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### **Sea Dragons: Special Operations and Chinese Military Strategy**

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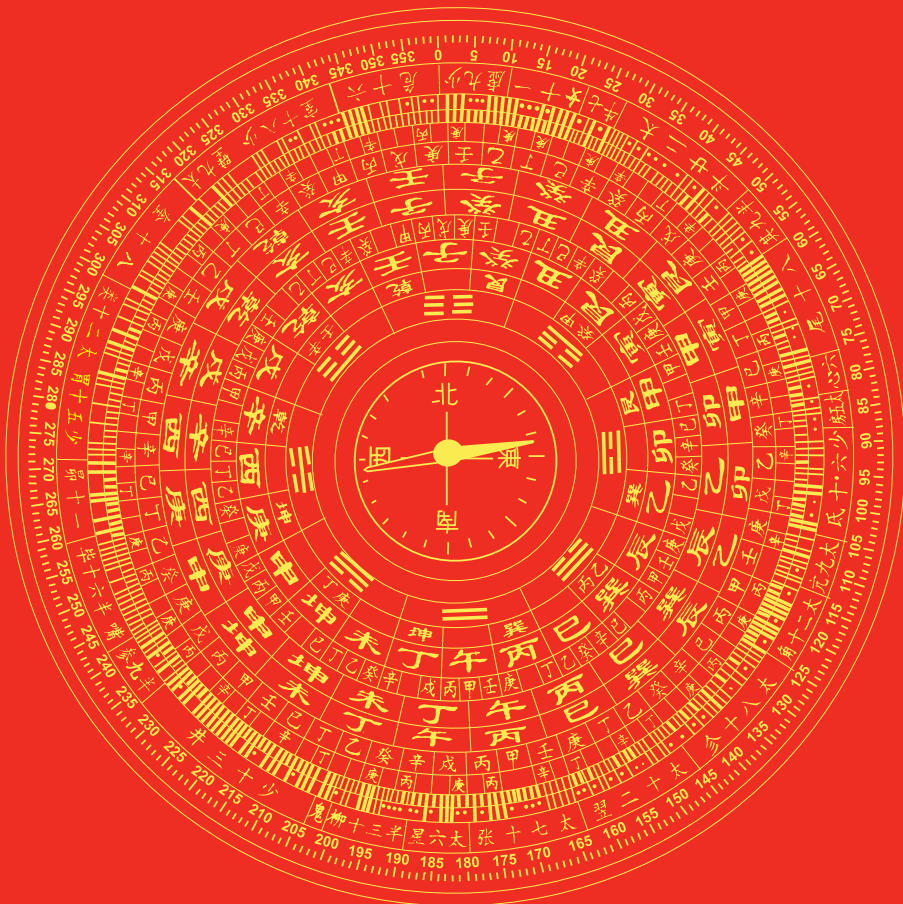


U.S. NAVAL WAR COLLEGE  
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Number 18

## Sea Dragons

Special Operations and Chinese Military Strategy



John Chen and Joel Wuthnow



# Sea Dragons

Special Operations and Chinese Military Strategy

*John Chen and Joel Wuthnow*



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Title-page image courtesy of *Asia Times*.

## Sea Dragons

### Special Operations and Chinese Military Strategy

In 2018, Chinese moviegoers flocked to theaters to enjoy *Operation Red Sea*, a fictionalized portrayal of People's Liberation Army (PLA) special operations forces (SOF) responding to a series of emergencies in the Middle East, encompassing piracy, terrorism, and evacuation of Chinese citizens from a war zone (see figure 1 below). The plot was inspired by the real exploits of the Sea Dragons, a SOF brigade assigned to the PLA Navy Marine Corps (PLANMC), which only a few years earlier had assisted in the evacuation of hundreds of Chinese and foreign nationals from Yemen.<sup>1</sup> The film grossed more than \$500 million at the box office and inspired audiences through the capabilities of Chinese

**Figure 1.** Poster from *Operation Red Sea* (2018)



Source: "Operation Red Sea," IMDb, <https://www.imdb.com/title/tt6878882/>.

as international SOF competitions and training programs. Their relatively small size (the Sea Dragons have only about three thousand personnel) belies their specialized skills and range of missions.

forces overseas while drawing attention to a part of the PLA with increasing responsibilities.

The Sea Dragons are the core of the PLA Navy's (PLAN's) SOF community, supporting China's maritime strategy in diverse ways. The primary mission for all PLA SOF, including in the navy, is to support major combat operations that are much closer to home than the scenario portrayed in *Operation Red Sea*—in particular, any potential operations across the Taiwan Strait. The Sea Dragons and other naval and marine corps units with SOF-relevant capabilities also train for smaller-island seizure operations in the South and East China Seas and can support maritime coercion against territorial rivals. They are also available for nonwar military operations overseas, such as counterpiracy and noncombatant evacuations, and participate in foreign engagements such

This volume assesses how PLA naval SOF have evolved to become a key enabler of the wartime, coercive, and peacetime elements of China's maritime strategy. Its questions include the following: What does Chinese military strategy and doctrine require of special forces, and specifically naval SOF, to be able to accomplish the mission? How do Chinese naval experts assess SOF capabilities and limitations? What lessons are they deriving from the United States and other foreign examples? How are the Sea Dragons and related units organized? What training do their personnel undergo as a unit, with other PLA forces, and with foreign partners? What has been their real-world experience? In what ways are these units likely to support Chinese combat operations? How might they be employed in low-intensity conflict and peacetime missions? What are their major constraints and what would be the signs that they are making progress in overcoming them?

The volume is organized into six main sections. The first discusses the prescriptions from Chinese military doctrine for SOF generally and specifically with respect to naval forces. It suggests that while the primary mission is supporting major combat operations, there are also increasing requirements to conduct nonwar military operations far from China. Section 2 offers an organizational portrait of the Sea Dragons, covering their internal structure, personnel, and equipment. Section 3 examines individual and unit training, combined-arms and joint training, and training with foreign counterparts. Section 4 describes the Sea Dragons' real-world operational experience. Section 5 expands the scope to consider other PLA naval forces with SOF-relevant capabilities, including PLANMC brigade reconnaissance battalions, aviation support, and diving communities, which together can assist the Sea Dragons or augment their capabilities in exigent circumstances.

The final section analyzes the contributions that naval SOF can make to China's maritime strategy and their current limitations. Alongside other SOF, the Sea Dragons could perform niche but critical missions in different cross-strait campaigns, including blockades and island landings. Short of war, they also could be mobilized to increase pressure on Taiwan or one of China's other territorial rivals in the South and East China Seas through more provocative exercises and deployments. Among all PLA SOF, the Sea Dragons are something of a "go-to" asset for protecting China's overseas interests because of their unique capabilities. Nevertheless, limited end strength, lack of integration into joint command structures, questionable training quality, sparse real-world experience, and equipment shortcomings all could pose operational challenges—especially if the Sea Dragons are under pressure to accomplish too much simultaneously.

The findings are based on a comprehensive review of Chinese open sources. This includes doctrinal publications such as *Lessons on the Science of Special Operations*, research from SOF specialists and Chinese firms providing equipment for maritime special forces, articles from *People's Navy* and other PLA outlets, and footage of training



exercises broadcast on Chinese television. While these sources provide significant insight into naval SOF, they also suffer from some limitations, such as lack of a complete, authoritative picture of the Sea Dragons organization and leadership, and only sporadic details about their equipment. This volume does not discuss roles of army, air force, or paramilitary SOF, which each contribute in their own ways to cross-strait and other operations.<sup>2</sup>

## Strategy and Doctrine

Chinese concepts of naval SOF are nested within larger portrayals of the role of special operations. Historically, those perspectives have focused on SOF as integral to successful joint campaigns, often through historical and foreign analogies. As a result, the roles that SOF are anticipated to play have focused narrowly on combat-oriented tasks such as reconnaissance and strike. In the maritime domain, Chinese analysts have paid the most attention to integrating special operations into joint island landing campaigns—not only in a cross-strait contingency but also in small-island seizure. SOF can pave the way for follow-on forces by infiltrating enemy lines, seizing critical sites, eliminating enemy leaders, and employing other means. The expansion of China's global interests in more-recent years has also led to discussions on how SOF can support nonwar military operations such as counterterrorism and antipiracy.

### *Broad Approaches and Historical References*

Authoritative Chinese writings describe special operations in narrow, combat terms. The PLA dictionary of military terminology states that SOF conduct “reconnaissance, combat, and other special tasks behind enemy lines,” with characteristics such as independence, speed, and “winning by surprise.”<sup>3</sup> They are a “special combat force” (特殊作战力量) under the direct control of the campaign or strategic commander.<sup>4</sup> By contrast, U.S. doctrine provides a more expansive view of SOF utilization. Special forces offer both combatant commanders and diplomatic chiefs of mission options that can be “synchronized with other interagency partners,” not only in areas similar to the PLA concept, such as unconventional warfare and special reconnaissance, but also encompassing diverse missions, to include hostage recovery and rescue, counterinsurgency, humanitarian assistance, foreign internal defense, information operations, civil affairs, and countering weapons of mass destruction.<sup>5</sup>

PLA discussions of SOF tend to follow the narrow definition found in the PLA dictionary of military terminology. Basic categories of special operations discussed in the 2006 *Science of Campaigns* encompass “special raid-attacks” that include “eliminating enemy command personnel” and “capturing important political-military leaders”; “special sabotage e-attacks” on enemy command systems, ports, airfields, radar stations, and other key targets; “special raid-harassment” to pin down enemy forces; and “special technical warfare” such as offensive cyber operations, jamming, and propaganda dissemination.<sup>6</sup> In

2013, the deputy commander of the Shenyang Military Region wrote that SOF “infiltrate covertly behind enemy lines” to attack targets or “guide air and land strikes.”<sup>7</sup> The 2020 edition of the *Science of Military Strategy* notes that SOF “go deep behind the enemy or close to the enemy to conduct asymmetric operations” in reconnaissance, sabotage, and psychological warfare.<sup>8</sup>

PLA writings emphasize that a critical function of SOF is to support conventional forces within a joint campaign. The *Science of Campaigns* notes that the use of SOF can help to “paralyze the enemy’s operational system” to “create favorable conditions for main force units.”<sup>9</sup> This action requires that irregular and conventional forces “complement each other at the campaign and even the strategic levels.”<sup>10</sup> SOF contribute to the larger PLA operational concept of “system destruction warfare,” in which a range of units work collectively to defeat or disrupt adversary operational systems.<sup>11</sup> The 2020 edition of the *Science of Military Strategy* describes SOF as integral to “multi-domain integrated joint operations” (多域一体联合作战), which refers generally to a higher degree of coordination in planning and operations than under the previous notion of “coordinated joint operations.”<sup>12</sup> SOF should coordinate with conventional forces in all domains, and with information, network, and firepower warfare, to target the “strengths, weaknesses, and nodes of the enemy’s combat system, especially information systems.”<sup>13</sup>

