its maritime administrative methods. More vessels and aircraft of different models will be constructed in the coming years, to be used for tridimensional inspection and control over the sea, and an Internet Vessel Reporting system will also be put into use. See "China to Expand Maritime Administration Scope," Xinhua, 12 February 2003, www.china.org.cn/.

# Playing by or Playing with the Rules of UNCLOS?

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The United States and the People's Republic of China (PRC) each piously claim to abide by the United Nations Convention on the Law of the Sea (UNCLOS), but each accuses the other of playing with the rules to advance parochial interests. The dissensus manifests itself in conflicting interpretations of what activity UNCLOS permits in the exclusive economic zone (EEZ). Narrowly conceived, this is a dispute about law. Viewed from a broader vantage, the dispute is one of a lengthening roster of issues in which the PRC and the United States are jostling for dominance over international regimes, reflecting an intensifying geostrategic friction that arises from mutual insecurity and mistrust.

Whether one perceives the PRC as a rising hegemon challenging U.S. primacy because of an abiding dissatisfaction with the norms and rules of an international system over which Washington exerts a disproportionate influence, or whether one prefers a less breathless depiction of the PRC as merely resentful of U.S. actions that seem to degrade China's security, it is evident that Beijing is prepared to contest Washington's view of what is permissible in the EEZ.[1] The putative source of controversy—how to interpret UNCLOS—is merely a symptom of a more pervasive malady in the Sino-U.S. relationship. Probing farther, one discerns the PRC and the United States engaged in a broader contest about access to and control over maritime space, which itself reflects an even deeper anxiety about how the evolving capacity of each to project military power affects the national security of the other. Ultimately, how the United States and the PRC manage these nested controversies affects the well-being of the international system, which Beijing and Washington each seek to influence.

If the only thing at stake were the question of what activities might be conducted in the EEZ, there are ways by which Beijing and Washington might modify their behavior to forestall conflict while resisting any erosion of the sense of national security. To date, neither has had the will to dismount from its high horse to compromise. That neither has done so does not mean that it is impossible or inconceivable.

Progress toward a *modus operandi* with respect to the EEZ has been impeded not for lack of opportunity or institutional mechanisms through which accommodation might be established but because the opposed postures concerning UNCLOS that Beijing and Washington have adopted grow from more than conflict over the EEZ. Beijing and

Washington are both working to ensure that their respective views of propriety are established or consolidated as customary international law where maritime activity is concerned. This may reflect the ambition each has of exercising leadership in other arenas where developed and developing states are characterized as viewing the world through different lenses.

In sum, there is much more at stake in the dispute about UNCLOS than an enumeration of what activities may be permitted in the EEZ. At issue is how the United States and the PRC will address mutual grievances within the boundaries of inherently imperfect international regimes and what implications their responses will have for the international system.

## Looking beyond Law

Law generally, and UNCLOS in particular, has become one means of contestation but not one that addresses the source of underlying political friction between the United States and the PRC.[2] The Sino-U.S. impasse arises from a conflict of strategic ambitions. Jousting over the definition of what activities may be permitted in the EEZ, the United States and the PRC mask (or refrain from acknowledging) their fundamental assumptions and, equally, hesitate to articulate the insecurity and indignation that each provokes in the other.

Each side devises elaborate argumentation to justify a position by reference to terms and passages from UNCLOS, implying a common acquiescence to the primacy of international law generally and to the UNCLOS regime specifically. Neither side challenges the legitimacy of international law in general or UNCLOS in specific. That the two disputants contend in such civil, legalistic discourse might encourage one to conclude that reason has surpassed passion, except that vessels from each state, dispatched by authorities determined to defend a principled position, meet in defiant encounters at sea, jeopardizing maritime harmony, menacing bilateral relations, and endangering the lives of duty-bound sailors. Thus, it provides only modest comfort that conversation about the EEZ is possible, even if it is through dialogue that both sides prefer to resolve the present controversy.

A resolution of the EEZ issue is unlikely to emerge from a discussion of law, because the law is not really the problem. Sino-U.S. relations are strained because of the ways in which the strategic aims of Beijing and Washington collide and chafe against one another during a period of rapid transition of stature and perceived power.

