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The Silent Sentinel

January 2012



Our Creed and Purpose

To perpetuate the memory of our shipmates who gave their lives in the pursuit of their duties while serving their country. That their dedication, deeds, and supreme sacrifice be a constant source of motivation toward greater accomplishments. Pledge loyalty and patriotism to the United States of America and its Constitution.

In addition to perpetuating the memory of departed shipmates, we shall provide a way for all Submariners to gather for the mutual benefit and enjoyment. Our common heritage as Submariners shall be Strengthened by camaraderie. We support a strong U.S. Submarine Force.

The organization will engage in various projects and deeds that will bring about the perpetual remembrance of those shipmates who have given the supreme sacrifice. The organization will also endeavor to educate all third parties it comes in contact with about the services our submarine brothers performed and how their sacrifices made possible the freedom and lifestyle we enjoy today.



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The Silent Sentinel via Email

To all of my Shipmates and families who currently receive our Great newsletter via the mail who would like it sent via email or continue to receive it via mail, please fill out the form and mail it to the base or myself. We are trying to cut the cost of the newsletter down from \$3700 to about \$1900 a year. By receiving the Silent Sentinel via email will cut down the printing and mailing cost. The other plus to receiving it via email is you can save it on your computer and not have the paper lying around the house.

A subscription to the Silent Sentinel newsletter will be available to surviving family members via internet email, at no charge, upon notification of the Membership Chairman. If a printed hard-copy is preferred, via US Post Office delivery, an annual donation of \$5.00 will be requested to cover costs.

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*DUE TO LOGISTICS CONSTRAINTS, ALL INPUTS FOR THE SILENT SENTINEL MUST BE IN MY HAND NO LATER THAN **ONE WEEK** AFTER THE MONTHLY MEETING. IF I DO NOT RECEIVE IT BY THIS TIME, THE ITEM WILL NOT GET IN. NO EXCEPTIONS! MIKE*

January Meeting

Our monthly meetings are held on the second Tuesday of the month at VFW Post 3787, 4370 Twain Ave., San Diego. Our next meeting will be on 10 January, 2012. The post is located one-half block West of Mission Gorge Road, just north of I-8. The meeting begins at 7 p.m. The E-Board meets one hour earlier at 6 p.m.

Check us out on the World Wide Web
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BINNACLE LIST
Anne Marie Gorence
Al Strunk

Submarine Losses in December

Submitted by C J Glassford



GRAMPUS (SS 4) - 16 Men on Board:
Main Engine Fuel Explosion, on 10 Dec 1910 :

“ 1 MAN LOST “

CARP (SS 20) - 19 Men on Board:
Sunk, on 16 Dec 1917, after Collision with USS F - 3, (SS 22), off the Coast of San Diego, California :

“ALL HANDS LOST “

S - 4 (SS 109) - 39 Men on Board:
Rammed and Sunk, on 17 Dec 1927, by Coast Guard Cutter Spaulding, Off Provincetown, Massachusetts, * Later
Salvaged:

“ALL HANDS LOST “

SEALION (SS 195) - Duty Section on Board:
Severely Damaged, on 10 Dec 1941, by 2 Bombs, during Air Attacks at Cavite Navy Yard, in the Philippines. Later Scuttled on 25
Dec 1941:

“ 4 MEN LOST “

MINNEAPOLIS-SAINT PAUL [Bell] ((SSN708) - 110 Men on Board:
Heavy Seas, on 29 Dec 2006, Washed 4 Crewmen Overboard in Plymouth, Sound England, while exiting Devonshire, England,
on the Surface, After a Port of Call :

“ 2 MEN LOST “ - “ 2 MEN RESCUED “



Can Iran Close The Strait Of Hormuz?

Times Blog, December 28

Since it doesn't have nuclear weapons yet, Iran is playing the lone trump card in its hand: threatening to shut down the Strait of Hormuz through which Persian Gulf oil flows to fuel much of the world's economy. Iranian navy chief Admiral Habibollah Sayyari told state television Wednesday that it would be "very easy" for his forces to shut down the chokepoint. "Iran has comprehensive control over the strategic waterway," he said as his vessels continued a 10-day exercise near the strait.

But just how good a trump card is it?

Iran has constructed a navy with considerable asymmetric and other capabilities designed specifically to be used in an integrated way to conduct area denial operations in the Persian Gulf and SoH, and they routinely exercise these capabilities and issue statements of intent to use them," Jonathan Schroden writes in a recent report for the Pentagon-funded Center for Naval Analyses. "This combination of capabilities and expressed intent does present a credible threat to international shipping in the Strait."

Not so fast, other experts maintain. "We believe that we would be able to maintain the strait," Marine General James Cartwright, then-vice chairman of the Joint Chiefs of Staff, told Congress last year. "But it would be a question of time and impact and the implications from a global standpoint on the flow of energy, et cetera, [that] would have ramifications probably beyond the military actions that would go on."

International maritime law guarantees unimpeded transit through straits, and any deliberate military disruption is an act of war. "Anyone who threatens to disrupt freedom of navigation in an international strait is clearly outside the community of nations," the U.S. Navy's 5th Fleet said from its headquarters in Bahrain. "Any disruption will not be tolerated."

Of course, brandishing a threat and carrying it out are two different things. "By presuming that Iran can easily close the strait, Western diplomats concede leverage, and the current U.S. habit of reacting immediately and aggressively to Iranian provocations risks unnecessary escalation," Eugene Gholz, a professor at the University of Texas, wrote in Foreign Policy in 2009. "Iran would find it so difficult, if not impossible, to close the strait that the world can afford to relax from its current hair-trigger alert."

Most U.S. military thinkers, speaking privately, seem to agree. There are two linked issues at play here: military and monetary. While it might be challenging for the Iranian navy to shut down commerce flowing through the strait, Iranian moves to carry out that threat could have much the same effect. Oil companies, and the shippers that transport their product by water, are conservative business types, not given to putting their costly tankers and crews in harm's way. But they'd get over it pretty quickly, and commerce would resume, with higher insurance rates.

One point worth noting: analyses of possible Iranian military action to plug the strait generally note that Iran gets about half of its national budget from oil exports that transit the strait. But if the next round of sanctions keeps Iranian oil off the world market, that brake on Iranian military action will be gone.

Iran has been practicing such saber-rattling for decades, and it always sends a nervous twitch through the world oil markets, spiking prices upward. It has done so this week, and oil's per-barrel price has flirted with the \$100 mark. That's a drag on the world economic powers seeking to punish Iran for its nuclear-development efforts, and Tehran plainly views it as a net-positive for itself. That's especially true in the year leading up to a U.S. presidential election, where the incumbent is seeking a second term.

About a fifth of the world's oil flows through the strait, which is only 34 miles wide at its narrowest point. But the navigable part of the strait is 20 miles across, although shipping is supposed to use a pair of two-mile wide channels, one inbound and the other outbound. Iran borders the strait to the north and east, and it has a major naval base – and its key submarine base – close by.

"While closing the Strait may be possible for Iran for a short period of time, the U.S. military would prevail in a conflict with Iran in order to re-open the Strait at a great cost to the Iranian armed forces," Brenna Schnars wrote in a 2010 study at the Naval Postgraduate School. "With international mistrust concerning the Iranian nuclear program already at the height of world concerns, an Iranian closure of the Strait would only enrage the majority of the international community, as their economies would severely suffer without its oil imports from the Persian Gulf."

U.S. Navy Commander Rodney Mills examined the military implications of an Iranian move to shut the strait in a 2008 study at the Naval War College. His bottom line:

There is consensus among the analysts that the U.S. military would ultimately prevail over Iranian forces if Iran sought to close the strait. The various scenarios and assumptions used in the analyses produce a range of potential timelines for this action, from the optimistic assessment that the straits would be open in a few days to the more pessimistic assessment that it would take five weeks to three months to restore the full flow of maritime traffic.

But fighting an Iranian effort to close the strait may not be easy. Iran in recent years has acquired "thousands of sea mines, wake homing torpedoes, hundreds of advanced cruise missiles and possibly more than one thousand small Fast Attack Craft and Fast Inshore Attack Craft," U.S. Navy Commander Daniel Dolan wrote in a report last year at the Naval War College. "...The majority of these A2/AD [anti-access, area-denial] forces are concentrated astride the vital Strait of Hormuz..." He urged the U.S. and its allies to fight any Iranian effort to shut the strait from the relative safety of the Arabian Sea, that broad body of water between the Persian Gulf and Indian Ocean. "It will allow the [allied commander] to concentrate fires on attriting the enemy forces," he said, "while denying the enemy an equal opportunity to return fires."

History offers some guidance. In the 1980s, the "tanker wars" between Iran and Iraq in the Persian Gulf – which led to 544 attacks and 400 civilians killed over eight years – the oil flow dropped by 25% before returning to normal levels. Insurances rates also would rise – perhaps from a penny to \$6 a barrel, Mills estimates – a steep hike in insurance premiums, but not that much when tacked on to a \$100 barrel of oil. "Despite the increased risk," Mills notes, "history shows us that insurance will remain available at a reasonable rate for the value of the cargo shipped."

Iran has scant chance of covertly mining the strait, U.S. military officers say. Small boats or anti-ship missiles would make more military sense. But Iran's trio of Russian-built Kilo-class submarines, as well as a dozen smaller subs, would be vulnerable to U.S. anti-submarine warfare. "The (U.S.) Navy," Mills wrote, "would be eager to permanently eliminate the Iranian submarine threat in a naval conflict."

And attacks Iran launched against tankers aren't guaranteed to work. "Most tankers today are of newer, double-hulled designs; coupled with internal compartmentalization, this tends to limit damage from an explosion," Mills' study said. "There are relatively few areas of vital machinery that could disable the vessel if damaged, and much of the vital machinery is underwater." But what about all that oil? "The crude oil they carry tends to absorb and dissipate the shock caused by an explosion, reducing the effectiveness of the warhead," Mills wrote. "And the crude oil is not very flammable, reducing the chance of fire or secondary explosion."

All this is not to say any battle over the strait would be a cakewalk, as some U.S. officials erroneously predicted the Iraq war would be. If war were to break out, Iran would throw everything it has into the fight. "It's clear that the Iranians have taken an approach in which they are going to attempt to use small boats, swarms, cruise missiles, mines, perhaps suicide boats, small submarines," Vice Admiral Mark Fox, the top U.S. commander in the region, said earlier this year. "We watch them very carefully and understand where they are, what they're doing."

Fox's 5th Fleet, which patrols the region, recommends its officers read *Immortal: A Military History of Iran and Its Armed Forces*, by CIA analyst Steven R. Ward. "Iran's soldiers, from the famed 'Immortals' of ancient Persia to today's Revolutionary Guard, have demonstrated through the centuries that they should not be underestimated," a summary of the book on the fleet's web site says. "The Iranians' ability to impose high costs on their enemies by exploiting Iran's imposing geography bear careful consideration today by potential opponents."

Fox acknowledges that "imposing geography" cited by Ward as the admiral discussed how the Iranians would likely fight. "They have a long littoral there — it's 1,300 nautical miles," Fox said. "They've got a lot of places where they have an ability to set up, they have coves for small boats and cruise missiles that can potentially move around." All this would complicate any conflict.

But Mills sees all the Iranian rhetoric and war gaming as little more than Persian saber rattling. "Iran gains more from the existence of their threat," he concludes, "than they would by actually carrying it out."

While Iran Baits The Us — Russia's Beefing Up Its Nukes

Business Insider, December 28

While the world watches Iran and the U.S. go back and forth over the Strait of Hormuz, sanctions, and Iran's nuclear program — Russia has been busy.

After pointing out to the world how much it opposes the European Missile Defense Shield, Moscow has been beefing up its nuclear arsenal, and putting the finishing touches on a new class of submarine.

Both weapons groups passed major milestones this week.

Having seen its share of problems over the years, the Bulava ICBM finally saw a successful dual launch Friday.

From the White Sea, the new submarine Yury Dolgoruky handily sent joint Bulava's more than 3,700 miles to Kamchatka where they nailed both their designated targets. The Bulava Submarine Launched Ballistic Missile (SLBM) can carry up to 10 multiple independently targetable reentry vehicles (MIRVs).

Each warhead can be set for a different target, and can drastically negate any missile defense shield that relies on targeting each warhead — much like the U.S. Aegis system installed as part of the Euro Missile Shield.

The Yury Dolgorukiy is a new Borei class Russian submarine almost 558 feet long and capable of carrying 16 Bulavas, or 160 nuclear warheads. The vessel was expected to be commissioned in 2011, and this test may be a final part of its sea trials.

Four days after the sub trial, Russia successfully launched an RS-18 Stiletto ICBM from a base in Kazakhstan that carried a brand new warhead also made to cut through missile defenses. The Stiletto can carry up to six of these warheads.

Russia's Deputy Defense Minister Anatoly Antonov told The Moscow Times he is not happy with the U.S. lip service being given to Russia over the Euro Defense Shield and will take appropriate actions to secure his country's defense.

Despite assurances to the contrary, Russia maintains concerns that the U.S. missiles will be used against Moscow.

The U.S. has already said it plans to build a radar station in Turkey, missile bases in Romania and Poland, and send Aegis missile defense ships to Rota, Spain.

Russia will do everything it can to prevent the U.S. plan from falling in to place.

These new developments are in addition to Russia's continued threat that it will deploy Iskander missiles to the Baltic Sea if the U.S. keeps up plans for the Euro shield.

Near Miss With Merchant Ship Led To Submarine Commander's Firing

Kitsap Sun, December 14

BANGOR — The USS Kentucky's commander was fired in October because the submarine got too close to a merchant ship, according to information the Kitsap Sun obtained through a Freedom of Information Act request.

Cmdr. Joseph Nosse was relieved on Oct. 19 for shortfalls in professional performance — not personal conduct — that led to leadership's loss of confidence in his ability to command, said Submarine Group 9 spokesman Lt. Ed Early. The shortfalls included inadequate leadership and oversight of the crew in the areas of operations and administration. The Navy provided no further details at the time. A 15-page incident report from Nosse to Submarine Force U.S. Pacific Fleet, much of it redacted, provides a sketch of what happened.

The date and location of the incident aren't provided. The report is dated Oct. 18, a day before the firing. The subject is "CLOSE CPA WITH b(1)" with b(1) representing redacted material. CPA means closest point of approach.