PLA researchers cite numerous historical examples to illustrate the combat utility of special operations. Some authors reference the PLA’s own experience conducting “small, fast and smart tactics” in the Chinese Civil War and Anti-Japanese War (that is, the Second Sino-Japanese War), where they “arrested and killed important enemy leaders . . . [,] destroyed watchtowers, bombed passages, raided supplies, and sniped enemy bandits,” among other feats.<sup>14</sup> In another source, a PLA scholar recounts the battle of Kumsong during the Korean War in 1953, in which a Chinese reconnaissance platoon infiltrated enemy lines at nighttime and raided the headquarters of the Republic of Korea’s White Tiger Regiment, stealing its regimental flag.<sup>15</sup> The same article referenced a forty-eight-person Soviet SOF team’s raid on the Tajbeg Palace in Kabul during the 1979 invasion of Afghanistan, resulting in the assassination of Afghan leader Hafizullah Amin.<sup>16</sup>

Chinese sources place even more attention on modern U.S. special operations. A 2004 article in the internal PLA journal *Military Arts* assessed that the proportion of SOF in U.S. operations increased from 1 : 122 during the Gulf War (1990–91), to 1 : 30 in Afghanistan (2002), to 1 : 25 in Iraq (2003), with special forces playing the “most critical role” in the latter two campaigns.<sup>17</sup> The *Science of Campaigns* describes how U.S. and coalition forces conducted the “largest special operation in the history of warfare” to “provide a powerful complement to the air and ground main offensive activities” during the Gulf War.<sup>18</sup> The 2013 *Science of Military Strategy* highlights the role of SOF in guiding air strikes against the Taliban, forcing insurgents into caves and “greatly speeding up

the process of clearing and suppressing” them.<sup>19</sup> Another article chronicles the “brilliant results” USN SEALs achieved in Afghanistan and Iraq by carrying out raids, reconnaissance, information operations, and other missions.<sup>20</sup>

A focus on U.S. strengths parallels discussions of PLA weaknesses and calls for improvements in special operations capabilities. The 2004 *Military Arts* article offers a comprehensive self-critique and set of prescriptions. Despite attempts at modernization, the “development of our special forces is still very slow, their size is still relatively small, and their quality is not sufficiently high.”<sup>21</sup> The solution needs to involve building a “special-operations command structure,” cultivating “high-quality talents,” improving support, and conducting theoretical research.<sup>22</sup> On the basis of the perception of a high level of U.S. SOF integration with other forces in recent campaigns, the author also encourages the PLA to increase its own special forces’ coordination in “joint campaign scenarios” and establish mechanisms for integrating SOF into training conducted by other land, air, sea, and missile forces.<sup>23</sup>

More-recent sources continue to feature self-assessments of SOF weaknesses and prescriptions for further reforms. Recent PLA news articles, for instance, describe limited interoperability between SOF and helicopter support units, and suggest a paucity of qualified special warfare operators who can survive the initial training. Taking such problems into account, the 2020 *Science of Military Strategy* argues that the “overall scale of our military’s special forces is relatively small, their weapons and equipment are relatively backward, and it is difficult to meet future combat needs.”<sup>24</sup> The PLA needs to increase the proportion of SOF, improve their equipment, enhance their special reconnaissance and strike capabilities, and increase their “survivability behind enemy lines.”<sup>25</sup> Another source links the development of special operations capabilities to the PLA’s three-step development strategy for modernization (with key dates in 2027, 2035, and 2049).<sup>26</sup> As part of building a “world-class” military by midcentury, the PLA should concentrate its “limited resources” on “achieving breakthroughs” in SOF organizations, training, and equipment in “each major strategic direction” (i.e., each of the PLA’s main theaters).<sup>27</sup>

### *Maritime SOF Missions*

The primary mission for PLA SOF in a maritime context is supporting amphibious operations. This is consistent with the focus of Chinese military strategy on preparing for a Taiwan contingency, as well as the potential need to seize smaller islands in the Taiwan Strait, East China Sea, or South China Sea.<sup>28</sup> Discussing SOF in this context mirrors broader PLA discussions of SOF as narrowly focused on a handful of combat-oriented responsibilities such as reconnaissance and strike to support other operations within a joint campaign, although Chinese experts also identify major challenges to the

employment of SOF in these operations. However, some Chinese strategists also suggest that special forces should be used in a more diverse range of circumstances, including supporting global power projection and carrying out other missions in the “far seas” such as counterterrorism and military diplomacy.

*Amphibious Warfare.* Chinese writings suggest that SOF can play several roles during an island landing campaign.<sup>29</sup> These include reconnaissance of sea-lanes, key landing sites, and the disposition of enemy forces; strikes and raids against ports, airfields, command-and-control hubs, and other critical targets; harassment of enemy formations; capture or elimination of adversary political and military leaders; and psychological warfare.<sup>30</sup> SOF would also support other dimensions of a landing campaign, including boarding ships during a blockade and rescuing pilots and ship crews in distress.<sup>31</sup> While much focus is on large-scale island landings, a 2003 article describes platoon- or company-sized SOF elements infiltrating smaller islands, attacking critical enemy targets, and coordinating with other forces.<sup>32</sup> Special forces would be one of several operational groups under the general direction of the campaign commander.<sup>33</sup>

For PLA scholars, several historical cases illustrate the roles that SOF could play in an amphibious campaign. The 2013 Academy of Military Sciences volume *Lessons on the Science of Special Operations* describes how U.S. 82nd Airborne Division paratroopers dropped behind enemy lines to support the June 1944 Normandy landings by carrying out raids and clearing obstacles.<sup>34</sup> The volume also discusses how British special air and boat squadrons gathered intelligence and raided Argentine positions during the 1982 Falkland Islands conflict, and how U.S. SOF seized key political and military targets in the 1983 Grenada campaign.<sup>35</sup> Another source describes USN SEAL frogmen as providing an “asymmetric advantage” during the Gulf War by conducting reconnaissance of critical sea routes and islands.<sup>36</sup>

Because of the prominence of the mission in PLA doctrine, it is unsurprising that Chinese researchers have emphasized evaluating the prospects for special operations in island landing scenarios. Several challenges have been identified. First are the intrinsic difficulties in deploying small teams of operators in hostile territory. A 2015 PLA National Defense University volume notes that the utility of SOF is reduced by their small numbers, inability to carry heavy weapons and equipment, dispersal of forces over large areas, and lack of organic logistics support. They also face difficulties in seizing enemy ports, which are “usually the focus of the counter-landing side and [feature] heavy defenses,” and in addressing “enemy electronic interference,” “civil disturbances,” and “tall buildings,” likely a reference to Taipei’s urban landscape.<sup>37</sup> As a result of such challenges, the PLA has studied approaches on how to select infiltration points that reduce vulnerability to enemy interdiction.<sup>38</sup>

Second is inadequate training. As one illustration, a 2015 article identified several problems with PLA frogman training, including short training time, lack of dedicated training facilities (with training often conducted in indoor swimming pools, reservoirs, or ponds), lack of training in “real combat conditions,” and limited opportunities for training with other branches and services.<sup>39</sup> Combat divers also need to increase their technical proficiency in underwater demolition and shooting.<sup>40</sup> Similarly, a 2016 article by a PLA Special Operations Academy scholar on capturing enemy personnel during island landings assessed that the “most pressing problem” facing SOF is their lack of opposition-force training.<sup>41</sup> Another problem is that captors need to work in small teams but PLA training fails to offer practice in two- or three-person detachments “capturing prisoners in concert.”<sup>42</sup>

Third is the lack of advanced equipment. Diving equipment, in the view of one group of PLA scholars, lags behind comparable U.S. and European models; its failure rate is high and it cannot “meet the needs of diving combat.”<sup>43</sup> Diving operations could benefit from equipment with features such as miniaturization, integrated information technology, noise reduction, “highly intelligent explosives,” and detection equipment for “underwater oil pipelines and other high-value combat targets.”<sup>44</sup> This prescription echoes another analysis of PLA frogman capabilities, which calls for better sensing technology to evade enemy detection.<sup>45</sup> Similarly, an article on capturing enemy personnel suggests the development of “special forces capture technology” designed to “improve the success rate of capture missions and protect the safety of the captors.”<sup>46</sup>

A few Chinese sources also discuss combat missions beyond amphibious warfare. Anticipating long-distance combat operations in the future, the 2013 *Science of Military Strategy* envisions stronger “fist forces” based on aircraft carriers complemented with “new types of operational strengths and support forces at sea,” including by “moderately augmenting them with naval special operations and amphibious forces.”<sup>47</sup> This view reflects lessons from the role of USN SOF in projecting maritime strength, including facilitating long-range firepower attacks, and even in operating unmanned underwater vehicles designed for “deep sea” special operations.<sup>48</sup> Moreover, speaking to the potential coercive uses of SOF, a 2018 article by two Southern Theater Command officers argues that special forces can help to demonstrate “the image of an elite, civilized, and mighty army” that would strike both fear and admiration in “potential opponents” and thus shape their decisions.<sup>49</sup>

*Nonwar Military Operations.* While *Lessons on the Science of Special Operations* focuses on combat missions, it also describes how SOF can support nonwar military operations, including protecting China’s maritime rights and interests within disputed regions such as the South and East China Seas. Specific missions include providing “maritime intelligence support” (海上情报支援) through special reconnaissance equipment; offering

a “security cover” (安全掩护) for maritime law-enforcement patrols; protecting fishing vessels; combating maritime smuggling; safeguarding islands and reefs already under China’s control through “anti-infiltration” (反渗透) operations and seizing ships that “illegally” sail near those features; and securing “institutions, personnel, and expatriates stationed abroad.”<sup>50</sup>

The PLA’s increasing role in protecting overseas interests has promoted discussion of the types of operations SOF need to be able to conduct far beyond China’s periphery as well.<sup>51</sup> These include overseas ship escort, counterterrorism, peacekeeping, disaster relief, personnel rescue, and “rights protection according to the needs of national politics and military diplomacy at any time.”<sup>52</sup> Some of these categories reflect areas where naval SOF are already active, such as supporting antipiracy operations and training alongside foreign forces.<sup>53</sup>

*Lessons on the Science of Special Operations* discusses several key principles that SOF should follow in performing nonwar military operations in the region and beyond, underscoring a perception of the risks of and limitations to using these forces abroad.<sup>54</sup> First is aligning special operations with domestic and international law so that overseas operations actions do not negatively impact China’s larger political, military, and economic interests and reputation. Second is the sparing and judicious use of these “rare assets” (稀有资源), implying limited duration of use and a coordination with other Chinese and international emergency response forces. Third is carefully employing these forces to avoid “unnecessary misfires” or accidents that could trigger an escalating conflict. Last is using SOF flexibly, matching operations with the “timing, rhythm, and intensity” of the situation and “creating conditions for the political and diplomatic settlement” of a dispute.

