

MS DAILY BRIEF - 4 October 2022

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Is Putin preparing to start World War III against NATO?



Will Putin respond to the Herson offensive in Ukraine by striking NATO territory?

Russian President Vladimir Putin and Kremlin officials have repeatedly suggested the possibility of launching strikes on NATO territory, though in the same way they threatened nuclear war, many of these claims have been dismissed with clarifications about NATO convoys being attacked only on Ukrainian soil. But at least one US lawmaker is concerned that Putin could be forced to launch attacks on NATO soil as his war effort in Ukraine continues to struggle.

Senator Marco Rubio, a Republican representing Florida who also sits on the Senate Intelligence Committee, expressed concern Sunday that an increasingly desperate Putin could launch attacks against NATO forces. Speaking on CNN's "State of the Union," Rubio explained that Putin has "two options."

"They can project defensive lines and they can say, 'here we're going to draw some lines and this is the territory we're going to try to hold on to' and focus their forces on that and take a few years. to modernize their forces or ... they can retreat and continue to lose territory," the Republican lawmaker said. Rubio noted how the Russian president may decide that the arming of Ukraine by Europe and the United States is the reason his military is losing in Ukraine and therefore the cause of his losing power and ultimately decides to respond with military strikes on NATO. "I think it's very possible that he's going to end up hitting some of these distribution points where these supplies are coming from, including inside Poland," Rubio added. He may have a point after the victories in Kherson. On Sunday, Russian social media pages painted a picture of desperation within the Russian Armed Forces. The popular war analysis account WarMonitor noted how Russian forces were "calling for urgent air support on social media on the Kherson frontline near the breakthroughs." Russian forces calling for urgent air support on social media on Kherson frontline near breakthroughs - WarMonitorUA (@WarMonitor3) October 2, 2022

The post tracks what could be the biggest advance made by the Ukrainian army since the war began, with Ukrainian troops already breaking through Russian defensive lines in "annexed" Kherson and reaching as far as Berislav. Analyst Rob Lee also shared screenshots of Russian social media posts suggesting that Ukrainian forces are succeeding in the Herson region, pushing Russian forces back to Dudchany. "Another says the situation could become critical soon, another says Ru forces need to prepare for urban warfare and Ukraine is hitting its lines where they are weak," Lee said. Russian pages are sounding a warning about Herson. One says Russian forces have returned to Dudchany, another says the situation could soon become critical, another says Ru forces must prepare for urban warfare and that Ukraine is hitting its lines where they are weak. pic.twitter.com/5n58euQIWR - Rob Lee (@RALee85) October 2, 2022.

Other analysts also described how Russian forces were believed to have withdrawn up to 25km into Herson. If rumors of a highly successful Ukrainian offensive at Herson are true, it's bad news for Russia at a time when the Kremlin may depend solely on the threat of nuclear war to prevent further military and financial support for Ukraine from NATO allies. Jack Buckby is a British author, counter-extremism researcher and journalist based in New York. Reporting from the UK, Europe and the US, he works to analyse and understand radicalisation on the left and right and reports on Western governments' approaches to today's pressing issues. His books and research explore these themes and propose pragmatic solutions for our increasingly polarised society.

Source: <https://www.19fortyfive.com/2022/10/is-putin-getting-ready-to-start-world-war-iii-against-nato/>

Navy's XLUUV mine-launching submarine \$242 million over budget and 3 years behind schedule

A program to develop an unmanned, 80-ton mine-laying submarine is three years behind schedule and \$242 million over budget, according to a report Wednesday from the Government Accountability Office. The Navy's Extra Large Unmanned Underwater Vehicle (XLUUV) prototype program was set to deliver five of Boeing's Echo Voyager-based autonomous submersibles as a fast-track procurement, according to GAO. The service contracted in March 2019 with Boeing to build the five prototypes to meet the 2015 Joint Emerging Operational Need (JEON) for an advanced mining platform. "The Navy considers these five XLUUVs to be prototypes, but intends to use these vehicles for military operations