The Kentucky, a Trident ballistic missile submarine based at Naval Base Kitsap-Bangor, came within a redacted number of yards of an inbound merchant ship. The sub was preparing to surface to conduct what the Navy calls a brief stop for personnel (BSP) — letting people on or off the boat.

"The root cause of the close CPA was inadequate command emphasis on and preparation for conducting the BSP safely," the report's summary states.

It appears the Kentucky crew thought the merchant ship was going away from them, but it was moving toward them. They stopped tracking it "which prevented other watchstanders from recognizing the ship was turning onto the track of a close aboard merchant," the report states. The merchant ship saw the sub's periscope and snorkel mast and veered to the left.

The report says Kentucky supervisors were too focused on the brief stop for personnel, distracting them from recognizing potential risks.

Nosse was reassigned to Submarine Group 9 staff.

Chaos Torpedoes Collins Sub Fleet

The West Australian, December 14

Australia's Collins-class submarine fleet is at risk of grinding to a halt because of chaotic maintenance procedures and incompetent leadership, a damning Federal Government report has warned.

An inquiry into the maintenance of Australia's six submarines has detailed a litany of mismanagement and bureaucratic waste, with investigators admitting that even they were at a loss to determine who was responsible for the day-to-day running of the Collins program.

Costing taxpayers about \$500 million a year to service, the vessels are supposed to form Australia's first line of defence against foreign aggressors, yet according to some reports the navy sometimes struggles to have a single submarine fit for duty.

The report, by British submarine expert John Coles, warns that without immediate action to rectify problems in the maintenance chain it could be just a matter of time before there is a "serious incident" aboard one of the vessels. The report says crews are inexperienced, with submarines continuing to operate with "defects of operational or safety significance".

"Decisions on what to live with and what to return to harbour to fix are being made by inexperienced people, a worrying feature with profound implications for safety," the report says.

The Collins-class fleet is based in Rockingham, but "deep maintenance" is carried out by the Australian Submarine Corporation in Adelaide.

Defence Minister Stephen Smith said the submarine issue had "bedevilled" Defence and successive governments for two decades.

As well as recommending a major restructure of the submarine servicing program, the report considers whether the entire maintenance program should be moved to WA.

"Concentrating all sustainment activity in WA would be likely to have clear benefits," it says.

Mr Smith suggested plans to eventually acquire another 12 next-generation submarines could simply see Australia buy plans "off the shelf" of a proved vessel.

Such a move would avoid many of the problems experienced by the Collins, which were part designed in Sweden then re-engineered and built in Australia.

Also yesterday, Mr Smith opened the door to allowing civilians to crew some navy ships as part of efforts to ease personnel shortages.

In an effort to fill a gap in the navy's ability to move men and supplies to combat or disaster zones - now temporarily filled by a rented commercial vessel - Defence will buy a new ship.

Russian Submarine Has Good Chances To Win Tender In India

The Voice of Russia, December 13

The new Russian submarine "Amur-1650" is taking part in the tender which India is holding for purchasing and licensed producing 6 non-atomic submarines.

Experts say that the Russian submarine has good chances to win.

The "Amur" has already been tested at a plant where it is produced — and found highly battle-worthy. Hydroacoustic cover of the latest generation makes it practically unnoticeable for radars.

"Still, it would be too early to have no doubts that the Russian submarine would win this tender," the Editor-in-Chief of the newspaper "Nezavisimoe Voennoe Obozrenie" ("Independent Military Review") Victor Litovkin says.

"The majority of diesel submarines which the Indian navy currently possesses are Russian-made, some of them made back in the Soviet time. In total, 80% of the weapons currently used by the Indian army and navy are Russian-made. However, it would be a bit too optimistic to say for sure that as far as Russian submarines have been popular in India until now, Indians will choose the Russian submarine this time as well. The matter is that India now wants new, modernized arms, and to make Indians prefer the Russian submarine to those made by other competitors, this time, Russia has to offer something really special. Still, Russia's trump card is that we are ready not only to sell our submarines to India, but to help Indians produce submarines of their own."

The producer of the Russian submarine, a design engineering bureau named "Rubin", has done much to adjust its brainchild to the demands of the Indian navy. The submarine has an energy device of a new generation which can work out energy no matter how long the submarine stays under water (with the energy devices of the older generations, submarines had to regularly rise to the surface to reload their batteries). Besides, they made the submarine especially fit for accommodating the supersonic cruise missiles "BrahMos" (which are a joint production of Russia and India). Thus, the Russian submarine has good chances of winning the tender, though the ones suggested by other competitors, Germany and Sweden, are also highly evaluated by experts.

However, even if Russia doesn't win this tender, it won't mean a big loss for it in cooperation with India in the sphere of military equipment. The two countries still have many other joint projects in this sphere — for example, Russia is currently modernizing the Indian aircraft carrier "Vikramaditya". It is planned to test it in the open sea in 2012.

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Here is Victor Litovkin again:

"India has already received planes for this aircraft carrier and is already using them. Russia is also modernizing the non-atomic submarines once sold by it to India – to be more precise, we are adjusting them to use Russian "Club" supersonic anti-ship missiles, which have already become very popular in the Indian navy. Besides, Indians want to receive the finance leasing for Russian atomic submarines "Nerpa". Russia also supplies its "T-90" tanks to India. Indians already have about 500 such tanks, but are intending to purchase another 1,500. Moreover, Russia supplies parts of the "Sukhoi-30" planes for Indians to assemble these planes at their plants."

So, it would be wrong to say that India is rejecting its former policy of cooperating with Russia in the sphere of military equipment, preferring Western partners instead. The plans of joint work of Indian and Russian designers over a warplane of the newest, the 5th, generation is more evidence of that.

Brazil To Upgrade Combat Gear On Subs Fleet

UPI, December 13

RIO DE JANEIRO, Dec. 13 (UPI) — Brazil is seeking to upgrade combat systems on its existing submarine fleet as part of an extensive defense optimization program.

Added to the planned upgrade is the scheduled construction of four conventional submarines and a nuclear-powered submarine that Brazil has contracted to build with French help. Armament on the planned submarines hasn't been discussed but is expected to be extensive.

The upgrades affect the Brazilian navy's four diesel-electric Tupi class submarines and one 1,550t Tikuna Class improved Tupi boat designed to patrol the coastal area and Brazil's offshore oil installations.

The Brazilian navy commissioned the SS Tupi in 1989 and the other three Tupi class submarines from 1996-99. The navy commissioned the fifth vessel, an improved Tupi class, also known as S34 Tikuna, in 2005. The submarines of both classes were designed by the HDW shipbuilding yard in Kiel, Germany.

The Tupi and Tikuna vessels are already armed and can launch Brazilian-made torpedoes as well as the BAE Systems Stingray.

The upgrades will involve the Mk48 heavyweight torpedo and extensive electronic refurbishment. Once upgraded the submarines could integrate other equipment, including Boeing's anti-ship missile the Harpoon. Extensive electronic refurbishment is planned as part of the upgrade.

Lockheed Martin said the Brazilian navy successfully tested its integrated combat system aboard the Tupi class SS Tapajo, as it detected, tracked and launched Mark 48 Mod 6AT torpedoes at targets during sea trials.

With the first combat system operational aboard SS Tapajo, the upgrade is focused on updating the three remaining Tupi class submarines and the Tikuna.

Lockheed Martin Maritime Systems and Sensors in Manassas, Va., received a \$35.3 million firm-fixed-price contract for the modernization of the Brazilian navy's S30 Tupi class submarines' Integrated Combat Systems under the Foreign Military Sales Program.

Lockheed Martin is to adapt, procure, integrate, test and conduct factory acceptance of the ICS modernization effort, including sonar systems and flank arrays. Per the DSCA announcement, both the Tupi and Tikuna class submarines will be upgraded.

Work will be performed split between manufacturing plants in Manassas (60 percent); Syracuse, N.Y. (19 percent); Salt Lake City (15 percent); Oldsmar, Fla. (4 percent); and Baltimore (2 percent).

In addition to the naval upgrades Brazil is planning a multibillion-dollar air force modernization program. The fighter jet competition is at the center of an international lobby effort involving Boeing's Super Hornet, French aviation company Dassault's Rafale fighter jet and Swedish Saab's Gripen NG.

Taiwan Giving Up On US Subs, Eyeing Local Plan: Analyst

Taipei Times, December 15

Taiwan has all but given up on acquiring diesel-electric submarines from the US and is expected to embark on a domestic program with assistance from abroad, a leading defense analyst told the Taipei Times.

Longstanding plans to augment Taiwan's small and aging submarine fleet gained momentum in 2001, when the administration of US president George W. Bush offered to provide eight diesel-electric submarines to Taiwan for about US\$12 billion.

With efforts going nowhere, in 2003 the Pentagon suggested that Taiwan consider buying refurbished submarines from Italy, and Rome reportedly agreed to sell four Nazario Sauro-class boats and an additional four following their decommissioning by the Italian Navy. However, Taipei rejected the offer, saying it wanted new submarines.

As a result of political wrangling in Taiwan's legislature, moves by the Chinese Nationalist Party (KMT) and the US to appease Beijing amid efforts at cross-strait reconciliation, and pressure from China on Washington, Bush's deal never materialized.

During a meeting with American Institute in Taiwan Chairman Raymond Burghardt in January, President Ma Ying-jeou (馬英九) reiterated Taiwan's desire to acquire submarines from the US, which some analysts interpreted as a sign of renewed commitment. Despite this, the arms package announced to the US Congress by US President Barack Obama in October did not include submarines or even a feasibility study.

Another problem that has haunted the sale is the fact that the US has not produced diesel submarines since the 1950s.

This could be about to change, with a US defense analyst familiar with the Taiwanese military saying he feels positive the navy will move ahead on the submarine program in the not-so-distant future.

Mark Stokes, executive director at the US-based Project 2049 Institute and a vocal proponent of a submarine program for Taiwan, said the Ministry of National Defense had given up on acquiring submarines from the US and had decided to launch an indigenous program with foreign assistance.

Military sources claim that research on submarine building has been launched and that the navy is trying to acquire production know-how from abroad.

The ministry has reportedly commissioned a local shipbuilder to contract a country other than the US capable of building submarines for cooperation in building non-nuclear-powered boats.

The Naval Shipbuilding Development Center under Navy Command has been very busy studying the blueprints of the navy's two Hai Lung-class submarines — Taiwan's only combat-ready subs — which were acquired from the Netherlands in the late 1980s.

Naval authorities are also reportedly readying to send personnel abroad to study production technology or negotiate technology transfers for building pressure-resistant hulls, which sources say is the most challenging aspect in building submarines.

Stokes said a good number of countries have the capabilities sought by Taiwan.

In the initial stage, the navy could limit its domestic program to small subs in the hundreds of deadweight tonnage, the report said.

Weighing in, James Holmes, an associate professor of strategy at the US Naval War College, told the Taipei Times that Taipei was right to give up on the US as a supplier of submarines, as this was never going to happen.

“Anti-submarine warfare is a People’s Liberation Army Navy Achilles’ heel,” he said, adding that “in the abstract a Taiwanese submarine force would be ideal.”

French Submarines Graft Case Resurfaces

Pakistan Observer, December 15

THREE allies of French President Nicolas Sarkozy including former French Minister Donnedieu de Vabres have become the focus of an expanding investigation into the 17-year-old case involving suspected corruption in the sale of submarines to Pakistan. The case, centres on kickbacks that investigators suspect were paid to secure the sale of three Agosta submarines to Pakistan in 1994

Earlier a French Judge, investigating corruption charges confirmed that illegal commissions were paid for the sale of submarines to Pakistan in 1995. The deal had led to the removal of the then Chief of Naval Staff (CNS) Admiral Mansurul Haq and framing of corruption references against several other people but it is still pending and according to a former Director General Naval Intelligence those who made millions of dollars from the deal were never held accountable. The submarine graft case has now resurfaced with the arrest of Mr Donnedieu de Vabres for questioning and it would naturally have fall out in Pakistan. The ongoing investigation in Paris into the May 8, 2002, terrorist attack that killed 11 DCN employees in Karachi may also shed new light on the submarine purchase. As a result the country, which is already in a political crisis, would be witnessing more allegations and counter allegations of all sorts. Many cases of corrupt practices were registered in the past by the National Accountability Bureau (NAB) and they gained much publicity in the media. However with the passage of time most of those cases including the Agosta submarine deal have been put in the cold storage. It is a common practice in Pakistan that people having proper connections escape from trial and punishment leading to huge losses to the national exchequer. Even today graft cases of billions of rupees are under lengthy process or pending in NAB and the Accountability Courts. The Agosta deal and other high profile corruption cases are bringing a bad name to the country and there is dire need that these must be taken to the logical conclusion. We believe that the NAB chairman, who has the reputation of an above the board personality would look into all the pending cases of corruption and take them to the logical conclusion at the earliest.

Passback Contains Objection

White House Opposes Incremental Funding For Multibillion-Dollar Sub

By Christopher J. Castelli, Inside the Pentagon – Dec 15, 2011

The White House is pressing the Pentagon’s multibillion-dollar nuclear ballistic missile submarine program to heed full-funding rules, limiting the Navy’s options for blunting the costly project’s impact on other shipbuilding endeavors.

The Office of Management and Budget’s Nov. 29 passback memorandum to the Defense Department warns that the effort to build replacements for aging Ohio-class submarines is not exempt from rules requiring each new vessel to be fully funded in a single year. Inside the Pentagon obtained a copy of the document.

Spreading the cost of a big-ticket ship over more than one year — an approach referred to as “incremental funding” — is only allowed when a program meets three criteria, OMB writes. The construction cost per vessel must be at least \$2.9 billion; there must be at least three years between the procurement of individual ships of that class; and the program must build aircraft carriers or large-deck amphibious assault ships — or conduct carrier refueling and overhauls.

“OMB does not anticipate that the OHIO Replacement program will meet these criteria,” the passback memo states.

The program, known as SSBN(X), would only meet the first yardstick cited by the White House. In fiscal year 2010 dollars, the Navy estimates the first sub in the class will cost \$11.6 billion. The service estimates the average procurement cost of boats two through 12 at \$5.6 billion each in FY-10 dollars, and it is now working to slash that figure to \$4.9 billion, according to the Congressional Research Service.