Most of the discussion has focused on the PLANMC, which has positioned itself for missions more diverse and farther reaching than its army amphibious counterparts, themselves more narrowly oriented toward a cross-strait contingency.<sup>55</sup> The *PLA Navy Personnel Handbook* notes that marines conduct “special mobile operations” (特种机动作战), a loose term that does not imply a singular focus on large-scale island landings.<sup>56</sup> Some commentary also differentiates the strengths of the marines from those of the other services. A 2018 article in a naval journal, for instance, argues that PLANMC SOF have advantages over counterparts from the other services in conducting overseas counterterrorism missions, including better “independent mission capabilities” than the army, better integration with other naval branches, and a stronger ability to deploy overseas than the army or air force.<sup>57</sup> The marines also can use their amphibious expertise to conduct counterterrorism raids from the sea to the land.<sup>58</sup>

In sum, while authoritative PLA sources have focused on the role of SOF in supporting large campaigns, such as island landings, other PLA discussions have begun to consider diverse missions in the maritime domain and highlight the unique roles of naval special forces. The discourse, rooted in the evolving practice of special operations, is moving the PLA closer to the broader definitions of special operations favored by Western militaries.

## The Sea Dragons: An Organizational Portrait

The PLAN's premier special operations force is the PLANMC Special Operations Brigade (海军陆战队特种作战旅). Its formal moniker is the PLANMC 7th Brigade (海军陆战队第七旅), but it is also commonly called the Sea Dragons Commando Unit (蛟龙突击队).<sup>59</sup> Some Chinese sources also refer to it by its military unit cover designator, 91128 Unit.<sup>60</sup> As part of the marine corps, its chain of command likely runs through navy headquarters in Beijing and its units can and sometimes do deploy to other theaters and globally.<sup>61</sup> On paper, the single SOF brigade puts the navy on par with the air force (which also has one brigade, known as the Thunder Gods), but both services fall far short of the army's fifteen SOF brigades. This section provides an overview of the Sea Dragons' facilities, structure, personnel, and equipment.

### *Facilities and Basing*

The Sea Dragons brigade is geographically located within the Southern Theater Command, with facilities in Sanya, Hainan, and possibly in Zhanjiang. The brigade is garrisoned in the Haitang District of Sanya City (三亚市海棠区), in a facility near the Chitian Reservoir (赤田水库), shown in figure 2.<sup>62</sup>

**Figure 2.** *Sea Dragons Garrison*



Source: Google Maps

The Sea Dragons also train at a facility in Tielu Harbor (铁炉港), shown in figure 3. A documentary released in 2022 showed prospective Sea Dragons personnel undergoing a



**Figure 3.** *Sea Dragons Training Area*

Source: Google Maps

variety of individual and small-unit training and selection courses at this facility.<sup>63</sup>

Beyond its garrison and a training facility in Sanya, the Sea Dragons may still have a headquarters presence in Zhanjiang, Guangdong Province. An April 2018 report described the brigade's

commander as working in Zhanjiang.<sup>64</sup>

### *Structure and Personnel*

The unit was established in 2002, likely by combining personnel from the East and North Sea Fleets Reconnaissance Ship Group Amphibious Reconnaissance Squadrons (侦察船大队两栖侦察中队).<sup>65</sup> Before receiving its current name as part of the PLA's 2016 reforms, it was known as the PLAN Special Operations Group (海军特种作战大队) and PLAN Special Operations Regiment (海军特种作战团).<sup>66</sup> Like the PLA's other brigades, it is likely a deputy division-grade organization and is led by a senior captain or captain. Key leaders of the brigade identified in Chinese media are listed in table 1.

PLA reforms under Xi Jinping have affected not only the unit's name but also its internal composition. As late as March 2018, the brigade was apparently still organized into a mix of battalions and squadrons (中队). One official source showed seven identifiable squadrons and at least one battalion, with a possible complement of up to eleven squadrons.<sup>67</sup> The brigade's organization as of March 2018 is shown in figure 4.

By December 2018, however, the brigade had combined these squadrons into four confirmed battalions, likely with three companies each, sequentially numbered, for an assessed total of twelve companies. Therefore, the Sea Dragons unit is now organized into the same general "brigade-battalion-company" (旅-营-连) model found in other parts of the PLA.<sup>68</sup> The four identified battalions and their identifiable subordinate companies are shown in figure 5.<sup>69</sup>

Official sources provide little further detail on the functions of these subordinate battalions, but one of these four battalions, or perhaps a fifth battalion, may be for training new recruits. One source suggests the Sea Dragons may have had a recruit battalion (新兵营) responsible for training new members of the brigade. As of March 2018, this battalion was run by an excess cadre (编余干部) who was likely waiting for reassignment



**Table 1.** *Identified Sea Dragons Senior Officers (2014–22)*

Names	Rank	Position	Date Last Identified	Remarks
SUN Hao (孙浩)	Capt.	Commander	28 December 2018 <sup>a</sup>	
WANG Yuezhong (汪月忠)	Sr. Capt.	Political commissar	21 December 2017 <sup>b</sup>	
XU Xiangxian (徐向贤)		Deputy commander, chief of staff	30 June 2014 <sup>c,d</sup>	One of the first members of the unit <sup>e</sup>
HONG Yuqiang (洪玉强)	Capt.	Deputy commander	28 May 2018 <sup>f</sup>	
LIN Qiaowei (林乔伟)		Deputy commander	4 January 2021 <sup>g</sup>	
LI Wei (黎伟)	Cdr.	Deputy chief of staff	8 December 2022 <sup>h</sup>	Previous commander of Sea Dragons Undersea Assault Team (水下突击队队长)
JIANG Jixiang (姜吉祥)		Deputy chief of staff	10 August 2018 <sup>i</sup>	
ZHOU Jun (周军)	Deputy regiment grade Cdr.	Deputy chief of staff	9 May 2019 <sup>k</sup>	May be responsible for unit training <sup>l</sup>
BI Yachun (毕亚春)	Cdr.	Reconnaissance battalion commander	28 December 2018 <sup>m</sup>	
ZHI Yafeng (支亚峰)	Lt. Cdr.	Battalion commander	10 August 2018 <sup>n</sup>	
YANG Huanjie (杨环杰)		Battalion commander	27 November 2020 <sup>o</sup>	
MIAO Hailong (苗海龙)		Battalion commander	29 November 2021 <sup>p</sup>	

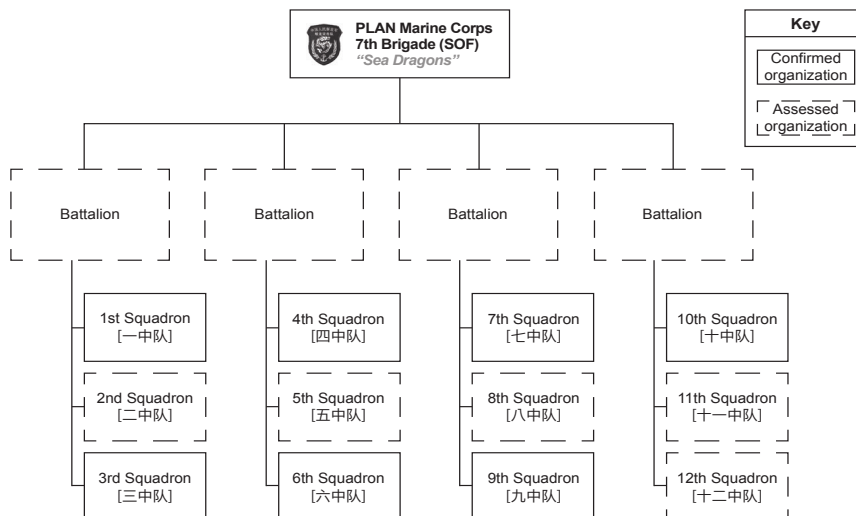
**Notes:**

- a. "A Certain Marine Corps Brigade Reconnaissance Battalion."
- b. 揭秘海军陆战队“蛟龙突击队” ["Secretive Marine Corps Unit 'Sea Dragons'"], 早安山东 [Good Morning Shandong], 21 December 2017, video, 02:02, available at [https://www.ixigua.com/6502006614868886029?logTag=b9eb7b6a05acdf156e54&wid\\_try=1](https://www.ixigua.com/6502006614868886029?logTag=b9eb7b6a05acdf156e54&wid_try=1).
- c. Shao and Huang, "I'm a Navy Special Forces Soldier," pp. 64–68; Cao and Wen, "We're from the 'Sea Dragons Unit.'"
- d. Cao and Wen, "We're from the 'Sea Dragons Units.'"
- e. 蛟龙突击队: 山岳丛林锻造全域作战的反恐尖刀 ["Sea Dragons Unit: Forging All-Area Operations Counterterrorism Dagger"], 军事快报 [Military Brief], 中国军视网, 28 May 2018, video, [https://www.js7v.cn/video/201805\\_146509.html](https://www.js7v.cn/video/201805_146509.html).
- f. "谁是终极英雄" [Who Is the Ultimate Hero], 4 January 2021 episode, 蛟龙出海 ["Sea Dragons Go to Sea"], aired on CCTV, available at <https://tv.cctv.com/2021/01/04/VIDEFijUUrS1LYEc3q3j8OU210104.shtml?spm=C52346.P0vF2udW3gXa.Ec1Uvc9Ehlh.11>.
- g. "From 'Amphibious' to 'Multidimensional.'"

Notes continued:

- h. 郭淑楠 [Guo Shunan], 海军陆战队黎伟, 入水、下潜、渗透、破袭! ["Marine Li Wei Enters the Water, Dives, Infiltrates, Attacks!"], 军事纪实 [Military Affairs on the Spot], 中国军网 [China Military Online], 27 April 2019, [www.81.cn/jpbf/jwgzR/jwgz/9490768.html](http://www.81.cn/jpbf/jwgzR/jwgz/9490768.html).
- i. 翟思宇 [Zhai Siyu] and 曹可轩 [Cao Kexuan], “蛟龙突击队”开展群众性练兵比武 ["'Sea Dragons Unit' Opens Mass Training Competition"], 中国军网 [China Military Online], 10 August 2018, [www.81.cn/tzjy/2018-08/10/content\\_9248864.htm](http://www.81.cn/tzjy/2018-08/10/content_9248864.htm).
- j. 郭淑楠 [Guo Shunan], ed., 陆地猛虎 海上蛟龙 空中雄鹰来了 ["Tigers on Land, Dragons at Sea, Eagles in Air Are Arriving"], 军旅文化大视野 [Brigade Culture View], 中国军视网 [China Military TV Network], 9 May 2019, [https://www.js7tv.cn/news/201905\\_180761.html](https://www.js7tv.cn/news/201905_180761.html).
- k. "Sea Dragons Go to Sea."
- l. "A Certain Marine Corps Brigade Reconnaissance Battalion."
- m. Zhai and Cao, "'Sea Dragons Unit' Opens Mass Training Competition."
- n. 掀起实战化训练热潮 全面提高海军打赢能力——习主席在中央军委军事训练会议上重要讲话在海军部队引起强烈反响 ["Realistic Warfare Training Trend, Comprehensively Upgrade Navy Winning Capability—Xi Jinping's Important Speech at the CMC Training Meeting Elicits Strong Navy Response"], 人民海军 [People's Navy], 27 November 2020, p. 1.
- o. 国防军事早报 [National Defense and Military Affairs Morning Report], 29 November 2021 episode, 海军陆战队 深入实施新时代人才强军战略 在火热军事实践中锻造新型作战力量人才 ["Marine Corps Deeply Implements New-Era Human Talents in Strong Military Strategy, Forging New-Type Forces in the Fire of Military Implementation"], aired on CCTV, available at <https://tv.cctv.com/2021/11/29/VIDE636Tp1cUa5fmE5svTkj211129.shtml>.