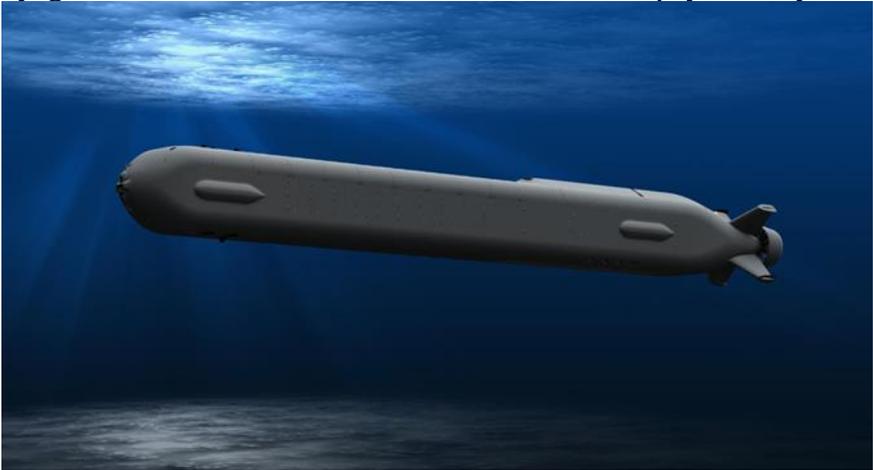
as soon as possible to meet JEON. In other words, according to requirements documentation, DOD and the Navy are pursuing the XLUUV because it meets an emerging need for anticipated military operations," the GAO report states. "The contract called for delivery of the first vehicle within two years, meaning delivery to the Navy was scheduled for December 2020. The option to manufacture and test the five prototype vehicles was a fixed-price incentive type of contract. The ceiling price for manufacturing all five vehicles is currently \$281.5 million, including technical manuals and other documentation."

Table 1: Cost Growth for Extra Large Unmanned Undersea Vehicle (in millions then-year dollars)

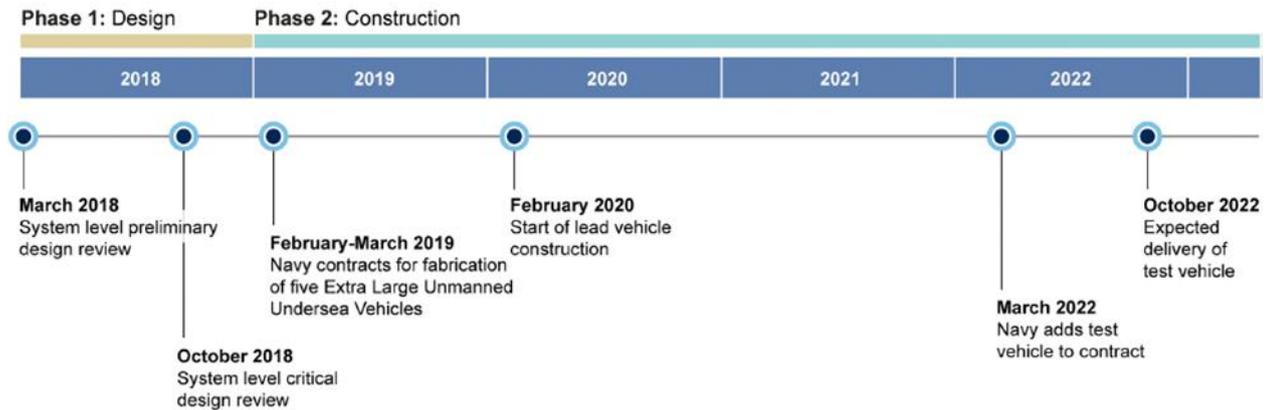
Planned costs (fiscal year 2023 President’s Budget)	\$621
Spent to Date (as of June 2022)	\$504
Additional planned costs (fiscal year 2023)	\$117
Original cost estimate (2016)	\$379
Total cost growth	\$242

Source: GAO analysis of Navy documentation. | GAO-22-105974

Based on Navy cost data as part of the FY 2023 budget request, the latest cost estimate for the five prototypes plus a \$73 million test vehicle is \$621 million. The Navy added the test vehicle to the XLUUV program in March so the service would have a platform to work with while waiting for the final prototypes. The test vehicle will combine elements of the Boeing Echo Voyager and the final XLUUV without the modular payload bay, the GAO report said.



The GAO blamed the cost overruns on "the Navy's decision not to require the contractor to demonstrate its readiness to manufacture prototype XLUUVs, as required by leading acquisition practices. Without knowledge to inform decision making, delays occurred as the contractor implemented updates, revisions, and modifications after the Navy contracted to procure the five XLUUVs in February and March 2019, according to Navy officials," the report states.



