

1. Introduction

Japan is quintessentially by geography a maritime country. It consists of four main islands (Hokkaido, Honshu, Shikoku and Kyushu), no part of which is more than 150 kilometres from the sea, and about 3,000 smaller islands (including Okinawa) and islets, some of which are uninhabited. Its claimed exclusive economic zone (EEZ) is 4.51 million square kilometres, compared to its total land territory of only 380,000 square kilometres. Its coastline is nearly 35,000 kilometres in length (the sixth longest in the world), or 91 metres for every square kilometre of land area.¹ Except for the northernmost island of Hokkaido, the interiors of the islands are 'mountainous, steep, and difficult to develop or farm', so that the population is concentrated along the coasts, and especially on a several 'spacious low-lying plains', typically centred around large natural harbours that have grown into 'huge urbanised ports', such as Tokyo, Kawasaki and Yokohama on the Kanto Plain, which comprise about a third of Japan's population; Osaka and Kobe, which together with Kyoto, form the Kansai District; and Nagoya on the Nobi Plain.² Its economy is vitally dependent on long and vulnerable sea-lines of communication (SLOC) for a very high proportion of its energy and raw materials requirements.³

A maritime country requires a maritime defence, and maritime capabilities were the centrepiece of Japanese rearmament, under the direction of the US Navy, which began in the early 1950s. Coastal defence groups were established immediately the National Safety Force was established by Yoshida Shigeru in April 1952, following the signing of the San Francisco Peace Treaty and the US–Japan Mutual Security Treaty in September 1951. These were initially an autonomous part of the Maritime Safety Agency (MSA), which was established on 1 May 1948 to perform constabulary and coastguard functions, but became part of the Maritime Safety Force, established on 1 August 1952, and reorganised into the Japanese Maritime Self-Defense Force (JMSDF) in July 1954.⁴

Since its formation, the JMSDF has incrementally but progressively and inexorably expanded its capabilities, roles and missions, increasing its 'sphere of activities [in] an ever widening circle'.⁵ Through its first decade, its principal

1 'Geography of Japan', *Wikipedia*, at en.wikipedia.org/wiki/Geography_of_Japan; and Masahiko Isobe, 'A Theory of Integrated Coastal Zone Management in Japan', at www.glocom.ac.jp/eeco/esena/resource/isobe/index.e.html

2 Peter J. Woolley, *Japan's Navy: Politics and Paradox, 1971–2000* (Lynne Rienner, Boulder, Colorado, 2000), p. 6.

3 Euan Graham, *Japan's Sea Lane Security, 1940–2004: A Matter of Life and Death?* (Routledge, London, 2006), chpt 1.

4 James E. Auer, *The Postwar Rearmament of Japanese Maritime Forces, 1945–71* (Praeger, New York, 1973), chpt 5.

5 Woolley, *Japan's Navy*, p. 24.

avowed focus was on defence of harbours and ports. In the mid-1960s, it graduated to defence of some of the narrower straits. The Third Defense Program (1967–71), approved by the Cabinet in November 1966, outlined the objective of ‘increasing the ability to defend coastal areas, straits and surrounding waters’; it was intended to provide the JMSDF with the capability to monitor submarine traffic passing through the Soya (or La Perouse) Strait between Hokkaido and Sakhalin Island, through the Tsugaru Strait between Hokkaido and Honshu, and through the Tsushima Strait between Korea and Japan.⁶ In January 1983, Prime Minister Yasuhiro Nakasone, a former director general of the Japan Defense Agency (JDA) (1970–72), declared that Japanese defence policy would ensure ‘full control of four straits that go through the Japanese islands [i.e., the Soya, Tsugaru and Tsushima straits and the Shimonoseki Strait between Honshu and Kyushu] so that there should be no passage of Soviet submarines and other naval activities’. Nakasone also confirmed in 1983 that Japan accepted responsibility for the defence of its sea lanes out to 1,000 nautical miles, from Tokyo to Guam or from Osaka to the Strait of Taiwan, a concept that the JMSDF began promoting in the 1970s and which was first announced by Prime Minister Suzuki Zenko in Washington in May 1981.⁷

Since the end of the Cold War, when the Soviet navy was its primary preoccupation, the roles and missions of the JMSDF have been further expanded and amplified. The Russian navy is much less threatening than its Soviet predecessor, but the JMSDF now also has to contend with Chinese and North Korean naval capabilities and activities. Moreover, the JMSDF’s purview now includes economic security, beyond the defence of SLOC, and even environmental security matters, in addition to its traditional military concerns. It shares with the Maritime Safety Agency responsibility for protection of Japan’s EEZ, and the ocean and seabed resources within it. Its maritime surveillance activities now include the collection of economic intelligence. As Admiral Eiji Yoshikawa, the head of the JMSDF’s Ominato Regional District Command, which is responsible for surveillance of Russian ships that pass through the Soya Strait, stated in 2004: ‘National security is not limited just to military aspects, but must also include economic activities’. He said that monitoring of the Soya Strait would continue as vigilantly as during the Cold War: ‘There will be no change in importance for our regional district headquarters of maintaining surveillance over the strait’. He also said that surveillance was ‘not limited to ships of the Russian Pacific Fleet’ but also included Russian oceanographic research ships and drilling ships searching for natural resources.⁸

6 Graham, *Japan’s Sea Lane Security*, p. 101; and Auer, *Postwar Rearmament of Japanese Maritime Forces*, pp. 136, 159, 167.

