White Paper

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HOW DO WE SAFEGUARD SUBMARINERS IN A WORLD OF ESCALATING MARITIME THREATS?

Steve Thorpe MBE, Submarine Escape Category Manager and former Submariner examines how meeting unprecedented standards in readiness is crucial to confront today's intense global challenges, and share's insights from the Japan Maritime Self-Defence Force and Survitec Defence's growing relationship and the evolution and best practices in SEIE servicing.

Submarine dominance and strategic readiness: Japan's evolving maritime capabilities

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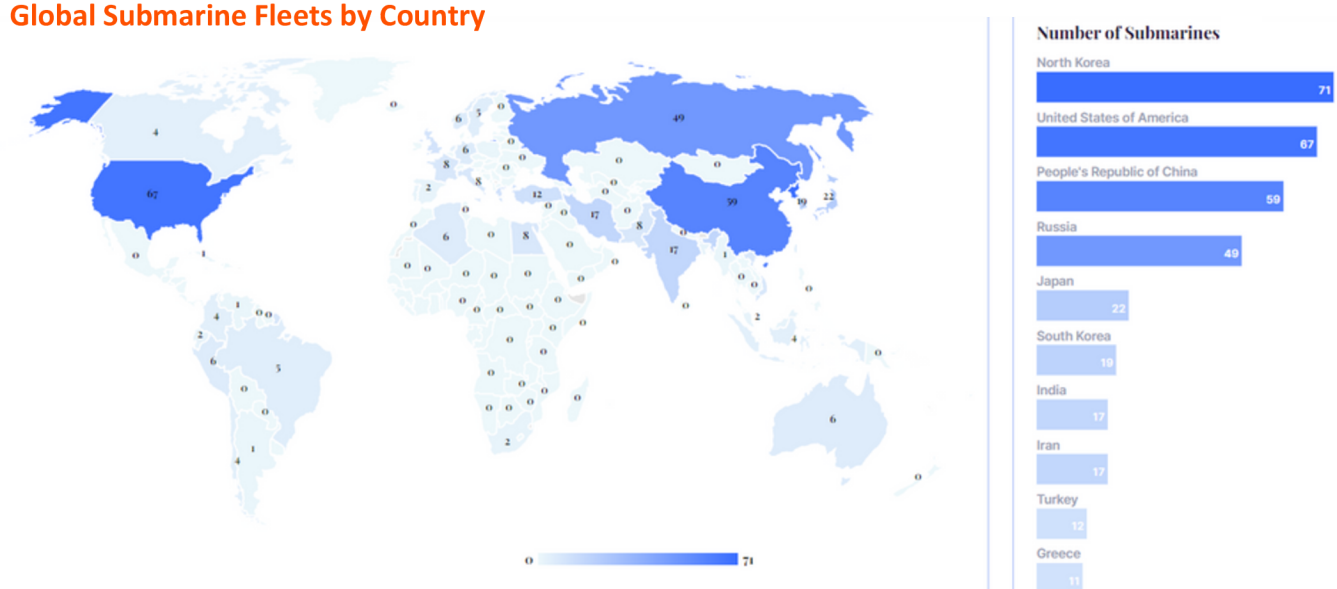
The evolving dynamics in the South China Sea underscore the critical importance of submarine capabilities in the region. Japan's commitment to expanding its submarine fleet over the next decade exemplifies its strategic focus on strengthening national security amid escalating tensions (Indo-Pacific Defense Forum).

Submarines are increasingly pivotal for maritime protection and security, addressing contemporary challenges with unparalleled stealth and operational flexibility. Historically, Japan's Maritime Self-Defence Force has consistently prioritised advanced naval capabilities, particularly in submarines, to ensure resilient defence and maintain regional stability. Japan's movements to further its interests in defending and advancing in the pacific islands demonstrates an amount of concern about the levels of sea route access available for naval, and commercial ships through Oceania (Rand).