The program of record calls for buying and operating a dozen new subs that will cost the department \$347 billion over the life of the boats, according to a memo signed in February by Ashton Carter, who was then the Pentagon’s procurement chief and has since become deputy defense secretary.

ITP reported in September that the Pentagon deliberations on slashing security spending might prompt officials to cut the program to 10 subs. Even with such a reduction, however, the program would still consume a massive portion of the Navy’s shipbuilding account in the coming years.

Earlier this year, in a bid to shield other programs from being impacted by the SSBN(X)’s large and uncertain appetite for funding, the Navy’s leadership proposed putting its budget outside the shipbuilding account. But Pentagon officials rejected the idea. In March, Carter told ITP the program would remain in the shipbuilding account.

Under the Navy’s FY-12 plan of record, the Navy would buy the first SSBN(X) in FY-19 and the second in FY-22, followed by one per year from FY-24 to FY-33. This plan calls for advance procurement money for the first sub starting in FY-15.

Incrementally funding SSBN(X) might boost the program’s total procurement cost but it could help to manage the impact on other shipbuilding programs, according to a November report from Congressional Research Service analyst Ron O’Rourke.

The idea is to stretch out the schedule for buying the subs and make greater use of two-year incremental funding, also called split funding.

“This option would not reduce the total procurement cost of the SSBN(X) program — to the contrary, it might increase the program’s total procurement cost somewhat by reducing production learning curve benefits in the SSBN(X) program,” O’Rourke writes. “This option could, however, reduce the impact of the SSBN(X) program on the amount of funding available for the procurement of other Navy ships in certain individual years. This might reduce the amount of disruption that the SSBN(X) program causes to other shipbuilding programs in those years, which in turn might avoid certain disruption-induced cost increases for those other programs.”

Further, the program could spread out funding for some subs with three or four-year incremental funding, the report states.

Despite debate about the funding approach for SSBN(X), the need for the program is clear, according to senior Pentagon officials. The military’s top officer recently underscored the endeavor’s strategic importance.

“We’ve been studying and must continue to study the capability given to us by the [nuclear] triad, and of course the SSBN fleet is our most survivable leg of the triad, and therefore I consider it to be indispensable,” Chairman of the Joint Chiefs of Staff Gen. Martin Dempsey said during an Oct. 31 House Armed Services Committee hearing.

This week’s conference agreement for the FY-12 defense authorization bill calls for the Navy and U.S. Strategic Command to assess several options for the number of subs and the number of missile tubes per sub in the SSBN(X) program. The report, due 180 days after the law’s enactment, would consider procurement and life-cycle costs, as well as the ability of each option to meet the program’s requirements.

The study options include a fleet of 12 subs with 16 missile tubes each, a fleet of 10 subs with 20 missile tubes each, a fleet of 10 subs with 16 missile tubes each and a fleet of eight subs with 20 missile tubes each, as well any other options the Navy and STRATCOM consider appropriate, the legislation states.

Nerpa Class Submarine To Reach Indian Shores By The End Of January

The Economic Times, Dec 16, 2011

NEW DELHI: A day after Prime Minister Manmohan Singh ruled out the possibility of a war between China and India despite new tensions in the border, highly-placed official sources asserted here that the Indian assessment “is based on the posturings of China” as well the “possible consequences of a war”.

This is said even as the prime minister began his two day visit to Russia on Thursday, amid clear indications that the long wait for the induction of a leased Russian nuclear submarine into Indian Navy will be over soon.

Well-informed government sources said a Nerpa class submarine, leased for 10 years by the Indian Navy, will begin its journey through Russian waters by the end of this month to reach Indian shores by the end of January.

This submarine is meant to strategically reinforce Indian vigil in the Indian Ocean and South China sea. India has also dismissed as “sensational and unfounded” reports that Seychelles has offered its territory to China to set up a military base.

The government sources said the reports about a Chinese military base were factually incorrect as what has been actually offered to China is only berthing facilities for its ships to dock, refuel and replenish supplies. This facilities, the sources added, is important for China since it has started sending its warships to the Gulf of Aden to combat piracy on the high seas against its commercial ships.

Earlier, Chinese ships used to avail of the facilities at Karachi, but have stopped going there for the past two years, the official sources pointed out. India too uses such facilities in ports in Oman and other Gulf counties, sources said while dismissing any fears with regard to the Chinese move. On the submarine front, this is the second time India is taking a Russian nuclear submarine on lease.

In 1990, Indian Navy acquired the necessary skills to operate a nuclear submarine by training on another Russian submarine, named INS Chakra. The new Russian submarine is expected to help India Navy to acquire special skills to operate its own ingeniously built nuclear submarine INS Arihant which is expected to be ready three years later.

Though no major defence deal is expected between India and Russia during Manmohan Singh talks with his counterparts, the defence matters will be high on the agenda of their talks, the official sources said. On a different note, India sources also said that a lot of concrete work still remains to be done in connecting North-South corridor, connecting Central Asian Republics to Iran via Afghanistan.

This route for trade, commerce and energy supply is designed to connect India to the Central Asian republics via the port of Chabahar in Eastern Iran bordering Afghanistan.

Nuclear Subs Could Replace Collins: Experts

By David Ellery, Canberra Times, Dec 16, 2011

American-built nuclear submarines and Japanese-designed conventional subs should be considered to replace the troubled Collins-class submarine fleet, shadow defence minister David Johnston says.

Senator Johnston has joined submarine and defence materiel experts in saying critical problems highlighted in this week's Coles Review of Collins-class sustainment means Defence must look beyond a \$36 billion "son of Collins" to take in all the options.

Rex Patrick, of Acoustic Force, an ex-submariner now working in the private sector, agrees - as long as one of the options is to stop throwing good money after bad on the existing boats.

He wants two of the six Collins-class submarines to be retired immediately to allow crews, resources and maintenance to be concentrated on the remaining four. That could actually result in more availability - or "material-ready days" - not fewer.

The Coles Review argues many of the Collins's problems are caused by Australia's need to have a conventionally powered submarine to do the job of a nuclear-powered one. "Due to geography [Australia's] submarines have a need to be able to travel long distances dived across open oceans," it states.

"Whilst nuclear submarines would, in general, possess such a capability Australia's decision to remain with conventional technology means that her national requirements are beyond what is available 'off the shelf'."

Senator Johnston said if the Government were to propose a nuclear option the Opposition would likely give it bipartisan support.

That was unlikely to occur while the ALP was allied with the Greens.

His views have been echoed by a high-ranking defence insider who said the acquisition of US nuclear submarines was "quite plausible".

There is a tacit acknowledgment within some parts of the defence hierarchy that the best replacements for the Collins would be US-designed and built nuclear submarines on a 21-year lease.

They could be cheaper to acquire than "Son of Collins", faster at sea and significantly cheaper to operate than Collins or an indigenous successor.

Mr Patrick agrees the nuclear option should be considered but warns of unintended consequences.

On the plus side nuclear boats can drop to 200m and cruise long distances unobserved at 25 knots - as opposed to about 10 knots with frequent "snorting" to run the diesels with a conventional sub.

Nuclear boats aren't as quiet as conventional subs and come with political baggage such as domestic opposition and possible protests during port visits abroad.

His real concern was that neither a new large conventional submarine or a nuclear submarine would fix the problems Australia has now.

As the Collins subs age, it is costing more and more to keep them in the water for less and less time - a situation that parallels the RAAF's experience in the final years it operated the F-111.

Mr Patrick said: "My solution would be to immediately pay off two of the six submarines and then concentrate on crewing and maintaining the remaining four.

"Then go for a 'rapid acquisition' of an off-the-shelf solution and, as each new boat comes on line, retire another Collins."

Over time the acquisition process would become cost neutral given Defence is spending \$800 million a year on six submarines that are rarely ready for sea.

Female Submariner Move To Cost £3m

Defense Management, December 20

The Ministry of Defence is to spend £3m modifying nuclear submarines to allow female submariners, Defence Secretary Philip Hammond has confirmed.

Earlier this month Hammond announced that female officers would be allowed to serve on the Vanguard class nuclear submarines from late 2013, with female ratings allowed to join from 2015.

Astute class hunter-killer submarines would be converted to allow female officers and ratings from 2016 after a long-standing ban was lifted.

Answering questions in Parliament this week, Hammond said that it would cost an estimated £3m to convert submarines to cater for female personnel.

The Defence Secretary said the money would "provide appropriate accommodation and emergency air supplies, so that should any female submariner be found to be pregnant while on board, she will be able to breathe from a discrete air supply until she can be medically evacuated".

The conversion would help "enlarge the talent pool from which the submarine service will recruit", he added

Hammond also ruled out any need to trial the change because "the United States navy has made the change already, and has found the arrangements to be perfectly satisfactory".

Also, previous concerns about women's health had been resolved, he said.

"The only reason why women were not eligible for the submarine service was that until recently the best medical evidence suggested that there could be a risk to foetal health," said Hammond. "It is now clear that that risk does not exist."

100th Submariner's Course Graduates

Israel National News, December 20

The newest crew members of the Israel Navy's submarine fleet graduated from their challenging 14-months training course Sunday. The graduates will be absorbed into their roles in the coming days, reported the IDF Website.

The course was the 100th since Israel received its first submarines.

Israel Navy Commander Major General Ram Rothberg addressed the course graduates.

"Together, you will now operate to protect the security of the state of Israel, above and beneath the water," he said. "You are a unique group that volunteered to take on a tough and complicated mission that no other people but you would perform and which requires calmness, mental fortitude,

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excellence, leadership, prestige, love and respect for others, teamwork under extraordinary pressure and adherence to the task.”

“You will conduct the mission responsibly, covertly, and under uncertain conditions,” Maj. Gen. Rothberg continued. “From now, covertness and lethality will characterize your mission.”

Israel Secretly Upgraded Submarine

Xinhua, December 20

The Israeli Navy will soon reinstate one of its submarines that had been secretly upgraded as part of wider efforts to bolster Israel’s long-range strategic capabilities.

The renovation of the Dolphin-class submarine, one of the three that Israel currently deploys, included a comprehensive structural overhaul, The Jerusalem Post reported Monday.

Israel has invested near 27 million U.S. dollars into the project. The renovation work at the navy’s northern Haifa shipyard, launched two years ago, was carried out clandestinely so as not to alert Israel’s enemies to the fact that one of its submarines was temporarily decommissioned, according to the report.

“Every vessel that comes into the shipyard for maintenance comes out with improved capabilities ... There are a select number of countries around the world which can independently renovate a submarine,” Col. Eli Shouach, commander of the shipyard, told the newspaper.

The officer in charge of the project said it included dismantling the submersible’s engine, valves, pipes and sonar for cleaning, while cracks in the hull were welded.

Navy officials would not say when the submarine, which entered service in 1999, is scheduled to hit the water, but the upgrade will enable it to remain operational for at least another 18 years.

The disclosure came ahead of the graduation ceremony of the navy’s 100th Submariner Course, a prestigious program that trains officers for command posts in the Flotilla 7 submarine fleet.

Israel’s diesel-powered Dolphin submarines, all manufactured at Kiel dockyards in Germany and partially underwritten by the German government, are believed to be capable of firing cruise missiles armed with nuclear warheads. Another two vessels, still undergoing construction, will be delivered to Israel in the coming years.

While Israel maintains an official policy known as “nuclear ambiguity,” according to which the Jewish state will not be the first or last nation to introduce nuclear weapons in the Middle East, its submarines are designated as a deterrence weapon that affords a second-strike capability.

Decrepit Dolphin Secretly Repaired

Strategy Page, December 23

December 23, 2011: Israel recently revealed that one of its Dolphin class submarines (that entered service in 1998-2000) had secretly spent nearly two years in an Israeli shipyard. The sub was partially disassembled and its engine and plumbing was cleaned and upgraded. Hull cracks were repaired and various other items were fixed. The boat, which entered service in 1999, is now expected to remain in service until 2030.

The three older boats have all been earlier upgraded to include larger fuel capacity, converting more torpedo tubes to the larger 650mm size, and installing new electronics. The fuel and torpedo tube mods appear to have something to do with stationing the subs off the coast of Iran. Larger torpedo tubes allow the subs to carry longer range missiles.

The larger fuel capacity makes it easier to move Dolphins from the Mediterranean to the Indian Ocean. Although Israel has a naval base on the Red Sea, Egypt, until recently, had not allowed Israeli subs to use the Suez Canal. So the Dolphins were modified to go around Africa, if they had to. But now the Egyptians, who are also feuding with Iran, frequently allow Israeli subs to use the canal. Larger fuel capacity also allows the subs to spend more time on station off the Iranian coast. Currently the Dolphins can stay at sea for about 40 days (moving at about 14 kilometers an hour, on the surface, for up to 8,000 kilometers). Larger fuel capacity extends range to over 10,000 kilometers and endurance to about 50 days.

Israel equipped its new Dolphin class submarines with nuclear cruise missiles in 2002. Israel also fitted their 135 kilometer range Harpoon missiles with nuclear warheads. These missiles are fired from the sub’s torpedo tubes. The 1,625 ton Dolphins can carry 16 torpedoes or missiles and have ten forward torpedo tubes (four of them the larger 650mm -26 inch- size). The Dolphins are considered the most modern non-nuclear subs in the world. The first three cost \$320 million each. All have a crew of 35 and can dive to a depth of more than 200 meters (660 feet). The Dolphin design is based on the German 209 class subs but has been so heavily modified that it is considered a different class.

The Israelis have developed a cruise missile, which has a range of 1,500 kilometers and carries a 200 kiloton nuclear warhead. The objective of deploying nukes on subs is to further enhance deterrence to any nation launching a nuclear strike against Israel. If one of the Dolphins is always at sea even a first strike against Israel would not prevent a nuclear strike by submarine launched nukes.

Meanwhile, Germany has agreed to pay 20 percent of the cost of a sixth Dolphin class submarine for Israel, which was ordered earlier this year. Two more are under construction and will arrive in the next two years. The sixth one should arrive in 2015. These new Dolphins cost about \$650 million each.

The three Dolphins under construction have a fuel cell based (AIP, or Air Independent Propulsion) system which enables them to stay under water for over a week at a time. The Dolphins are also very quiet, and very difficult to hunt down and destroy. The first three Dolphins didn’t have the AIP system.