Source: GAO analysis of Navy documentation and interviews with Navy Officials. | GAO-22-105974

Questions about the delays sent by USNI News to a Navy spokesperson were acknowledged but not immediately returned. A Boeing spokeswoman relayed USNI News to the Navy when asked for comment Wednesday. A defense official told USNI News Wednesday that much of the delay was due to production issues related to the COVID-19 pandemic. Lack of batteries, skilled welders and titanium were bottlenecks in the XLUUV production process. With the delays, "delivery of the first XLUUV is now expected to be delayed by over 3 years. The contractor originally planned to deliver the first XLUUV in December 2020 and all five by the end of the 2022 calendar year," the report said. "Navy officials told us that the contractor tentatively targeted February 2024 to June 2024 for delivery of all five vehicles." Since the 2019 award of the XLUUV, the Navy has provided few details on the role it planned for the XLUUV or details about the design.

According to the GAO report, "the vehicle body is composed of four sections or modules. This modularity allows some of the interior components, such as batteries or payloads, to be added or removed when the vehicle is in the water.... The Navy could add two extra batteries to the XLUUV if, for example, it needs more power for a mission due to increased range or payload. Also, according to Navy officials, the Navy plans to begin exploring the development of a universal payload module that could carry many types of equipment for a variety of missions." The Navy has a history of turning unmanned prototype programs into operational assets. After an extensive period of testing, in 2009, U.S. Central Command took possession of five RQ-4A Broad Area Maritime Surveillance (BAMS-D) demonstrators and used them extensively in the Middle East for surveillance operations.

The GAO report can be accessed at: <https://news.usni.org/2022/04/08/gao-report-on-navy-unmanned-systems>

Source: <https://news.usni.org/2022/09/28/gao-navys-xluuv-undersea-minelayer-242m-over-budget-3-years-behind-schedule>

A version published by Russia:

https://www.worldandwe.com/ru/page/vse_bolshe_faktov_ukazyvayut_na_diversiyu_ssha_i_nato_v_otnoshenii_severnogo_potoka.html?utm_source=warfiles.ru

Russia responds with Poseidon nuclear torpedo. Western services have warned that the K-329 Belgorod submarine is preparing to test the torpedo



NATO intelligence services have sent allies data on the movements of the Russian submarine K-329 Belgorod and a possible test of the Poseidon torpedo, also dubbed the "weapon of the Apocalypse" by Russian media.

The CNSA (National Security and Defence Council of Ukraine) Anti-Disinformation Structure warns against the potentially misleading content of the article published by La Repubblica newspaper.

According to Ukraine's CNSA, NATO has not made public information on the activity of the Belgorod submarine, and the activity of Russian submarines as well as their degree of modernization is constantly monitored.

"Such unsubstantiated statements only increase the information terrorism promoted by the Russian Federation," the Ukrainian Security and Defence Council statement added.

Putin seems to want to raise the risk of nuclear confrontation even further and is launching a new challenge to the West.

According to the Italian publication La Repubblica, the Belgorod submarine has been moved to the Kara Sea and it is not excluded that the Russian Navy will test for the first time the Poseidon torpedo, capable of travelling underwater a distance of 10 thousand kilometres.

The information comes from a NATO report sent to major allied states in recent days. The report notes the movements of the Belgorod nuclear submarine, which became operational in July.



This torpedo can carry a nuclear warhead capable of causing a "radioactive tsunami". Experts compare the effect of its launch to the launch of an intercontinental ballistic missile.

A special feature of the system is that launches cannot be tracked: the torpedo has been designed to emit very little heat and move silently at speeds of over 100km/h.

As the Russian publication RBC makes clear, Belgorod is a multi-purpose nuclear-powered submarine designed to host the Poseidon unmanned underwater nuclear torpedo system. The system is designed to strike the enemy's coastal infrastructure to create large areas of radioactive contamination, tsunamis and other consequences of a nuclear explosion on enemy territory.

The press reported that the US and its allies have stepped up surveillance to detect any signs that Putin is ordering the Russian military to use nuclear weapons against Ukraine.

