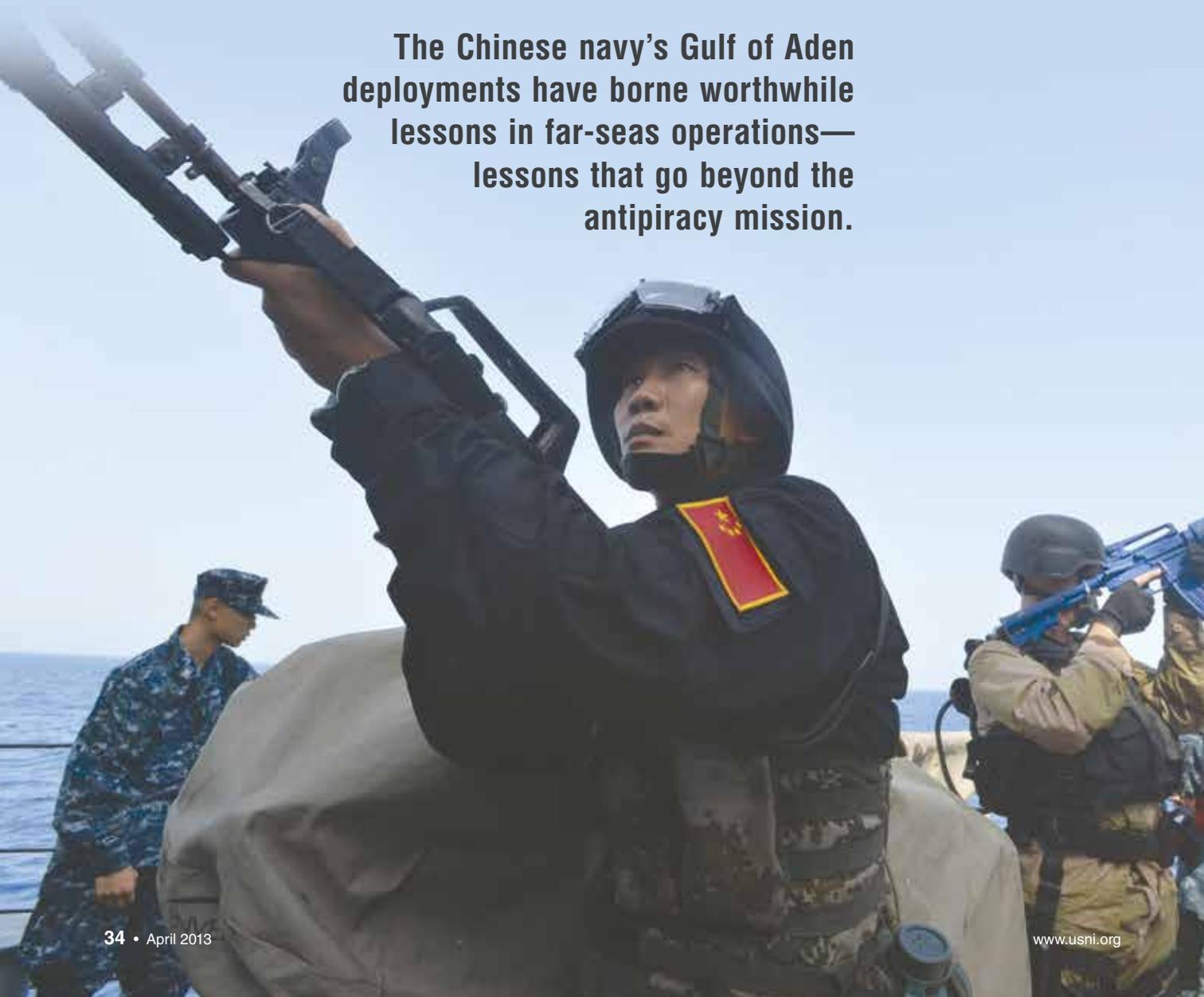


By Andrew S. Erickson and Austin M. Strange

# LEARNING THE ROPES IN **BLUE WATER**

The Chinese navy's Gulf of Aden deployments have borne worthwhile lessons in far-seas operations—lessons that go beyond the antipiracy mission.