The Navy’s New Submarine Drone Will Launch Through The Trash Chute

Business Insider, December 22

The U.S. Navy has announced it will deploy the AeroVironment Switchblade drone from a submerged submarine during naval exercises next year.

Graham Warwick at Aviation Week reports the contract to get the drone from the sub to the air went to Raytheon, which built the submerged launch vehicle (SLV) system that sends the drone through the trash disposal unit on its way to the surface (via fbo.gov).

Launched at periscope depth, the drone is folded into a canister, shaped like a large projectile round, and once in the water it floats to the surface and parks at a 35 degree angle. Once it hits the waves, the canister opens, delivers a small charge to the electric drone, which launches itself from the canister.

The move is part of a Submarine-Over-The-Horizon Organic Capability (SOTHOC) program that will allow submarine crews to deploy surveillance from their shallowly submerged vessels.

Navy To Launch Kamikaze Drone From Submarine

Tucson Citizen, December 26

Unmanned aerial warfare is heading underwater. The Navy is preparing to test-launch a small, kamikaze drone from a submarine next year, Defense Tech reports.

The Switchblade drone, essentially a self-propelled, remotely guided missile, will be enclosed in a special launch canister and fired from one the sub’s trash chutes at periscope depth, Def Tech explains, citing Aviation Week. The canister floats to the surface, where the electric-motor, folded-wing drone launches itself.

Here’s an illustration.

The launch is planned during the biennial RIMPAC, billed as “the world’s largest multi-national maritime exercise,” next year in Hawaii.

The Army has used the Switchblade against Taliban targets and will resume such attacks next year, Bloomberg reported in October. The aircraft can be carried in a soldier’s backpack.

The Army paid AeroVironment \$4.9 million this summer for a small initial squadron of Switchblades. More on that from Wired.

Here’s how the manufacturer describes its little killer:

The Switchblade is designed to provide the warfighter with a “magic bullet”. It can rapidly provide a powerful, but expendable miniature flying Intelligence, Surveillance and Reconnaissance (ISR) package on a Beyond Line-of-Sight (BLOS) target within minutes. This miniature, remotely-piloted or autonomous platform can either glide or propel itself via quiet electric propulsion, providing real-time GPS coordinates and video for information gathering, targeting, or feature/object recognition. The vehicle’s small size and quiet motor make it difficult to detect, recognize, and track even at very close range. The Switchblade is fully scalable and can be launched from a variety of air and ground platforms.

Def Tech wonders “how the Navy controls the tiny UAVs without signals from its subs being detected.” Defense Review, which declares itself “a big fan” of armed drones, offers its assessment of the Switchblade.

China’s Noisy Subs Get Busier — And Easier To Track

Wired, December 27

The military’s latest secret assessment of China’s rapidly modernizing submarines has good news and bad news for the U.S. Navy. On one hand, the roughly 60 submarines in the People’s Liberation Army Navy (PLAN) fleet are spending more and more time on combat-ready patrols — signaling China’s increasing naval competence and growing seriousness about influencing the western Pacific Ocean.

On the other hand, the flurry of undersea activity gives American forces more opportunities to tail and examine Chinese subs. And U.S. analysts discovered a silver lining in the gathering strategic storm clouds. Chinese submarines are a hell of a lot noisier than anyone expected. The sound you hear is the Pacific balance of power tipping in Washington’s favor.

As recently as 2007, China’s diesel-powered subs and a handful of nuclear-propelled models managed just a few patrols per year, combined. Two years before that, none of Beijing’s undersea boats went on patrol. For years, the majority of PLAN submarines remained tied up at naval bases, sidelined by mechanical problems and a shortage of adequately trained crews.

As long as the PLAN’s submarines were idle, the U.S. Navy’s spy planes, surveillance ships and snooping subs had few opportunities to assess China’s undersea capabilities — and, most importantly, how much noise the Chinese generate while submerged and moving. Navies can use passive sonars to track submarines by the sounds they make. The louder a vessel, the easier it is to detect. And destroy.

With little information to go on, American intelligence officials had to guess. In cases like that, “you guess conservatively,” a respected U.S.-based naval analyst tells Danger Room on the condition of anonymity. The conservative estimates placed the latest PLAN subs roughly a decade behind the state-of-art for Russian submarines — and potentially 20 years behind U.S. undersea technology.

Now Chinese subs are patrolling more frequently. “Within the last year or two the Chinese have begun to deploy diesel boats more frequently into places like the Philippines Sea,” the analyst reveals. More and better data is flowing in from U.S. forces. With that data, the Navy conducted a fresh assessment of PLAN submarines. The unnamed analyst attended a classified briefing based on the assessment.

The assessment’s biggest surprise: Leaving aside the PLAN’s dozen imported Russian subs, new Chinese submarines can be detected at what’s known as the “first convergence zone,” a ring approximately 25 miles from an undersea vessel where outward-traveling sound waves pack close together.

During the Cold War, the U.S. Navy would arrange its own submarines in lines where each boat was 25 miles from the next, forming a sort of net to catch Soviet subs. With the introduction of the latest generation of quiet Russian diesel subs in the 1990s, the Americans thought that convergence-zone detection was no longer possible. But the Navy’s just discovered that China’s homemade subs are even louder than 20-year-old Russian boats. “Apparently they [U.S. subs] are making first convergence zone detections and holding them,” the analyst reports.

Assuming the Chinese stay with their current sub designs, American submarines should be capable of swiftly defeating Chinese boats in any potential future shooting war — helping clear the way for U.S. aircraft carriers to strike Chinese land targets. Combined with a slowdown in Chinese sub production, and the recent doubling of America’s submarine build-rate, the noise revelation could lead to a radical recalculation of the Pacific balance of power.

The U.S. Navy had a comfortable technological lead over the PLAN even before the increased Chinese sub activity fueled the recent intelligence coup. Now that lead has gotten even wider. And noisier.

Russia Test-Fires Two New Nuclear Missiles

The Moscow Times, December 27

Russia successfully tested on Friday its two new Bulava intercontinental missiles, which experienced several failures in the past.

The Defense Ministry said the 12-meter-long Bulava, or Mace, which Moscow aims to make the cornerstone of its nuclear arsenal, was fired from a submarine in the Arctic White Sea and hit the target, a designated polygon, on the Kamchatka Peninsula in Russia’s Far East.

“The launch was carried out from [a submarine in] submerged in the White Sea,” ministry spokesman Igor Konashenkov was quoted by RIA-Novosti as saying. “Its warheads reached the polygon [target] on time.”

The Bulava had failed half of its previous trials, calling into question the expensive missile program. The previous launch in June from the same submarine was a success though.

A Bulava missile weighs 36.8 tonnes and can travel a distance of 8,000 kilometers carrying six to 10 nuclear warheads, which would deliver an impact of up to 100 times the atomic blast that devastated Hiroshima in 1945.

Report: Israeli Jets, Sub Strike In Sudan

Israel National News, December 25

Israeli fighter jets, helicopters and possibly a submarine were involved in multiple attacks on targets in Sudan last week, according to local news outlets.

The reports say that Israeli jets hit targets in the eastern part of the African country, near its border with Egypt, last Thursday. They allegedly hit six Land Cruiser jeeps and killed four people. An earlier strike took place last Sunday and reportedly involved Israeli helicopters. A truck was targeted. Some reports say an Israeli submarine was also spotted at the same time.

However, the Sudanese army spokesman, Col. Al-Sawarni Haled Sa’ad, said that the military’s air defense array gave no indication that the country’s airspace had been breached.

Arabic news outlet Dar al-Hayyat on Sunday reported “conflicting information” coming out of Sudan regarding alleged Israeli air strikes. It said that the governor of Sudan’s Red Sea District recently received notification from several citizens in the region that the IAF had raided smuggler convoys, in Abu Thabaq in the disputed Hala’ib triangle.

Also according to al-Rakoba, on December 15, Israeli Apache helicopters landed on an island east of the Red Sea port of Mohammed Qol.

In early 2009, an Israeli raid on a 23-truck convoy carrying weapons to Hamas terrorists in Gaza was reported.

Israel does not comment on whether reports of overseas actions such as these are accurate.

Sudan Denies Israel Hit Convoys

UPI, December 26

KHARTOUM, Sudan, Dec. 26 (UPI) — A Sudanese military spokesman has denied reports that Israel was involved in a series of attacks on weapons convoys in eastern Sudan.

The convoys were reportedly loaded with weapons heading for the Gaza Strip, Israel’s Channel 2 quoted Sudanese media saying Sunday night. The reports claimed an Israeli submarine as well as fighter jets allegedly participated in a series of strikes.

Sudanese military spokesman Col. Alsoarma Khaled Sa’ad told Albawaba.com: “We do not have assurances on that aggression.”

The reports said an Israeli warplane targeted a convoy of six Land Cruiser vehicles Thursday and Sunday last week, killing four passengers and destroying two of the vehicles. There were also reports that an Israeli submarine entered the territorial waters in eastern Sudan and a helicopter landed on an island in Sudan’s territorial jurisdiction, the Web site said.

The Sudanese al-Rakoba newspaper said one of the strikes hit a convoy near Sudan’s border with Egypt in the Hala’ib triangle region, an area whose sovereignty is disputed by Sudan and Egypt.

Israel has neither confirmed or denied the reports.

Israeli security officials believe Sudan is a key conduit of weapons bound for Gaza, the weapons are unloaded from ships docking at Port Sudan and are placed on trucks and taken to the Egypt-Gaza border where they are smuggled into Gaza through the network of tunnels, Israel Radio said.

'Military First' For North Korea May See Submarines As Top Risk For South*Bloomberg, December 22*

North Korea's mini-submarines and Soviet-era artillery may pose a greater threat to Asia than its nuclear program as Kim Jong Un seeks to cement support among generals three times his age in the world's fourth-largest army.

While questions remain over whether Kim will inherit his deceased father Kim Jong Il's control of the totalitarian state, he heads a country whose so-called military-first policy has kept it on combat alert since the Korean War ended in 1953. It terms a trade embargo over its nuclear weapons program "vicious sanctions of the enemy," and has repeatedly assaulted the South.

"We're still some ways away from North Korea being able to point a nuclear weapon at someone in any meaningful way," Alexander von Rosenbach, U.K.-based senior analyst of armed forces at IHS Jane's, said by phone. "There is a risk of a surprise attack to bolster the regime's credentials."

Strikes last year that killed 50 South Koreans demonstrate the risks posed by more than 250 long-range artillery installations along the world's most fortified border in reach of the Seoul area and its 23 million citizens. The U.S., China, South Korea, Russia and Japan have failed to convince the regime to drop its nuclear-weapons program in eight years of talks.

Global Consequences

"North Korea's military forces retain the capability to inflict lethal, considerable disruption to the ROK with significant corresponding regional and global economic and security consequences," U.S. Forces Korea said in a report last year, referring to South Korea. "North Korean forces are postured to conduct limited attacks or kinetic provocations against the Alliance, with little or no warning."

Last year, North Korea shelled an island in the Yellow Sea, killing four South Koreans, and was blamed by an international panel for sinking the Cheonan warship, in which 46 sailors died. North Korea has one of the world's largest fleets and more than 30 guided-missile patrol boats, according to a 2007 paper from the U.S. Army War College's Strategic Studies Institute.

While North Korea has twice detonated a nuclear device, the country doesn't have the technology to deploy one, said analysts including retired U.S. Admiral Bill Owens, a former vice chairman of the Joint Chiefs of Staff who has lived in Beijing and Hong Kong for the past five years.

"I don't think they have the ability to deliver a nuclear weapon," Owens said in a telephone interview.

Birth From War

North Korea is a legacy of World War II, which ended Japan's occupation of the Korean peninsula, and the Cold War. The Japanese surrendered to U.S. forces in the south and to Soviet troops in the north. The Soviet Union then installed an anti-Japanese guerrilla leader, Kim Il Sung, as head of North Korea. Kim invaded the South in June 1950, starting a war that ended three years later without a peace treaty.

Before his death in 1994, Kim authorized operations that included a 1983 assassination attempt on South Korean President Chun Doo-hwan in Myanmar that killed more than 20 people, the bombing of a Korean Air flight that killed all 115 on board, and the kidnapping of at least 13 Japanese to serve as language teachers for North Korean spies.

Kim Jong Il succeeded his father and stepped up the country's missile and nuclear-weapons development, while continuing provocations against South Korea.

'Lot of Harm'

The history of attacks "shows a lot of potential for causing damage, particularly if they aren't concerned about the international consequences of their actions," said Richard Bitzinger, senior fellow at the S. Rajaratnam School of International Studies in Singapore. "They haven't really got a high-tech army overall, but that doesn't mean it can't cause a lot of harm."

North Korea is estimated to have 1.2 million troops and another 7.7 million in reserve, according South Korea's 2010 Defense White Paper. It also has 70 submarines, including an undetermined number of Yeono-class midget subs, compared with South Korea's 10.

The Kim regime allocates a third of its budget to maintain 1,700 aircraft, 800 naval vessels and more than 13,000 artillery systems, according to the American military, which has 28,500 troops in South Korea. The U.S. estimates that the Pyongyang government has enough plutonium for a half-dozen nuclear devices and sells ballistic missiles for cash.

Land Mines

The 4 kilometer (2.5 mile) wide, 248 kilometer-long demilitarized zone is sown with a million land mines. The waters off the coast near the border are claimed by both sides and any military provocations from North Korea would probably revolve around such disputes, said Gary Li, head of marine and aviation forecasting at Exclusive Analysis Ltd., a London-based business advisory firm.

"The submarine force would be a likely candidate for any action," Li said. "It would remain covert and you can deny responsibilities. They have the advantage of telling their own people one thing and telling the world another because they can keep the two separate."

Kim Jong Un, thought to be in his late 20s, was made a four-star general last year and promoted to a senior position in the Workers' Party of Korea. He hasn't taken his father's place as head of the National Defense Commission, a position designated as the "supreme leader" of the country, according to its constitution. Kim Jong Il, who state media said died of a heart attack on Dec. 17, took three years after his father passed away before assuming the country's highest posts.

Low Morale

North Korea's capabilities are limited by obsolete weapons, low morale among soldiers, reduced training and issues with command control, Dennis C. Blair, then director of National Intelligence, said in a 2010 annual threat assessment.