Rear Admiral Ciorobea explains why Belgorod, the 'Russian submarine of the apocalypse', would be easy to hit and sink in the Black Sea

Rear Admiral Constantin Ciorobea, a doctor of military science, spoke about Belgorod, the Russian Federation's new Poseidon-type nuclear torpedo submarine, also dubbed the "submarine of the Apocalypse" by the Russians.

The Romanian Rear Admiral explained why the Belgorod will not be deployed in the Black Sea as it is an easy target.

Source: https://www.defenseromania.ro/supertorpila-nucleara-poseidon-serviciile-de-informatii-nato-i-au-avertizat-pe-aliati-cu-privire-la-posibilele-teste-pregatite-de-pe-submarinul-k-329-belgorod_618540.html

Sweden sends diving ship to inspect Nord Stream pipelines



Sweden on Monday sent a dive ship to the site of Russian gas pipelines in the Baltic Sea that ruptured last week following explosions in the area to investigate an incident that has added new tension to Europe's energy crisis. Europe is investigating what caused three Nord Stream pipelines to burst in a suspected act of sabotage near Swedish and Danish waters that Moscow was quick to try to pin on the West, suggesting the United States had something to gain. "The coast guard is responsible for the mission, but we support them with units," a Swedish navy spokesman, Jimmie Adamsson, told Reuters. "The only one we are calling is HMS Belos, which is a submarine rescue and diving ship." The Swedish coastguard said Nord Stream 1 had stopped flowing, but a flyover suggested gas was still leaking from Nord Stream 2 and bubbling to the surface within 30 metres (32 yards). The Kremlin said the West was to blame for Monday's rupture, saying the United States may have increased sales and prices of liquefied natural gas (LNG) as a result. Norway posts soldiers at oil and gas plants after Nord Stream leak Washington has strongly denied any involvement. European countries suspect sabotage but have refused to say who might be behind it. Kremlin-controlled Gazprom GAZP.MM also said flows could resume at the last remaining intact pipeline in the Nord

Stream 2 network, a suggestion that could be dismissed given that Europe blocked Nord Stream 2 on the eve of Russia's invasion of Ukraine in February. "If the decision is made to start deliveries through Nord Stream 2's B line, natural gas will be pumped into the pipeline after the integrity of the system has been checked and verified by supervisory authorities," Gazprom said. It follows Sunday's suggestion that the Nord Stream network could be repaired, given enough time and funds.

NORWAY SENDS SOLDIERS

Nord Stream has been a flashpoint in the energy standoff between the West and Moscow that has hit Western economies and fueled a cost-of-living crisis. Russia has steadily cut gas flows through Nord Stream 1 this year before shutting them off completely in late August, blaming technical difficulties caused by Western sanctions. European countries have said Moscow is using energy as a weapon. Nord Stream 2 has never been operational, and Western countries have resisted calls from Russia to drop opposition to the project. Shocked by Nord Stream's ruptures, European countries have begun to strengthen security and surveillance around critical infrastructure that could be vulnerable to attack. Norway, Europe's main gas supplier and a major oil exporter, has said it must guard large onshore oil and gas processing plants. Italy has tightened surveillance and controls on underwater energy and telecommunications cables, a source told Reuters. It has also focused on the safety of other gas supply lines. Eni, Italy's biggest importer of Russian gas, said over the weekend that Russia had stopped all gas flows through its Tarvisio entry point, though its chief executive on Monday. Stopping flows through the Tarvisio entry point "has absolutely nothing to do with geopolitical factors. It is due to the fact that Gazprom would have to pay a monetary guarantee for the transport of gas from Austria to Italy that was not there before," Claudio Descalzi said.

Source: <https://www.marinelink.com/news/sweden-sends-diving-vessel-inspect-499884>

[UK to buy two specialised vessels to protect underwater infrastructure](#)

Britain will purchase two specialist vessels to protect underwater infrastructure such as cables and pipelines, Defence Minister Ben Wallace said on Sunday, following the Nord Stream pipeline leaks from Russia to Europe. European countries say Nord Stream pipelines were damaged by "sabotage" but have not blamed Moscow. Russian President Vladimir Putin blamed Western countries. Speaking at the Conservative Party conference in Birmingham, central England, Wallace spoke of "mysterious damage" to the pipelines, but made it clear he saw the threat to Britain's infrastructure coming from Russia. "It should remind us all how fragile our economy and infrastructure are in the face of such hybrid attacks. Our internet and energy depend heavily on pipelines and cables. Russia makes no secret of its ability to target such infrastructure," Wallace said. "That's why I can announce that we have recently committed to two specialized ships with the capability to keep our cables and pipelines secure." Wallace said the first "multi-role research vessel for seabed warfare" will be purchased this year and will be operational by the end of next year, while the second vessel will be built in the UK.