**D**ecember 2012 marked the fourth anniversary of China's ongoing antipiracy mission in the Gulf of Aden. Over four-plus years, the People's Liberation Army Navy (PLAN) has deployed 34 warships with 28 helicopters in 14 task forces, safely shepherding more than 5,000 commercial vessels and rescuing or assisting more than 50 of them across 500 escort trips.<sup>1</sup> Nearly 10,000 select personnel have sharpened their skills, improved coordination mechanisms, and tested new platforms and technologies.

Unmatched in Chinese history, these antipiracy task-force deployments, which typically last several months, offer the first major window into China's far-seas operations and approach thereto. In fulfilling this new mission, PLAN leaders have faced unprecedented questions that can only be answered through action and experimentation:

- How best to ensure PLAN ships' supply and replenishment?
- What coordination and communication demands attend far-seas deployments?
- What food and medicine should be stored aboard for a crew of nearly 1,000 at sea for several months, and what may be replenished in port?
- How can Chinese sailors increase their ability to improvise during unanticipated contingencies?
- How can the PLAN optimize escort protection with existing resources?

China's navy continues to address these questions by strengthening the operational underpinnings of its far-seas antipiracy mission and—by extension—its capabilities overall. As Political Commissar Tang Gusheng of the amphibious vessel *Kunlunshan* remarked in 2011, "By sailing out of our coastal waters, the operation in the Indian Ocean serves as a live drill for us."<sup>2</sup> As the PLAN's most intense operational experience in recent years, the mission's most important contribution may be

imposing experience with unscripted, unpredictable situations on what remains an operationally cumbersome and risk-averse service. Here, we examine the major operational and tactical lessons learned by the PLAN during its antipiracy mission, as conditions in the Gulf of Aden force complex coordination, improvisation, and real-time execution that goes far beyond the better-supported, lower-risk approach available to PLAN forces training in or near home waters.

## Supply and Replenishment

Sustained overseas deployments are difficult and require multiple skills that today's U.S. Navy considers routine but the PLAN is having to learn virtually from scratch. Executing replenishment at sea is far more difficult than logistics that can be planned in advance or shiphandling and cargo transferring that can be simulated and practiced in China's near seas. Underway replenishment requires maintaining schedules, planning stores distribution, and exercising the supply system—repeatedly—as well as improvising, e.g., when a just-in-time delivery to a transfer port fails to occur. Unlike during training simulations at home, poor performance in the far seas generates real consequences, often before the eyes of other navies or nations, as well as the public back home.

PLAN antipiracy task forces rely partially on underway replenishment to supply critical fuel and stores. When task forces transfer escort duties, outgoing PLAN warships usually convey materials and equipment to incoming vessels. The PLAN is learning the craft of blue-water at-sea replenishment, albeit gradually. One U.S. Navy helicopter pilot the authors consulted has witnessed Chinese ships conducting at-sea replenishment in the Gulf of Aden by halting and tying up. U.S. ships, by contrast, usually maintain a speed of 13 knots during underway replenishment.

U.S. NAVY (DEREK R. SANCHEZ)

**A member of the visit, board, search, and seizure (VBSS) team from the Chinese frigate *Yi Yang* takes part in a September 2012 Gulf of Aden counterpiracy exercise on board the USS *Winston S. Churchill* (DDG-81). As one Chinese political commissar described his country's pioneering far-seas efforts, "By sailing out of our coastal waters, the operation in the Indian Ocean serves as a live drill for us."**



U.S. NAVY (AARON CHASE)

**Chinese sailors board a rigid-hull inflatable boat after completing their counterpiracy exercise with the crew of the *Churchill*. The Gulf of Aden deployment has afforded ample interactions with friend and foe alike. “Far-seas deployments bring constant encounters with pirates and foreign navies,” remark the authors, “as well as technical challenges, which cannot be fully anticipated or scripted.”**

Growing utilization of foreign ports enables Chinese naval ships to dock for maintenance more frequently. During China’s inaugural antipiracy deployment, the supply ship *Weishanhu* made two brief replenishment stops at Port Aden, while the destroyers *Haikou* and *Wuhan* received only at-sea replenishment and made no port calls, apparently because Chinese decision-makers worried about possible local opposition. Warships in recent escort task forces have stopped in foreign ports an average of once per month, typically docking for five days. One reason is subsequent operations’ extended durations: Whereas the inaugural task force was at sea for 124 days, deployments now average six months. Beijing also uses antipiracy missions to pursue broader diplomatic objectives, i.e., enhancing bilateral ties with important energy suppliers throughout the Middle East–Indian Ocean region.

