NAVY NEWS WEEK 27-1

1 July 2018

Fisheries bill to protect fishermen from piracy

A Fisheries Management Bill will protect fishermen and impose penalties against trespassers in Trinidad and Tobago waters. This was the assurance given by Pio Manoa, Legal Officer of the Food and Agriculture Organisation, addressing concerns raised by Tobago fishermen at a consultation on the draft Bill for Tobago Fisheries stakeholders, last Thursday at the Conference Room of the Division of Environment, Shaw Park. Curtis Douglas, Vice President of the All Tobago Fisher Folk Association (ATFA), noted numerous complaints by the island's fishermen about Venezuelan pirates and reports of robberies at gunpoint, tampered fishing gears and threats.Douglas said ATFA has called on the authorities, including the Trinidad and Tobago Coast Guard, to assist Tobago fisherman against piracy. Manoa responded by noting that the draft bill contains laws to address the issue of piracy and protection for fishermen under the United Nations Convention on the Law of the Sea, 1982 Treaty – which provides for the rights and obligation in each maritime zone. "*If a vessel comes in to use one of your ports, you have an obligation to take action…if that vessel has been fishing in a manner that is illegal, unreported and unregulated (IUU),*" he said. He noted, however, "*when you come across a foreign fishing vessel that is fishing in a manner that is against the law and you bring that person in and take legal action against that person, you cannot include imprisonment as a penalty unless there is a treaty between Trinidad and Tobago and the country where that person is from.*"He added the trespasser must pay a reasonable bond/security in the sum of money to the port before he can be released, and if the fine cannot be paid, then the vessel and its occupants cannot be released. "*If a foreign vessel is caught violating your Fisheries Laws in the territorial sea, you have the same obligations and you can include imprisonment as a penalty. For that zone you don't have to prompt a release as that requirement is not in the law. If they are caught closer in the archipelagic waters, imprisonment is impossible, prompt release is not imminent.*"Arguing for strengthening the legislature framework governing passage of vessels in TT waters, Manoa stressed that if this framework was weak, TT's position when negotiating with another state, would also be weak. He said IUU fishing by stateless vessels or vessels without a national flag would also be linked to TT's international and regional obligations to encourage long term sustainability in the fishing sector. Manoa also noted that the current 100-year-old Trinidad and Tobago Fisheries Management Act is the oldest law he has ever dealt. He said the FAO's main focus in working on the draft bill is to support the implementation of responsibilities for TT as a coastal, flag and port state. "*As a flag state, the International Tribunal for the Law of the Sea has said there is a due diligence obligations when we think about flag state responsibilities*," he said, explaining that a flag state must ensure measures ere in place to address complaints of vessels flying its flag and also ensure these are in a condition to follow rules when fishermen go out to sea. "*As a port state, a country can exercise sovereignty over its ports. A port state can impose very strong conditions, as it wishes*," he said, As a coastal state, Manoa, explained that "*if foreign vessels come in to fish under a licence, they can do that because we have an obligation as a coastal state. If we got surplus fish that our domestic fleet has not caught, then there is an obligation to grant that surplus to foreign vessels, based on the conditions we enforce*." **Source : trinidad & Tobago Newsday**

VIDEO/PICTURES: German frigate significantly damaged during missile misfire

By George Allison
June 27, 2018

German frigate Sachsen has suffered significant damage as a result of a misfiring missile.

The accident happened last week, June 21st, off Norwegian coast. We understand from local media reports that only two crew members were hurt, sustaining minor injuries.
The missile was launched from launcher in front of the bridge, but didn't take off and burned out in launcher, inflicting serious damage. See the video at this link: https://t.co/va2HMmJO06 . This comes at a bad time for the German military, not long after the scathing '***Report on the Operational Readiness of the Bundeswehr's Primary Weapons Systems'*** was published. The report lead the Bundestag's military commissioner, Hans-Peter Bartels, to complain about "large holes in personnel and equipment" in the Bundeswehr that have resulted in two thirds of the German armed forces being being non-operational. The problem, he explained, has worsened over time due to the German military not replacing out of date equipment. The German Navy temporarily lost its last submarine in October, as the rudder of its last Type 212A was severely damaged in a collision with a rock off the Norwegian coast while


the rest of the fleet was out of service. It is also understood that none of the new frigates, the Type 125s, are able to enter into operational service due to defects and a similar situation is faced by auxiliary ships, Berlin and Bonn, which were sent to dry dock for a year and a half of repairs. **Source: https://ukdefencejournal.org.uk**

He terrorized the NC coast in World War II. The last U-boat captain has died at 105.