Sursa: https://gcaptain.com/britain-to-acquire-two-specialist-ships-to-protect-underwater-infrastructure/?subscriber=true&goal=0_f50174ef03-8d28d4a646-139869041&mc_cid=8d28d4a646&mc_eid=9c3143fd22

[Italian navy patrols to defend Mediterranean gas pipelines](#)

Italy's navy will take steps to strengthen the protection of trans-Mediterranean gas pipelines following suspicions of sabotage of the Nord Stream system. Under a plan drawn up by Defence Minister Lorenzo Guerini and other officials, the Italian navy will deploy remote-controlled submarines to monitor key areas of the Mediterranean, particularly around infrastructure used to transport gas from North Africa, according to a statement. The move comes as Rome seeks to secure energy supplies for the coming winter. Italy has secured enough alternative gas supplies from North Africa to make up for any shortfalls in supplies from Russia, people familiar with the matter said earlier this week. The country has also reached its gas storage target of 90% earlier than planned, Energy Minister Roberto Cingolani said Wednesday.

Sursa: https://gcaptain.com/italian-navy-sails-to-defend-mediterranean-gas-pipelines/?subscriber=true&goal=0_f50174ef03-8d28d4a646-139869041&mc_cid=8d28d4a646&mc_eid=9c3143fd22

[Russian deputy prime minister says Nord Stream restoration possible](#)

Russian Deputy Prime Minister Alexander Novak said on Sunday that it is technically possible to restore the broken offshore infrastructure of the Nord Stream gas pipeline, TASS news agency reported. A total of four leaks were discovered last week on the Nord Stream 1 and 2 pipelines in the Baltic Sea near Denmark and Sweden, with a significant drop in gas pressure leading to the detection of the ruptures. "There have never been any such incidents. Of course, there are technical possibilities to restore the infrastructure, it takes time and adequate funding. I am sure that adequate possibilities will be found," Novak said. Denmark's Energy Agency announced on Sunday that it has been informed by Nord Stream AG that stable pressure has been reached in Nord Stream 1, once the largest single Russian gas supply route to Europe, indicating that the leakage flow from the latest leaks has been stopped. Nord Stream AG said Saturday that gas is no longer flowing from the Nord Stream 2 pipeline, which has retained some gas although it never became operational. Also read: Who's to blame for the Nord Stream gas pipeline leak? European Union states say they believe the damage was caused by sabotage, but they and other Western governments have avoided pointing fingers directly. Russian President Vladimir Putin said Friday that the United States and its allies were responsible, a charge the White House has rejected. Novak said, according to TASS, that the United States, Ukraine and Poland opposed the Nord Stream pipeline. He added that those who have expressed opposition have an interest in stopping the pipelines from operating Nord Stream Pipeline 1 was already closed, but now it cannot be easily reopened. The new Nord Stream 2 pipeline has not yet entered commercial operations after being built in September 2021.

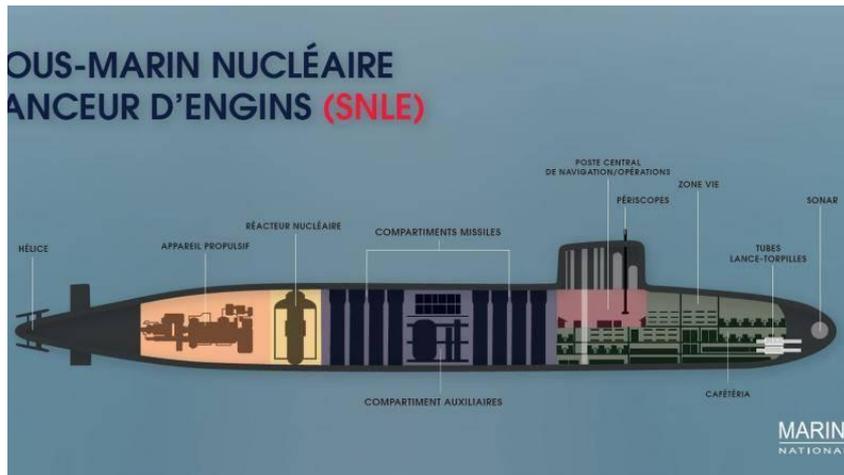
Sursa: https://gcaptain.com/russian-deputy-pm-says-restoration-of-nord-stream-possible/?subscriber=true&goal=0_f50174ef03-8d28d4a646-139869041&mc_cid=8d28d4a646&mc_eid=9c3143fd22