Simply put, the PRC—reflexively anxious about its comparative weakness in the face of far more robust U.S. military power—worries about how the United States and its allies may undermine those assets that the PRC has managed to develop to offset the existing

military asymmetry between them. Beijing seems committed to expanding strategic depth by raising the cost to the United States of operating close to the PRC's shores. In line with this objective, the PRC evidently resents U.S. intelligence and surveillance activities. It hopes to push foreign forces as far from shore as is possible, especially those with prying eyes capable of gathering information about assets Beijing prefers to keep secret.

One PRC military official present at the U.S. Naval War College conference that gave rise to this volume expressed Beijing's irritation and disquiet, explaining that its reason for seeking to deny the United States and other foreign vessels unfettered access to the EEZ has everything to do with the PRC's perceptions of U.S. intentions. The official said that just as a person looking out from the front door of his home develops intuition to know whom to welcome into his house for tea and against whom to slam the gate, so too does the PRC respond intuitively to what it perceives as America's hostile strategic intentions.

Casting the PRC attitude about foreign military activities in the EEZ as a self-evidently rational reaction by Beijing to Washington's unreasonable expectations and questionable intentions, the PRC official made plain his view that the controversy—including, one presumes, the incidents at sea—results from flawed American policies. The rhetoric most often invoked in this context is an assertion by Chinese commentators that the United States seeks to "contain China."[3] This concern is particularly acute with respect to the South China Sea and extends not only to the actions of the United States but also to those of Japan and India. Without making explicit what precisely it means to contain China or how the United States would accomplish this objective, the implications of a distinction between a guest one invites in for tea and a menacing presence one works to exclude is that if the United States were to adjust its posture to conform with Beijing's preferences, the source of friction would disappear and the controversy would be resolved.

During an August 2009 special session convened under the 1998 Sino-U.S. Military Maritime Consultative Agreement (MMCA), a PRC Ministry of Defense official made a comparable point, stating, "China believes the constant U.S. military air and sea surveillance and survey operations in China's exclusive economic zone had led to military confrontations between the two sides. . . . The way to resolve China-U.S. maritime incidents is for the U.S. to change its surveillance and survey operations policies against China, decrease and eventually stop such operations."[4] In this case, as in so many others where the PRC finds itself in dispute with foreign states, the Chinese frame the controversy as one in which fault rests entirely on the other side. From Beijing's perspective, as its spokesmen are wont to observe, the PRC has been pushed by the other state into the unwelcome position of having no option other than the one to which the foreign state now objects.

For its part, the United States, which has long defined its own national security in terms of sustaining access to waters and airspace half a world away, views charily any erosion of its freedom of navigation or overflight.[5] In 1979 the United States established the Freedom of Navigation (FON) Program to challenge claims by coastal states that they be permitted to restrict freedom of navigation or overflight beyond those standards more widely endorsed by the international community. According to the U.S. Department of State, the United States pledges to

> exercise and assert its navigation and overflight rights and freedoms on a worldwide basis in a manner that is consistent with the balance of interests reflected in the Law of the Sea (LOS) Convention. The United States will not, however, acquiesce in unilateral acts of other states designed to restrict the rights and freedoms of the international community in navigation and overflight and other related high seas uses.[6]

To achieve these ends, the United States engages in a range of diplomatic and consultative activities but also authorizes "operational assertions by U.S. military units," which target states—including the PRC—seeking to impose greater restrictions on movement than are embodied in UNCLOS.[7]

It is worth observing that the American policy regarding freedom of navigation is not an outgrowth of concern only about the PRC but is implemented globally. Indeed, at least until the end of the administration of President George W. Bush, the Office of the Under Secretary of Defense for Policy published on an annual basis what were known as "FON assertions"—lists of all states that sought to restrict freedom of navigation and the particular manners in which they sought to do so. Since then the U.S. Department of Defense has affirmed its intention to authorize "deliberate and calibrated assertions of our freedom of navigation rights by U.S. Navy vessels."[8]

So, for the United States, navigation through and overflight of the EEZ—even where military activities are undertaken—is an essential right of all states. As to the inclination to engage in surveillance and intelligence gathering in a region that the PRC perceives as sensitive, one American conference participant observed that American strategic planners seem to be perpetually anxious about assaults on their domain emerging as strategic surprises—an apprehension triggered by the Japanese attack on Pearl Harbor in 1941 and reinforced for a new generation by al-Qaeda's attacks of September 11, 2001. Consequently, the very idea that the PRC hopes to prevent scrutiny of submarine and related assets arouses suspicions and prompts American resolve to ensure that it not be caught unaware of newly devised capabilities or incapable of responding to them.