BY BRUCE HENDERSON

The last surviving German U-Boat captain, who terrorized the Atlantic off North Carolina's Outer Banks early in World War II, has died at age 105. Reinhard Hardegen, who once described his exploits to the Observer decades after the war, died June 9, the Washington Post reportedHardegen commanded one of the first U-boats Germany deployed to intercept Allied supply lines shortly after the Japanese attack on Pearl Harbor on Dec. 7, 1941. "*I cannot describe the feeling with words, but it was unbelievably beautiful and great,*" he later wrote of approaching close enough to see Manhattan's glare from his boat, the New York Times reported. "*I would have given away a kingdom for this moment if I had one. We were the first to be here, and for the first time in this war a German soldier looked upon the coast of the U.S.A*." After his submarine sank two tankers off Long Island, he steered toward the Outer Banks and waited for merchant ships. There he sank three more ships. Hardegen, in a 1991 Observer interview from Germany, said his ***U-123*** tuned in Charlotte's WBT radio as it sat on the ocean bottom during the day and surfaced at night to hunt passing ships that were silhouetted by the glow from coastal towns. Hardegen, then 78, said he was astonished that he met almost no opposition from a U.S. military that was unprepared for the U-boat invasion of the East Coast. "*I was very surprised*," he said. "*There was no defense on the coast of the United States ... No blackouts, no dimming, nothing*." For seven months, what would come to be known as the Battle of the Atlantic was focused off Cape Hatteras and Cape Lookout, claiming hundreds of lives and scattering an estimated 50 to 60 sunken ships on the seabed within 100 miles of the N.C. coast. The area became known as "**Torpedo Junction**." Residents of Ocracoke Island saw loud explosions at night, orange fireballs and smoke from burning ships and found dead sailors on their beaches. The Union Jack still flutters over a cemetery for four British sailors who washed ashore in 1942. Two of the sunken ships — the German sub ***U-576*** and the Nicaraguan-flagged tanker it sank, the **SS *Bluefields*** — were the focus of a 2016 expedition off Cape Hatteras to document the wrecks. The U-boat sank the tanker with torpedoes and damaged two other ships, but was brought down when it was surfaced by U.S. aircraft and a naval escort. Members of the expedition by the National Oceanic and Atmospheric Administration, the nonprofit Project Baseline, UNC's Coastal Studies Institute and other partners were the first to see the ships since they went down in 1942. The wrecks, 240 yards apart in 750 feet of water, had previously been viewed only by the sonar that located them in 2014. The Bluefields crew had survived their ship's sinking, but the wreck of U-576 still holds the remains of 45 crew members. "*It goes from a page in a scientific report down to a very real place at the bottom of the ocean*," David Alberg, superintendent of the Monitor National Marine Sanctuary in Newport News, Va., said after the expedition. "*When you see (the submarine) and see the dive planes tilted up in a sign that* the ship was doing everything it could to get to the surface, and all the hatches sealed, you realize that this is a tomb for all *those young men we fought. You begin to look at it a little differently*." Hardegen, who rose to the rank of lieutenant commander, sank between 19 and two dozen merchant ships, the Washington Post reported. He became a hero, awarded Germany's highest military honor by Adolph Hitler, but later disavowed support for the Nazi party. He later came to the U.S. to speak with veterans group and meet with the families of his war victims.After the war, Hardegen said he had done his best to stem the losses and help survivors. Historian Michael Gannon, author of 1990's "**Operation Drumbeat**," corroborated Hardegen's accounts of once approaching a lifeboat to give survivors food and of ordering a neutral Swiss ship to pick up survivors of a sunken freighter."*Everyone stood at the railing, waved and wished us a good homecoming*," Cmdr. Hardegen wrote in his captain's log, the Post reported. "*Let's hope that they tell this at home and effectively dampen the atrocity propaganda about us.* **Source: Maasmond Maritime**

Navy fires commanding officer of sub *Montpelier*

The commanding officer of the fast-attack submarine ***Montpelier*** was relieved of command Monday, U.S. Submarine Forces officials said. Cmdr. Bradley Swanbeck was fired due to a loss of confidence in his ability to command, according to

SUBFOR officials. While officials declined to say what caused the loss of confidence, SUBFOR spokeswoman Cmdr. Sarah Self-Kyler confirmed that the Naval Criminal Investigative Service is investigating allegations of personal misconduct against Swanbeck Swanbeck has been reassigned to Submarine Squadron Four, Self-Kyler said. He had taken command of the Montpelier in April 2016. Cmdr. Jeffrey Tamulevich was fired this week over "*evidence of misconduct involving alleged fraternization*," Navy officials said . Capt. Todd Moore has assumed command of the Montpelier until a permanent relief is assigned, she said Swanbeck's firing is the second command relief of June, according to information provided to Navy Times. The Navy relieved Cmdr. Tim Rhatigan of his command of the Norfolk-based Helicopter Sea Combat Squadron 22 on June 1, citing a loss of confidence in his ability to command. **Source: navytimes**

And another one bites the dust!