[Triumphant ballistic missile nuclear submarines \(France\)](#)



A key component of France's strategic nuclear forces are nuclear ballistic missile submarines. The "Strategic Oceanic Force" Force Océanique Stratégique is currently equipped with four Triomphant-class SSBNs. These vessels have been built over the past decades and are capable of carrying 16 M51 ICBMs. New generation In the early eighties, the naval component of the French strategic nuclear forces was built based on the SSBN Redoutable. They did not differ in perfection and became physically obsolete, because of which it was decided to develop a new ballistic missile carrier. Such a project began in 1982 and was given the working name SNLE NG (Sous-Marin Nucléaire Lanceur d'Engins de Nouvelle Génération - "New Generation Nuclear Submarine Missile Carrier"). The development of the SNLE NG was entrusted to seven industrial groups, each of which included several companies and was responsible for its own direction. Under separate sub-projects, hull structures, a power plant, ship systems, etc. were created. A separate group was assigned to integrate all components. The aim of the project was to create a new nuclear submarine compatible with advanced SLBMs. At the same time, it was necessary to drastically reduce noise compared to Redoutable boats, as well as to improve the vessel's own target detection capabilities. Various technical, operational and other features of the submarine were also discussed.

Development of the SNLE NG took several years and was completed in 1985-86. Soon the construction of the first boat began, which was given the number S 616 and the name Le Triomphant ("Triumphant"). According to plans at the time, the fleet was to receive six boats before the early 2000s. By then, it became clear that the SNLE NG project would be perhaps the most expensive in the history of the French fleet. The total cost of the programme came to 88 billion francs at a price of approx. 10-12 billion. The last ships in the series were built after the introduction of the new currency and cost approx. 3-3.1 billion each. In the early 1990s, the strategic situation changed and the series was reduced to four SSBNs. In addition, we had to revise the composition of the weapons. The development of the new M5 SLBM (hereafter referred to as M51) was postponed and instead it was decided to use the M45 product, an improved version of the M4 series. The introduction of the M5 was pushed back a few years. Work in progress The laying down of the lead submarine Triumfator took place on 9 June 1986 at the Direction des Constructions et Armes Navales shipyard in Cherbourg (then one of the DCNS factories, and now Naval Group). In particular for the implementation of this project, the company mastered a number of new construction technologies. However, the project turned out to be quite complicated and construction was delayed.



Le Triomphant was not launched until March 1994. Testing and trials of the systems took several more years. The ship entered the Navy's combat structure in March 1997. By then, the fleet had managed to decommission two obsolete Redoutable SSBNs and was preparing to decommission the third. The second submarine in the series, Le Téméraire ("Brave") with the number S 617, was fitted out in December 1993 and built until January 1998. The main technologies had already been developed, and tests were completed before the end of the following year 1999. In January 1996, the construction of the submarine S 618 Le Vigilant ("Vigilant") began. In September 2003, it was launched, and in November 2004, the flag was raised on it. The first three SSBNs were built according to the original design, which included the use of M45 missiles. In October 2000, the submarine Le Terrible ("Grozny") was laid down, which was the first in the series to carry the new M51 (formerly M5) SLBMs. Some difficulties arose again and the submarine was launched only in March 2008. In September 2010, she started her service. Almost immediately after the completion of the construction of Le Terrible, repairs and modernisation of the previous submarines began. The main purpose of this process was to replace the M45 missiles with the new M51s. The refit was completed by 2018, and now all Triumfator SSBNs use only M51 missiles. The previous M45s were withdrawn from service in 2016, after the repair of their last carrier began. Technical features The Triumphant project involved building a double-hulled submarine. Inside the durable hull there are living and working quarters, a power plant and silo missile launchers. The length of such a boat is 138 m with a width of 12.5 m. Surface displacement - 12,640 tons, underwater - 14,335 tons. The crew includes 111 people, including 15 officers.