For both American and Chinese strategists and statesmen, then, the controversy about what is allowable under UNCLOS is not a simple question of how best to interpret the convention but is the outgrowth of geostrategic competition under conditions of a security dilemma. Both defend their positions as matters of principle.

This, though, is not the manner in which disagreements about activities in the EEZ are commonly addressed. Instead, in Beijing as in Washington, the focus is on what UNCLOS permits and why it is therefore obvious that the other side is in violation of clearly stated precepts. As the chapters of this volume suggest, efforts by American and Chinese commentators to convince each other of views they proffer as unassailable have, thus far, failed. Indeed, Americans and Chinese advocates frequently "talk past" one another.[9] Where the EEZ is concerned, statesmen, scholars, soldiers, and other commentators advance assertions that flow from premises that are simply not shared by nationals in the other state. As prima facie evidence of this, consider that none of the American authors who have contributed to this volume question the legal right of the United States to conduct military activities in the EEZ, just as none of the Chinese authors who have contributed question the legitimacy of the PRC's effort to exclude such activities from the EEZ.

Fundamentally, each side deploys legal reasoning to justify actions it feels compelled to take for the enhancement of its security. As neither side is prepared to debase itself by relinquishing its pretense of equanimity—divulging how menaced the other makes it feel—each behaves as an aggrieved party, deprived of rights that it claims are plainly stated in UNCLOS, rights that it believes it could yet enjoy if only the other side would recognize the proper interpretation of the law. For both Americans and Chinese writing on this matter, fault rests squarely on the shoulders of the other nation. Neither is prepared to acknowledge or "own" the means by which it exacerbates underlying suspicions by actions it takes.

## The High Horse of Principle

In resorting to UNCLOS, Beijing and Washington each claim the moral high ground. Chinese advocates have adopted the perspective with respect to the EEZ that the PRC has taken in other international controversies involving powerful states. The PRC assumes the mantle of the underprivileged developing state confronting harassment from the far stronger, developed state. Li Xingguang, president of the PRC's Military Court of the Navy, said in an interview published in *Jiefangjun Bao (Liberation Army Daily):*

> A handful of maritime powers, as represented by the United States, advocates that maritime scientific research in EEZs should not fall under the jurisdiction of littoral states, although most other countries uphold the principle of prior agreement . . . [and] third world countries generally hold that naval and air force military reconnaissance activities in EEZs must be conducted with the agreement of littoral states.[10]

The PRC position is rife with implications of American hegemony reflecting, consciously or not, the well-trod narrative of China's sufferings at the hands of Western imperialism.

By choosing this tack the PRC locates its dispute with the United States less in law than in the international equivalence of populism. That plays not only to the sympathies of its own population—explaining by reference to the asymmetry of power between itself and the United States why it cannot defend its interests against incursions into a maritime domain that Beijing claims should be its own to regulate—but also to the global bleachers. In this way China seeks to arouse the sympathies of less powerful "developing" nations, which feel themselves at some disadvantage in confrontation with the United States or other large states that act in self-interest, disregarding the preferences of the weaker state. In this sense, the controversy concerning UNCLOS may be seen as one battle in the Sino-U.S. war for moral primacy and influence over global institutions.

As a signatory to UNCLOS, the PRC occasionally implies that its interpretations should trump those of the United States, which has yet to ratify the convention that Washington nevertheless employs as a bludgeon against Beijing's claims that UNCLOS permits limitations by coastal states on foreign military activities in the EEZ. The message is that even though the United States asserts its compliance with UNCLOS, because it has not undertaken to be formally bound by the convention it has no standing to impose its self-regarding interpretations of the regime on those states that have ratified it.