Tuesday morning Dutch mine Counterneasure vessel **M 860 *Schiedam*,** passing Maassluis, en route Rotterdam

Photo : Cees Kloppenburg Maritime Photo Maassluis www.maritimephoto.info ©

The Tripartite class is a class of mine warfare vessel used by the navies of Belgium, France and the Netherlands, as well as Pakistan, Indonesia, Latvia, and Bulgaria. A joint venture of the navies of France, Belgium, and the Netherlands, the Tripartite class of minehunters were conceived in the 1970s and built in the 1980s. France built the mine-hunting equipment, Belgium provided the electronics, and the Netherlands constructed the propulsion train. France and the Netherlands originally bought 15, with Belgium buying 10 All three countries' Tripartite ships contribute at times to NATO's Standing Maritime MCM capability groups (SNMCMG1 or SNMCMG2). **Source: Maasmond Maritime**

The German Bremen class frigate **FGS *Augsburg*** arrives in Plymouth Sound June 15 for several weeks operational training.

Photo ; Raymond Wergan, Newton Ferrers. ©

BAE Systems to deliver increased firepower payload tubes for Block V Virginia-class submarines

BAE Systems has received a contract to produce payload tubes for two of the US Navy's new Virginia-class submarines to support increased firepower on the Block V version of the attack subs

Under the contract with General Dynamics Electric Boat, a builder of the Virginia class, BAE Systems will deliver two sets, each consisting of four tubes, for the Virginia Payload Modules on the SSN 804 and SSN 805. The Virginia Payload Module

(VPM) extends the length of the Block V submarines over previous versions of the Virginia-class by adding an additional mid-body section to create more payload space for greater firepower.

US Navy photo of Virginia-class attack submarine **USS *Illinois* (SSN 786)**

Each large-diameter payload tube can store and launch up to seven Tomahawk cruise missiles. The VPM offers exceptional flexibility as well for the integration of future payload types, such as unmanned systems or next-generation weapons. "*The Virginia Payload Module is critical to the Navy's undersea presence*," said Joe Senftle, vice president and general manager of Weapon Systems at BAE Systems. "*With the VPM, the Navy is adding significant capability to the Virginia-class by increasing the firepower of these subs and tripling their payload capacity*." BAE Systems, which is also providing payload tubes for the SSN 803 under a previously awarded VPM contract, has a long history of supporting the Navy's submarine fleet as the leading provider of propulsors and other submarine systems. The company was selected to provide propulsors, spare hardware, and tailcones for Block IV Virginia-class vessels and stands ready to provide the same support for the Block V subs. Under this most recent contract, BAE Systems will also develop the processes and tooling necessary for the Block V payload tube production. Work will be performed at the company's facility in Louisville, Kentucky, with deliveries scheduled to begin in 2020.

Source: https://navaltoday.com

Navy Pilot Killed in A-29 Crash Was Part of Light Attack Test Team

Posted: June 26, 2018 4:35 PM

By RICHARD R. BURGESS, Managing Editor

ARLINGTON, Va. — The naval aviator killed June 23 in the crash of a A-29 aircraft was part of the test team for the Air Force's Light Attack Experiment. Lt. Christopher Carey Short was one of two crew members flying in an A-29 Super Tucano when it crashed in the Rio Bombing Range, a part of the White Sands Missile Range in New Mexico. The other crew member suffered minor injuries. The flight, originating from Holloman Air Force Base, New Mexico, was an event in the Air Force's Light Attack Experiment, a demonstration of the A-29 and the AT-6 Texan II, said Air Force Lt. Col. Robert N. Carver, public affairs officer for the 49th Wing at Holloman. The experiment is being conducted to determine the value of using turboprop light attack aircraft instead of faster, more expensive jets for close air support in benign air-defense environments. Short was a Navy F/A-18 Hornet pilot assigned to Fighter Composite Squadron 12 — a Navy Reserve adversary squadron — based at Naval Air Station Oceana, Virginia. He was a member of the active-duty component of the Navy, unusual for a member of a reserve squadron. He was on a temporary assignment with the 49th Wing for the Light Attack Experiment, which began on May 7.

Source:http://seapowermagazine.org

An A-29 Super Tucano experimental aircraft flies over White Sands Missile Range, New Mexico, on Aug. 1, 2017.