The power system is based on the K15 pressurised water reactor with a thermal power of 150 MW. The propeller is driven by the main turbo gear assembly. There are also emergency diesel generators with a capacity of 700 kW. A reactor refuelling is designed for 20-25 years of operation and provides almost unlimited cruising range. Maximum speed under water is 25 knots. The design of the submarine used a number of solutions to reduce acoustic visibility. The Triumfator is reported to be about 1,000 times quieter and more stealthy than previous Redoutable-class nuclear submarines. At the same time, modern hydroacoustic stations are used, which have increased detection distances for underwater targets. According to some reports, during the recent upgrade, not only the missile system was replaced, but also the SAC. The SSBNs are equipped with four 533 mm torpedo tubes. With their help, compatible torpedoes of several types are launched. To combat surface targets, submarines can use Exoset SM39 missiles, also launched through a torpedo tube. In the central part of the pressure housing are 16 main body missile launchers - in two longitudinal rows of eight each. Initially, the M45 intercontinental SLBM, based on the M4 medium-range missile, was used. It was a three-stage missile with a length of 11 m and a mass of 35 tonnes,

the firing range reached 6 thousand km. Combat equipment included six individual TN-75 targeting units with a capacity of 100 kt each.



After the upgrade, all Triomphant SSBNs use the M51 missile. It has a length of 12 m and a mass of 52 tonnes, but does not require a radical restructuring of the launcher. The rocket has three stages with solid fuel engines. The main stage carries 6 to 10 TN-75 units. The range of the M51 missile exceeds 8,000 km and can reach 10,000 km. In 2015, a new version of the missile was developed under the name M51.2. It improved some systems and used new warheads with a capacity of 100 kt. As of 2016, the next modification is under development - M51.3. According to some reports, in 2020-21. French industry has started flight tests of such products. Their introduction is scheduled for mid-decade. Submarines in service The Triumfator-type SSBN head was adopted by the French Navy 25 years ago. The fourth vessel of the project entered service 12 years ago. At the same time, just 5-7 years ago, the submarines underwent modernisation, following which they received a modern high-performance ballistic missile. All French SSBNs are based in the port of Ile-Long and have direct access to the Atlantic Ocean. From the moment they enter service, all ships regularly go on combat duty in certain areas of the ocean. From time to time, missile training launches are carried out in Atlantic training areas. With their help, the skills of the crews are developed and the capabilities of the French strategic nuclear forces are demonstrated. In general, the operation of the four Triomphant submarines does not face serious problems, including those caused by design flaws or similar factors. At the same time, there have been unpleasant incidents. So, in February 2009, the lead ship of the series collided with the British SSBN HMS Vanguard during exercises. The light hull and GAK antenna sustained minor damage. No vital systems were damaged and the submarine was able to return to base on its own for minor repairs.

According to reports, the next phase of repair, readiness restoration and modernisation of four submarines is planned for the foreseeable future. These measures will keep them in operation for another 10-15 years until their planned decommissioning. Details of future upgrades are not reported. In particular, it is not known whether they intend to replace the current SLBM M51s. In 2017, a new SNLE 3G (3rd Generation) programme was launched, the aim of which is to develop the next 3rd generation SSBN. The research phase of the programme ended in 2021, after which work on the technical design began. It will be ready by

mid-decade, and then lead boat laying will take place. Delivery of this vessel is scheduled for 2032-35. It is clear that the current Triumphant submarines will be operated until a sufficient number of new 3G SNLEs are available. Consequently, they will have to remain in service at least until the early to mid-forties. This means that "Triumphant" in the future will be repeatedly repaired and possibly receive new equipment or even weapons.



Key Component

The development and construction program for the Triumphant-class SSBN was expensive and complex. However, as became clear later, such costs were fully justified. The Navy received the desired submarines with high performance, large ammunition and necessary combat qualities. The last Redoutable class submarines were withdrawn from the fleet in 2003 and 2008. Since then, the Navy's and the nuclear forces' main strategic missile carriers have been new Triumphant-class vessels that meet all modern requirements. Under current plans, they will retain their place in the submarine forces and nuclear deterrent system for another 15-20 years. And the command expects Triumphant to cope with such tasks.

Source: <https://topwar.ru/202537-atomnye-podlodki-s-ballisticheskimi-raketami-tipa-triomphant-francija.html>