For instance, Zhang Haiwen cites passages from an essay by Scott Borgerson to make the point that there is a "strong political force which is scornful of the Convention in the United States. They like to take advantage of the Convention but do not respect it."[11] Zhang writes, "It is unfair . . . that the United States, which has yet to ratify the Convention, is raising an argument on the interpretation of the Convention."[12] Reacting to what she views as Washington's selective compliance with UNCLOS, Zhang highlights the following from Borgerson's piece: "Opponents of the convention [UNCLOS] argue that there is no need to join the treaty [UNCLOS] because, with the world's hegemonic navy, the United States can treat the parts of the convention it likes as customary international law, following the convention's guidelines when it suits American interests and pursuing a unilateral course of action when it does not."[13]

In these sentiments Zhang is not alone. Chinese observers have framed the dispute about UNCLOS as illustrative of U.S. hegemonic tendencies. "America's failure to cooperate with the international community on UNCLOS is not an isolated phenomenon," writes one commentator, "but is one element in its strategy to dominate the world and monopolize the oceans."[14]

In a vigorous denunciation of the U.S. position on UNCLOS, Shen Dingli, the vice dean of the Department of International Studies at Fudan University, comments that for a long time the United States has been acting as the world's primary maritime power, seeking to limit the rights and interests of littoral states but all the while penetrating

their maritime space in ways that are "hegemonic and offensive." He asserts that the United States, which has thus far refused to ratify UNCLOS, nevertheless regards itself as if it were among those states that *have* ratified the convention, censuring states that genuinely have. Shen writes that the United States often interprets the convention from the vantage of its own interest rather than according to the stringent standards it claims are demanded of a world leader. If this persists, Shen cautions, it will be difficult for the United States to maintain its image as a moral and legal exemplar. Instead, it will be perceived as a state that is always scheming and seeking to profit at the expense of other states.

Shen writes that the United States must realize that the days when America could be insufferably arrogant and take advantage of other states have passed. The PRC, he writes, does not have the intention—and, at present, lacks the means—to "run to America's front door" to challenge the U.S. coast and maritime regulations, and, he submits, the United States ought not challenge the PRC's laws on the EEZ. He urges mutual regard for the convention that both sides claim is operative and concludes, menacingly, by threatening, "The U.S. should consider: as a state which cannot manage to put Iraq in good order and is certainly unable to treat Afghanistan fairly, it should, in the face of a great country with a population of 1.3 billion, restrain itself a bit."[15]

One way to interpret the challenges emanating from the PRC is that Beijing resents a legal regime that appears to favor American security at the PRC's expense. Unable to change the words of UNCLOS, the PRC argues—laboriously, at times—to persuade the United States that the spirit of the law clearly supports Beijing's interpretation, even where the word of the law may be insufficiently precise.

Hence, Chinese and American analysts of UNCLOS dicker about the meaning of article 58(3), which reads: "In exercising their rights and performing their duties under this Convention in the exclusive economic zone, States shall have due regard to the rights and duties of the coastal State and shall comply with the laws and regulations adopted by the coastal State in accordance with the provisions of this Convention and other rules of international law in so far as they are not incompatible with this Part."[16] PRC analysts point to the "due regard" clause as evidence of the obligation of foreign states to abide the laws of coastal states and the right of coastal states to restrict military activities in the EEZs off their coasts. American analysts tend to view this conclusion as smuggling into the article a privilege that was explicitly rejected by the drafters of the convention.

It is conceivable, of course, that advocates writing on behalf of the PRC offer interpretations of UNCLOS that are in fact meant to reopen and extend negotiations about issues that have, apparently, been settled. By challenging the understanding of what is permissible in the EEZ, the Chinese analysts may be hoping that other states will follow

suit, adjusting what would then be seen as customary international law and hoping that the legal justifications they offer will likewise become the new norm. This, indeed, is precisely why some American proponents of UNCLOS argue that the United States must ratify the convention. For example, Rear Adm. Arthur E. Brooks, commander of the Seventeenth Coast Guard District, has said, "While reliance upon customary international law has served us well for many years, it does not adequately protect our interests. Customary international law is based on the evolving practice of States; it can and does erode over time. The Law of the Sea Convention provides the legal certainty and stability" that the admiral believes would assure U.S. interests for the long term.[17]

Notwithstanding the imperfections in PRC arguments made about the American disregard for UNCLOS, it takes only a modicum of empathy to understand why Chinese view U.S. actions as they do. After all, the United States does have the military means to enforce its will and, up to a point, continues to press its claims by engaging in operations it knows to trespass Beijing's stated limits of tolerance.[18]

