

RUSSIA RELOADS ITS LIBRARY

The Royal Navy has revealed its submarines are suddenly having numerous encounters with Russian Akula SSNs, or nuclear attack submarines. The Chinese and American navies are not revealing anything about similar encounters, but it appears the Russians are updating their sound libraries. These are used for the passive (no broadcasting) sensors submarines favour.

These sonar receptors listen for sounds and compare ones that might be ships or submarines with previously recorded sounds in the submarine's electronic library.

Russia's sonar sound libraries have long needed updating. Every ship, submarine or marine animal has a distinct sound, and some American sound libraries can even identify individual whales.

The activity is happening because Russian submarines haven't been at sea much since the end of the Cold War in 1991. The peak year was 1984, when there were 230. By 2002 there were none and about two years ago only about 10 of their nuclear submarines went to sea on a combat patrol each year. Most of the boats going out were SSN attack submarines, while a few were SSBNs, or ballistic missile craft. There were more short-range training missions, which often lasted a few days or just a few hours.

But the true measure of a fleet is the "combat patrol" or "deployment." In the United States Navy most of these last from two to six months and in the last three years, US nuclear submarines have carried out 10 times as many patrols as their Russian counterparts. Crews on these long patrols have time to stalk potential enemy submarines and capture their sound signatures.

Since the late 1990s, the Russian Navy has been hustling to try and reverse this decline. But its budget, despite recent increases, is not large enough to build new ships to replace the current Cold War era fleet, which is falling apart.

The rapid decline of Russia's nuclear submarine fleet needed international help to safely decommission over 100 obsolete or worn out vessels over the last decade. It was driven by the Russian threat to just sink them in the Arctic Ocean.

Russian admirals made their big mistake in the early 1990s, when they tried to keep their submarine fleet operating, rather than retiring 90 percent of them. This consumed most of the Navy's budget and didn't work. There were too many ships, not enough sailors and not enough money for maintenance or training at sea.

The mighty Soviet fleet is now mostly scrap or rusting hulks tied up at crumbling naval bases. Since the end of the Cold War, most of the shipbuilding budget has gone into new nuclear submarines, including six of the 7000 tonne SSN Akulas built from the late 1980s.

The first of a new series of SSBNs, the Borei class, was delayed by technical problems, a new ballistic missile that wouldn't work and lack of money. After many delays, the first Borei class boat is finally ready for service at a cost of US\$2 billion.

Currently, Russia only has 14 SSBN boats in service and



ABOVE: Seen in service at sea



LEFT: The nuclear-powered submarine Omsk in dry dock

not all of them have a full load of missiles. Some lack full crews or have key systems in need of repair.

It has only eight of its Akula class in service (another is leased to India). All the earlier SSNs are

trash and most have been decommissioned. There are also eight SSGN (nuclear submarines carrying cruise missiles) and 20 diesel-electric boats. A new class of SSGNs is under construction, but progress and funding has been slow.

By comparison, the US has seven new 7700 tonne Virginia class SSNs in service, three under construction and plans to eventually build 30. The mainstay of the American submarine force is the 6100 tonne Los Angeles class SSN. Sixty-two were built and 44 remain in front-line service. Three 8600 tonne Seawolf class nuclear attack submarines were built out of a planned 29. The Seawolf was designed as a super-submarine to fight the Soviet Navy at its height.

While western nuclear subs last for about 30 years, Russian models rarely get past 20. That means two new SSN or SSGN boats have to enter service each year to maintain a force of 40 boats. Unless the Russian Navy receives billions more dollars a year, that is not going to happen.

Right now, the priority is to produce more of the Borei class. Eleven more are planned or under construction. They are critical, because they carry sea-launched ballistic missiles, or SLBMs, which are much harder to destroy in a first strike than land-based missiles.

The rest of the Russian armed forces are also in sad shape and would be unable to resist a major invasion. Only the ICBMs and SLBMs guarantee the safety of the state. The way things are going, in a decade or two Russia will end up with a force consisting of a dozen SSNs and a dozen SSBNs.

Russia has realised if they don't get these submarines to sea more often, the crews will become less capable of doing their job in wartime. The crews are now receiving more training and the submarines are at sea three or four times more frequently than in the past two decades.

It is still not up to western standards, but the Russian Navy is no longer in a downward spiral, either.