Figure 4. Sea Dragons Organizational Chart (March 2018)

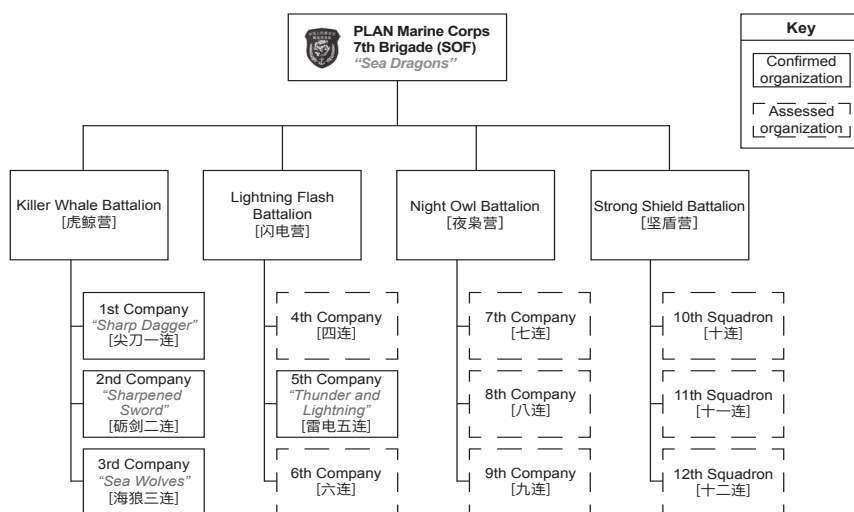


Source: Zhai and Cao, "The Marine Corps Field Training Is like a Rainbow."

elsewhere or a transition out of the military.<sup>70</sup> Units below the battalion level may be organized by specialty. The Sea Dragons' Night Owl Battalion reportedly features an Undersea Assault Team (水下突击队) of unknown size and composition, and one source also noted the existence of a "diving squad leader" (潜水班长).<sup>71</sup> It is unclear whether these units are organized as permanent formations or as ad hoc groupings.

As with other PLA organizations, all the Sea Dragons' units below the battalion level are referred to as *fendui* (分队), a broad term for many kinds of units. Over the last dozen years, authoritative sources have identified seven *fendui*, which may refer to battalions,

Figure 5. Sea Dragons Organizational Chart (December 2018)



Source: Guan, "Official Announcement!"

companies, or equivalent-grade departments within the headquarters. It is not clear from open sources which named units correspond to which *fendui*. Table 2 shows all identified PLANMC Special Operations Brigade *fendui*.

Unofficial sources speculate on the Sea Dragons' composition and force structure with much greater detail. Perhaps the most credible of these accounts is a 2023 book by former Taiwan Military Intelligence Bureau deputy director Weng Yanqing (翁衍慶), who claims that the brigade's force structure is as shown in figure 6.<sup>72</sup>

Aside from its combat elements, the Sea Dragons brigade also has a headquarters staff responsible for functions such as general management and training.<sup>73</sup> While no details have been reported on its first-level administrative and functional departments, the Sea Dragons' staff (参谋) likely resembles those of other PLA SOF, with operations, intelligence, training, communications, confidentiality (机要), political work, logistics, mobilization, electronic countermeasures, and military affairs (军务) components.<sup>74</sup> The headquarters also includes second-level organizations such as a general management office (管理科) and a training office (作训科) that has at least one officer with substantive foreign training experience.<sup>75</sup>

Like most other PLA units, the Sea Dragons structure also includes Leninist features such as political commissars and Chinese Communist Party cells. The brigade's 1st Company, 1st Battalion has a frequently decorated grassroots party organization (基层党组织), suggesting that the rest of the brigade has a corresponding party apparatus.<sup>76</sup> This would include a grassroots party committee (基层委会) within each battalion and

**Table 2.** *Identified PLANMC Special Operations Brigade Fendui*

Fendui	Chinese Name	Date Identified
44th	91128部队44分队 <sup>a</sup>	November 2020
52nd	91128部队52分队 <sup>b</sup>	January 2019
54th	91128部队54分队 <sup>c</sup>	October 2022
61st	91128部队61分队 <sup>d</sup>	August 2010
66th	91128部队66分队 <sup>e</sup>	January 2022
71st	91128部队71分队 <sup>f</sup>	January 2012
72nd	91128部队72分队 <sup>g</sup>	August 2014

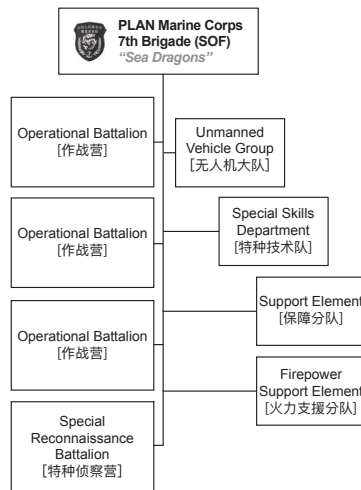
*Notes:*

- a. 光荣榜: 全军军事训练先进单位和个人 ["Honor Roll: All-Military Training Advanced Units and Personnel"], 解放军报 [PLA Daily], 27 November 2020, available at [https://www.sohu.com/a/434782280\\_259558](https://www.sohu.com/a/434782280_259558).
- b. 《解放军报》刊登全军备战标兵单位和个人光荣榜 ["PLA Daily Posts All-Military War Preparation Units and Individual Honor Roll"], 国防部 [PRC Ministry of National Defense], 6 January 2019, [www.mod.gov.cn/gfbw/qwfb/yw\\_214049/4834160.html](http://www.mod.gov.cn/gfbw/qwfb/yw_214049/4834160.html).
- c. 光荣榜 ["Honor Roll"], 人民海军 [People's Navy], 10 October 2022, p. 4.
- d. 公示2010年优秀士兵保送入学和优秀大学毕业生士兵提干对象 ["Announcing 2010 Outstanding Troops Recommended for Admission and Outstanding University Graduated Promoted as Soldiers"], 人民海军 [People's Navy], 30 August 2010, p. 4.
- e. 2016–2020年全国普法工作先进单位、先进个人和依法治理创建活动先进单位名单 ["2016–2020 List of National Legal Knowledge Work Advanced Units, Advanced Individual and Organizational Legal Governance Activities"], 智慧普法平台 [Wisdom Legal Knowledge Platform], 24 January 2022, [legalinfo.moj.gov.cn/zhfxfzxx/fzxtzgg/202201/t20220124\\_446881.html](http://legalinfo.moj.gov.cn/zhfxfzxx/fzxtzgg/202201/t20220124_446881.html).
- f. "光荣榜 ["Honor Roll"], 人民海军 [People's Navy], 21 January 2012, p. 4.
- g. 中国特种兵在外军特战学校夺冠13科目 获最高荣誉 ["China Special Forces Win 13 Awards and the Highest Honor in Foreign Special Forces School"], 浙江日报 [Zhejiang Daily], 1 August 2014, available at <https://www.chinanews.com.cn/ml/2014/08-01/6449089.shtml>.

party branches (党支部) for each company.<sup>77</sup> The brigade's headquarters also would have party committees (直属党委) for each of its functional departments.<sup>78</sup>

Credible sources put the end strength of the Sea Dragons at about three thousand.<sup>79</sup> The brigade annually replenishes its ranks with inductees from around the country that undergo a two-year training and selection process.<sup>80</sup> As with other PLA special operations units, these inductees include conscripts.<sup>81</sup> To be selected by the Sea Dragons for further training and selection, they must excel as recruits (新兵) in their training formations.<sup>82</sup> Once they arrive at the Sea Dragons, the new recruits must survive a three-month period of intensive evaluation and testing where only those remaining are promoted to junior-level noncommissioned officers (NCOs), while those that fail are likely not permitted to stay in the Sea Dragons.<sup>83</sup> The brigade also takes volunteers from other units, including from other services and branches.<sup>84</sup> As of 2019, up to a third of the brigade's members had transferred from other units.<sup>85</sup> Regardless of personnel origin, the attrition rate for aspiring Sea Dragons personnel is often 50 percent or higher due to the rigors of this initial training and selection process.<sup>86</sup>

**Figure 6.** *Sea Dragons Organizational Chart (Unofficial Source, January 2023)*



Source: Weng, *Chinese Communist Military History, Military Strength, and the Threat to Taiwan*.

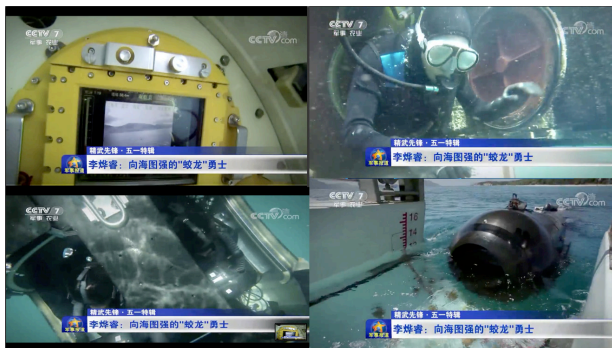
### Equipment

A focus of the Sea Dragons' modernization has been on advanced underwater equipment. Chinese media frequently depict unit members training with various scuba equipment and specialized undersea fl  chette rifles and pistols.<sup>87</sup> Individual frogmen also have been spotted using undersea navigation devices, though the exact model types and capabilities are unclear.<sup>88</sup> Occasionally, frogmen train in pairs with WRY-001A diver propulsion vehicles, which can move up to two frogmen underwater at higher speeds than regular swimming would allow.<sup>89</sup> Perhaps the Sea Dragons' most secretive undersea equipment is manned semiopen submersibles. In April 2018, official footage depicted two frogmen exiting a hatch and operating a frogman delivery vehicle underwater, as seen in figure 7.<sup>90</sup>

While public discussions of Sea Dragons equipment have been sparse, there have been some candid assessments of systems under consideration from China's defense industry. These sources include discussions of problems consistent with the reference in the 2020 *Science of Military Strategy* to PLA SOF equipment as still lagging, but also imply substantial effort in rectifying those deficiencies. Much of this research focuses on undersea communications and navigations systems, as well as frogman delivery vehicles.