Beyond that, the United States persists in an unacknowledged expectation that operating a massive armada in the waters of the western Pacific is both a right to which it is entitled and an obligation for American national security. Americans have become so habituated to unfettered operation in the Pacific that few question the legitimacy or ethical propriety of doing so. Americans on both sides of the ideological divide seem to support, without reflection, the notion of this entitlement.[19]

Americans may assume that such dominance is self-evidently in the interests of other states because the United States defends the "global commons." One consequence is that Americans may refrain from reflecting on how the U.S. naval presence appears in the eyes of the PRC. The Chinese, though, by no means share the certainty that an American naval presence in the western Pacific is, ipso facto, consistent with Beijing's notions of national security. Consequently, even well-considered and conceptually grounded explanations of the sensibility of the U.S. presence coupled to well-intended invitations for Sino-U.S. cooperation are likely to be perceived by Chinese readers as self-serving justifications for the sustenance of American primacy. After all, leaving aside nonstate actors that might pose threats to the security of PRC land or seaborne commodities, the state that Beijing looks to as the most likely source of harm is the United States.

The authors of a document intended to lay out the PRC's worldview, strategic concerns, and military response—*China's National Defense*—survey the strategic situation around the world. Turning to the Asia-Pacific region, they write, "The Asia-Pacific security situation is stable on the whole." However, in a paragraph listing what are euphemistically called "many factors of uncertainty," the document states that "the US has increased its strategic attention to and input in the Asia-Pacific region, further consolidating its

military alliances, adjusting its military deployment and enhancing its military capabilities."[20]

It elaborates, "China is faced with the superiority of the developed countries in economy, science and technology, as well as military affairs. It also faces strategic maneuvers and containment from the outside while having to face disruption and sabotage by separatist and hostile forces from the inside."[21] The frequency with which the PRC press and Chinese academics write of what are perceived as U.S. efforts to contain China makes it highly likely that references to developed countries and to "strategic maneuvers and containment" mean almost assuredly the United States and, perhaps to a lesser extent, Japan.

Naturally, Washington avers that its actions in the EEZ are legitimate, and when PRC vessels have challenged those claims at sea, the United States has refrained from escalating, while arguing with vehemence and—like a fouled player on a basketball court—exaggerated indignation about the infringement of its rights by the PRC. American analysts assert that rather few states concur in Beijing's view of the EEZ as a region where foreign military activities are excluded. Moreover, Americans hammer at the PRC's notion that foreign military vessels must secure the permission of the PRC to conduct certain activities in the EEZ extending from the Chinese coast. Americans argue that UNCLOS does not endorse the view preferred by the PRC that the EEZ is an extension of each littoral state's coast and particular domestic laws but instead argue that UNCLOS casts the EEZ as a single oceanic realm in which a single legal regime applies.

This view flows from conviction that there is a single, global system governed by rules that operate as the United States claims they do. Actually, the PRC does not contest the singularity of the international system. Both the United States and the PRC understand that there is a single international system, but both Beijing and Washington are struggling to ensure that it reflects values they each prefer.

## Implications

The contretemps of the early twenty-first century regarding the EEZ did not emerge only when the PRC rapidly became more wealthy and powerful. That is, the conflict is not the by-product of the "rise of China." The posture Beijing now advances reflects preferences that the PRC staked out in the process of negotiating UNCLOS in the 1970s. Indeed, as the chapter by Andrew Williams in this collection observes, the PRC was among those states that sought during the negotiation of UNCLOS to have "security interests" of coastal states protected in the EEZ and military activities by foreign parties prohibited.[22] These efforts failed.

What may, however, be the outgrowth of the "rise of China" is a newly emerging indignation within the PRC and self-confidence that it can, and should, confront unwelcomed

foreign vessels as a way of underscoring its determination to protect what it perceives to be its rights. In this, the PRC manifests two potentially risky behaviors. The first is to base its notion of rights on its own interpretation of a convention, in disregard of the prevailing interpretation of a preponderance of signatory states. Beijing could, one supposes, withdraw from UNCLOS and insist that it has a right to extend sovereignty out to whatever distance from shore it chooses. After all, there are instances when a state believes it has the capacity to defend a claim not otherwise protected by law and simply snubs the law so as to do what it wills. For example, Japan in 1933, in the face of Western condemnation and efforts to constrain the expansion of its foothold in Manchuria, withdrew from the League of Nations, citing "a wide divergence of view" between itself and the League regarding the implications of its support for the "independence" of Manchukuo.[23] Germany withdrew seven months later. Should the PRC reach a stage of development at which a surfeit of national self-confidence outweighs a capacity for level-headed self-restraint, it could defect from UNCLOS and, like the United States, claim adherence in its own manner, without being a signatory.

