

The PLAN Submarine Force  
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The Peoples Liberation Army Navy regards its submarine force as its first line naval force. Not without reason. Only the submarine force has nuclear powered ships. And submarines pose the most significant naval threat to hostile naval forces, including US Navy carrier battle groups. This force is undergoing rapid conversion to modern propulsion, sensor and weapons technologies. At the same time, serious measures have been taken to reduce noise levels and increase operational efficiency.

The elite portion of the submarine force is its nuclear powered ships. [Submarines are officially ships in the PLAN]. This force was long mainly a paper threat. The original half a dozen nuclear submarines (5 Han attack boats and a single Xia which is nominally a boomer) were the most noisy nuclear submarines ever built. Worse, they had terrible problems with radiation leaks in the reactor coolant system. [The first was completed in 1974, but not operational until the 1980s.] But during the 1990s an extensive program was undertaken to rebuild them all. Rumored to have been re-engined with French reactors replacing the original German ones, ONI thinks that instead the entire reactor coolant system was rebuilt. They had their ESM and sonar suites replaced with French equipment, and three may have been fitted with C-801 Ynng Ji 8 (Eagle Strike) ASCMs. Interestingly, the single Xia, although used for missile launch trials, has never deployed with operational ballistic weapons, and has been added to the force as an attack submarine. [Supporting this theory are reports indicating the JL-1 and JL-1A missile never entered series production nor were warheads manufactured for them]. In 2004 the first of the new 093 class SSN is nearing its completed and nearing its commissioning. A second of the series is launched and two or more additional units are eventually expected to be built. These submarines, build with Russian technical advice, are similar to the Victor III class. They have been modified to use the new PRC land attack cruise missile (HN-3). They are considered to be “very quiet.” A new missile submarine (type 094) has also begun construction. It is reportedly designed to use a sea based version of a land based ICBM (known as JL-2 in naval form). This weapon could reach US targets from Chinese waters.

Potentially more significant is the rapidly expanding conventional submarine force. Typical of PLA programs, there are parallel domestic and foreign weapons systems. Most famous, perhaps, is the purchase of 4 Russian Kilo class submarines, including two of the more advanced Project 636. More ominously, China ordered an additional 8 units of this class, for simultaneous delivery in 2006, and it appears all will be delivered by 2007. These are superb submarines, quieter than most of the world's nuclear submarines when not recharging batteries, and outfitted with very good sensors and torpedoes.

Less well understood are the newer domestic submarine classes. The first of these, called Ming, has completed production. But one of these boats was used to test a form of AIP, and the final series of six was built to use the best sonar and torpedos available and also reportedly use AIP. The other domestic class is the Song. Subject to protracted development, it required a substantial redesign, so that the first unit forms its own subclass called Song I. There are now six Song II, all with AIP, and all fitted to fire the same ASCM as the later Han SSNs (YJ-8). [Often reported to be fired from separate tubes, in fact these are torpedo tube launched weapons.] Taken together, these modern submarines (Song is still building at a rate of one a year) represent a very significant capability. They are as quiet as the US Los Angelus class, and those with AIP do not have to use noisy diesel engines to recharge their batteries for weeks.

Finally, the PLAN continues to operate significant (but declining) numbers of Romeo class submarines. Copied from a Russian design, those still in service have also had new French sonar suites installed. There are about 36 of these vessels, but only about 21 active duty crews to serve them. [PLAN does not associate a crew with a specific submarine. Crews live ashore and are assigned a hull for a given mission.] These submarines might be significant as minelayers, as bait for anti-SSN traps, and as threats to merchant shipping.

A final note about the PLAN submarine force. Long thought to use inferior Chinese designed torpedoes, it is entirely equipped with Russian torpedoes. The Yu-1 is the Type 53-51, the Yu-3 is the SET-65E, the Yu-4 is the SET-60, the Yu-5 is the TEST-71/96 and the Yu-6 is the Type 53-65 (which has been compared to the Mark 48). Only the newer boats are fitted to use the Yu-5 and Yu-6.

Class	Type	Active	Inactive	Building	Noise	Sonar	Weapons
094	SSBN	0	0	1	Very Quiet	6	JL-2, all torps
093	SSGN	0	1	1+2	Very Quiet	6	HN-3, all torps
Xia	SSBN	1	0	0	Quiet	5	all torps [JL-1A]
Han	SSGN	5	0	0	Quiet	5	YJ-8, all torps
Kilo 696	SS	2	0	8	Very Quiet	6	all torps
Kilo 877	SS	2	0	0	Quiet	5	all torps
Song II	SSG	6	1	1+2	Very Quiet	6	YJ-8, all torps
Song I	SSG	1	0	0	Quiet	5	YJ-8, all torps
Ming III	SS	6	0	0	Very Quiet	6	all torps
Ming II	SS	12	0	0	Quiet	5	Yu-1 to 5
Ming I	SS	0	2 scrapped				
Romeo II	SSG	1	1 scrapped				
Romeo I	SS	21	0	0	Quiet	5	Yu-1 to 4
Reserve R.	SS	0	15	0	Quiet	4	Yu-1 to 4
Hulked R.	SS	0	12	0	Quiet	3	Yu-1 to 3
Gulf	SSB	0	1 in storage		Average	3	Yu-1 to 4
Song-O	SSX	0	1 in storage		Very Quiet	4	8 mines