(U.S. Air Force Photo by Ethan D. Wagner)

Submarine-Launched Variant of China's YJ-18 Supersonic Anti-Ship Missile Emerges

Posted On Monday, 02 October 2017 10:20

Pictures have emerged in China of a new submarine-launched variant of the YJ-18 supersonic anti-ship missile. The pictures show two slides from a presentation given by a retired People's Liberation Army Navy (PLAN or Chinese Navy) Rear Admiral at a Univertisty in August. The first picture shows a launch capsule (the vehicle for the underwater part of the launch) which appears similar in shape and size to the Russian Kalibr capsule. The second image shows the missile breaking the surface during a test launch. While some open sources refer to the submarine launch variant of YJ-18 as "YJ-18B" this has never been officially confirmed and the top of the slides actually reads "YJ-18 subsonic/supersonic anti-ship

guided missile". Other variants reportedly include a ship launched land attack cruise missile, a ship launched anti-ship missile and a truck launched anti-ship missile.

Launch capsule of the YJ-18 submarine launched variant

As we mentionned in August 2015, Chinese media claim the YJ-18 system is designed for the destruction of various surface ships from an enemy's landing squadrons, convoys, carrier strike groups, as well as single vessels and land-based radiocontrast targets in conditions of intensive fire and electronic countermeasures. In its surface launched variant, the vertical launch the missile's turbojet engine is reportedly capable of flying at a cruise speed of Mach 0.8 for about 180 kilometers after that point the warhead section separates and a solid rocket engine ignites allowing a top speed of Mach 2.5-3 for about 40 kilometers. Because of these flight characteristics, some Western analysts believe the YJ-18 is based on the Russian Kalibr/Klub 3M-54E. According to Chinese sources, the missile can maneuver at 10G acceleration to avoid enemy interception by air-to-air or surface-air missiles.

Loading of a Kalibr cruise missile aboard a Kilo-class submarine

More recent sources claim the submarine launched variant of YJ-18 has a range of 500 kilometers (270 nautical miles) with a terminal speed of Mach 2 and terminal altitude lower than Kalibr/Klub 3M-54.

Source: http://www.navyrecognition.com

The Royal Navy's flotilla of Type 23 frigates is getting back up to strength as **HMS *St.Albans*** comes out of maintenance into operational training off Devonport. **Photo : Raymond Wergan, Newton Ferrers.(c)**

Egyptian, Spanish Naval Exercises in Red Sea

Egyptian naval forces and Spanish naval forces have carried out joint training over several days in Egypt's territorial waters of the Mediterranean and Red Seas. The training involved a number of modern and sophisticated naval units and pieces from the Egyptian Navy, including the Mistral-class Landing Helicopter Dock named after late president Anwar al-Sadat, the Gowind frigate, the German-made 41 Submarine, the ***Zafer*** frigate, and the Suez class missile corvette. The Spanish aircraft carrier ***Juan Carlos*** and a frigate took part as well in the training. The joint training included a number of activities that involved live ammunition and the usage of helicopters to back day and night naval combat operations.It also included the

implementation of sea navigation and supply formations, inspecting suspected vessels, the search for and discovery of enemy submarines, and securing vessels carrying important cargo. **Source: albawaba**

Navy officers censured for bringing 'embarrassment' on the service in 'Fat Leonard' scandal

By Dan Lamothe

President Trump's top political appointee in the Navy has censured a retired admiral and two other officers for embarrassing ethical violations in connection with a sprawling criminal investigation involving disgraced defense contractor "Fat Leonard" Glenn Francis, Navy officials said Wednesday. Navy Secretary Richard V. Spencer disciplined retired Rear Adm. Richard Wren, as well as Navy Capt. Timothy Conroy and retired Capt. Charles Johnson, said Cmdr. Bill Speaks, a service spokesman. Spencer based his decision on Navy findings that each officer had improper interactions and accepted gifts from Francis's company, Glenn Defense Marine Asia, in violation of service rules. The Navy has said that Francis defrauded the U.S. government of about $35 million. Spencer said in the letter to Wren that he "*demonstrated exceedingly poor judgment and leadership by repeatedly and improperly accepting gifts from Mr. Leonard Francis*," noting that he was a "*prohibited source*" because he was a defense contractor who had business with the Navy. Spencer also accused Wren of attempting to mislead investigators with a false statement during a 2015 interview. "*As a senior officer, you had a duty to represent the United States and the United States Navy in a way that upheld the values of our great nation and Navy*," Spencer wrote. "*Rather, you intentionally disregarded the ethical standards long established for the naval service and brought ill-repute and disgrace upon our honored institution*." The letters to Conroy and Johnson include similar allegations. Conroy was accused of accepting gifts, including the company of a prostitute who was paid for by Francis. Johnson was accused of accepting a variety of dinners and gifts from the defense firm and drinking alcohol to excess at a dinner in Australia in a manner "*which was to the disgrace of the armed forces*." The letters of censure are considered a formal, public shaming, and will be placed in the personnel files of the officers. They were issued after a joint investigation led by the Justice Department. "*It is incumbent that naval officers, particularly those placed in positions of great trust and responsibility, be held to the highest standards of both personal and professional behavior*," Spencer said in a statement. The three officers "*each disregarded those standards and engaged in conduct that reflected unethical and improper personal behavior and set poor standards of leadership. Each officer's conduct is an embarrassment to the thousands of officers, sailors and civilians who do the right thing every day*." **Source: Washington Times**