"Pyongyang relies on its nuclear program to deter external attacks on the state and to its regime," Blair said. "Although there are other reasons for the North to pursue its nuclear program, redressing conventional weaknesses is a major factor and one that Kim and his likely successors will not easily dismiss."

North Korea, which conducted nuclear test explosions in 2006 and 2009, said Nov. 30 that construction on a light-water atomic reactor and production of low-enriched uranium is "progressing apace." While work is nearly complete on the outside walls of the building, the plant may not be operational for two or three years, according to an analysis of satellite photos on former U.S. nuclear negotiator Joel Wit's website, 38North.org.

U.S. Targets

No public information can verify that North Korea possess operational nuclear weapons, according to the Stockholm International Peace Research Institute. North Korea wants to develop ballistic missiles capable of hitting targets in the continental U.S., according to the Pentagon.

More than 70 percent of North Korean forces are within 100 kilometers of the demilitarized zone established at the end of the Korean War. Even so, its constitution calls for "peaceful reunification" of the peninsula.

North Korea conducted more than 1,400 major provocations and violations of the demilitarized zone from 1953 to 2003, according to U.S. military estimates. State media regularly threatens to turn Seoul into a "sea of fire."

The U.S. is pledged to defend both South Korea and Japan, where almost 40,000 troops are stationed. Japan, which has strengthened its defense capability after North Korea sent a missile over the island nation in 1998, this week announced the purchase of 42 Lockheed Martin Corp. F-35 Joint Strike Fighters.

"The risks we face over the next several years stem from Kim Jong Un's weakness, not his strength," said Marcus Noland, deputy director of the Peterson Institute for International Economics in Washington and the author of "Avoiding the Apocalypse: The Future of the Two Koreas." "You can imagine other military provocations like the ones we've observed over the last 18 months toward South Korea."

With Eye On China & Pak, India To Revamp Sub Fleet*The Times of India, December 28*

NEW DELHI: Faced with a fast-depleting underwater combat arm even as both China and Pakistan rapidly bolster their fleets, India is planning a major rejig of its submarine production plans to ensure its operational readiness does not get further eroded in the years ahead.

For starters, the case for equipping the last two of the six French Scorpenes submarines being built at Mazagon Docks (MDL) with the crucial air-independent propulsion (AIP) systems is now being "progressed", say top defence ministry sources.

The six diesel-electric Scorpenes are slated for delivery in the 2015-2020 timeframe under the ongoing Rs 23,562-crore 'Project-75', three years behind schedule. AIP in the fifth and sixth vessels, costing an additional Rs 1,000 crore each, will give them a deadlier killer punch and stealth because they will be able to stay submerged for much longer periods before surfacing to get oxygen to recharge their batteries.

Then, India is likely to go in for three additional Scorpenes after the first six. "While no decision has yet been taken, it makes economic sense since six of them are already being built at MDL. The second submarine workshop at MDL, incidentally, will get operational soon," said a source.

It will also be operationally expedient since, as was first reported by TOI earlier, the already long-delayed follow-on 'Project-75 India' to acquire six new-generation stealth submarines will take at least another two to three years to be even finalized. It will take another seven years, if not more, after that for the first new submarine to toll out.

"Going in for three more Scorpenes is one way out of the logjam over P-75I, with Navy and MoD yet to agree on the shipyards to execute the project. The French companies will, of course, charge hefty amounts for the ToT (transfer of technology) packages for the three more Scorpenes," he said.

Moreover, the P-75I programme may also be expanded to include nine submarines, all equipped with both tube-launched missiles for land-attack capabilities as well as AIP, instead of the six planned as of now for well over Rs 50,000 crore.

"Two submarine production lines with enhanced capacity, one on the west coast with MDL tying up with a private shipyard, and the other on east with Vizag-based Hindustan Shipyard Ltd doing the same, would be an optimal solution," said another source.

But for all this to happen, the Indian defence establishment will have wake up from its slumber. First in formulating realistic long-term strategic plans to systematically build military capabilities, and then ensuring their timely execution with single-minded determination. Consider this. The 30-year submarine-building plan approved by Cabinet Committee on Security in 1999 envisaged induction of 12 new submarines by 2012, followed by another dozen by 2030. But a dozen years later, not a single new submarine has been inducted. Navy is making do with just 10 ageing Russian Kilo-class and four German HDW submarines, with just over half of them being fully

operational at any given time.

It will get worse. As per projections, only five of the existing 14 submarines will be operational by 2020. Even with six new Scorpenes by then, India will remain far short of the minimum of 18 conventional submarines required to deter Pakistan and China.

U-Boats May Be On Navy's Shopping List

The Canberra Times, December 28

Australia's "future submarine" could be a super U-boat built by a German company that made many of the submarines that nearly brought Britain to its knees in World War II.

HDW has released details of a concept design, designated the Type 216, for a long-range conventional submarine.

Experts say the design, based on the successful Type 214, is specifically targeted at Sea 1000 - Defence's future submarine program.

Rex Patrick, a former submariner and the director of Acoustic Force, said yesterday the information available indicated Type 216 would meet the requirements spelt out in the 2009 Defence white paper and there was no reason the submarines could not be built in Adelaide.

"I think they [HDW] have been working on the Type 216 for some time with candidates like Australia, India and Canada in mind," he said.

Another HDW design, the Type 209, is the basis for three submarines Indonesia is buying from Korea's Daewoo Shipbuilding Marine Engineering.

The \$1billion contract for the three, two of which will be built in South Korea and one in Indonesia, was signed on December 20.

Defence has been considering a number of European submarines, including the HDW 214, the Spanish Navantia S-80 and French DCNS Scorpene, as replacements for the trouble-plagued Collins for some time. It has confirmed "requests for information" are to be sent to the three manufacturers.

Defence has also signed a contract with Babcock to research a land-based submarine propulsion test facility and a "Future Submarine Industry Skills Plan" is being prepared.

While Defence has acknowledged the European vessels offer proven designs and shorter delivery times than an Australian-designed submarine, the concern is they are too small to meet Australia's broad needs as outlined in the 2009 white paper.

The "supersized" HDW Type 216 may change that. It is more than twice the size of the three submarines that have just been commissioned by Indonesia.

Designated the Type 1400, the Indonesian boats will still be very capable. The first is expected to be in use by 2015 with the second scheduled for delivery in 2018.

There is grave concern delays in the Government's decision making process means there is no longer sufficient time to design and build an "evolved" Collins class boat by the 2025 deadline.

Former ASC chief executive officer, Greg Tunney, is on the record as having said "serious concept work and definition studies" should have begun in 2010.

HDW's Type 216 concept, the subject of a special report in the current edition of Jane's International Defence Review, overcomes the shortcomings of small European submarines and would take less time - and money - to build than a "son of Collins" analysts claim. At almost 4000t, 89m long and with an extendable minimum range of 10,400 nautical miles (19,240km), it outclasses the existing Collins in every way.

The evolved 216 would come with air-independent propulsion giving it a nuclear submarine-like ability to linger underwater in choke points such as the Straits of Malacca for weeks on end. It would have the ability to launch cruise missiles, carry a "swimmer delivery vehicle" for special operations and be extremely quiet thanks to propulsion design parameters and an outer shell that absorbs sound.

Kim Jong-Il Funeral: South Korea Announces Submarine Drills

Telegraph, December 28

Two of South Korea's submarines will be tasked with attempting to penetrate the screen that has been stepped up off the coast of the southern part of the peninsula since a North Korean torpedo sank the South Korea warship Cheonan in March 2009, with the deaths of 46 sailors.

To make the "surprise" drills more realistic, South Korean surface forces will not be informed of when the exercise will take place, a navy official told the Yonhap news agency.

"We will simulate enemy infiltration using our own submarines for 'surprise' exercises starting early next year," the official said. "These have been designed to enhance our navy's capability to detect infiltrating North Korean submarines.

"Next year, our drills will be more intense and will closely resemble actual battles," he said.

International concern has been focused on North Korea's nuclear programme and the development of missiles to deliver atomic warheads, but Seoul has good cause to fear Pyongyang's conventional forces. As well as a regular standing army of 1.2 million troops, the North has 250 long-range artillery pieces along the border between the two nations, 1,700 aircraft and 800 naval vessels, including 70 submarines and an undetermined number of midget submarines.

South Korea, in contrast, has 10 submarines.

North Korea has also demonstrated that it is willing to use its submarines to attack the South, with a Sang-O class vessel running ashore near the town of Gangneung in September 1996 after landing a team of agents to spy on nearby naval installations.

After the stranded vessel was spotted, the crew tried to destroy its secrets and scattered into the countryside in an apparent attempt to return to the North. In the following 49-day manhunt, one man was captured, 11 were killed by their compatriots or committed suicide and 13 died in firefights with South Korean forces.

The timing of Seoul's announcement of the naval exercises is no coincidence and is designed to send a clear message to the incoming regime in Pyongyang that the South will not sit idly by in the event of any further provocations, such as the Cheonan incident or the shelling of an island off the west coast in November 2010 in which four people died.

Analysts say that North Korea has a history of aggressive acts outside its borders to divert attention when it is faced with internal problems, but Lee Myung-Bak, the hawkish president, has said that South Korean forces will respond with force to a third incident.

A Happy, Healthy, and Prosperous New Year to All!

Water Drones*Defense News, January 9, 2012*

The announcement called for technology so new it might exist only in the minds of inventors. Prospective contractors and analysts routinely compare the endeavor to the search for the Holy Grail.

In this case, the grail is an unmanned submarine smart enough to sense and avoid obstructions, powerful enough to stay out on months-long missions without detection, and cool enough to keep computers from overheating.

Those are among the challenges facing the companies and universities vying to provide ideas to the U.S. Navy about how to power and autonomously navigate a Large Displacement Unmanned Undersea Vehicle (LDUUV), a development project led by the U.S. Office of Naval Research (ONR).

Proposals were submitted to the office in late September, with winners informed Dec. 19, although they won't necessarily be publicly identified, ONR said. The Navy wants to gather up ideas and technologies from organizations that might not be equipped to build an entire vessel. A major company then could be hired to integrate the parts.

At the top of the list of challenges would be power and heat. Development of futuristic sensors and processing software will be moot if those issues cannot be managed. Complicating matters, the Navy has ruled out nuclear power because no human would be aboard to address an emergency.

"People might say, 'I've got the Holy Grail. I've got the engine and I've got the fuel,'" said Robert Nowak, an independent energy consultant who has run programs for ONR and the Defense Advanced Research Projects Agency. But that's only true if the heat that engine puts out from that fuel doesn't play havoc with the other systems onboard.

Once those issues are solved, "sensing and avoiding a fishing net are going to be the Holy Grail," said Jeff Smith, projects manager of Bluefin Robotics, which is working on autonomous control for unmanned submarines. "The number of dolphins and seals that get caught in nets is not insignificant. Let's face it: As smart as we are with unmanned vehicles, we're never going to come close to a dolphin or a seal when it comes to their situational awareness."

Power Quest

ONR's July announcement seeks ideas for enough energy for the craft to remain at sea for 70 days or longer in open-ocean transit with operations as deep as 800 feet. The craft will need the autonomy to conduct missions in littoral waters, amid local merchant shipping, fishing boats and nets. As a steppingstone, ONR has set a goal of power and autonomy for a 30-day mission, including operations at depths down to 400 feet.

These quests, particularly power generation and storage, have become the signature problems in building a prototype of what is envisioned as a 48-inch-diameter vehicle with a fiberglass hull to defeat sonar.

The Navy's Intelligence, Surveillance and Reconnaissance Roadmap calls for building an LDUUV by 2014 and having it on missions by 2017. It envisions a fleet of LDUUVs by the end of the decade.

Job No. 1 will be proving the energy technologies required for such a vehicle.

"The higher-ups in the Navy are emphasizing this and saying, 'If you can't develop the energy we need, we can't do the mission,'" said Nowak, who is not affiliated with the program.

The ISR Roadmap directs funding "UUV power and Endurance first," then "sensors, C3, networks and autonomy."

Chief among those higher-ups was now-retired Adm. Gary Roughead, who was chief of naval operations until September. Roughead laid out a vision of LDUUVs as submarine-force multipliers providing persistent ISR, a capability the Navy can't get from smaller unmanned subs that measure their mission capability in hours.

"I cast the net widely in the continued pursuit of high-density underwater power," Roughead said at August's Association for Unmanned Vehicle Systems International conference in Washington. "That clearly is something that will be a game-changer for us."

As bait, he committed 50 percent of the Navy's research and development budget over the next five years to solving the energy problem for underwater vehicles, including LDUUV.

The Navy is seeking \$47 million for LDUUV work in the 2012 budget request.

The Navy is envisioning a different concept of operations for LDUUV compared with other robotic vehicles it has conceived of in the past, including the Long-term Mine Reconnaissance System and the Mission Reconfigurable UUV. The blueprint for those vehicles called for launching them from torpedo tubes and recovering them. The concept proved to be unworkable because, for example, the launch vehicles would have overcrowded torpedo rooms.

The Navy envisions the LDUUV leaving from a pier, doing its ISR work and returning, or perhaps being recovered by a surface ship away from the littorals. It sees a UUV that can loiter undetected long enough to map the sea bottom; track local submarine, merchant ship and fishing boat traffic; and detect mines, though a formal concept of operations has not yet been drafted.

With all of that in mind, the LDUUV will have an open software and hardware architecture to make it receptive to varying sensor suites to be replaced as missions change.

Smaller UUVs have done those missions for more than a decade, and the results have been subject to their range and payload capacity limitations. But the kind of endurance the Navy wants from the LDUUV requires the kind of energy that has remained elusive, and with cause, Nowak said.

Conventional power systems, which in the case of other unmanned vehicles means batteries, need not apply.

"You will find that there aren't any batteries that are capable of meeting the requirements the Navy is looking for," Nowak said.

But fuel-only probably isn't the answer either. The Navy has a contract with AlumiFuel Power to experiment with smaller undersea vehicles driven by hydrogen cylinders. But while hydrogen's energy potential is widely known, its storage under compression in thick-skinned cells would present weight and volume issues in the LDUUV.

Other fuels are possible - much of industry and ONR were mum about their ideas while proposals were being evaluated - but Nowak posits that some combination of power is more likely.

The longevity issue can become complicated by problems accumulated along the way on a voyage.