China's defense industry has been studying frogman undersea communications and navigation tools for a decade. In 2014, engineers from the China Electronics Technology Group Corporation's (CETC's) 3rd Research Institute wrote that domestic undersea voice communications devices included viable "all-in-one mask-type, split-type, and

**Figure 7.** *Sea Dragons Personnel Operating a Two-Man Frogman Delivery Vehicle*



Source: "Elite Warrior Vanguard."

companying guidance watches. The former could send and receive guidance signals on multiple channels, while the watch interpreted these signals for the diver. Together, this equipment reportedly enabled frogman teams to operate with navigation guidance up to ten thousand meters away from base and one thousand meters from each other.<sup>92</sup>

By December 2022, several Chinese defense conglomerates had developed improved undersea communications systems for the PLA. For instance, the China Shipbuilding Industry Corporation 715th Research Institute reportedly has designed a frogman audio communications system that can work at depths of up to sixty meters and can transmit and receive out to two thousand meters in good sea conditions. CETC's 3rd Research Institute has built a system that works in conditions up to sea state 3 with voice communications out to 1,500 meters. Consistent with China's military-civil fusion strategy, various academic and commercial organizations such as Xiamen University, Northwestern Polytechnic University, and a Suzhou-based private company are also developing undersea frogman communications.<sup>93</sup> One research institute has even reportedly built an artificial intelligence-based recognition system weighing 150 grams that can recognize up to thirty different hand signals underwater.<sup>94</sup>

Domestically developed frogman delivery vehicles, however, apparently have been found to be problematic. A 2015 article from a team of special operations researchers at the PLAN Submarine Academy (海军潜艇学院) noted that unnamed domestically produced open-style frogman delivery vehicles then in use suffered from limited oxygen provision (around one hour), excessive cavitation that compromised their stealth, large and unwieldy size, and materials unsuitable for special operations, such as nondegaussed steel.<sup>95</sup>

These limitations, combined with low trainee proficiency, led the study's authors to recommend tight restrictions on training with these vehicles. Specifically, they advised that users only deploy domestically developed vehicles in sea areas less than three nautical

base-station-type" (面罩一体式, 分体式和基站式) systems with ranges of up to two thousand meters, but acknowledged problems in communications distance, bandwidth, and audio quality.<sup>91</sup> The undersea diver navigation equipment at that time was mostly grouped into sonar tone markers (引导声标器) and ac-

miles from shore that had been precleared of debris, fishing nets, and explosives. Additionally, all training events should have preplanned navigation routes with preset speeds to allow surface mariners to know exactly where frogmen were training to evaluate and observe vehicle cavitation for future vehicle and training improvement. Finally, the authors recommended that all training activities include a thorough emergency rescue plan in case the trainees developed the bends or other dangerous side effects.<sup>96</sup> It is unclear from open sources whether the next generation of Chinese frogman delivery vehicles corrected these deficiencies.

Since the brigade conducts so-called quadphibious operations—underwater, on land, in the air, and on the sea surface—it is not surprising that it has trained with advanced equipment in these other domains. The brigade was likely among the first units to receive the new *xingkong* (星空) camouflage, and on land its personnel are routinely seen equipped with night-vision goggles, rifle-mounted sights and infrared designators, and lighter MICH-style helmets with attachment points for communications and optics equipment.<sup>97</sup> They are equipped with the full complement of infantry weapons available to the PLA, including specialized weapons such as designated marksman rifles and larger-caliber antimatériel sniper rifles.<sup>98</sup> Sea Dragons commandos also have been seen operating larger-caliber heavy machine guns and possibly direct-fire explosive munitions, but it is unclear whether they have organic access to indirect-fire-support weapons or man-portable air-defense systems.<sup>99</sup> One photo that emerged in November 2021 showed a ZTD-05 amphibious fighting vehicle with markings suggesting it belonged to the Sea Dragons' 1st Battalion, though no further details on these platforms and their possible assignment to the brigade could be found at the time of writing.<sup>100</sup>

In the air, Chinese media depicts the Sea Dragons parachuting or fast-roping almost exclusively from Z-8 helicopters with PLAN and PLANMC markings. Though almost all these helicopters contain no special markings, at least one clip showed Sea Dragons frogmen operating from a Z-8 with medical markings, suggesting either a search-and-rescue operation or the availability of airborne medical evacuation assets to the unit.<sup>101</sup> Other sources depict maritime parachute training with Z-8C helicopters of the PLANMC, but it is unclear whether these helicopters are from a unit dedicated to the Sea Dragons brigade itself.<sup>102</sup>

On the sea surface, the Sea Dragons typically appear to operate from a variety of small boats. Hulled vessels usually bear markings of PLA engineering troops (工兵) and have motors on board, while the small rubber boats in use can be fitted with motors or used without motor propulsion as appropriate.<sup>103</sup> Frogmen from the brigade have deployed small rubber boats from the side doors of a Z-8 helicopter, but there is no public footage of Sea Dragons deploying watercraft from the air.<sup>104</sup>

## Training

Like other PLA SOF units, the Sea Dragons focus on small-unit training and developing a wide variety of tactical skills, especially for infiltration of a given target area. More recently, they have participated in a range of combined-arms and joint training exercises, reflecting the PLA's doctrinal emphasis on integrating SOF into larger campaigns. The Sea Dragons also have played a role in Chinese military diplomacy and sharpened their skills through participation in exercises with several foreign partners, such as Venezuela and Turkey.

### *Individual and Unit Training*

Brigade command staff have stressed that having personnel with multiple skills is critical to survival and success in small-unit special operations. Sea Dragons personnel are expected to master diverse skills, including parachuting, rappelling, direction finding, special-vehicle driving, search and seizure, demolition, and hand-to-hand combat skills, as well as reconnaissance skills such as map identification, photo taking and video recording, and encryption protocols for transmitting intelligence.<sup>105</sup> These training subjects are then broken down into more-specific skill-sets. In March 2022, for instance, brigade members practiced multiple types of airborne parachute insertions, including “bare-handed” parachuting, dual-person parachuting, steerable parachuting, and precision parachuting.<sup>106</sup>

Diving and undersea tactics are some of the most challenging skills that Sea Dragons personnel must master. Chinese media sources offer scant detail on the undersea training or capabilities of the brigade, with the exception of a 2010 article briefly describing the deployment of frogmen and their diver propulsion vehicles through submarine torpedo tubes and an April 2018 clip showing frogmen exiting through an undersea hatch, driving a two-seat frogman delivery vehicle, and using WRY-001A diver propulsion vehicles.<sup>107</sup> More-recent footage shows frogmen practicing marksmanship with specialized undersea rifles (see figure 8), training with handheld undersea navigation devices, and coming ashore on a beach at night after infiltrating with scuba equipment. In the report, an instructor stressed the importance and difficulty of diving in murky seas, conferring greater stealth but impeding coordination and navigation.<sup>108</sup>

As a unit, the Sea Dragons reportedly train to a higher standard than other PLA entities. The brigade's Night Owl Battalion, for instance, explicitly aims to train harder and above the standards laid out in the Central Military Commission's (CMC's) Outline of Military Training and Evaluation.<sup>109</sup> As of 2018, this reconnaissance battalion typically trained outdoors on the Hainan coast from April to July and adhered to a rigorous training schedule consisting of training in eleven subjects a day for four days a week, with no less than 25 percent of this aggregate training activity occurring at night.<sup>110</sup> In November



**Figure 8.** *A Sea Dragons Frogman Practicing Underwater Marksmanship*



Source: 如果“蛟龙突击队”是一把尖刀，那么一连就是尖刀上的刀尖 [“If the ‘Sea Dragons Commando Unit’ Is a Sharp Knife, Then 1st Company Is the Tip of the Knife”], 中青在线 [Chinese Communist Youth League Online], 18 October 2018, [m.cyol.com/content/2018-10/18/content\\_17699168.htm](http://m.cyol.com/content/2018-10/18/content_17699168.htm).

2020, the unit’s 44th *fendui* was one of only two navy units to be honored by the CMC as an “advanced military training unit of the whole army,” citing its innovation of new training methods for “underwater penetration and island and reef attack warfare.”<sup>111</sup>

Other reports highlight Sea Dragons infiltration training, a key task in any small- or large-island seizure campaign. A 2016 report, for instance, detailed

a confrontation drill staged in a jungle in Guangdong Province involving fifty-person teams conducting and defending against a mock infiltration.<sup>112</sup> A 2020 special news report followed Sea Dragons commandos rowing in rubber boats at night as part of a surface infiltration drill. The drill included phases where the troops were allowed to use boat motors to increase speed and other segments where they had to row as quietly as possible to the shore.<sup>113</sup> An April 2022 report described a simulated nighttime assault on an enemy command post in which a group of tens of commandos divided into a command group (指挥组), a firepower group (火力组), and other mobile groups (行动小组) surveilled the target with a quadcopter unmanned aerial vehicle (UAV) before commencing an assault.<sup>114</sup>

The Sea Dragons also practice cross-domain infiltration, notably from air to sea. In October 2021, brigade personnel practiced parachuting into water from helicopters off the coast of Hainan Island with steerable parachutes, where they then proceeded to board small boats and return to shore.<sup>115</sup> Frogmen of the Sea Dragons’ Night Owl Battalion have practiced deploying rubber boats from Z-8 helicopters into the water before fast-roping and jumping from the helicopters into the water themselves.<sup>116</sup> Other footage shows brigade frogmen in scuba gear descending from helicopters into the water, as well as emerging from the water, climbing into rubber boats, and paddling to shore.<sup>117</sup>

There also has been some reporting on the Sea Dragons’ exfiltration techniques. One 2017 report showed brigade personnel practicing a fast diver extraction method where waiting frogmen were scooped up into a passing motorized rigid inflatable boat.<sup>118</sup> Another media clip showed brigade frogmen climbing from the water onto a rope ladder suspended from a hovering Z-8 helicopter with medical markings, demonstrating an airborne diver extraction method in what may have been a search-and-rescue drill.<sup>119</sup>

Recent Sea Dragons training showcases larger-scale capabilities. Though one of the brigade's deputy chiefs of staff, Cdr. Bi Yachun (毕亚春), stressed that most special operations are squad-sized endeavors involving only one to two personnel or six to twelve at most, the April 2022 simulated nighttime command post assault discussed above likely involved larger units.<sup>120</sup> A December 2022 report also underscored a trend toward larger operations; it showed an exercise in which brigade members launched operations from the *Jinggangshan* Type 071 amphibious transport dock (Hull No. 999), likely as part of larger amphibious assault maneuvers with a PLANMC force that had converted an infantry battalion to an air assault battalion. This exercise focused on expanding from two-domain to multidimensional amphibious assault, involving the characteristic small-boat landings, helicopter parachuting, and helicopter fast-roping frequently seen in reporting on the Sea Dragons.<sup>121</sup>

### *Combined-Arms and Joint Training*

Recent exercises also have featured coordination with other PLAN units. In December 2020, Sea Dragons personnel participated in an island landing exercise involving squad-sized (班组) mechanized infantry units from the PLANMC 1st Brigade, 1st Amphibious Mechanized Infantry Battalion. Media footage showed personnel using mine-clearing line charges to destroy landing obstacles, while sniper teams seized optimal sniping positions and began to ambush critical points on the enemy's front line. Sea Dragons personnel then fast-roped from helicopters onto high ground and began infiltration and attacks ahead of the main landing force. Finally, assault vehicles deployed smoke screens to cover infantry fighting vehicles carrying out suppressing fire, while SOF proceeded to destroy "vital enemy targets."<sup>122</sup> A December 2022 amphibious assault exercise similarly involved landings from amphibious assault vehicles, barrages from self-propelled artillery guns, and use of man-portable air defense systems, suggesting improved coordination with other forces.<sup>123</sup> Other notable training activities have included an exercise with a PLAN submarine flotilla in the South China Sea (date unknown, probably sometime in 2016), in which Sea Dragons personnel deployed undersea diver delivery vehicles through a submarine's torpedo tubes for the first time and managed to navigate a diver delivery vehicle in sea state 3, among other groundbreaking activities for the unit.<sup>124</sup>