Navy fires CO of destroyer *Hopper*, the fourth reported command firing in May

Cmdr. Jeffrey Tamulevich, left, is shown here with Navy Secretary Richard Spencer and Spencer's wife, Sarah, during a visit to the ship in 2017. **Photo: USN**

The commanding officer of the Hawaii-based destroyer ***Hopper*** was fired in late May in connection to allegations of fraternization, Navy officials said. Cmdr. Jeffrey S. Tamulevich was relieved due to "*evidence of misconduct involving alleged fraternization*," Naval Surface Force Pacific spokesman Cmdr. David Russell told Navy Times. Russell declined to offer further details on what the evidence entailed, citing an ongoing investigation. Tamulevich had led the ***Hopper*** since July and has been temporarily reassigned to Navy Region Hawaii. Capt. Joseph Ring, Destroyer Squadron 31's deputy commodore, has been named to be the ship's temporary commanding officer until a permanent relief is identified. Russell said Tamulevich declined to comment. "*Commanding officers are entrusted with essential responsibilities to their Sailors and their ships, and are expected to maintain the Navy's high standards for leadership*," Russell said. Tamulevich is the second SURFPAC skipper to be fired this month, and at least the fourth Navy command firing, according to service reports. Cmdr. Tammy Royal was fired as commander of the dock landing ship ***Harpers Ferry*** on May 17 after her superiors believed she could no longer effectively lead the San Diego based ship, SURFPAC officials said. Another surface warfare officer, Capt. Heedong Choi, was fired as head of the Navy ROTC program at the State University of New York's Maritime College on May 3 due to a "*loss of confidence*," chief of naval personnel officials said. Officials didn't provide further details on the specific reasoning behind those two firings. **Source: Navy Times**

Can you imagine this taking place in South Africa? Here human rights trump the strict discipline required at sea.

Case for RAN Submarines Watertight

No issue in Australian defence creates more excitement and interest than submarines. It is not hard to see why. Australia

has started what will be one of the largest submarine projects in the world with the construction of 12 state of the art conventionally powered submarines. However, a project of this size – it is costing us tens of billions of dollars over the next several decades - naturally attracts some questions. You may have seen a few. Questions like '*why are submarines so expensive*'? '*Why do we need submarines at all? and 'are we building the right type of submarine'?* These are fair questions and deserve to be addressed. Let's start with cost. Put simply, the high cost of submarines comes down to their complexity. Submarines, with the possible exception of rockets, satellites and other things we send into space, are the most complicated machines ever created by humanity. Australia's future submarines will have over one million individual parts. We need all of these components because submarines need to do things that other vessels do not. Unlike surface ships submarines need to operate both above and below the water. They cannot be easily modified like surface ships and have vastly more complicated maintenance requirements.