China's significant submarine fleet, comprising both nuclear and conventional vessels, exerts a profound influence on the security landscape in the area (Naval Technology). This formidable Chinese naval presence compels other nations to reinforce their defence capabilities, with a pronounced emphasis on submarine warfare.

The recent AUKUS trilateral security and defence partnership between Australia, the UK, and the US marks a transformative development, substantially enhancing Australia's ability to project power (USNI). Concurrently, the established presence of US and UK forces, supported by strategic bases such as Guam, underscores the international commitment to maritime security in the region (Breaking Defense). Cooperation and adherence to international norms are crucial for managing tensions and fostering stability in these contested waters.

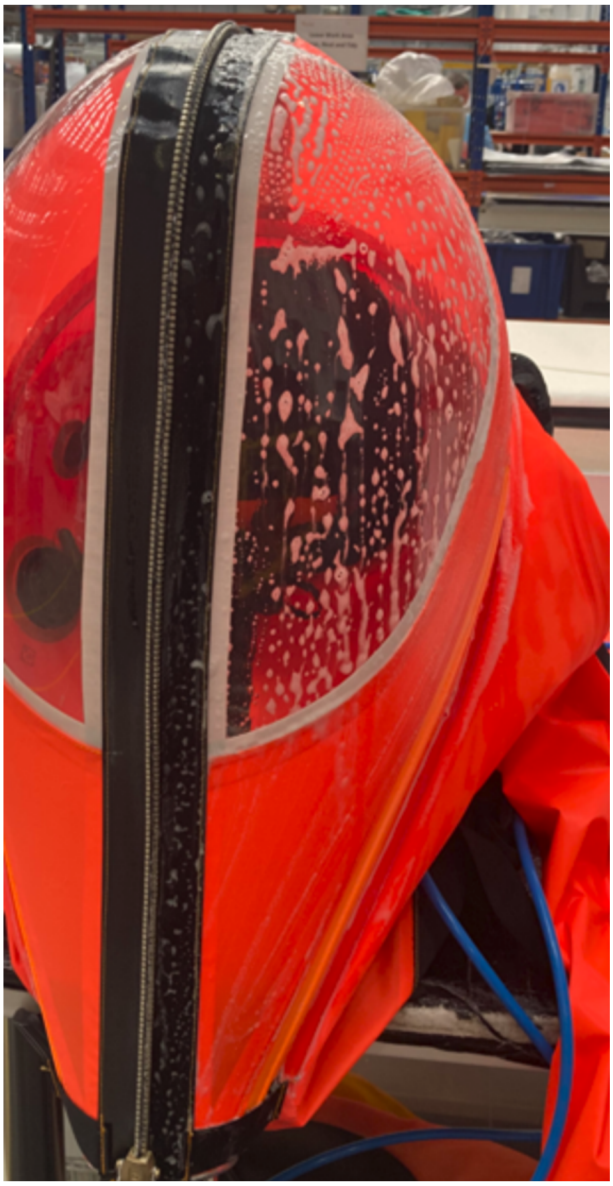
Global Submarine Fleets by Country



(Wisevoter)

