

14. Assessment of Japan's Ocean Surveillance Capabilities

The underwater approaches to Japan are now guarded by the most advanced submarine detection system in the world. Some 30 hydrophone arrays form a multi-layered network, with the ocean observation stations at Higashidori in north-eastern Honshu and at White Beach in Okinawa operating long-range, open-ocean systems for surveillance of the eastern and southern approaches to the home islands, and another long-range system deployed across the Sea of Japan for surveillance of the western side; the 'barrier' systems, covering the northern and southern entrances to the Sea of Japan (i.e., the Soya and Tsushima straits), and both sides of the Tsugaru Strait separating Hokkaido and Honshu, as well as Kii Strait, the southern entrance to Osaka Bay and the Inland Sea; and short-range systems guarding important harbours and entranceways, as at Kannon Zaki in the case of the entrance to Tokyo Bay and Mutsure-jima at the western entrance to Kanmon Strait and the Inland Sea. Technically, the hydrophones are perhaps the most sophisticated in the world, being as good as the latest US systems.

Beyond securing the underwater approaches to Japan itself, Japan and the United States have over the past decade jointly constructed a long line of undersea surveillance systems (the 'Fish Hook Undersea Defense Line') which extends from the Tsushima Strait and Kyushu along the Ryukyu archipelago, past Taiwan and into maritime South-East Asia. This ensures that Chinese submarines are unable to proceed undetected from either the East China Sea or the South China Sea into the broad expanses of the Pacific Ocean. It suggests that even without recourse to the overwhelming US assets, Japan would be ascendant in any postulated submarine engagement with China.

This notional superiority is extremely tenuous, however, being essentially dependent on Chinese forbearance. Some of the elements of the surveillance infrastructure, including the electronic intelligence (ELINT)/electronic support measures (ESM) facilities and the communications links between the collection stations and the intelligence analysis centres and fleet commands are susceptible to electronic jamming. All of the shore stations for the undersea arrays and the associated ELINT systems are physically vulnerable. Most could easily be destroyed by commando units or precision-guided conventional munitions, let alone the blast overpressures of nuclear detonations. This vulnerability feeds escalation dynamics, with reciprocal pressures to escalate once conflict is joined – pressures on Japan to destroy or damage as much of the Chinese naval forces as possible in the theatre (including Chinese submarines) before its ability to locate

and track them is lost, and pressures on the Chinese forces to destroy Japan's sound surveillance system (SOSUS) shore stations and ELINT/ESM facilities before they are decimated.

Some facilities, such as the JMSDF's Ocean Observation Station at White Beach, Okinawa, might be regarded as sufficiently important as to warrant pre-emptive nuclear attack. It is the key station for processing and analysing data collected by the underwater arrays strung from along the Ryukyu archipelago, and hence for detecting submarine movements within and from the East China Sea.

The United States cannot avoid entanglement in this escalation process. Apart from its obligations under the Japan–US Treaty of Mutual Cooperation and Security, important elements of the US Ocean Surveillance Information System (OSIS) are co-located with their JMSDF counterparts. The segment of the 'Fish Hook' line from Kyushu to Yonaguni is essentially a joint activity that is just as vital to US strategic interests as to the defence of Japan. The US Navy could not abide its degradation. At a minimum, it would be compelled to attempt to destroy any Chinese missile-carrying submarines while aware of their locations, before they are able to pass through a broken 'Fish Hook' line and come within firing range of the continental United States. Moreover, the United States has incorporated options in its nuclear war plans to initiate 'selective' and 'limited' nuclear attacks against Chinese targets in a wide range of contingencies, including a conventional conflict between Japan and China as well as situations where its own strategic interests are threatened. The escalatory portents are horrendous.¹

1 For a more comprehensive discussion of the escalation dynamics that might operate in a Northeast Asian conflict, see Robert Ayson & Desmond Ball, 'Can a Sino–Japanese War Be Controlled?', *Survival* (Vol. 56, No. 6), December 2014/January 2015, pp. 135–166.

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