The Sea Dragons also train with other PLA services and the People's Armed Police (PAP), though this training is still focused on small-unit tactics. An early mention of Sea Dragons training with other services came in 2016, when the unit traveled to Xinjiang for counterterrorism training with a SOF brigade of the Xinjiang Military District.<sup>125</sup> The two-thousand-person contingent reportedly deployed using a mix of navy, joint logistics, and civilian transportation capabilities.<sup>126</sup> A 2021 report described Sea Dragons personnel working with a PLA Air Force Airborne Corps brigade to develop joint tactics for infiltrating an enemy's rear area in complex conditions.<sup>127</sup> In June 2022, brigade members

conducted a visit, boarding, search, and seizure (VBSS) drill with the Snow Leopards (雪豹部队) SOF unit from the PAP 2nd Mobile Contingent (第二机动总队), in which mixed teams infiltrated a “hijacked ship” via diving and small rubber boats before boarding in larger numbers from larger boats and seizing control of the ship and its crew (see figure 9).<sup>128</sup>

### *Foreign Training*

The Sea Dragons also have honed their skills through education and exercises with international partners. The brigade has routinely sent personnel to train in foreign military institutions as part of exchange programs. In its first eight years, the Sea Dragons sent forty-five members to train in Venezuela, Ecuador, Turkey, and Estonia. When the unit was established, the chief of staff and one of the battalion commanders already had foreign training experience of their own.<sup>129</sup>

**Figure 9.** *Sea Dragons and PAP Conduct a Joint VBSS Drill (June 2022)*



Source: 燃! 蛟龙突击队与武警特战分队海上联训 [“Burn! The Sea Dragons Commando Unit and a People’s Armed Police Special Forces Detachment Hold Joint Training at Sea”], 中国军网 [China Military Online], 29 June 2022, [www.81.cn/tz/jdt\\_208572/10167405.html](http://www.81.cn/tz/jdt_208572/10167405.html).

Turkey and Venezuela are the most frequent destinations for PLA naval SOF training. In November 2001, eight Chinese troops trained with the Turkish navy’s SOF (Underwater Offense Command—Su Altı Taarruz, abbreviated SAT), including the Sea Dragons’ chief of staff Xu Xiangxian (徐向贤) and battalion commander Zhang Genyuan (张根元).<sup>130</sup>

While there, they trained in diverse subjects such as field survival, deploying from

helicopters, and use of sea mines; one of them received a NATO Special Forces Medal for his performance.<sup>131</sup> Sea Dragons’ reconnaissance battalion instructor Fan Zhenfeng (范振峰) also trained in Turkey, likely with the Seventh Gendarmerie Commando Training Regiment Command in Yenifoça, İzmir (土耳其霍恰宪兵突击队学校).<sup>132</sup> Others have trained at Venezuelan military special forces schools, including two future Sea Dragons company commanders: Li Yerui (李烨睿), who trained at the Venezuelan Naval Special Operations School (委内瑞拉海军特种作战学校), and He Long (何龙), who trained at the Venezuelan Army Special Forces School (likely the Escuela de Operaciones Especiales General de División Andrés Rojas) in 2017.<sup>133</sup>

Brigade personnel also routinely participate in competitions, drills, and exercises with foreign counterparts. In 2004, eight members of the Sea Dragons took part in an international reconnaissance soldier competition in Estonia.<sup>134</sup> Around 2013, Sea Dragons also participated in the PEACE 2013 (和平—2013) naval exercises with Pakistan.<sup>135</sup> Other Sea Dragons personnel have assumed high-profile roles in combined exercises. In 2016, then-deputy brigade commander of the Sea Dragons Sun Hao (孙浩) commanded PLANMC forces taking part in JOINT SEA 2016 landing maneuvers with Russian forces.<sup>136</sup> Members of the brigade also have trained with Saudi naval special forces, once in 2018 and more recently in November 2019, when Sea Dragons personnel trained at the King Faisal Naval Base with Saudi naval special forces of the Western Fleet in Jidda in BLUE SWORD 2019 (蓝剑—2019).<sup>137</sup> This event involved diving skills training that appeared to be more than just a symbolic gesture of cooperation.<sup>138</sup>

Foreign training has provided opportunities for the Sea Dragons to acquire new techniques and training methods. Training with the Turkish navy's SAT reportedly has included foundational subjects like GPS navigation, first aid and rescue techniques, small-unit tactics, rubber-boat proficiency, and more specialized maritime subjects such as "open and closed diving" (开放式和封闭式潜水), free diving and ascent at twenty-meter depths with no breathing equipment, nighttime undersea navigation, demolitions, working with sea mines, and maritime reconnaissance techniques.<sup>139</sup> Another Sea Dragons student at the Seventh Gendarmerie Commando Training Regiment Command trained on various diving topics and counterterrorism combat techniques.<sup>140</sup>

Some personnel with foreign training experience have been promoted upon their return to China. These returning students represent both "red" and "expert" characteristics, having passed rigorous physical and political screenings as part of a selection process for foreign training and returned home with prized technical skills.<sup>141</sup> They are almost certainly expected to pass along the skills they learned abroad to their home units within the brigade on their return. Both Li Yerui and He Long (discussed above) became company commanders on their return from overseas training, and as of 2021 He Long was serving on staff in the brigade's training office (作训科), where he was incorporating his foreign training experience into routine training for other Sea Dragons personnel.<sup>142</sup> Similarly, 1st Lt. Zhang Heng, who achieved first place in an international sniper competition, was appointed a company commander.<sup>143</sup>

International experience may accelerate participants' careers, but it also appears that the troops selected to train abroad are some of the Sea Dragons' most capable members in the first place. The highly lauded—and experienced—1st Company of the brigade's 1st Battalion is a frequent participant in international military competitions, drills, and exercises, having competed in the Erna international reconnaissance soldier competition in Estonia, as well as in combined drills or exercises with Russian and Pakistani forces.<sup>144</sup>

Members of the 1st Company also likely represented the PLA in KOWARI 2018, a wilderness survival exercise carried out with U.S. Marines and Australian forces.<sup>145</sup> Other foreign drills are led by multiyear veterans of the brigade. The Sea Dragons detachment that trained with the Saudi naval special forces in November 2019 was led by Venezuelan Army Special Forces School alumnus Zhou Jun (周军), who has served with the brigade in various capacities since at least 2010.<sup>146</sup>

While the PLA usually sends its most experienced and reliable troops for foreign training, one exception occurred in 2012, when newly inducted Sea Dragons members role-played as pirates during VBSS and search-and-rescue drills aboard the Chinese oiler *Hongzhehu* and frigate *Zhoushan* during a highly publicized ten-day exercise with Russia.<sup>147</sup> This suggests that some foreign training activities blend substantive objectives with propaganda goals.

### Operational Experience

Aside from their training activities, some Sea Dragons members also have honed their skills in real-world operations. Some seventy members of the brigade deployed with the PLAN's first antipiracy task force to the Gulf of Aden in 2008.<sup>148</sup> Brigade members regularly participated in subsequent patrols, often drawn from elite units such as the 1st Battalion, 1st Company, which deployed on at least nine antipiracy task forces as well as the PLAN's PEACE MISSION medical task force. Although deploying small numbers of troops drawn from elite units limits the operational experience of the brigade writ large—most Sea Dragons are never deployed in their careers—it is consistent with the doctrinal emphasis on avoiding accidents or incidents that could embarrass the PLA or escalate conflicts abroad.

Most antipiracy patrols are uneventful, but the Sea Dragons have been called on to participate in periodic rescue operations. In a series of incidents in 2009, for instance, special forces embarked on the destroyer *Wuhan* and other ships, operating from the deck and shipborne helicopters, fired machine gun warning shots and flares to ward off Somali speedboats approaching Chinese merchant ships.<sup>149</sup> The next year, after Somali pirates boarded the COSCO ship *Taiankou*, the destroyer *Xuzhou* was sent from the Gulf of Aden to rescue the crew. Special forces divided into air and surface assault teams, conducted reconnaissance, and eventually boarded the ship, though the pirates already had left by that time.<sup>150</sup> In 2012, SOF members were dispatched on dinghies from the destroyer *Changzhou* to pick up freed hostages from a Taiwanese fishing vessel from a beach in Somalia; when heavy tides made a return boat trip difficult to execute, the marines facilitated a helicopter evacuation.<sup>151</sup> Five years later, ten commandos participated in the rescue of nineteen Syrian crewmembers of the hijacked Tuvaluan cargo ship OS 35 in the Indian Ocean.<sup>152</sup> That incident was notable because the PLAN coordinated

with the Indian navy, which provided reconnaissance and air cover (though Chinese media did not mention India's participation).<sup>153</sup>

On two occasions, the Sea Dragons had opportunities to support significantly larger contingencies. As dramatized in *Operation Red Sea*, the 2015 Yemen evacuation of Chinese nationals involved approximately fifty members of the Sea Dragons acting as the “main ground force” for the PLAN's evacuation operation, ensuring the extraction of 571 Chinese and foreign nationals (see figure 10).<sup>154</sup> In April 2023, a small contingent of special forces assigned to an antipiracy task force assisted in the evacuation of hundreds of Chinese expatriates from Sudan.<sup>155</sup>

**Figure 10.** *Sea Dragons Guard a Pier during the Yemen Evacuation (April 2015)*



Source: 《红海行动》的主角，是支这样的特种部队 [“The Star of Operation Red Sea Is This Kind of Special Forces Unit!”], Sina.com, 21 February 2018, <https://news.sina.com.cn/c/2018-02-21/doc-ifyrvaxe8302961.shtml>.

In addition to embarking on PLAN ships, the Sea Dragons have more recently gained experience deploying to the PLA's first overseas base. Led by He Long, the company deployed to the Djibouti logistics base in August 2019 after preparing for the mission since February of that year, marking perhaps the first time that a company-sized detachment had deployed abroad.<sup>156</sup> There is sparse

information about its activities during that deployment, although it has conducted skills competitions and assisted in training the Djiboutian coast guard in maritime special operations.<sup>157</sup> Its deployment as a formation likely contributed to unit cohesion, suggests leadership confidence in its capabilities, and could be a model for future SOF deployments to overseas Chinese bases.

## Supporting and Assisting the Sea Dragons

The Sea Dragons are the PLAN's only officially acknowledged special operations unit, but other naval units possess similar capabilities or could be called on to support SOF. Non-SOF supporting elements that could play these roles include PLANMC combined-arms brigade reconnaissance battalions, the PLANMC's aviation brigade, PLAN salvage-and-rescue units, and PLAN minesweeping forces. Other supporting entities include



the PLAN Submarine Academy, the PLAN Marine Corps Training Base, and the PLAN Yulin Support Base. This section describes the contributions of each of these units.