A practical example of complexity in a submarine design is testing the crush characteristics of the hull design. Australia is progressing this design, when the hull is finalised, we need to prove that the hull will withstand pressures at various depths according to Australian requirements. Unlike other complex machines, like an aircraft for example, a submarine can't land if there are problems with the hull. The underwater environment analogy is much more akin to putting a vehicle into space. Even worse than space, with a submarine you cannot really put on a suit and go outside to fix things. Submarines also exist in a highly regulated market, one that quite rightly places a premium on the safety of our service men and women. When you look at the complexity and numerous operating requirements of submarines, it is easy to see why they do not come cheap. Designing, building and sustaining such vessels takes a lot of time and needs a lot of highly skilled labour. It is also worth noting that the cost of the Future Submarine Project is also a function of the length of the program. The last submarine is due to be finished in the late 2040s and sustainment is only due to wrap up in the late 2080s. Why would any country spend all this time and money such things? Australia has many obligations to its citizens in the areas of health, education and other social services. Why would we spend money on submarines instead of these areas? We do it because we must. Secure sea lanes are probably the most important national security requirement for Australia. As an island nation, we are more vulnerable than most to sea lane disruption. To not secure our sea lanes is to put our national security and entire economy at risk. History tells us that maritime security and economic security are indelibly linked. Naval blockades and warfare were central to the outcomes of both world wars and numerous other conflicts. Submarines, along with our naval surface fleet, are the key elements of effective maritime security. Submarines defend our sea lanes. We keep hearing the term regionally superior because the best way to defeat another submarine is with a better submarine. Submarines also offer the best protection for the rest of our naval fleet. If you accept the need for submarines, how do you know if you have the right one? There has been much debate in the media about both the size and type of submarine we have selected. In particular, the question has been asked repeatedly whether Australia should have nuclear submarines. Why has Australia decided to build conventionally (diesel), powered submarines instead of nuclear ones? Apart from the merits or otherwise of nuclear submarines, Australia cannot realistically build or support any without a domestic nuclear industry. Without the supporting industry this would be like trying to build a multi-story office building on a foundation of sand. Until Australia has such an industry, the debate about nuclear submarines is a non-starter. I have every confidence the Australian Government has made the right strategic decisions on submarines and chosen a design that will meet the Australian requirements. They are to be commended for investing in Australian defence capability to ensure our country's national security needs are met. For the naysayers and detractors, who I will also acknowledge are acting as patriots in sharing their views, I suggest you focus your attention on the strategic need and ensure that as we go along our submarine requirement matches the strategic drivers as they evolve. This is probably more important than the minutiae of how to execute the project. We have access to experts, let's use their expertise. The challenges of submarine design, construction and sustainment are not to be underestimated, but through the course of the program we will develop one of only a handful of workforces in the world capable of the task. Australia has the skills, knowledge and decision-making capability to make the Future Submarine Project an unvarnished success and just by virtue of the fact that we are acting with commitment and determination, we will draw to ourselves all of the things that we need. **Source: Defence Connect**

Russia to start building helicopter carriers after 2020

KALININGRAD, June 20. Russia will start designing and building universal amphibious assault ships (helicopter carriers) after 2020, when it completes design work on a new large landing ship, Navy Deputy Commander-in-Chief Viktor Bursuk said on Wednesday. "*These ships will appear as they are stipulated by the shipbuilding program and they will be built at the*

second stage of the program's implementation after 2020," he said. "*The design work on universal amphibious assault ships will begin after we complete designing a large amphibious assault ship*," the vice-admiral said, without specifying the design bureau that would be assigned this work. On his part, President of Russia's United Shipbuilding Corporation Alexei Rakhmanov said that "*there will undoubtedly be competition among design bureaus*" within the corporation. "*We will do this precisely in the way we build ships in cooperation with other shipyards of the North-West and we will do the design work exactly in the same manner, involving bureaus with resources available today in completing either technical or working design documentation. We will come up with a proposal for the Navy, which, I hope, will be approved*," the vice-admiral said. A source in the Russian defense industry earlier told TASS that Russia's Defense Ministry and the United Shipbuilding Corporation had agreed that the construction of domestic helicopter carriers would begin in 2020 at the Severnaya Verf Shipyard. According to the source, two such warships are planned to be built: the first of them is expected to be handed over to the Navy in 2024 while the second warship is set to be laid out in 2024 and delivered to the fleet in 2026. Another source earlier told TASS that helicopter carriers would have a diesel gas turbine installation, with diesel as the main engine and the turbine intended for greater capacity. Kamov Ka-52 helicopters will comprise the backbone of the warships' air group. The helicopters' deliveries will be synchronized with the deliveries of helicopter carriers. Also, Ka-27, Ka-29 and Ka-31 gunships will be based on the helicopter carriers. Earlier, then-Deputy Defense Minister Yuri Borisov said that the first Russian helicopter carrier would appear approximately by 2022. **Source: TASS**

Narcosubs: Technological Innovation in the War on Drugs

June 19, 2018 Guest Author

By Javier Guerrero C.

A makeshift submarine is lifted out of the water at Bahía Malaga on the Pacific coast, in 2007. (Colombian Navy/Reuters)

