

---

## The 'Flying Shark' Prepares to Roam the Seas: Strategic pros and cons of China's aircraft carrier program

---

**China SignPost™ 洞察中国—"Clear, high-impact China analysis."©**

---

China's budding aircraft carrier program is provoking energetic debate among Chinese and foreign observers. The former Ukrainian carrier *Varyag* (called "Shi Lang" by some Chinese Internet sources) is now being rapidly refitted in China's Dalian Naval Shipyard. It is likely to represent a modest and training-focused beginning to a small set of first-generation Chinese dedicated deck aviation platforms, which will ultimately employ such indigenously-developed carrier aircraft as the J-15 Flying Shark.

China will likely build ~3-4 hulls to permit at least one to be at sea while the others are being used for training or being refitted. Various Chinese sources predict that the ex-*Varyag* could be "launched" and have some form of "harbor and sea trials" this year, perhaps as early as July. If so, when combined with the 11 January flight test of the J-20 stealth fighter and increasing training involving J-10 aircraft (a variant of which may be exported in the next few years), this will be a banner year for Chinese military aviation development.

Against this backdrop, it is important to provide a proper strategic context and assess the likely pros and cons the development and eventual deployment of carriers holds for China. A viable carrier capability would certainly offer the beginnings of a new level of power projection capability. Having a clear sense of what the strategic advantages and weaknesses of carriers are for the PLA Navy (PLAN) will help the U.S. and other regional powers formulate more effective plans and strategies to help cope with China's nascent carrier capability.

### Strategic Benefits

- 1) **Enhanced regional diplomatic influence.** A carrier group would offer immense diplomatic benefits in providing a visible Chinese naval presence in the South China Sea, Southeast Asia, along key sea lanes in the Indian Ocean, and for humanitarian missions such as the response to the 2004 Indian Ocean tsunami. Several carrier groups would be necessary for persistent presence in these areas, however, to allow for periodic maintenance.
- 2) **Improves China's ability to defend its citizens and specific high profile economic interests in volatile areas between the Red Sea and Hong Kong.** Moving forward, China's capabilities will most likely be tailored more specifically to handling threats to Chinese citizens and economic interests abroad. These include non-traditional security threats such as piracy and terrorism, as well as internal chaos like that seen in Libya. The U.S. military, on the other hand, possesses truly global, and highly sustainable,

expeditionary capabilities that enable it to fight large wars virtually anywhere in the world.

3) **Carriers offer a scalable set of capabilities that can handle a range of contingencies.**

The platforms and operational infrastructure that make high-end missions possible can also be scaled down to deal with non-traditional security missions like humanitarian relief after the 2004 Indian Ocean Tsunami or suppression of piracy off Somalia. China's military is improving its capacity for dealing with smaller-scale threats that do not involve potential forcible entry into a hostile area, yet still involve long-range deployments. Improved abilities to show the flag and assist with humanitarian missions and other military operations other than war can potentially allow a limited expeditionary military capacity to yield substantial diplomatic benefits for China. It is important, however, to understand that the PLA's naval, air, and ground capabilities for out of area operations are likely at least 15 years away from allowing the scalable responses to high and low-intensity threats that U.S. DoD possesses today.

### Strategic Drawbacks

1) **Carriers are inherently vulnerable.** When asked during a Senate hearing how long U.S. aircraft carriers would survive in a major war against Soviet forces, Admiral Hyman Rickover famously replied "about two days." In a high-intensity confrontation against a foe with submarine, air, and surface-based anti-ship capabilities, the life expectancy of a Chinese carrier would probably be measured in hours. Anti-submarine warfare is perhaps the biggest weakness China that needs to rectify with respect to defending future carriers. Many of China's neighbors, including Vietnam, Indonesia, and Malaysia, have all acquired, or have contracted for, quiet modern diesel attack submarines in recent years and the U.S., Indian, Japanese, and Australian navies all possess highly credible attack submarine capabilities.

2) **Carriers and their supporting ships and infrastructure are expensive.** This reality derives in part from the carrier's vulnerability to attack and in part from the fact that a variety of supporting systems are needed to ensure that a carrier can operate with maximum effectiveness. If the PLAN intends to conduct credible carrier operations in distant seas, it will likely need to acquire more advanced air defense vessels, enhance its at sea replenishment abilities, and acquire more nuclear attack submarines and better integrate land-based AWACS and tanker aircraft with its carrier-based aviation.