### *PLAN Marine Corps Brigade Reconnaissance Battalions*

Each of the six PLANMC combined-arms brigades has a reconnaissance battalion (侦察营). Often conflated with the Sea Dragons, perhaps intentionally, these battalions offer some of the same capabilities, are likely held to similar training standards, and participate in many of the same overseas activities as the Sea Dragons. These reconnaissance battalions are the PLAN's closest analogues to the Sea Dragons brigade.

Chinese sources do not specifically identify PLANMC brigade reconnaissance battalions as SOF (特种作战部队), but these units offer many of the same capabilities. They train with similar equipment to that of the Sea Dragons, including infantry weapons such as antimatériel sniper rifles, designated marksman rifles, night sights, and other systems.<sup>158</sup> They also are equipped with UAVs at the squad level for reconnaissance missions (sometimes at night), and their members have been shown using the same undersea diver propulsion vehicles and practicing the same armed diving reconnaissance and underwater shooting skills that the Sea Dragons purport to master.<sup>159</sup> In one exercise, brigade reconnaissance battalion personnel swam to shore, penetrated enemy lines, sniped high-value targets, and destroyed key nodes of a simulated enemy force—all capabilities reminiscent of the Sea Dragons.<sup>160</sup>

The PLANMC brigade reconnaissance battalions are likely held to training standards similar to the Sea Dragons, though the PLA's reforms probably have resulted in uneven training across the various battalions. NCO selection occurs once a year; on average, NCOs entering these units have eight years of service. They undergo extensive physical training, including topics such as water survival skills and basic diving proficiency.<sup>161</sup> Some newer brigade reconnaissance battalions, however, are converted PLA ground-force (PLAGF) units, and their members likely had to play catch-up. For example, troops from the 6th Brigade reconnaissance battalion, freshly converted en masse from a ground-force motorized infantry brigade, stressed training in water and amphibious operations as part of their "new identity" as marine infantry.<sup>162</sup>

Personnel from reconnaissance battalions also participate in many of the same overseas activities as the Sea Dragons. There is evidence that elements of the PLANMC 2nd Brigade's reconnaissance battalion, known through unofficial sources as the Southern Lions (南国雄狮), may have been deployed to Djibouti like their Sea Dragons counterparts.<sup>163</sup> The former commander of the Southern Lions battalion also reportedly received international training at the Venezuelan Army Special Forces School and participated in a 2009 rescue operation off the coast of Somalia.<sup>164</sup> Members of other PLANMC brigade

reconnaissance battalions also select personnel for participation in international military competitions.<sup>165</sup>

Despite their many similarities to the Sea Dragons brigade, PLANMC brigade reconnaissance battalions are primarily responsible for fulfilling tactical battlefield reconnaissance needs for their parent brigades, rather than carrying out dedicated special operations for national or theater command authorities. Official sources indicate that PLANMC brigade reconnaissance battalions also practice specialized tasks such as detecting and clearing land mines, but a more commonly demonstrated task is calling in and correcting artillery fire, as well as conducting battle damage assessment.<sup>166</sup> Unsurprisingly, personnel from these battalions work closely with reconnaissance offices (侦察科) within their parent brigades' staff structure.<sup>167</sup> In one exercise, a brigade reconnaissance battalion in Shandong took orders directly from the brigade command post and sent its reconnaissance information back to brigade staff.<sup>168</sup>

Some evidence also suggests that brigade reconnaissance battalions may be more heavily armed than their Sea Dragons' comrades, potentially boasting organic fire support in the form of light armor. Though direct indicators of a heavier force structure are scarce, personnel from one brigade reconnaissance battalion boasted of seamless coordination between a UAV reconnaissance team (无人机侦察小组), a ground reconnaissance team (地面侦察小组), and an armored reconnaissance team (装甲侦察小组).<sup>169</sup> These separate detachments may have been formed ad hoc from other brigade elements, but media coverage of the exercise suggested they had been drawn from the same reconnaissance battalion.

### *PLAN Marine Corps Brigade Air Assault Battalions*

PLANMC brigade air assault battalions (空中突击营) also could be called on to support Sea Dragons operations. As a highly touted component of the PLANMC's shift from two-dimensional amphibious operations to multidimensional deployment onto the battlefield, PLANMC brigade air assault battalions could be used to reinforce SOF troops farther inland or operating behind enemy lines. Often shown entering the battlefield by parachuting or fast-roping from helicopters and recently shown lifting off from the deck of the *Hainan* Type 075 multipurpose amphibious assault ship, these troops could serve as a quick-reaction force for Sea Dragons operations ashore. Each of the PLANMC's six combined-arms brigades has an air assault battalion.<sup>170</sup> Though some information about the possible support role of these brigade air assault battalions can be inferred from existing descriptions of their training activities, little information is available describing the composition, size, or readiness of these units. Exercises in fall 2020 suggested that PLANMC air assault battalions were training to operate in an enemy's rear area, similar to Sea Dragons and brigade reconnaissance mission descriptions.<sup>171</sup>



Like the PLANMC's brigade reconnaissance battalions, the air assault battalions may be subject to more rigorous training than regular PLANMC infantry given the challenging nature of air assault operations, but the PLANMC likely is still honing its brigade-level air assault capabilities. One report indicated that at least one of the six brigade air assault battalions was converted from a conventional infantry battalion during the PLA's 2016 reforms, suggesting that at least some of these units were still working to become proficient in air assault operations.<sup>172</sup>

### *Aviation Support*

Rotary-wing aviation plays a prominent role in publicly reported Sea Dragons activities. The Sea Dragons are frequently shown deploying from PLAN helicopters (see figure 11), but it is unclear whether the brigade has an organic aviation detachment or even a designated helicopter unit from other parts of the PLA. Nevertheless, the recent expansion of the PLANMC suggests that the Sea Dragons brigade may have greater aviation capabilities at its disposal.<sup>173</sup>

**Figure 11.** *Sea Dragons Practice Rappelling from Z-8s*



Source: 特种部队中的“王牌”！揭秘海军蛟龙突击队 [“The ‘Ace Card’ of Special Forces! Unmasking the Navy’s Sea Dragons Commando Unit], 中青在线 [Chinese Communist Youth League Online], 28 December 2018, <https://shareapp.cyol.com/cmsfile/News/201812/28/web168524.html>.

Perhaps the most consequential change pertaining to aviation support to Sea Dragons operations is the addition of a dedicated aviation brigade to the PLANMC's force structure in 2017. Its personnel have trained in situations that would likely prove useful in special operations, including ultralow-altitude flying to avoid radar detection, night flying, and low-altitude penetration

of enemy airspace to deliver troops.<sup>174</sup> In other exercises, aviation-brigade helicopters have practiced flying in rainy, adverse weather with poor visibility and dropping frogmen into the water at ten-meter altitudes or lower.<sup>175</sup> The Sea Dragons likely long have enjoyed priority access to PLAN airlift, but the fielding of an aviation brigade dedicated to PLANMC missions suggests that more airlift assets may be available in the future for PLAN special operations.

### *PLAN Combat Diving Communities*

The PLAN can also draw on combat-diving expertise in other formations for special operations. Though not officially designated as SOF, and likely not trained for high-intensity

combat or maintained at the same high readiness level, combat divers in the PLAN's rescue-and-salvage detachments (防险救生支队) and minesweeping-ship groups (扫雷舰大队) provide underwater operations capability that could assist PLAN SOF, especially in peacetime or lower-intensity conflict scenarios.

Likely informed by an appreciation of the role of underwater divers in foreign combat operations and direct relevance to future PLA missions across the Taiwan Strait and elsewhere, PLA reforms expanded the navy's frogman capabilities through the creation of a least one dedicated anti-sea mine frogman (反水雷蛙人) unit in 2017.<sup>176</sup> Though precise definitions and consistent term usage are elusive, some clarity is emerging on their functions. One official 2021 Chinese video, for instance, portrayed "divers" as more focused on underwater tasks, while these "frogmen" are expected to fight underwater as well as on land.<sup>177</sup>

The PLAN's most publicized mine-clearing frogman unit is the Northern Theater Navy's Minesweeping Ship Group Anti-Sea Mine Frogman Detachment (北部战区海军扫雷舰大队反水雷蛙人中队). Broken into specialized squads, including a "minehunting diver squad" (猎雷潜水班), the detachment focuses on carrying out independent mine-clearing operations in complex geographies where minesweeping vessels cannot operate, especially in narrow sea passages or complex harbor areas. Accordingly, their training stresses diving proficiency, especially for use in diving operations in dark areas with extensive natural obstacles.<sup>178</sup>

Chinese sources describe rescue-and-salvage detachments (防险救生支队) as "special units" (特殊的部队), which likely fall under the purview of naval logistics and support.<sup>179</sup> Responsible for search-and-rescue operations, these formations train for both helicopter insertion and undersea diving rescue. Divers from these units focus on deep-sea diving and repair tasks, especially in geographically complex environments. Though these units do not officially conduct "special operations," there is a logical intersection between rescue-and-salvage diving and undersea special operations.<sup>180</sup>

### *Other Support Elements*

Beyond formations responsible for direct combat support, other parts of the PLAN may also augment the service's special operations capability. This includes logistics, such as medical treatment and supplies. The Sea Dragons are likely connected to the PLAN Yulin Support Base (海军榆林保障基地) in some fashion, having been listed under the base in two separate Hainan Province reports on entities with outstanding organizational culture.<sup>181</sup> Given that the Sea Dragons are garrisoned in the Haitang District of Sanya City their connection to the Yulin Support Base may be logistical in nature.<sup>182</sup>

Academic and technical research also supports PLAN special operations. The PLAN Submarine Academy is home to researchers that study special operations. In April

2015, researchers from the academy's Rescue and Salvage Department (防险救生系) published an article in the Army Special Operations Academy's journal. In June 2016, a researcher from the academy's Military Physical Education Research Office (海军潜艇学院军事体育教研室) and dual hatted with the Army Special Operations Academy published research on the physiological and psychological effects of low-temperature seawater training on special operations frogmen.<sup>183</sup> The PLAN Marine Corps Training Base (海军陆战队训练基地), formerly known as the PLAN Marine Corps Academy (海军陆战学院), also conducts research relevant to selected special operations capabilities. The base has historically served as a training and research consulting center for the various branches of the PLAN, including coastal-defense troops and marine corps command personnel. It trains personnel for "midgrade command billets" (中级指挥任职).<sup>184</sup> One study from the former academy described an evaluation-and-assessment system for studying the operational effectiveness of frogman delivery systems, and another surveyed the psychological health of officers and enlisted from a 2015 antipiracy patrol in the Gulf of Aden.<sup>185</sup> This academic work frequently uses information derived from training exercises and may yield operational benefits for the PLAN's SOF community.