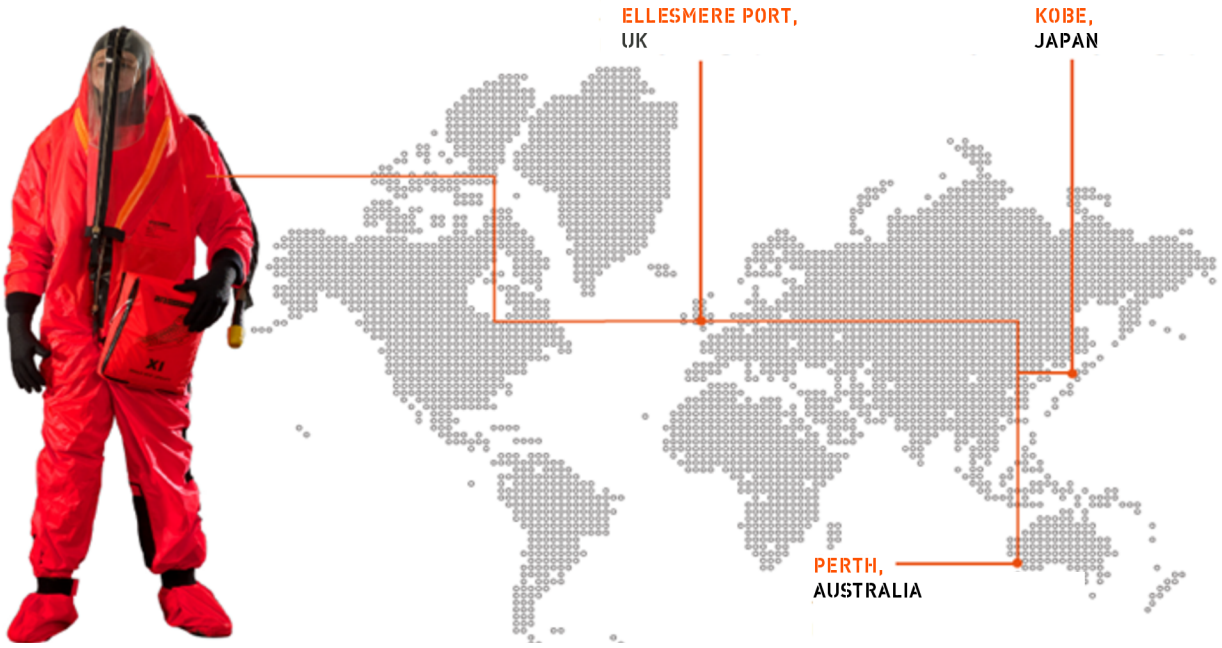
CASE STUDY: Building capability in Japan

Since 2009, the Japanese Ministry of Defence (JMOD) has chosen Survitec's SEIE MK11 suits. In 2022, a strategic agency agreement with Sojitz Aerospace enhanced access to the Acquisition, Technology & Logistics Agency (ATLA), responsible for defence equipment procurement for JMOD.



As a result of the rapid expansion of Japan's submarine program, ATLA has expressed a significant requirement for additional MK11 SEIE suits through to 2030 and beyond, each requiring bi-annual servicing contracts, highlighting the criticality JMSDF places on the emergency preparedness of its naval personnel aboard submarines.

Collaborating with Sojitz and local service provider Marinair, Survitec has developed a comprehensive in-country SEIE MK11 service capability in Kobe, tailored to the needs of the Japanese Maritime Self-Defence Force. The scheduled servicing of a large volume of SEIE MK11 suits in 2024 initiates this initiative, underscoring Survitec's commitment to delivering timely and efficient support to Japan's defence programs, and capacity will be scaled up to meet the growing needs of Japan's



Submariner protection, what's recommended?

The storage of Submarine Escape Immersion Equipment (SEIE) onboard submarines presents significant challenges due to the harsh and dynamic conditions inherent to submarine operations. Fluctuating temperature and humidity levels within submarines can impact the integrity and performance of SEIE suits, necessitating rigorous maintenance to preserve their effectiveness.

An independent report strongly recommended servicing the MK11 SEIE at the 3- and 7-year intervals throughout its 10-year lifespan to meet naval requirements for ensuring optimal performance and reliability of SEIE suits in emergencies. This maintenance schedule is crucial for the safety and security of submarine personnel.

Each Survitec SEIE service centre adheres to the same rigorous multi-point testing regime in compliance with SOLAS and IMO guidelines.

The testing regime includes:

- Inspection of all components and safety-critical features.
- Air holding tests of the suit, ascent hood, and liferaft.
- Functional tests of CO_2 cylinders and operating mechanisms.
- Implementation of applicable upgrades.
- These standardised processes ensure consistent quality across all serviced suits, aligned with Survitec's ISO9001-certified Quality Management System.

Sources

1. Indo-Pacific Defense Forum: https://ipdefenseforum.com/2024/04/japan-expands-underwater-defense-capabilities-with-eye-on-prc/
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