An even more risky behavior manifested by the PRC, in its confrontational maneuvers at sea, is an apparent expectation that by employing obstructive means short of violence—principally harassment of U.S. vessels—it can persuade the United States to alter its operations to conform with PRC preferences while avoiding calamity. There is no need to wonder what lessons the PRC has taken from the 1 April 2001 collision of the Chinese F-8 and the American EP-3. Wang Wei's death has not prompted reflection about the advisability of exercising greater restraint in expressions of displeasure at U.S. operations or of expanding the MMCA to establish a bilateral code of conduct aimed at preventing incidents at sea.[24] Rather, the PRC not only acknowledges no responsibility for its part in these confrontations but justifies its response.

Equally, the United States continues to goad the PRC without recognizing how doing so contributes to hostility it otherwise claims interest in overcoming. It behaves as if fault for the incidents at sea resides solely in Beijing's wanton disregard for the safety of American sailors and airmen. Washington insists that beyond the specific intelligence it may seek from operations conducted in the EEZ, its deployments reify the principle of freedom of navigation and therefore should be seen as defending a common good from which all states—the PRC included—stand to benefit.

Accustomed as it is to see itself as the defender of liberty and the enforcer of order, the United States is not attuned to the perceptions of insecurity and indignation it arouses in weaker powers. Americans have become so used to possessing an asymmetric advantage of power that in dealings with less powerful states they assume that the benignity of their actions will be self-evident. Were the situation reversed—were the eyes of a much more powerful foreign power peering all too intently from much too near at regions

of the U.S. coast that Washington considers strategically sensitive—Americans might understand more viscerally the alarm U.S. activities provoke off China's coast.

The United States believes itself to be playing by the rules. By exploiting far more powerful resources against a far weaker target, it may lose sight of—or perhaps it cares little about—how the imbalance affects perceptions of its actions by the other. Pursuing its FON operations, the United States may also be playing with the rules to "score points." During the Cold War, the cat-and-mouse, tit-for-tat, thrust-and-parry competition with the Soviet Union was a rivalry between two more or less evenly matched opponents. Applying the same norms and harboring expectations that its relations with the PRC ought to follow the same pattern, Washington either overlooks or revels in the asymmetry.

From Washington's vantage, so long as it abides by UNCLOS there is no reason why it should restrict its own activities simply because China is made to feel vulnerable by them. Just as the PRC justifies its challenges to U.S. activities in the EEZ, so the United States justifies those very activities. Feeling their actions legitimated by law and flowing from more fundamental principles, both the United States and China persevere in risky displays of determination rather than devising mutually acceptable limits that will safeguard the interests of both. Should this pattern persist, one should be unsurprised if defiance leads, once again, to miscalculation, conflict, and loss. Like teenage hot-rodders bolstered by bravado, overconfidence, and a sense of invulnerability to physics, the United States and the PRC are embarked on a protracted game of maritime "chicken" that may, with little warning, turn horribly wrong.

The possibility of a bilateral compromise is clear but would demand that both sides be prepared to give up something in exchange for self-restraint by the other. For example, Beijing could reserve what it perceives as its right to interdict foreign vessels that did not seek prior permission for military activities within the EEZ while allowing as a matter of sovereign courtesy those that provided advance notice to pass unhindered. Washington could reserve what it perceives as its right to conduct military activities in the EEZ without seeking prior permission from the coastal state while agreeing as a matter of sovereign prerogative to provide prior notification to the PRC. Having received advance notification, the PRC could "shadow" foreign vessels conducting military activities in the EEZ so as to evaluate better what data were being gathered, and the United States could refrain from remarking on or thwarting that countermeasure.

By reserving maximal rights so as not to compromise on principle while acting with less rigidity so as to avoid conflict, both sides could—by mutual accommodation—contribute to a reduction in hostility and the cultivation of greater trust and mutual regard. Naturally, Beijing and Washington could adapt existing international codes of conduct for encounters at sea to suit better their mutual needs, or they could devise one anew.[25]

That way, if a shift in political mood causes either to revert to their maximal claims, a clash might still be avoided by reference to formal protocols—such as the COLREGS—devised to prevent conflict.