"Endurance is more than just putting out power," said Antoine Martin, president of Unmanned Vehicle Systems-Consulting, who recently completed a comprehensive study of power for robotic vehicles. "It's being able to manage the power you have, being able to play with the materials in the hull of the UUV so that it doesn't develop drag by accumulating particles at sea."

Barnacles or algae growing on a slow-moving UUV could hamper its performance, as could saltwater corrosion, storm damage, ice and myriad other potential problems.

"All of this is a long step from where we are today," Martin said.

U.S. Strategy Boosts Navy Subs, Programs*Aviation Week, January 5*

The new set of Pentagon priorities discussed Jan. 5 by President Barack Obama and Defense Secretary Leon Panetta includes provisions that will likely bolster U.S. naval forces — but possibly dampen service plans for some proposed fleet upgrades.

The new strategy includes a refocus on the Asia-Pacific region — with several allusions to China — which, many defense analysts say, will surely make certain Navy programs more desirable given the greater need to access the region by sea.

The strategy also focuses on intelligence, surveillance, and reconnaissance, anti-access capability and undersea investments, which bodes well for submarine programs.

But the Pentagon's renewed focus on readiness could cause the Navy to shift funds from procurement to repair needs.

In releasing the strategy, Obama says that, in particular, the nation will continue to invest in the capabilities critical to future success, including "intelligence, surveillance, and reconnaissance; counterterrorism; countering weapons of mass destruction" and operating in areas "where adversaries deny us access."

Panetta says of the future force, "It will have global presence, emphasizing the Asia-Pacific and the Middle East." He says, "of necessity" the Pentagon will have to "rebalance toward the Asia-Pacific."

Of particular concern, the Pentagon says, is China. "Over the long term, China's emergence as a regional power will have the potential to affect the U.S. economy and our security in a variety of ways. The growth of China's military power must be accompanied by greater clarity of its strategic intentions in order to avoid causing friction in the region," the Defense Department says in its summary of the new strategy.

One of the primary missions of U.S. armed forces, the Pentagon says, is to "project power despite anti-access/area denial challenges."

In these areas, "Sophisticated adversaries will use asymmetric capabilities to include ... ballistic and cruise missiles, advanced air defenses, mining and other methods," the summary says. "States such as China and Iran will continue to pursue asymmetric means to counter our power projection."

Accordingly, "The U.S. military will invest as required to ensure its ability to operate effectively in anti-access and area denial environments. This will include implementing the Joint Operational Access Concept, sustaining our undersea capabilities ... improving missile defense and continuing efforts to enhance the resiliency and effectiveness of critical space-based capabilities."

While making such investments, the Pentagon says it must make sure it maintains its current assets, which has proved problematic for the U.S. Navy when it comes to taking care of its surface ships and equipment, especially its Aegis-equipped destroyers, cruisers and radar components.

Recent Navy reports underscore years of maintenance neglect and now, analysts say, the service faces a huge repair bill to fix and maintain those ships and systems — costs that could upend the Navy's plans for a redesigned destroyer fleet and new radar system desired for missile defense.

“We will resist the temptation to sacrifice readiness in order to retain force structure,” the Pentagon says, “and will in fact rebuild readiness in areas that, by necessity, were de-emphasized over the past decade.”

Taiwan's Project Diving Dragon resurfaces

Asia Times, January 9

TAIPEI - Recurring reports that countries other than the United States are helping Taiwan build diesel-electric submarines domestically go back a decade. According to various articles, it's either the Western Europeans, Russians or Indians who are clandestinely concocting a submarine plan with the Taiwanese.

While the notion that any country able to build subs would choose to so profoundly snub China appears unlikely, the question arises as to why these rumors persist.

An island and its mythical being

Then-United States president George W Bush in 2001 approved the sale of eight conventional submarines to Taiwan, but the deal has been in limbo ever since. While the US ceased building diesel-electric subs decades ago, the Western European countries that do still produce them - and are seen as having the

best technology for diesel-electric sub construction - likely fear reprisals from Beijing for supplying Taipei with the technology.

In the 2000s, with pro-independence Taiwanese president Chen Shui-bian in power and the Taiwan Strait constantly on the brink of war, a solution that ostensibly suggested itself was that the Taiwanese build their own subs.

While there have yet to be credible signs that “Project Diving Dragon” was ever alive and kicking, or any alternate Taiwanese plan for submarines, rumors of its existence refuse to die. Intriguingly, such rumors have surfaced at even shorter intervals under Chen's successor, Ma Ying-jeou, who says he doesn't want an arms race with the military power across the Taiwan Strait.

Leaps forward - sudden and great

In late 2010, it was suggested that the Taiwanese navy had used a Russia trip by a Taiwanese ship and arms builder, the China Shipbuilding Corporation Taiwan, in late 2010 as cover for secret negotiations. Though apparently seeking Russian expertise in building ice-breaking ships, the genuine mission was reportedly talks on building diesel submarines in Taiwan.

According to another report in May, Washington proposed and Taipei accepted a deal for four subs instead of eight in order to revive the decade-old deal made with the Bush administration.

A few weeks later, the Taiwan Navy was said to have test-fired indigenous Hsiung Feng II (HF-2) ship-to-ship missiles from one of its two old Dutch-built Hailung class subs, suggesting the Taiwanese had made only two subs fit for combat with a new, “beyond-vision strike capability”.

However, the most recent news then broke in mid-December, with reports that Taiwan was persuading European submarine building experts to travel to the island to train Taiwanese in the specialized type of welding used on submarines, while naming India as a potential alternative supplier of submarine technology.

Not so subtle inconsistencies

For the time being, only the story on the HF-2 test-firings has been proven false.

The Hailungs, it turns out, still have problems with just launching torpedoes from old fire control systems and have “absolutely no capability” of launching anti-ship missiles from their torpedo tubes, a retired Taiwan Navy engineer told Defense News.

Some of the reports in question have rightly pointed out that indigenously building diesel-electric subs isn't child's play, warning that Taiwan could end up with flawed and prohibitively expensive boats and reminding that “Project Diving Dragon” never got the official nod from the Ministry of Defense in the first place.

Among the last weapons Beijing wants to see under Taipei's command, submarines are among the very few platforms that deserve the term “game-changer”. This is particularly the case with Taiwan. If the island ever had to defend itself against a Chinese attack, diesel-electric subs could make a difference by prolonging the conflict so that things become dicey for Beijing.

Unlike Taiwanese fighter jets, which would have a hard time taking off or returning to base after Chinese ballistic missiles destroyed runways during the opening hours of conflict, submarines could hold out for significantly longer. In waters east off the island, they could - together with the Taiwanese fleet of surface combatants - open a corridor into the western Pacific for the US Pacific Fleet. This would be enormously detrimental to Beijing's interests as it lowers potential US losses, easing a US president's decision to order forces into the theater.

Taiwanese subs, if not built too large, could also ensure that any Chinese attempt of a large-scale amphibious landing incurred large losses in the shallow Taiwan Strait near to the coast. A bit farther flung but not entirely unrealistic is the notion that Taiwanese subs could block China's ports, taking aim at the mainland's economy.

Chinese breath of fire and brimstone

In October, economists Andreas Fuchs and Nils-Hendrik Klann at the University of Goettingen in Germany published a paper that gave a mild foretaste of what would be in store for any country daring to assist. Fuchs and Klann demonstrated that world leaders who have defied Beijing by welcoming the exiled Tibetan leader the Dalai Lama face an average 8.1% annual loss of exports to China for up to two years.

Euro-zone countries that in theory could play a role in Project Diving Dragon are not likely in the mood for any such shenanigans, which would likely irk China much more than any hosting of the Tibetan religious leader. Resource-rich Russia, which hopes to benefit from the stellar economic growth of its resource-hungry neighbor, is unlikely to consider anything of the sort.

This leaves only India. But Delhi does not have an indigenous conventional submarine construction capability. The Project 75A/76 program (the follow-on plan for six French Scorpene class diesel-electric submarines currently built in India) envisions help from either Europe or Russia, according to John Pike, director of the GlobalSecurity.org think-tank. By transferring technologies to Taiwan, India would risk jeopardizing a program deemed crucial in keeping up with China's naval modernization.

Besides, as China sees all weapons sales to Taiwan as “splittist”, India can take it for granted that China would support separatist insurgencies in India in retaliation.

Political will in Taipei is also likely lacking. Lai I-chung, a member of the research body the Taiwan Thinktank, told Asia Times Online that Ma and his ruling Kuomintang party (KMT) had in the past decade opposed subs because they saw them as offensive and overly expensive weapons that would destabilize the situation across the Taiwan Strait.

Lai said that from 2000 to 2008 - when the KMT was in the opposition but held legislative majority - it blocked a special budget for subs over 60 times.

“But this all of a sudden changed in January 2011,” Lai said. “In a surprise statement, Ma named subs and new F-16s [fighter jets] as Taiwan's two preferred weapon systems for purchase. Nobody knows why he changed his mind.”

Tsai Ming-Yen, chairman of the Graduate Institute of International Politics at Taiwan's National Chung Hsing University, suggested that the sub stories could have to do with Ma wanting to calm public fears before he starts political talks with China if he wins a second term in the presidential elections to be held on January 14, particularly over a peace agreement he's pledged to seek with the mainland.

“By telling the public he can build subs in Taiwan, Ma is reassuring them that the peace agreement won't be detrimental to Taiwan's security,” Tsai said.

Gavin Greenwood, a consultant with the Hong Kong-based security risk management consultancy firm Allan & Associates, has another take on Ma's u-tune. He said that from Taiwan's perspective, routine reminders to the US over undelivered arms packages served ulterior purposes.

“It gives Taipei some leverage on the more ‘doable’ deals - upgrades of the F-16 fleet and Patriot systems and delivery of the Blackhawk helicopters for example. It also fends off domestic opponents by seeming to strive for greater defenses against China with little risk of actually having to acquire - and pay - for the actual kit,” Greenwood said.

Steve Tsang, director of the University of Nottingham's China Policy Institute, said that even if Project Diving Dragon and other such plans don't exist, allowing rumors to gain credibility is not too bad an option for the Taiwanese.

“If Taiwan should not develop an effective submarine force but could get the only power that will threaten its existence to divert a significant part of its military budget to develop an anti-submarine capability, it will mean less being spent on items that can pose a real threat to Taiwan's existence,” Tsang said.

Oscar Shifts From Quality To Quantity

Strategyworld.com, January 7

Russia is planning to rebuild its Oscar II class nuclear submarines to carry a wide variety of missiles. Currently, each Oscar II carries 24 large anti-ship missiles. But by rebuilding the missile launchers (which are outside the pressure hull) to carry more, but smaller missiles, each Oscar II can carry up to 72 missiles. This makes it easier to overcome the anti-missiles of enemy surface ships. What is lost in range and warhead size will be made up with better target detection and countermeasures technology.

Russia has eight Type 949A SSGNs (nuclear powered cruise missile submarine). Known in the West as the Oscar II class, these boats began entering service just as the Cold War ended (three were in commission when the Soviet Union disintegrated in 1991). Construction continued on six more, and by 1997, eight were in service. Seven Oscar IIs remain in service, as the Kursk was lost in 2000, to a well-publicized accident. The Oscar's were designed as “carrier destroyers,” with long range cruise missiles that could, in theory, take out an American aircraft carrier.

The Oscar II class boats have a surface displacement of 14,000 tons. They have eight torpedo tubes (four 650mm/25.6 inch, four 533mm/21 inch), and 24 SS-N-19/P-700/Shipwreck/Granit missiles. These anti-ship missiles have a range of 550 kilometers, a speed of 1600 kilometers an hour, and a 750 kg (1,650 pound) high-explosive warhead (or a nuclear warhead of 350 or 500 kilotons as an option). The Oscar's crew of 107 contains 48 officers. That's because of the high degree of automation, and the need to offer officers pay and accommodations to attract the technical talent required to keep these boats going. The United States and Russia are no longer at each other's throats, especially on the high seas. The Oscar's are expensive to operate, and were scheduled for retirement over the next decade, as their nuclear reactors were due for refueling. The decision to refurbish the Oscar IIs indicates that the navy believes it won't get money for replacement boats.

The P-700 missile is an older, and bulkier, design. New launching tubes would allow it to fire more of the Yakhont (also known as Oniks, P-800 or 3M55). This is a 8.9 meter (27.6 foot) long, three ton missile with a 300 kg (660 pound) warhead. Early ship launched versions had a range of 120 kilometers, but the more recent models have a range similar to the Harpoon. The big advantage of the Yakhont is its high speed (about 2,500 kilometers an hour). This makes it more difficult to defend against. The 546 kg (1,200 pound) Harpoon is 4.6 meters (15 feet) long, has a 222 kg (487 pound) warhead and a range of 220 kilometers. It approaches the target low, at about 860 kilometers an hour. GPS gets the missile to the general vicinity of the target, then radar takes over to identify and hit the target. The Harpoon has successful combat experience going back two decades. Most corvettes and many frigates are small enough to be destroyed by one Harpoon. Yakhont does more damage because of the high speed, and greater weight. Yakhont was originally deployed as a “carrier killer”. Both missiles cost about the same (\$1.2 million each).

Nuclear submarine fire mystery deepens

The Foreigner, January 8

The ‘Yekaterinburg’ torpedo compartment blaze could have had catastrophic consequences even though it did not affect the reactor. Environmental organisation Bellona reported the damaged Delta-IV class sub sailed from the Roslyakovo dry dock to Severodvinsk in Arkhangelsk Oblast via the Okol’naya base. Equipment at Okol’naya includes cranes to remove ballistic missiles.

The Russian Defence Ministry refused to confirm the Okol’naya route, maintaining there was no weaponry about ‘Yekaterinburg’.

Nevertheless, Bellona’s Alexander Nikitin, a former Russian submarine captain, claimed leaving any such arsenals aboard, including Intercontinental Ballistic Missiles (ICBMs) or nuclear warheads, is common for short-term repairs.

The 18,200-ton vessel can carry up to 16 ICBMs, each with four warheads, as well as 12 torpedoes. According to RT, these missiles were removed beforehand.

Meanwhile, Vice-Admiral Einar Skorgen, former commander of defence for northern Norway, said there was never any danger the fire would damage the reactor, which had been shut down.

“As far as I know, there are two important things that are located forward in the submarine, the torpedo tubes pass through the section and the sensors are [also] located there,” he told NRK.

