China’s First Airstrip in the Spratly Islands
Likely at Fiery Cross Reef

by

Ethan Meick
Policy Analyst, Security and Foreign Affairs
Background

China’s land reclamation activities at Fiery Cross Reef in the disputed Spratly Islands have resulted in the expansion of the reef into an artificial island of at least three kilometers in length and between 200 and 300 meters wide, according to satellite imagery from November 20 (Appendix 1). The artificial island is larger and longer than China’s three other land reclamation projects constructed over the last 12-18 months on Chinese-controlled outposts in the South China Sea and is the only one capable of supporting an airstrip in its current form.1

- China since 2014 has made significant progress on land reclamation projects on Johnson South Reef, Johnson North Reef, Cuateron Reef, and Gaven Reef. In addition to dredging sand to make islands out of these reefs, China appears to be expanding and upgrading military and civilian infrastructure—including radars, satellite communication equipment, antiaircraft and naval guns, helipads, and docks—on some of the manmade islands.2

- Four countries with South China Sea claims already have airstrips on land features in the region—Taiwan on Taiping Island (the largest), Malaysia on Swallow Reef, Vietnam on Spratly Island, and the Philippines on Thitu Island.3

The United States, Vietnam, and the Philippines have criticized China’s land reclamation projects. A U.S. Department of Defense spokesperson said, “We urge China to stop its land reclamation program, and engage in diplomatic initiatives to encourage all sides to restrain themselves in these sorts of activities.”4 China has defended its projects. According to a spokesperson at China’s Ministry of Foreign Affairs, “[A]nyone in the outside world has no right to make irresponsible remarks on China-related activities … The construction-related activities undertaken by China on the islands are primarily to improve the living conditions of personnel stationed there and to better fulfill our international responsibilities and obligations in terms of search and rescue and the provision of public services.”5

Preliminary Analysis

The size and length of the manmade island at Fiery Cross Reef and the People’s Liberation Army’s (PLA) need for a more robust infrastructure to meet its C4ISR1 and air requirements in the Spratly Islands suggest China will build an airstrip on the island.6

The land reclamation project at Fiery Cross Reef appears designed to create an airstrip as long as 3,000 meters, which should allow most PLA combat and support aircraft to use it.7 The PLA likely would use the airstrip primarily to enable short-duration, long-distance C4ISR operations and presence patrols over China’s claims in the Spratly Islands.7 Moreover, the airstrip would allow PLA aircraft to provide air defense for PLA Navy surface combatants and amphibious ships operating in the southern reaches of the South China Sea. Finally, PLA aircraft could use the airstrip for emergency landings, which will be

---


2 C4ISR stands for command, control, communications, computers, intelligence, surveillance, and reconnaissance.

3 At a recent international defense forum in China, a senior People’s Liberation Army (PLA) officer said, “There is a need for a base [in the Spratly Islands] to support our radar system and intelligence-gathering activities … we lacked sufficient air force capabilities in the South China Sea. There is a need for a base of operations in the South China Sea for state security and to protect national interests.” Nanae Kurashige, “Chinese Military Officer Explains Need for Construction in Disputed Spratlys,” Asahi Shimbun (Japan), http://ajw.asahi.com/article/asia/china/AJ2014111230018.
particularly important when the PLA Navy’s carrier air wing becomes operational in the next two to three years.\(^8\)

- Most of the PLA’s combat and support aircraft lack the range to conduct air operations in the southern reaches of the South China Sea, which is more than 600 nautical miles from the PLA’s closest aviation base and over 400 nautical miles from Woody Island, China’s air strip in the Paracel Islands (Appendix 2). Until China builds an airstrip in the Spratly Islands or develops an aircraft carrier aviation capability, China must use air refueling tankers to enable air operations at these distances from China. However, China’s current fleet of air refueling aircraft, which consists of only about 12 1950s-era H–6U tankers, is too small to support sustained, large-scale, long-distance air combat.\(^9\) Furthermore, the H–6U tanker has a limited capacity to hold transferable fuel and most of China’s fighters do not have the equipment necessary to refuel in the air.\(^10\)

- The frequency of launches from the airstrip would be contingent on many factors, including: the amount of apron and hangar space on the island; the availability of supplies, logistics, and personnel for maintaining aircraft; and fuel storage. China’s only other airstrip in the South China Sea at Woody Island appears to have limited supplies and fuel, suggesting Fiery Cross Reef would at least have minimal stockpiles for replenishing aircraft.\(^11\)

Although an airstrip would alleviate some of the PLA’s logistical and power projection deficiencies in the South China Sea, monitoring and enforcing China’s vast maritime claims would continue to remain a challenge for the PLA.

According to the satellite imagery in Appendix 1, China also appears to be building a sea port at Fiery Cross Reef. IHS Jane’s analysts assess the harbor could be large enough to allow large Chinese naval and maritime law enforcement ships to dock in order to replenish supplies.\(^12\) In addition, Chinese fishermen could use Fiery Cross Reef as a safe harbor during harsh weather.\(^13\)

Finally, China may be attempting to use its land reclamation project at Fiery Cross Reef, along with its four other such projects, to bolster the legal standing of its South China Sea claims ahead of an International Tribunal on the Law of the Sea ruling requested by the Philippines.\(^5\) The Philippines asked the tribunal to assess the legality of China’s nine-dash line\(^6\) and declare whether certain land features in

---

\(^{8}\) China commissioned its first aircraft carrier, the Liaoning, in 2012 after approximately six years of renovation work on the Soviet-designed, Ukrainian-built hull and one year of sea trials, and is developing a carrier-based fighter aircraft, the J–15. China’s first J–15 unit is expected to become operational by 2016.

\(^{9}\) Aircraft operating at sea often experience corrosion and pitting to airframes and engines and require fresh water to clean and maintain. M. Taylor Fravel (Massachusetts Institute of Technology, Department of Political Science), e-mail interview with author, December 10, 2014; and a China defense expert, e-mail interview with author, December 10, 2014.


the disputed South China Sea are islands (which can generate full exclusive economic zones out to 200 nautical miles) or are smaller land features (which can only generate territorial seas out to 12 nautical miles). China may perceive that if it can demonstrate that the remote South China Sea outposts are true islands, rather than mere rocks or reefs, it will strengthen the legal and practical justification for its vast territorial claims.


Appendix 1: China’s Land Reclamation Project at Fiery Cross Reef

Appendix 2: Comparison of Current Operational Distances of PLA Bases with Airstrips from Taiwan versus the Spratly Islands (distances in nautical miles)

Source: Google Maps; adapted from David Shlapak, “Chinese Air Superiority in the Near Seas,” in Peter Dutton, Andrew S. Erickson, and Ryan Martinson (eds.), China’s Near Seas Combat Capabilities (China Maritime Studies, U.S. Naval War College, February 2014), p. 64.
Regulations Seek to Justify and Consolidate Control in the South China Sea


11 M. Taylor Fravel (Massachusetts Institute of Technology, Department of Political Science), e-mail interview with author, December 10, 2014; and a China defense expert, e-mail interview with author, December 10, 2014.