## Coordination and Communication

To mitigate inefficiencies stemming from vertical, asymmetric information flows among government and military agencies, the PLAN has adopted a flatter command structure in which Central Military Commission orders can be passed directly to vessels on duty rather than first involving fleet and base-command levels. Smoother coordination mechanisms expedite real-time decision-making. For example, the 11th Task Force, commanded by the North Sea Fleet (NSF), was able to consult Shanghai-based technical experts from a nationwide coordination consortium with more than 400 naval and technical specialists during an equipment malfunction.<sup>3</sup>



PLAN efforts to ensure that its relatively inexperienced units are able to operate smoothly in the Gulf of Aden suggest growing emphasis on interagency synchronization.

More generally, Gulf of Aden management experience offers precedence for future instances in which Beijing needs to respond swiftly overseas. Given the PLAN’s enhanced role in safeguarding China’s national interests, Chinese researchers contend that China should stop viewing the development of naval logistics in isolation and:

include maritime material flow into the building of the system-of-systems of the whole military, into the maritime material flow system-of-systems of the whole nation; and to building according to the support thinking of “joint

logistics in charge of general support, navy in charge of special support” under the overall planning of the nation and the General Headquarters.<sup>4</sup>

New technology has extended PLAN communication capacity. The Beidou satellite system installed on surface vessels deployed to the Gulf of Aden provides real-time positioning that allows the PLAN to accurately plot vessel locations. Unlike its GPS counterpart, Beidou includes a “two-way short digital message communications function” that facilitates inter-ship communication. Zhao Huashu, the destroyer *Qingdao*’s observation and communication chief, stated, “The Beidou system is highly secure, sends messages rapidly . . . can satisfy general message and communications needs [and] has greatly reduced our communications time.” Apparently the entire NSF has been upgraded with Beidou systems that complemented NSF surface vessels’ “far-seas training needs.”<sup>5</sup> By flattening inter-ship information flows and arming PLAN vessels with accurate maritime surface-location capabilities, Beidou is quickly raising PLAN antipiracy operational performance.

### Sailors’ Health and the Art of Improvisation

Extended deployments challenge sailors’ physical and mental endurance. Teaching them how to spend time under way is essential to avoid adverse impacts on motivation, instruction, and training that otherwise hamper prolonged deployments. Recognizing the importance of “getting salty,” the PLAN seeks antidotes for maladies from seasickness to low morale. With shipboard resources limited, People’s Liberation Army No. 425 Hospital has served patients via “teleconsultation.”<sup>6</sup> Victuals are varied; shipboard food-preservation techniques and best practices for water purification and conservation are emphasized.

Sailors’ daily life is strenuous. They share ten-square-meter dormitories and must rise at 0620 daily. Special forces are expected to execute responsibilities for eight to ten hours per day. The PLAN deploys psychiatrists to diagnose and address homesickness and social problems. To stay fit, sailors must select activities that conserve limited deck-time and -space. Social life on board PLAN escort ships is limited but receiving increased attention. During weekends sailors are permitted to use the popular Chinese instant-messaging computer program Tencent QQ for 10–15 minutes each. Crewmen have access to Chinese satellite television, Internet-wired computers, and European coffee. Perhaps initially overshadowed by more pressing operational debates, maintaining sailors’ well-being during long deployments has become a PLAN priority.