To damage the reactor, the fire “would have to have occurred on the inside of the pressure-proof hull, but there is little chance that it might have happened.”

He alleged the Russians withheld information about the fire “to hide they had made another mistake.” The ‘Yekaterinburg’ blaze took 20 hours to extinguish. It is estimated nine people were injured.

3 Subs Sale Deal Signed With S Korea

Pakistan Observer, Jan 6, 2012

Batam—Indonesia has signed a contract with a South Korean shipbuilding company on the purchase of three submarines with emphasis on technology transfer in the manufacturing process, Deputy Defense Minister Sjafrie Sjamsoesdin said.

Under the contract, South Korea’s Daewoo Shipbuilding and Marine Engineering (DSME) would build two of the submarines in Korea with the participation of Indonesian personnel in the manufacturing process and the third one in Indonesia in the dockyard of PT PAL in East Java, he said

“The purpose of the US\$ 1.80 billion scheme is also transfer of technology in the building of submarines,” Sjafrie said. Meanwhile, Maj Gen Ediwan Prabowo, head of the defense ministry’s defense facilities agency, said the first submarine would be entirely built in South Korea with 30 personnel of PT PAL participating in the project as interns. The PT PAL people would be assigned to master the designing phase of the submarine building project and participate in preparations to construct the second submarine.

Later, Indonesia would send up to 130 shipbuilding personnel to Korea to be involved in the process of making the second submarine. “Eventually, we hope the third submarine can be wholly built at the dockyard of PT PAL in Indonesia so that local human resources can gain full submarine building competence,” he said. Ediwan said the government expected the first submarine to be completed in 2015, the second in 2016 and the third in 2017. “With the acquisition of the three new submarines, the Indonesian Navy’s combat and deterrent capability will be significantly enhanced,” he said.—AP

WJC’s Lauder: Israel Needs More Subs

JTA.org, Jan 5, 2012

NEW YORK (JTA) — The president of the World Jewish Congress, Ronald Lauder, urged Israel to expand its fleet of submarines in response to the Iranian threat.

Writing in the New York Post, Lauder warned that Iran could destroy Israeli military bases and airfields in a surprise attack using conventionally armed missiles. He said that additional Israeli submarines could serve as a deterrent.

He also suggested that Israeli submarines could help deter a nuclear strike.

“Expanding Israel’s submarine fleet with a potent reach and powerful warheads would send a clear and unmistakable message to radical Islamic fundamentalists that Israel has the means to confront with massive deadly force a first strike nuclear attack in the Middle East,” Lauder wrote in the Op-Ed, which was first published on the newspaper’s website Wednesday night.

Lauder wrote that defense analysts believe that Israeli submarines are able to fire “nuclear capable Harpoon cruise missiles from within retrofitted torpedo tubes.”

Israel is believed to have nuclear weapons but maintains an official policy of nuclear ambiguity.

Lauder served as deputy assistant secretary of defense for European and NATO affairs under President Ronald Reagan.

Former US Ambassador Says Submarines Could Save Israel From Iran

The Algemeiner, January 4

In Wednesday morning’s New York Post, Ronald Lauder – former United States Ambassador to Austria and current President of the World Jewish Congress – made the case for enhanced Israeli submarine activity in the Indian Ocean as a necessary deterrent against an Iranian military threat.

In regards to a possible attack from Iran, Lauder writes “That’s why Israel needs to use the Mediterranean and Indian Oceans as a bastion for its diesel-powered submarines”. He briefly touches on the limited capabilities of diesel powered submarines and points to an Israeli test in the Indian Ocean, which sent a warhead 1,000 miles, as proof that the Israeli Navy can operate in the world’s third largest ocean.

They can, in a time of absolute necessity, for very short time-frames.

According to one military expert, diesel powered submarines are not designed and are not capable of making long range runs without the assistance of other submarines to help re-fuel.

“The size of the Israeli Navy, it’s very small, maybe with two more coming. You need a very significant number of submarines to have a strong presence all the time. The Indian Ocean is far away and huge limiting factors are diesel fuel and food”, says Retired US Naval Officer and current professor at the US Army War College, John Patch.

Lauder writes “To be credible, Israel will need more than a five-boat fleet of subs. At least two submarines must be at sea at any given time, one in the Indian Ocean, to ensure a genuine deterrent, while others are undergoing maintenance, retrofitting and refueling”. According to Patch, at least two diesel submarines would need to be operating in the Indian Ocean at once if the navy were to be engaged in long term operations there, due to the need for re-fueling.

Food may seem like a simple problem to solve, but it’s not.

“U.S. boomers that go on long patrols, their biggest limiting factor is food. It’s either provided by a ship at sea, which is not done by many countries because it’s very hard to pull up next to a ship, or you do it in port, and you get some repair parts and supplies”.

There is little doubt that Israel would be in favor of any and all deterrents against an Iranian attack, but in the case of a sustained Israeli submarine presence in the Indian Ocean, according to the professor it most likely isn’t possible anytime soon.

“In a pinch, to do it in a crisis situation, you could probably do that, but it would be very hard”, said Patch.

Hidden Bag Found On USS Cobia Submarine

Herald Times, January 2

MANITOWOC - Imagine Paul Rutherford’s surprise when he was working aboard the USS Cobia and came across a bag that likely hadn’t been touched by human hands since World War II.

Rutherford is maintenance supervisor for the Wisconsin Maritime Museum, where the submarine draws thousands of visitors each year.

The Cobia yielded its surprise to Rutherford on Dec. 21. He was on his back, squeezed into a tight space installing a protective cage around a light fixture above upper sleeping bunks in the after torpedo room.

“I had to take off the cover around the light fixture so I could use that to attach the cage to it,” he said. “I realized I didn’t bring the cages with me. I couldn’t reach them and I didn’t want to crawl down because it’s a struggle, so I called for some help.”

During the five minutes or so that he waited, his imagination went to work. He put himself in the mindset of a World War II submariner and wondered if one of them might have stashed something in a nearby nook.

“Wouldn’t that be cool if I found something,” he thought to himself.

Rutherford reached his hand above an electrical utility box behind the escape hatch.

And there it was. A brown leather zippered toiletry bag, flattened from being shoved into a 2- to 3-inch-high space more than 60 years ago.

"So I pulled it out," he said. "There was actually a lot of dust on it and one edge was spray-painted white," likely from remodeling during the '60s or '70s before the museum acquired the submarine, he said.

Rutherford waited until he finished his work and shimmied out of the tight space to see what was inside.

The bag yielded up a small empty red corduroy pouch, a rubber stamp with a seaman's name, a "100 Cocktails" booklet, and two poems, "Give Us a Drink" and "Navy Wife."

"That thing had definitely been up there longer than I've been alive," said Rutherford, 47. "If I wouldn't have forgotten to bring the cages with me, I would have never have found these items."

Using the rubber stamp as her guide, Karen Duvalle, submarine curator, consulted crew records and identified the objects as being from Seaman First Class Hersey J. Williams, who served aboard the USS Cobia on the submarine's fourth war patrol, which departed from Perth, Australia, on Dec. 12, 1945.

Chances are that one of the two bunks near the area where the bag was found belonged to him, Duvalle said.

"The submarine has been here for 41 years, and to find something that has been there for 66 years . that's exciting," Duvalle said. "It was a tricky area to get to - that's why it has been up there for so long."

While the bag was flattened, everything inside was in good condition, she said.

"It's kind of odd," Rutherford said. "It's not stuff you would usually find in the bag. We thought maybe he left it there as some sort of Navy tradition or something. It was in a place that you wouldn't have put something like that normally. That's why it was cool finding it."

It was typical for submariners to keep personal items in small personal lockers, bunk bags and small lockers in the crew's washroom of the submarine, Duvalle said.

The drink booklet contains recipes for martinis and rum drinks, she said.

The "Navy Wife" poem warned women not to become a sailor's wife unless they could answer yes to the questions it asked, including, "Can you sit home nights just waiting/Until the war is won?"

The other poem was a little salty, peppered with what Duvalle called "sailor talk."

The little red bag might have once held the seaman's razor, she said.

Duvalle plans to scour the museum's archives, talk to veterans and do Internet research to find out more about the submariner who, possibly on a whim, tucked the bag into the bowels of the submarine and maybe even chuckled as he thought of the day that it might be found.

Iran Launched Mehrab Surface Missile For First Time

Zawya, January 1

Iran launched Mehrab surface missile for first time, FNA reported.

Iran tested medium range Mehrab firing from Peykan class Gorz boat. Iran also fired Tp-47 Ajdar rockets by Ghadir submarine during Velayat-90 war game.

Iran Navy Commander Rear Admiral Habibollah Sayyari said Sunday that his forces will fire surface-to-air missiles today during the naval drills dubbed 'Velayat 90' being conducted in the strategic Strait of Hormuz.

Speaking to IRNA, he said the missiles have been built by committed experts of the Navy as well as scientific and defense industries centers.

He noted that several surface-to-surface, surface-to-sea, shoulder-launched missiles and torpedoes will also be fired during Sunday and Monday operations of the naval forces.

Iran's Navy started the massive 10-day Velayat 90 naval exercises on December 24.

The drills cover an area from the east of the strategic Strait of Hormuz in the Persian Gulf to the Gulf of Aden.

Iran maintains that the drills are defensive in nature and intended to convey a message of peace and friendship to the regional countries.

Iran Drill Showcasing Newest Submarines

Press TV, December 31

The spokesman for Iranian Navy's Velayat 90 war games in the Strait of Hormuz says three of Iran's newest domestically-manufactured Ghadir-class submarines are actively present in the naval drills.

Speaking on the eighth day of the military exercises on Saturday, Rear Admiral Mahmoud Mousavi pointed out that all systems and equipment of the three submarines have been designed and manufactured by Iranian experts.

The 120-ton Ghadir submarine which was first unveiled in 2007 has excellent shallow depth performance and can conduct prolonged coastal missions. The Iranian fleet currently has 11 Ghadir submarines in service.

Mousavi said, Iran has the know-how of designing and building different classes of submarines today, expressing hope that in the near future the Iranian Navy will manufacture submarines with higher tonnage.

The Iranian commander also made reference to the Navy's strategic focus on night operations, saying the naval forces make optimum use of their electronic and wiretapping equipment to prepare themselves to overcome the restrictions of operations within darkness.

The power phase of Velayat 90 naval maneuver commenced early on Saturday.

Iran's Navy launched the massive 10-day naval exercises on December 24. The military maneuvers cover an area from the east of the strategic Strait of Hormuz in the Persian Gulf to the Gulf of Aden.

Iran says that the drills are defensive in nature and intended to convey a message of peace and friendship to the countries in the region.

Russian Nuclear Submarine Blaze Injures Nine After Crew Remain Inside

The Guardian, December 30

The Russian president, Dmitry Medvedev, has ordered an investigation after a nuclear submarine caught fire during repairs in the Arctic, injuring at least nine people.

The blaze, believed to have been started by a welding lamp igniting rubbish and wooden scaffolding next to the craft, raged for nine hours at a shipyard in the Murmansk region. Up to 30 crew members remained inside the submarine, although it was unclear if they were trapped.

Russian officials were quick to announce there had been no radiation leak from the nuclear sub, named Yekaterinburg, after the flames were extinguished. Conflicting reports said between nine and sixteen people were treated for smoke inhalation. Bellona, a respected Norwegian NGO which monitors Russia's nuclear fleet, said the number of casualties may have been higher.

Friday's fire was the second blow for Russia's military this week after it emerged a blogger had published photographs of a night visit to a secret rocket engine factory near Moscow. It is also the latest in a string of accidents to befall Russia's fleet of nuclear submarines in recent years, the most notorious being the explosion that sent the Kursk to the bottom of the Barents Sea in 2000, killing all 118 crew on board. A K-159 submarine sank in the same waters three years later with the loss of nine men, and 20 people died after the leak of a fire suppressant gas on a K-152 Nerpa off Russia's Pacific coast in 2008.

The K-84 Yekaterinburg, launched in 1984, is normally equipped with up to 16 missiles and 12 torpedoes. It was reportedly unarmed and in dry dock when the fire started Friday afternoon and spread to the rubber shell around the craft. About 400 emergency workers struggled to contain the blaze using helicopters and tug boats, partially submerging the vessel in order to put it out.

The 18,200-tonne, 167-metre Yekaterinburg was reportedly used twice this year to successfully test-fire the Sineva ballistic missile, also known by its Nato designation Skiff.

Igor Konashenkov, a defence ministry spokesman, said the Yekaterinburg's reactor was out of operation at the time of the accident, which happened at the Roslyakovo dock, one of the main port's for Russia's northern fleet, situated about 900 miles north of Moscow close to the city of Murmansk. "There is no danger of a radioactive leak," he said.

Prosecutors have launched a criminal investigation into the accident. Medvedev ordered deputy prime ministers Dmitry Rogozin and Igor Sechin to examine the causes of the fire and ensure the craft is restored.

The fire will embarrass Medvedev, who this year approved £400bn of arms spending to 2020.

The desolate region around Murmansk contains the biggest concentration of old nuclear reactors in the world and, since the cold war ended, has become the world's atomic dustbin. Murmansk is home to the old Soviet Union's northern fleet of nuclear submarines, many of Russia's atom-powered icebreakers and several 40-year-old civil reactors.

Alexander Ruzankin, head of economic development for the Murmansk region, says it has around 200 working nuclear reactors and 20,000 separate stores of waste, ranging from containers full of radioactive water to decrepit buildings full of fuel rods.

Nearly 20% of the world's reactors and nuclear fuel is concentrated in the region. A few obsolete nuclear submarines are decommissioned each year with the help of US and Norwegian aid, but the nuclear legacy is growing as Germany and former Soviet states send their radioactive research reactors and nuclear waste there for decommissioning and eventual shipment to the Urals.

Many of the stores are in a dangerous condition and are leaking water and radioactive substances into the soil and water.

Holland Club New Inductees: Alberto Poblete John Lester Fred DeWitt



CJ GLASSFORD MEMORIAL PHOTOS









Digitizing Our U.S. Submarine WWII War Patrol Reports

Forward:

"This effort by EMC (SS) John Clear USN (Ret) is truly remarkable. For over 40 years, although declassified, the remarkable exploits of the U. S. Submarine Force during WWII sat on microfilm in a few museums and files, essentially untouched. His initiative revealed factual accounts of each U. S. submarine war patrol during WWII. In my view, that delay in publication was a travesty which should not have occurred for our WWII submarine veterans.