Finally, the PLAN's special operations capabilities benefit from the development of the ground forces' SOF units. In select instances, PLAGF SOF units have apparently received newer equipment not yet observed in Sea Dragons use. News footage from February 2023 reportedly revealed for the first time the 75th Group Army SOF Brigade using individual frogman surface transport vehicles and coming ashore on a beach during an exercise.<sup>186</sup> From the standpoint of interservice rivalry, this development casts a shadow on the PLAN's special operations capabilities. From a capabilities perspective, however, the equipment, knowledge, and proficiency gained from the PLAGF's adoption of new systems will likely trickle down to and benefit PLAN SOF. Whether that benefit comes from a response to interservice rivalry or from actual material contributions from the PLA ground forces may not matter if the PLAN is able to improve its special operations forces.

## Assessment

The Sea Dragons and other SOF-relevant communities within the PLAN offer a mix of capabilities relevant not only to China's primary contingencies across the Taiwan Strait but also in protecting Chinese interests in the South and East China Seas and farther afield. While the doctrinal focus has been on support for larger combat operations, naval SOF also offer capabilities designed for low-intensity conflict and more-routine functions such as search and rescue and even military diplomacy. Key challenges that limit their contributions, however, include mission trade-offs given their small scale and competing assignments, questionable ability to function as part of a joint construct, and

limited technical proficiency. The PLA will likely work in the years ahead to reduce these challenges.

### *Potential Contributions*

The most significant wartime mission for China's SOF is support for a cross-strait campaign. Doctrine emphasizes enabling an amphibious assault, which encompasses attempts to seize both Taiwan itself and its smaller offshore islands such as Kinmen or Matsu. The Sea Dragons likely would be placed within a functional special operations group within the joint command, where they would be assigned specialized tasks based on their capabilities; ground-force, air-force, and paramilitary SOF would have their own responsibilities.<sup>187</sup> The Sea Dragons and other naval SOF could play diverse roles, including surveillance of sea-lanes, ports, and coastal defenses prior to the assault; underwater obstacle demolition; mine clearing; sabotage or raids against specific maritime targets; capture of enemy personnel; medical evacuation; and search and rescue.<sup>188</sup>

It is also likely that the Sea Dragons would be a priority unit in any Chinese attempt to seize a Vietnamese-, Philippine-, or Taiwanese-held outpost in the South China Sea, or to conduct operations on the Senkaku Islands in the East China Sea. Whereas the PLA ground forces focus more on the Taiwan Strait, the PLANMC has carved a niche in handling a more diverse range of scenarios within the "near seas" and in other environments.<sup>189</sup> Located adjacent to the South China Sea, the Sea Dragons could leverage their clandestine technology and infiltration training to surprise and capture defenders and seize critical sites, facilitating follow-on assault by conventional marine corps battalions.

While the focus would be facilitating an island landing, Chinese naval special forces also could support other aspects of a cross-strait conflict.<sup>190</sup> In a joint firepower campaign, small reconnaissance units from the Sea Dragons or perhaps PLANMC brigade reconnaissance battalions could supplement other SOF in providing real-time targeting data and battle-damage assessment for firepower units through a joint headquarters. In a joint blockade, which could be conducted independent of or preceding an island landing, and even potentially continuing after a stalled invasion, the Sea Dragons could work with other naval or paramilitary units to patrol sea-lanes around the Taiwan Strait, interdict shipping bound to or from the island, and escort ships.<sup>191</sup>

There is also the prospect that naval SOF would contribute to coercive campaigns short of high-intensity conflict. A "new normal" of heightened tensions across the Taiwan Strait could feature teams of Sea Dragons being mobilized to increase political pressure on Taiwan's leaders or the public through various small-scale demonstrations.<sup>192</sup> SOF already have been part of a pressure campaign through publicized training against mock-ups of Taiwan's presidential palace in the Inner Mongolian desert.<sup>193</sup> Maritime special forces could enhance these activities by training in sensitive maritime areas

near Taiwan, shadowing or harassing Taiwanese vessels, or even attempting to board commercial ships coming into or from Taiwan. Using the Sea Dragons would have the benefits of displaying high-end capabilities—some derived from real-world operational experience—while having greater control over potential escalation because of these units' relatively high level of training and proficiency. These activities also could extend to coercive campaigns against other regional rivals.

Among China's various special forces, naval SOF such as the Sea Dragons are the most appropriate for operations to defend China's overseas interests. That unit already has been deployed to participate in counterpiracy operations off the Horn of Africa (including several operations to rescue hijacked ships) and was a key force in the evacuation of Chinese and foreign nationals from Yemen in 2015 and Sudan in 2023. In the future, Sea Dragons components can be expected to deploy to Djibouti or other Chinese overseas bases where they could be available to assist in counterpiracy missions, noncombatant evacuations in contested environments, maritime search and rescue, or humanitarian assistance and disaster relief. As an amphibious force, they also could support counterterrorism operations in littoral regions or attempt to rescue hostages, taking a page from the USN SEALs model they have closely studied. However, higher-end operations would be more likely to encounter problems created by limited jointness and lack of high-end equipment.

A different function would be supporting China's foreign military engagements. Already, handpicked members of the Sea Dragons have participated in international training courses and competitions with countries such as Venezuela, Turkey, and Saudi Arabia, and even took part in the 2018 KOWARI exercise featuring the United States and Australia. PLAN SOF assigned to counterpiracy task forces also have opportunities to participate in combined exercises or other engagements with foreign counterparts.<sup>194</sup> These activities not only enhance their own proficiency but also support attempts to shape foreign perceptions of the PLA as a capable force. Expanding the role of naval SOF in foreign engagements could contribute to security assistance through training for foreign maritime constabulary or special forces.

### *Challenges and Progress*

Special operations forces can support China's maritime strategy by facilitating combat operations, coercing rivals, and conducting nonwar military operations, but they also face several challenges that together will limit their future effectiveness. One challenge is insufficient capacity given the scope of their assignments. While Chinese sources note the increasing ratio of SOF in U.S. combat operations over the last few decades, special forces remain a marginal element within the PLAN. The Sea Dragons brigade has a total strength of three thousand, just over 1 percent of the 260,000-person navy (contrasting

with the ten-thousand-strong USN Special Warfare Command). That ratio increases with the inclusion of other SOF-relevant communities such as divers, marine corps brigade reconnaissance battalions, and aviation assets, but true naval SOF remain a small elite. This limited capacity could create bottlenecks if China had to juggle competing missions, such as a flare-up of tensions simultaneously across the Taiwan Strait and in the South or East China Sea.

A milestone in reducing the capacity gap would be an expansion of naval SOF beyond their current composition. One option would be to establish an additional SOF brigade based in a different theater command, mirroring the basing of USN SEAL teams on both coasts. Another option would be to add battalions and support elements to the existing brigade, with some of them perhaps permanently or rotationally deployed to overseas bases. The PLA might also expand some related units, such as divers or more-capable coast guard units, who would be available to augment the Sea Dragons in the case of competing contingencies. This would require strong bureaucratic advocacy, but with the PLANMC itself only a small part of the navy and absent a large SOF bureaucracy similar to U.S. Special Operations Command (SOCOM), it is unclear who would lead that effort.

A second challenge is limited jointness within the naval SOF community. PLA SOF are typically composed as subordinate commands within corps-level organizations: group armies in the case of the ground forces and the PLANMC in the case of the Sea Dragons. This promotes a high degree of coordination within those larger entities, as demonstrated in combined-arms training carried out within the marine corps. It is likely that this arrangement would also benefit interactions between the Sea Dragons and marine reconnaissance battalions and other support elements within the marine corps (although there is still room for improvement here as noted by the lack of colocated SOF and aviation support).

A more significant problem concerns the level of SOF integration with joint commands, whether under national or theater leadership. Reporting directly to naval headquarters, the Sea Dragons are outside the theater construct in peacetime and likely would be placed within a joint special operations group in wartime. However, in the absence of a standing theater-level SOF arrangement or a SOCOM-like functional command in the PLA, it is unclear who would be qualified to lead such an organization and whether the assignments of SOF elements across the different services could be successfully deconflicted—problems exacerbated by the inherent clandestine nature of SOF. This arrangement also makes it less likely that national PLA authorities could use the Sea Dragons as a strategic asset along the lines of the USN SEALs. These problems are not necessarily being rectified in peacetime: publicly reported training focuses primarily on SOF coordination with other naval units, rather than joint training under a joint headquarters. Similarly, we did not find references to dedicated support for the Sea Dragons (e.g.,

organic or standby transportation units), which could mean a more ad hoc system for mission planning than arrangements within the U.S. special operations field.

These problems could be mitigated through organizational reforms and new operational patterns. One option, which could complement an expansion of naval SOF, is to increase theater coordination with these forces through direct command relations or at least through liaisons (mirroring those between the theaters and the PLA Rocket Force).<sup>195</sup> Similarly, the PLA could establish standing SOF oversight functions with the CMC Joint Staff Department or the theater joint staffs. Such reforms could increase the integration of forces like the Sea Dragons into joint planning, training, and operations. We also might find references to dedicated support units that would consistently train with and complement PLAN SOF. Clues that the PLA is making progress in this area could include new joint doctrine or novel operational concepts being discussed by PLA academics.<sup>196</sup> In practice, the PLA could more regularly feature Sea Dragon commandos in theater exercises or incorporate them into more-complex real-world operations to put pressure on Taiwan, such as joint patrols near Taiwan-held territory.

A third problem concerns the proficiency of naval SOF operators. While Chinese media often portray the Sea Dragons as an elite force worthy of admiration, especially in dramatic portrayals such as *Operation Red Sea*, the reality is more complicated. A subset of operators has gained foreign experience, some of whom have been promoted within the Sea Dragons, but most members likely have not deployed overseas in their careers, or only have done so in permissive environments (e.g., in foreign training programs). Moreover, some Chinese researchers acknowledge deficiencies in training that Sea Dragons and other SOF undergo as part of their regular duties. Such factors mirror frequent PLA self-criticisms about its lack of combat experience and realistic training but could be more consequential for SOF commanders that need to be able to exercise a high degree of autonomy in complex circumstances.<sup>197</sup>

Evidence of improvements in human capital could take several forms. One would be discussions of new or innovative exercises, perhaps in locations farther from mainland China or under adverse geographic or hydrological conditions, and those involving larger formations. Dispatch of larger number of troops to highly regarded foreign training programs (such as in Russia) or victories in international competitions would offer another sign of increasing competence. Another would be updated curricula or greater use of simulation and gaming in educational institutes such as the PLA Special Operations Academy. Still another would be signs that the Sea Dragons or other SOF-related units are not only deploying at a larger scale but also successfully handling unscripted incidents such as hijackings or evacuating Chinese nationals under duress—which have been few and far between to date.



Finally, there are continuing questions about the quality of the equipment being used by Chinese naval SOF. This problem is particularly difficult to evaluate given the lack of open-source reporting on the capabilities of individual or unit equipment, but discussions from Chinese industry publications and general commentary on the need for modern SOF equipment suggest that the PLA does not believe itself to have capabilities on par with U.S. and European counterparts. Analysts should monitor research published by Chinese military and commercial firms for signs of new or upgraded SOF equipment. In sum, while the Sea Dragons and other SOF-relevant units can now contribute in several ways to China's maritime strategy, fielding genuinely "world-class" forces will likely require further changes to composition, organization, training, and equipment.

## Notes

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