7 Graham, *Japan’s Sea Lane Security*, pp. 122–23, 143–44.

8 ‘Japanese Self-defence Forces to Keep Tabs on East Asia’s Seabed’, *Alexander’s Gas & Oil Connections* (Vol. 9, No. 5), 10 March 2004, at www.gasandoil.com/goc/news/nts41021.htm

A litany of intrusions into Japan's EEZ and territorial waters since around 1996 is chronicled in chapter 2. These have primarily involved Chinese oceanographic and naval vessels, including submarines. Some have clearly been engaged in intelligence collection and oceanographic familiarisation in areas of strategic and operational importance in contingent circumstances, such as the Tsushima, Tsugaru and Osumi straits, as well as areas subject to territorial disputes, such as the Senkaku Islands.

The JMSDF's ocean surveillance architecture, involving ground-based signals intelligence (SIGINT) and electronic intelligence (ELINT) collection systems, high frequency direction finding (HF DF) systems for locating communications transmitters at sea, and airborne collection systems such as long-range maritime patrol (LRMP) aircraft and maritime surveillance helicopters, as well as SOSUS (sound surveillance system)-type undersea submarine detection system, is described in chapter 3.

The Japanese Ground Self-Defense Force (JGSDF) also has important responsibilities with respect to coastal surveillance, especially in northern Hokkaido, with two HF/VHF (very high frequency) DF and six ELINT collection facilities located from Rebun Island and Wakkanai in the north-west to Nemuro in the north-east of the island. Two JGSDF stations for monitoring the south-western part of the Sea of Japan, separating North Korea from Honshu, were established in 2008, while a new coastal surveillance station is currently under construction on Yonaguni Island, Japan's westernmost point, close to the Senkaku Islands. These JGSDF assets are described in chapter 4.

The organisation of the JMSDF, including the high command, the fleet bases and the JMSDF's five regional district commands, within which its undersea and ELINT facilities are supported, is described in chapter 5. This chapter also describes the intelligence centres which serve the fleet HQ at Yokosuka, on the south-west side of Tokyo Bay, and the JMSDF's principal communications stations for connecting its ocean surveillance information collection facilities with the intelligence centres and fleet commands.

Subsequent chapters, while more technical, are essentially novel. They cover matters not addressed in the academic literature about Japanese defence policy. That literature is concerned with discourse about the cardinal aspects of declaratory policy, such as the interests and views of key defence decision-makers (especially the prime minister and the minister of defence); textual analyses of major official policy statements, such as white papers and successive mid-term defence programs; defence budget trends; current issues in the US-Japan alliance; and major equipment procurement programs, such as air warfare destroyers, helicopter carriers and submarines.

This study is meant to inform the debate, which is perhaps more narrow but certainly no less serious, concerned with issues of crisis stability and force employment policy. The China–Japan maritime relationship is exhibiting manifestations of action–reaction dynamics, or competitive arms acquisition processes, in which significant proportions of the ELINT and electronic warfare (EW) components of the respective acquisitions are tailored to the EW systems of the other side. Given that the possibilities for conflict are real, whether from accident, inadvertence or miscalculation, it is necessary to appreciate the capabilities that comprise the prevailing strategic balance or, in this case, the Japanese side of its undersea dimension. Close examination of these capabilities allows consideration of the prospective escalation dynamics once conflict is joined.

Appreciation of the technical parameters and performance characteristics of command, control, communications and intelligence systems is fundamental to sound strategic analysis. The analysis of antenna types and specifications allows ELINT and EW capabilities to be determined with reasonable precision. The geographic location of the antenna sites, at the entrances to Japan's various internal straits and waters, and given the limited ranges of most of the very high frequencies involved, allows prospective areas of conflict to be discerned.

Facilities that are of high strategic or operational value and also relatively vulnerable become lucrative targets; most of the shore stations for Japan's undersea submarine detection system and the associated ELINT facilities and communications centres are in this category. Some, particularly those co-located with other important command centres, may rank as nuclear targets in heuristic scenarios. Escalatory moves are likely to be attractive, making a significant difference in operational outcomes.

The United States would inevitably be a party to any such conflict at the outset. As described in chapter 8, the United States and Japan jointly maintain important submarine detection systems, including long segments of the so-called 'Fish Hook' undersea defence line, which monitors Chinese submarine movements in the East China Sea, while key elements of the US Ocean Surveillance Information System (OSIS) are co-located with JMSDF Ocean Surveillance Information System (JOSIS) facilities. Any degradation in US submarine detection and tracking capabilities would greatly compound the escalation dynamics. The strategy of the United States would dictate offensive actions against enemy submarines before these capabilities were operationally impaired.

This text taken from *The Tools of Owatatsumi: Japan's ocean surveillance and coastal defence capabilities*, by Desmond Ball and Richard Tanter, published 2015 by ANU Press, The Australian National University, Canberra, Australia.