The Cold War is over. It should not take four decades before the importance of U. S. Submarine efforts during that period are made public."

Very Respectfully, VADM Roger F. Bacon, USN (Ret)

Digitizing Our U.S. Submarine WWII War Patrol Reports

I first became acquainted with the WWII U.S. Submarine War Patrol Reports microfilm collection at the Naval Undersea Museum, Keyport, WA in the summer of 2006, while volunteering as a docent at the museum. This little known and very infrequently used collection is housed within the 3rd floor, non-lending library of this outstanding facility which is one of only a small hand full in our nation where these reports can be viewed.

Being a retired SubLant and SubPac Chief, whose naval career had included tours of duty on three of these WWII veteran submarines, I was interested in their war time history and achievements. With help from the museum's staff (in particular Jennifer Heinzelman, Collections Manager), I soon became well versed with the library's microfilm reader as to how to set-up and peruse the film rolls of the 255 U.S. submarine's war patrol records. These numerous microfilm rolls are housed in large collection drawers there within the library.

What immediately struck me in reading these histories from the microfilm copies of the original paper reports was the succinct manner in which these histories had been recorded at the time of and where these events occurred. Some of these reports were almost "casual" in their presentation of these awesome events. As an example: one of my previous tours of duty was on the USS Sealion SS-315 which just happened to be the only submarine in history to sink an enemy battleship in wartime. To read the pertinent pages from within this particular report of this patrol one would think that this type of occurrence was rather commonplace and not of such monumental importance as it had been. Well known submarines and individual heroes of these times seem to be "alive" in their patrol report depictions. The officers making the input and the yeomen that typed up these multi-copy reports on their old Underwood typewriters did so with an almost clinical detachment, ultimately providing an insight as no other form of written historical log or book has given us.

Again with the aid of the staff I was able to print out some of these pages but it was a very slow and cumbersome chore. It wasn't until I was able to reconnect the microfilm reader's output directly to a computer and hence save pages in a digital format that this effort began to come together and make sense. From my research I had found that nearly half of these microfilmed reports were photographed in 16mm and the rest in 35mm, in that, again, I found another problem. The 16 mm pages were an easy and direct "save to" on the p.c., but the 35mm had to be worked on with an average of three shots and then laboriously "stitched" together with the computers software. To say that this slowed down the procedure is an understatement. Fast calculations showed that I had about 5 years of 8 hour days ahead of me at the rate that I was preceding.

By the fall of the year I had been hooked on this project. One day while talking with an active duty LCDR and Jennifer, I decided that this project had to be taken on in earnest in order to more easily share these historic times with the many rather than just the few that had access to these microfilm libraries. I wanted to get these stories out while we still had some of our WWII submarine veterans with us, whose stories were told within these pages.

Further research found that recent technology had been developed that could now take on this conversion in a manner that would not require the manual, laborious efforts thus far expended. This newer technology was basically a huge machine that could read and convert these microfilm rolls faster than I ever could hope to accomplish. Two major companies were queried as to cost. The pricing, while fair (quoted at over six thousand dollars), was not something that the museum, nor its supporting foundation, would be able to fund. With the help of a long time friend, Dan Martini EMCM (SS), USN Ret., a partnership was formed and registered in Jefferson County of Washington State

with the express purpose of handling this project. The museum agreed to lend out the microfilm rolls (some 255) to the company that we had agreed upon and the partnership would pay the cost of the conversion process.

It was at about this time that Vice Admiral Roger Bacon, of the museums foundation, had heard of our project and wanted to help make the project move into reality. Admiral Bacon's father had been a highly respected WWII submarine Commanding Officer and thus Admiral Bacon's interest in these reports had been in mind for many years.

The initial run received from the conversion company came down to 28 full DVDs containing all of the 1,600+ war patrol reports of the 255 submarines involved. We were provided with two master copies, one in .jpg (picture) format and the other in .pdf (Adobe Reader) format. These reports were assembled in hull number sequence, oldest to the newest of the participating WWII subs. As per SubPacs instructions, the vast majority of the war patrol reports were written within the require guidelines as follows;

- | | |
|---|--|
| (A) Prologue | (M) Radar |
| (B) Narrative (date & time) | (N) Sound gear & conditions |
| (C) Weather | (O) Density Layers |
| (D) Tidal information | (P) Health, food & habitability |
| (E) Navigational aids | (Q) Personnel |
| (F) Ship Contacts | (R) Miles steamed, fuel used |
| (G) Aircraft | (S) Duration |
| (H) Attacks | (T) Factors of endurance remaining |
| (I) Mines | (U) Communication, radar and sonar countermeasures |
| (J) Anti-submarine measures and evasive tactics | (V) Remarks |
| (K) Major defects | |
| (L) Radio | |

It was also at this point that we registered our newly converted war patrol reports and were issued an ISBN number of 13: 978-0-615-17769-4. together with an intellectual copyright being filed (to protect the digital conversion).

By early 2007 we had the final masters on hand and began further production from these sets. Admiral Bacon (as our mentor) financed the first (costly) five sets and donated these to the Newport, RI and Monterey, CA Naval War College libraries, the St. Mary's, Georgia Museum, USS Nautilus Museum, Groton, CN and the USS Bowfin Museum, Honolulu, HI. The partnership in turn provided a master set to the Naval Undersea Museum and to some eight submarines stationed at Bangor Submarine Base, WA during our quarterly NSL NW meetings.

Later that year, during the 2007 USSVI Alaskan Cruise Convention, these patrol reports were first introduced, in their new user friendly digital format to the submarine community at large. We also posted this information on the internet at the same time. It was the partnership's agreement, to provide at no cost, any copy of any submarine reports to any WWII sub vet or his immediate family, several hundred individual boat's patrol reports were thus sent out. Many submarine authors, (Tom Clancy, et al), researchers, and historians were among the initial purchasers.

By 2009 it was decided to make these reports available for free viewing to the general public directly on the internet. Rich Pekelney of the Historic Naval Ships Association, (HNSA), was contacted and uploaded all of the reports onto their website with a bravo zulu sent back to the partnership and our mentor Admiral Bacon. While able to view the reports for free via the internet, these pages are not easily copied or printed out.

In quick order further improvements in computer software allowed the reports to be further converted to a "compressed pdf" format greatly reducing the production time and lowering the overall cost to less then 1/10 of the initial offering. The total of the reports including all of the appendices (which include some fifteen cross references, by boat, C.O. etc.) are now on just 4 DVD's in this compressed .pdf format.

We have archived the initial run in the .jpeg format to allow for further "cleaning up" (in time) of some of the reports that were either too light, dark, smudged or had any other problems in their reading quality.

The outcome of this effort has provided an easy to use reference of the thousands of pages that if printed out on single sided paper, would be a book at over 22 feet across, a massive work!

The company, (now a corporation), has continued to provide these reports at an extremely low cost to a world wide audience. Our initial desire to acknowledge our WWII Submarine Veterans still alive has been well met and we will continue in our stated efforts through Submarine Memorabilia, Inc...

John Clear EMC(SS) USN Ret.
Submarine Memorabilia, Inc.
180 Robin Lane
Port Ludlow, WA 98365-9522
webmaster@usssealion.com

Listing of all U.S. Submarines in WWII (Pacific) by Name (alpha), Hull Number (i.e. SS-218), Number of Patrols Made & Total Pages Within War Patrol Reports.

Albacore	218	10	551	Cero	225	8	485	Herring	233	7	156	Razorback	394	5	275	Seadragon	194	12	468
Amberjack	219	3	82	Charr	328	3	114	Hoe	258	8	320	Redfin	272	7	290	Seahorse	304	8	439
Angler	240	7	338	Chub	329	3	138	Icefish	367	5	177	Redfish	395	2	201	Seal	183	12	557
Apogon	308	8	253	Cobia	245	6	269	Jack	259	9	304	Robalo	273	3	143	Sealion	315	6	330
Archerfish	311	7	223	Cod	224	7	466	Jallao	368	4	127	Rock	274	6	67	Searaven	196	13	594
Argonaut	166	2	82	Crevalle	291	7	506	Kete	369	2	36	Ronquil	396	5	251	Segundo	398	5	236
Argonaut	475	1	78	Croaker	246	6	266	Kingfish	234	12	522	Runner	275	3	94	Sennet	408	4	146
Aspro	309	7	286	Cutlass	478	1	21	Kraken	370	4	144	Runner	476	1	77	Shad	235	11	362
Atule	403	4	190	Cuttiefish	171	3	92	Lagarto	371	2	43	S-11	116	6	40	Shark	174	3	201
Balao	285	10	410	Dace	247	7	691	Lamprey	372	3	85	S-13	118	4	36	Shark	314	?	???
Bang	385	6	235	Darter	227	4	290	Lapon	260	8	325	S-15	120	3	25	Silversides	236	14	467
Barb	220	12	503	Dentuda	335	1	47	Lionfish	298	2	74	S-17	122	6	63	Skate	305	7	108
Barbel	316	4	139	Devilfish	292	4	97	Lizardfish	373	2	101	S-18	123	7	72	Skipjack	184	10	391
Barbero	317	2	100	Diablo	479	2	17	Loggerhead	374	2	59	S-23	128	7	61	Snapper	185	11	371
Barracuda	163	6	36	Dolphin	169	3	61	Macabi	375	1	32	S-26	131	2	120	Snook	279	9	334
Bashaw	241	6	312	Dragonet	293	3	117	Manita	299	1	37	S-27	132	1	107	Spadefish	411	5	308
Bass	164	4	47	Drum	228	13	350	Mingo	261	7	257	S-28	133	7	451	Spearfish	190	12	495
Batfish	310	6	331	Entemedor	340	1	26	Moray	300	1	29	S-30	135	9	152	Spikefish	404	4	113
Baya	318	5	229	Finback	230	12	417	Muskellunge	262	7	250	S-31	136	8	152	Spot	413	3	189
Becuna	319	5	200	Flasher	249	6	265	Narwhal	167	16	357	S-32	137	8	120	Springer	414	3	86
Bergall	320	5	175	Flier	250	2	130	Nautilus	168	15	452	S-33	138	8	128	Steelhead	280	7	308
Besugo	321	5	268	Flounder	251	6	278	Paddle	263	8	381	S-34	139	7	92	Sterlet	392	5	237
Billfish	286	8	285	Flyingfish	229	12	555	Pampanito	383	6	240	S-35	140	8	143	Stickleback	415	1	33
Blackfin	322	5	60	Gabilan	252	6	225	Parche	384	6	274	S-36	141	2	87	Stringray	186	16	470
Blackfish	221	12	432	Gar	206	15	347	Pargo	264	8	482	S-37	142	7	173	Sturgeon	187	11	315
Blenny	324	4	495	Gato	212	13	552	Perch	176	2	349	S-38	143	9	40	Sunfish	281	11	459
Blower	325	3	123	Golet	361	2	27	Permit	178	14	598	S-39	144	5	117	Swordfish	193	13	422
Blueback	326	3	267	Grampus	207	6	243	Peto	265	10	380	S-40	145	9	146	Tambor	198	12	461
Bluefish	222	9	402	Grayback	208	10	477	Pickrel	177	7	254	S-41	146	8	160	Tang	306	5	206
Bluegill	242	6	389	Grayling	209	8	143	Picuda	382	6	291	S-43	154	3	107	Tarpon	175	12	393
Boarfish	327	4	154	Greenling	213	12	427	Pike	173	8	219	S-44	155	4	99	Tautog	199	13	653
Bonefish	223	8	508	Grenadier	210	6	199	Pilotfish	386	6	203	S-45	156	4	95	Tench	417	3	125
Bonita	165	7	43	Grouper	214	12	311	Pintado	387	6	236	S-46	157	5	133	Thornback	418	1	76
Bowfin	287	9	524	Growler	215	11	404	Pipefish	388	6	248	S-47	158	7	186	Threadfin	410	3	146
Bream	243	6	365	Grunion	216	1	30	Piper	409	3	111	Sailfish	192	12	366	Thresher	200	15	120
Brill	330	3	89	Guardfish	217	12	590	Piranha	389	5	227	Salmon	182	11	431	Tigrone	419	3	200
Bugara	331	3	62	Guavina	362	6	242	Plaice	390	6	354	Sand Lance	381	5	168	Tilefish	307	6	257
Bullhead	332	3	75	Gudgeon	211	12	566	Plunger	179	12	357	Sargo	188	12	447	Tinosa	283	11	521
Bumper	333	2	82	Guitarro	363	5	300	Pogy	266	10	334	Saury	189	11	431	Tirante	420	2	131
Burrfish	312	6	297	Gunnel	253	8	352	Pollack	180	11	372	Sawfish	276	10	364	Toro	422	2	51
Cabazon	334	1	36	Gumard	254	9	489	Pomfret	391	6	359	Scabbardfish	397	5	223	Torsk	423	2	70
Cabrilla	288	8	368	Hackieback	295	2	95	Pompano	181	7	182	Scamp	277	8	229	Trepang	412	5	326
Cachalot	170	3	52	Haddo	255	10	384	Pompon	267	9	227	Scorpion	278	4	102	Trigger	237	12	381
Caiman	323	4	117	Haddock	231	13	334	Porpoise	172	6	213	Sculpin	191	9	285	Triton	201	6	205
Capelin	289	1	64	Hake	256	9	320	Puffer	268	9	483	Sea Cat	399	4	155	Trout	202	11	289
Capitaine	336	1	61	Hallbut	232	10	357	Queenfish	393	5	248	Sea Devil	400	4	228	Trutta	421	2	154
Carbonero	337	2	50	Hammerhead	364	7	283	Quilback	424	1	63	Sea Dog	401	4	199	Tullibee	284	4	125
Carp	338	1	56	Harder	257	6	325	Rasher	269	8	543	Sea Fox	402	4	148	Tuna	203	13	497
Catfish	339	1	38	Hardhead	365	6	314	Raton	270	8	317	Sea Owl	405	3	184	Tunny	282	9	472
Cavalla	244	6	323	Hawkbill	366	5	250	Ray	271	8	399	Sea Poacher	406	4	193	Wahoo	238	7	165
												Sea Robin	407	3	177	Whale	239	8	427
												Sea Wolf	197	15	590				