- 3) **An operational Chinese aircraft carrier capability is likely to unnerve China's neighbors and potentially help to catalyze more formal regional security alignments aimed at counterbalancing China's growing military power.** Aircraft carriers are inherently a power projection tool. China's neighbors and strategic competitors will likely seek to hedge against what they interpret as a signal of China's desire to have a more robust naval capability that can transition quickly from soft to hard-power missions.
- 4) **Long lead time to actual operational capability gives potential regional adversaries time to build up countermeasures, which are often much cheaper and can be acquired relatively quickly.** China's large and active shipbuilding infrastructure and labor base is likely to reduce its carrier construction and outfitting costs relative to those of the U.S., for example. Still, domestically-built carriers will be expensive—with a final cost that will likely be equal to that of several Type 071 amphibious assault ships or helicopter carriers, which are very well suited for handling the contingencies China is most likely to face in coming years and would arouse less fear among China's neighbors than a full-on aircraft carrier.

#### Potential Missions

- 1) **Asserting maritime claims in the South China Sea.** This mission is certainly one for which a carrier embarking modern strike fighters like the J-15 would have a much greater military and diplomatic impact than amphibious assault ships or helicopter carriers. For this reason alone, Chinese carrier deployments are likely to be seen as threatening by neighboring countries like Vietnam that have competing claims in the South China Sea.
- 2) **Protecting/rescuing Chinese citizens and economic assets threatened by internal violence and chaos.** When the J-15 naval strike fighter enters service, it will likely be able to deliver China's most advanced precision guided munitions and would greatly enhance the PLAN's ability to safeguard a rescue operation.
- 3) **Supporting sea lane security operations against low-intensity threats like the Somali pirates.** Anti-piracy missions emphasize helicopters and embarked special forces for boarding vessels, but could be significantly enhanced with carrier-based dedicated airborne reconnaissance platforms. Carrier-borne strike fighters would also give China a credible way to threaten retribution if Chinese citizens were injured or killed by pirates.
- 4) **Humanitarian relief operations.** China could reap real diplomatic benefits from having an operational carrier that could support intensive helicopter operations serving a

disaster area like coastal zones impacted by the 2004 Indian Ocean Tsunami or Japan's 2011 earthquake.

**Strategic Implications and Barometers**

Once China's ex-*Varyag* begins sea trials, China will likely need at least 5 years to be able to conduct carrier operations outside its immediate region. China's carrier capabilities are likely to primarily be aimed toward lower-intensity contingencies including maritime presence mission in the South China Sea, suppression of piracy, protection of PRC citizens abroad, and humanitarian relief operations. A greater focus on building carrier groups with substantial organic anti-submarine warfare capabilities and embarked strike fighters, by contrast, would suggest that Chinese leaders want to bolster their capacity to handle higher-intensity combat against major regional navies.

**About Us****China Signpost™ 洞察中国—“Clear, high-impact China analysis.”©**

*China SignPost™ aims to provide high-quality China analysis and policy recommendations in a concise, accessible form for people whose lives are being affected profoundly by China’s political, economic, and security development. We believe that by presenting practical, apolitical China insights we can help citizens around the world form holistic views that are based on facts, rather than political rhetoric driven by vested interests. We aim to foster better understanding of key internal developments in China, its use of natural resources, its trade policies, and its military and security issues.*

*China SignPost™ 洞察中国 founders Dr. Andrew Erickson and Mr. Gabe Collins have more than a decade of combined government, academic, and private sector experience in Mandarin Chinese language-based research and analysis of China. Dr. Erickson is an associate professor at the U.S. Naval War College and fellow in the Princeton-Harvard China and the World Program. Mr. Collins is a commodity and security specialist focused on China and Russia.*

*The authors have published widely on maritime, energy, and security issues relevant to China. An archive of their work is available at [www.chinasignpost.com](http://www.chinasignpost.com).*

*The views and opinions contained in China SignPost™ 洞察中国 are those of the authors alone and in no way reflect the views or policies of the authors’ employers. All relevant and eligible contents © Andrew S. Erickson and Gabriel B. Collins, 2010-*