So long as either side believes that it is entirely within its rights to continue on its present course, however, compromise and self-restraint are unlikely. To date, both sides have manifested an intention to remain astride their high horses, yielding little reason to expect rapid change from either.

## Notes

1. For insight to conceptual considerations of the contest between the United States and the PRC for supremacy in the international system, see Robert S. Ross and Zhu Feng, eds., *China's Ascent: Power, Security, and the Future of International Politics* (Ithaca, N.Y.: Cornell Univ. Press, 2008).
2. William J. Aceves, "The Freedom of Navigation Program: A Study of the Relationship between Law and Politics," *Hastings International and Comparative Law Review* 19 (1995–96), p. 259.
3. "Luo Yuan: Sixiang zhibao jianyan Aobama bu ezhi Zhongguo yanlun" [Luo Yuan: Four Indicators Test Obama's Speech about Not Containing China], Xinhua, 24 November 2009, news.xinhuanet.com/.
4. "China Urges US to Reduce Military Surveillance Operations," Xinhua, 27 August 2009, World News Connection.
5. U.S. Senate, *Testimony of Deputy Assistant Secretary Scot Marciel, Bureau of East Asian and Pacific Affairs, U.S. Department of State, before the Subcommittee on East Asian and Pacific Affairs, Committee on Foreign Relations, United States Senate,* 111th Cong., 1st sess., 15 July 2009, available at foreign.senate.gov/.
6. "Maritime Security and Navigation," *U.S. Department of State: Diplomacy in Action,* www.state.gov/.
7. Ibid.; George Galdorisi, "The US Freedom of Navigation Program Preserving the Law of the Sea," *Ocean and Coastal Management* 25, no. 3 (1994), pp. 179–88.
8. *Testimony of Deputy Assistant Secretary of Defense Robert Scher, Asian and Pacific Security Affairs, Office of the Secretary of Defense, before the U.S.-China Economic and Security Review Commission,* 4 February 2010, www.uscc.gov/.
9. Striking examples of this may be found in Raul (Pete) Pedrozo, "Preserving Navigational Rights and Freedoms: The Right to Conduct Military Activities in China's Exclusive Economic Zone," *Chinese Journal of International Law* (2010), pp. 9–29, and in Zhang Haiwen, "Is It Safeguarding the Freedom of Navigation or Maritime Hegemony of the United States? Comments on Raul (Pete) Pedrozo's Article on Military Activities in the EEZ," *Chinese Journal of International Law* (2010), pp. 31–47.
10. "Summary: JFJB Interviews PLA Navy Court President on Legal Issues on EEZs," *Jiefangjun Bao Online,* 22 June 2009, World News Connection.
11. Zhang, "Is It Safeguarding the Freedom of Navigation or Maritime Hegemony of the United States?" p. 38, citing Scott G. Borgerson, *The National Interest and the Law of the Sea,* Council Special Report 46 (New York: Council on Foreign Relations, 4 May 2009).
12. Zhang, "Is It Safeguarding the Freedom of Navigation or Maritime Hegemony of the United States?" p. 35.
13. Ibid., p. 39.
14. Gao Zhiguo, "Meiguo jujue pijun 'Lianheguo haiyangfa gongyue' de qian yinhouguo" [The Cause and Effects of America's Refusal to Ratify the UNCLOS], *Shanghai International Maritime Information and Documentation Network,* 5 June 2007, www.simic.net.cn/.
15. Shen Dingli, "Jianyi Meiguo zai Nanhai yousuo shoulian" [Suggesting That the U.S. Restrain Itself a Bit in the South China Sea], *Dongfang Zaobao,* 13 March 2009, www.dfdaily.com/.
16. "[UNCLOS] Part V: Exclusive Economic Zone," *Admiral and Maritime Law Guide: International Conventions,* www.admiraltylawguide.com/.
17. Alaska House of Representatives, *Statement of Rear Admiral Arthur Brooks, Commander, Seventeenth Coast Guard District, to the Alaska House State of Affairs Committee on the United Nations Convention on the Law of the Sea,* 23 March 2009, available at www.uscg.mil/.