Last year, the Colombian Navy detected and captured the first electric narco-submarine.[1] Demonstrating the innovative capacities of Colombian drug traffickers, narco-submarines, drug subs, narco-semisubmersibles, self-propelled semisubmersibles, or simply narcosubs, are maritime custom-made vessels used principally by Colombian drug traffickers with the purpose of smuggling illicit drugs to consumers or transshipment countries. This year only one of such vessels have been captured, and given their technical characteristics seems a step back in the '*evolution'* of narcosub technology. Such is the paradox of security and maritime interdiction in the War on Drugs. The very process of thwarting a particular method or route creates the conditions to propel technological innovation on the drug traffickers' side. The narcosubs are one of many of these innovations. The term "*narcosub*" encompasses a diversity of watercraft that includes semisubmersible and fully submersible vessels. Several entries on CIMSEC (here, here, and here) have already delved into the characteristics of the narcosubs and their potential capacities to threaten regional security. In addition, several studies in the security field, such as by Ramirez and Bunker,[2] as well as academic articles, have also attempted to provide technical evidence and policy advice. To summarize, narcosubs are characterized by the use of maritime diesel engines, a rudimentary system of refrigeration, no facilities, fiberglass hulls, and a valve which can be activated in case of being captured that allows water to fill the hull and sink the vessel. Narcosubs are not made to last, as smugglers mostly discard such vessels after ending their one-way journey. Smugglers have been using narcosubs from at least as early as 1993, but the majority of captures have been made since 2005. Narcosubs are described by the Navy as vessels that are highly difficult to detect and/or track, due to their lack of emissions, small wake, and low heat signature, preventing visibility all around. Despite the centrality of innovation in the War on Drugs, there have been few attempts to understand the process. Given that 90 percent of the cocaine from Andean countries is transported using maritime routes,[3] it is necessary to analyze the development of drug trafficker and state agency technologies in the maritime environment. That is to say, the study of the game of cat and mouse between interdiction and evasion. This binary can be understood as the symbiotic relationship that creates the conditions for innovation, generating a constant arms race between drug traffickers and state agencies. Different versions of the genesis of the narcosubs mill around, from Pablo Escobar's mastermind idea, boosted by the semi-mythical image of the drug baron with the economic means and savvy to contract specialized naval engineering. According to this version, Pablo Escobar supposedly conceived the idea of a submarine after watching a James Bond movie. In this story a Russian and an English engineer were hired to design the submarines while Pablo's brother took took care of the electric circuits.[4] A common narrative in describing narcosub building is to assume some form of hierarchical organization, both in terms of decision making and knowledge. That is, the participation of a '*cartel'* with capabilities to hire '*expert knowledge'* such as

naval engineers who then recruit builders. The diffusion of the technology is also assumed to be the result of transnational organized crime networks. Others suggest that narcosubs are the transfer of military innovation by the guerrilla groups FARC or ELN to their drug trafficking enterprises.[5] Innovation in the design and building of these vessels is so commonplace that the adjective 'first' is often repeated. The truth about narcosub design and building may be more prosaic. The variety of watercraft labeled under the banner of narcosubs summarizes some of the key features of the innovation and counter-innovation competition in the War on Drugs.

The Evolution of Narcosubs

The narcosubs demonstrate a variable combination of materials, designs, and building. Even narcosubs found in the same shipyard vary in several features. In this sense, each narcosub is a unique way to solve the problem of transporting large amounts of illicit drugs, producing a complex timeline that is problematic to define using traditional innovation concepts, such as incremental or radical innovation, but also to define as the result of pull/push factors. The process of innovation in the War on Drugs can be better described using the concept of dispersed peer innovation,[6] in which the design and construction of these vessels, not being bound by standardized procedures, profits from the possibilities of creating their own designs with high degrees of flexibility. In this sense, it is possible to say that what smugglers produced with the narcosubs are different versions of a '*techno-meme'* that gets combined with the local knowledge of maritime routes and boat building. Those involved in the process of outlaw innovation are able to mix locally available knowledge of traditional boat building with off-the-shelf technologies. One key issue when studying the evolution of narcosubs and other forms of drug traffickers innovations is how entwined they are with other forms of maritime drug transport. The process of incremental innovation does not necessarily produce a particular method that replaces older strategies. For example, a technical analysis of improvements of the go-fast boats or fishing boats demonstrates that there are few steps between semisubmersible methods and submersible ones. These few steps are provided by the availability of the knowledge to build such vessels within the relatively small areas where narcosubs can operate.

What it Takes to Build a Narcosub

Little is known about the day-to-day decisions on design and modification of such vessels. Official documents say little about the narcosub builders, but a set of documents allows us to take a glimpse at the organization of a narcosub enterprise. These include the Supreme Court of Justice ruling on the extradition of Colombian nationals to the United States in order to be judged by courts in the U.S. for criminal offenses, including narcotics violation, and reports from the law enforcement agencies and military. Several facts can be derived from the analysis of such documents. Narcosub builders are often independent of the owners of the cocaine. Several opportunistic relationships are undertaken, with drug traffickers either contacting the builders or the builders contacting the drug traffickers. As part of a plea bargain, a narco-submarine builder narrates how as a part of his organization he carried out and presented blueprints of 'his' narcosubs, and descriptions of the areas where the vessels could be built and launched. As part of his negotiation with prospective buyers, he shared his past experience of success in the building and operation of these boats.

Figure 1: Narcosub Building Team

Figure 1 (see seperate diagram) reconstructs the main links in a narcosub builder organization and shows the multiple forms of knowledge and relationships that can be found in such an organization. While some aspects of the design are carried out by specialists such as electrical and mechanical engineers, others are left to people with local knowledge, such as knowledge about fiberglass handling and coating. In this organization, another individual, the provider of the fiberglass, also plays the role of quality assurance guaranteeing that, in fact, the vessel is correctly waterproofed. Other individuals are in charge of the logistics, such as the purchase and transport of materials and personnel to shipyards. Finally, some individuals are hired as crewmen. They test the vessel and provided feedback to builders.