PLAN personnel prepare detailed contingency plans for manifold emergency situations. Commander Guan Jianguo of the 9th Escort Task Force explained, “We have prepared ourselves for all manner of difficulties and challenges. We have revised and perfected our escort contingency plan, with focus on the strengthening of various types of targeted training.”<sup>7</sup> Ma Lei, Commander of the 11th Task Force helicopter group, noted, “We have to know all the conditions in a given sea area like the back of our hand in advance and memorize all the contingency plans.”<sup>8</sup> This focus on memorization raises a distinct possibility that Chinese personnel may have difficulty handling events for which they have not rehearsed exhaustive responses.

While routine training constitutes an important aspect of learning to perform new missions in new environments, there is no substitute for learning how to be effective by thinking on one’s feet. PLAN officials acknowledge this reality and are working to address it. The frequency of “unscripted” training exercises in which PLAN sailors are denied advance warning or directives is growing. For instance, while serving in the Gulf of Aden, the destroyer *Wuhan* held weekly asymmetrical training pitting a Blue Force of experienced officers against a less experienced Red Force, the latter purposely given less information to memorize.<sup>9</sup> While it remains uncertain how realistic such exercises actually are, and the extent to which conditions are simulated in which events actually go wrong, the PLAN is learning the value of improvisation. Most importantly, far-seas deployments bring constant encounters with pirates and foreign navies, as well as technical challenges, which cannot be fully anticipated or scripted.

### Convoy Protection

Given the PLAN’s currently limited far-seas deployments and power-projection ability, developing convoying capabilities is a logical response to Chinese concerns about a “Malacca dilemma,” sea-lines-of-communication security in general, and even threats of modern-day commerce raiding. At a tactical level, successful convoying requires managing rendezvous, learning how to coordinate with merchant masters outside the PLAN’s chain of command, considering the merits of different steaming formations, and accommodating vessels’ differentials in speed and other characteristics. By working convoys in a relatively benign environment, the PLAN is developing such skills subtly but effectively.

Several trends indicate progress. While initial escortees were all Chinese-flagged ships, now roughly 70 percent of ships escorted are foreign vessels,

reflecting the PLAN’s growing confidence in its protection ability.<sup>10</sup> Escort efficiency has increased dramatically, with convoys now sometimes including more than 20 vessels.

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**In four years of actively conducting Gulf of Aden antipiracy operations, the PLAN has accrued know-how and lessons that it could not have acquired otherwise.**

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U.S. NAVY (ARON CHASE)

**On patrol far from home: The Chinese frigate *Yi Yang* transits the Gulf of Aden in late 2012. “PLAN achievements in the Gulf of Aden represent far more than an amalgamation of antipiracy best practices. Beyond this specific mission set, they provide a broad foundation to support future capabilities.”**

Adopting diverse, situation-specific escort tactics—including single-column, double-column, and triangle-style warship formations, as well as combinations thereof—has resulted in meaningful efficiency gains. Other techniques include relay-style switching of escort duties by PLAN ships traveling in opposite directions, organizing escortees by speeds and other characteristics, incorporating helicopter patrols, and dispersing forces to head off pirates at distance. Employing such methods, the PLAN continues to derive incremental improvements in efficiency while operating with finite resources in the far seas.

## Antipiracy and Beyond

In four years of actively conducting Gulf of Aden antipiracy operations, the PLAN has accrued know-how and lessons that it could not have acquired otherwise. It has traversed a steep learning curve with impressive speed and resourcefulness, implementing significant procedural, training, and operational improvements and thereby increasing naval capabilities and confidence. Perhaps the mission’s greatest value is imposing unpredictable situations—the most realistic operational experience presently available to the PLAN.

PLAN forces in the Gulf of Aden continue to incrementally accumulate intangible operational experience that raises Chinese naval competence overall. Viewed holistically, PLAN achievements in the Gulf of Aden represent far more than an amalgamation of antipiracy best practices. Beyond this specific mission set, they provide a broad foundation to support future capabilities. At the tactical level, many fundamental skills that the PLAN is learning from its antipiracy operations transcend naval-warfare domains and missions. The U.S. Navy refers to

these as mission-essential tasks; i.e., a helicopter crew for a maritime special-forces mission must be proficient in taking off and landing a helicopter on a ship at night. The PLAN is developing foundational skills for far-seas operations—and will be able to apply them far beyond the scope of fighting piracy. ✪

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