18. Although the United States retains a decided advantage over the PRC in military capabilities writ large and has defied PRC preferences, there may come a point at which China is able to raise the cost to the United States of doing so to an unacceptable level. According to the U.S. Department of Defense, the People's Liberation Army continues "to develop and field disruptive military technologies, including those for anti-access/area-denial, as well as for nuclear, space, and cyber warfare." U.S. Defense Dept., *Military Power of the People's Republic of China, 2009* (Washington, D.C.: March 2009), pp. i, vii, 13, 20–25, 47–48.

19. In the context of a spirited debate, there is one point—the expectation that the United States should remain a Pacific power—on which two scholars representative of the two ideological camps seem to agree. See Aaron Friedberg and Robert S. Ross, "Here Be Dragons: Is China a Military Threat?" *National Interest* 103 (September/October 2009), pp. 19–34.

20. Information Office of the State Council of the People's Republic of China, *China's National Defense in 2008* (Beijing: Foreign Languages, January 2009), pp. 4–5.

21. Ibid., p. 6.

22. See also Pedrozo, "Preserving Navigational Rights and Freedoms," p. 24.

23. "The Imperial Rescript Relating to Withdrawal from the League of Nations, Proclaimed on March 27, 1933," *Ibiblio: The Public's Library and Digital Archive,* www.ibiblio.org/.

24. *Agreement between the Department of Defense of the United States of America and the Ministry of National Defense of the People's Republic of China on Establishing a Consultation Mechanism to Strengthen Military Maritime Safety,* 19 January 1998, available at www.fas.org/.

25. Pedrozo, "Preserving Navigational Rights and Freedoms," p. 27.

## Abbreviations and Definitions

| | | |
|---|---|---|
| A | **ABE-LOS** | Advisory Body of Experts on the Law of the Sea |
| | **ADIZ** | air-defense identification zone |
| | **AGI** | surveillance ship |
| | **ATS** | air traffic services |
| C | **CDEM** | construction, design, equipping, and manning |
| | **COLREGS** | International Regulations for Preventing Collisions at Sea |
| E | **EEZ** | exclusive economic zone |
| F | **FIR** | flight information region |
| | **FON** | Freedom of Navigation (Program) |
| | **FSI** | [IMO Sub-Committee on] Flag State Implementation |
| I | **ICAO** | International Civil Aviation Organization |
| | **IMO** | International Maritime Organization |
| | **INCSEA** | U.S.-USSR Prevention of Incidents on and over the Seas agreement |
| | **IOC** | Intergovernmental Oceanographic Commission |
| J | **JMSDF** | Japan Maritime Self-Defense Force |
| L | **LOSC** | Law of the Sea Convention [also UNCLOS] |
| M | **MARPOL 73/78** | International Convention for the Prevention of Pollution from Ships |
| | **MMCA** | Military Maritime Consultative Agreement |
| | **MSC** | Military Sealift Command |

| | | |
|---|---|---|
| | **MSR** | marine scientific research |
| N | **NATO** | North Atlantic Treaty Organization |
| | **1998 EEZ/CS Law** | Law of the PRC on the Exclusive Economic Zone and the Continental Shelf |
| O | **ONR** | Office of Naval Research |
| P | **PICES** | North Pacific Marine Science Organization |
| | **PLA** | People's Liberation Army |
| | **PLAN** | People's Liberation Army Navy |
| | **PRC** | People's Republic of China |
| | **PSSA** | particularly sensitive sea area |
| R | **R/V** | research vessel |
| S | **SAR** | [International Convention on Maritime] Search and Rescue [1979] |
| | **SMS** | special-mission ship |
| | **SOA** | State Oceanographic Administration |
| | **SOLAS** | [International Convention for the] Safety of Life at Sea [1974] |
| | **STCW 1978** | [International Convention on] Standards of Training, Certification and Watchkeeping [for Seafarers, 1978] |
| T | **TMT** | transfer of marine technology |
| U | **UN** | United Nations |
| | **UNCLOS** | United Nations Convention on the Law of the Sea [also LOSC] |
| | **UNCLOS III** | Third United Nations Conference on the Law of the Sea |

| | |
|---|---|
| **UNESCO** | United Nations Educational, Scientific and Cultural Organization |
| **UNIDIR** | United Nations Institute for Disarmament Research |
| **USNS** | United States Naval Ship |
| W **WMO-IOC** | World Meteorological Organization–Intergovernmental Oceanographic Commission |

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