The organization described in the legal files is interesting because it has two different construction sites; one in Colombia's South Pacific and one on the Ecuadorian coast. The organization boss was not actually involved in the construction of the narcosubs, but he was the main source of finance. The main builder of the narcosubs is considered a "chief" within the organization. Besides providers of drugs, every shipyard has an administrator accompanied by a chief of security. The description provided does not delve into the process of designing and building narcosubs specifically, but shows the participation of people with formalized knowledge and others in possession of craftwork knowledge, such as the people involved in the woodworking and the fiberglass construction, some of whom worked in both shipyards. The fiberglass work was supervised by another specialist, who provided expert knowledge and supervision at both sites. This person was not part of the organization, but was the provider of the fiberglass. In the same organization, a mechanical engineer was identified, who was in charge of the design and building of the hatches, steering mechanisms, and galvanization of the narcosubs.

The innovation in narcosub technologies is then carried out by a multitude of different groups with little incentive to collaborate among themselves. This gives rise to a wide variation of submersible and semisubmersible designs. Such technical decisions are taken by builders and drug traffickers in a context in which the actions of other groups and their enemy (law enforcement and military) are not always known.[7] Narcosub builders are able to configure a complex design using a mix and match approach. Blending off-the-shelf solutions, local traditional knowledge, and technical-formal knowledge produces hybrids such as low-profile narcosubs using truck diesel engines.

Drug smugglers do not just compete with the state, they also compete with other drug rings and other narcosub builders. This complex pattern of competition plays a role that promotes further local innovations. Through trial and error they master

the building principles of the narcosub and introduce minor variations into their models. The variation and innovation in narcosub technologies, as well as the interpretation that actors, smugglers, and enforcement agencies make of such innovations, creates changes in a co-evolutionary fashion. In this way, the choices of the illicit actors, competing among themselves and against the state, continuously destabilizes and changes the landscape in which they act, triggering a situation in which multiple players attempt alterations, which create new adaptations.

Conclusion

It has been argued that smugglers often have the capacity to change their strategies and designs after they been detected by law enforcement and the military. Nevertheless, a more complex understanding of the pattern of innovation in the War on Drugs, in which explanations are not given in terms of push/pull between state agencies and drug smugglers, but take into account multiple layers of competition and sources of knowledge, will provide better tools to control the illegal flows. One main consequence of this would be to escape the fallacy of flexibility, in which the explanations of the process innovation in the War on Drugs is given solely based on drug traffickers' actions.

Javier Guerrero C. is a Lecturer at the Instituto Tecnológico Metropolitano (Medellín, Colombia). In addition, he is a Post-Doctoral researcher at Centro de Estudios de Seguridad y Drogas, Universidad de los Andes (Bogotá, D.C, Colombia). Javier is currently researching the intersections between technology, security and the War on Drugs and the history of technology in the War on Drugs. He may be reached at the following addresses: javierguerrero@itm.edu.co; je.guerreroc@uniandes.edu.co

Endnotes

[1] http://www.dailymail.co.uk/news/article-4739460/Colombian-army-seizes-electrical-drug-narco-submarine.html
[2] http://scholarship.claremont.edu/cgi/viewcontent.cgi?article=1029&context=cgu_facbooks
[3] http://www.dtic.mil/dtic/tr/fulltext/u2/1016658.pdf
[4] Escobar, R., & Fisher, D. (2009). *The Accountant's Story Inside the Violent World of Medellin Cartel*. New York: Hachette Book Group.
[5] Jacome Jaramillo, Michelle. "The Revolutionary Armed Forces of Colombia (FARC) and the Development of Narco-Submarines." *Journal of Strategic Security* 9, no. 1 (2016): : 49-69.
DOI: http://dx.doi.org/10.5038/1944-0472.9.1.1509
Available at: http://scholarcommons.usf.edu/jss/vol9/iss1/6
[6] Hyysalo, S., & Usenyuk, S. (2015). The user dominated technology era: Dynamics of dispersed peer-innovation. *Research Policy*, *44*(3), 560–576. https://doi.org/http://dx.doi.org/10.1016/j.respol.2015.01.002
[7] http://revistas.flacsoandes.edu.ec/urvio/article/view/2943

Source: http://cimsec.org

Workhorses of the sea

Van Oord's **CSD *Artemis*** outbound from Moerdijk heading for Benoa (Indonesia) **Photo : Aad Kleijn ©**