NAVY NEWS WEEK 10-5

8 March 2018

DAFF working on illegal, unregulated and unreported fishing as part of Phakisa

Written by defenceWeb, Tuesday, 06 March 2018

The Department of Agriculture, Forestry and Fisheries (DAFF) is a major player in government's blue economy initiative under the Operation Phakisa umbrella and this week said it would "galvanise" itself and law enforcement agencies to combat illegal, unregulated and unreported (IUU) fishing. The comments come as the Hawks arrested 16 people in Gansbaai in the Western Cape on Monday in a sting operation over abalone poaching. Eight of those arrested are officials from the Department of Agriculture, Forestry and Fisheries. The officials apparently assisted poachers in the area and will this week appear in the Hermanus Magistrates Court on charges of corruption, racketeering and defeating the ends of justice. Vico Thembalethu, Acting Chief Director: Monitoring Control and Surveillance, said abalone poaching is part of the IUU fishing problem which in its entirety "*threatens world food security and ecosystems*". "*South Africa is not exempt from this and DAFF has galvanised law enforcement agencies through Operation Phakisa to deal with IUU fishing*," he said, adding the national department responsible for the continued well-being of South Africa's oceans understands the need for "*organised international communities to work collaboratively in dealing with it*". This has seen the country ratify the UN Food and Agriculture Organisation's (FAO) Port State Measure agreement. Its major objective is to combat IUU fishing. DAFF, he said, played an integral role in enhancing collaborative efforts through the relevant SADC (Southern African Development Community) structures and those of Interpol to curb IUU fishing in the region. The blue economy component of operation Phakisa comprises marine transport and manufacturing; offshore oil and gas; aquaculture; marine protection services and ocean governance. Apart from the DAFF fleet of fisheries control and research vessels, the SA Navy is the other contributor to the marine protection services set out in Phakisa's blue economy vision. This is currently done utilising existing platforms such as SAS Drakensberg, the Valour Class frigates and Warrior Class offshore patrol vessels (OPVs) which are converted strikecraft. The SA Navy was originally seeking six additional hulls to boost its patrol capabilities, both in- and offshore, for Phakisa. Financial limitations have seen the inshore component removed with Cape Town-based Damen Shipyards named the successful bidder for the three offshore vessels. Indications are the first OPV will be handed to the SA Navy around the third quarter of 2021 to take some of the maritime patrol load off the existing fleet. **Source: www.defenceweb.co.za**

In 2011, a Russian Submarine Fire Nearly Caused a Nuclear Disaster

The submarine *Ekaterinburg* carried torpedoes, missile fuel, and thermonuclear weapons.

By Kyle Mizokami

Feb 27, 2018

Russian Deputy Prime Minister Dmitri Rogozin has admitted that a December 2011 incident involving a nuclear missile submarine almost became one of the worst nuclear weapons disasters ever recorded. The ***Ekaterinburg***, a ballistic missile submarine, caught fire in drydock, threatening its load of liquid-fueled nuclear missiles. If the missiles had caught fire, then the resulting explosions would have spewed radioactivity over a wide area, threatening a nearby town of 300,000 people. The nuclear-powered ballistic missile submarine ***K-84***, also known as ***Ekaterinburg***, had made a quick stop in drydock before heading out on a missile patrol. The ship was surrounded by wooden scaffolding for a welding job on the bow when a fire broke out. The fire quickly spread to the submarine's rubber anechoic coating, which is designed to lower the sub's acoustic signature underwater. The fire burned for nearly a day as firefighters struggled to contain the blaze. Russian nuclear weapons analyst Pavel Podvig mentioned the incident at the

time on his blog, ***Russian Strategic Nuclear Forces***. On February 25, Podvig linked to another article on Twitter, a ***Kommersant*** newspaper interview with Deputy Prime Minister Rogozin. Rogozin was Moscow's point man on the incident and rushed to the Russian naval base at Murmansk when it happened. Rogozin states that the ***Ekaterinburg*** "*did not unload the ammunition set for repair: there were torpedoes on it, and regular ballistic missiles.*" The **K-84 *Ekaterinburg*** is a Project 667BDRM ballistic missile submarine. Built in 1982 ,the vessel is 584 feet long and displaces 15,500 tons submerged. She was two VM-4SG pressurized-water nuclear reactors, giving her nearly unlimited range, and a crew of 135. As part of Russia's nuclear deterrent at sea, *K-84* regularly takes a full complement of 16 R-29RM liquid-fueled nuclear missiles on undersea patrols, each of which is armed with four nuclear warheads. ***Ekaterinberg*** also has four bow-mounted torpedo tubes with a dozen conventional and nuclear torpedoes and torpedo tube-launched missiles, including the nuclear armed RPK-2 *Viyoga* anti-submarine missile. The location of the fire, in the port bow near the torpedo tubes, made avoiding a torpedo/missile explosion a top priority. From the rubber tiling, the fire apparently spread to the sonar acoustic chamber filled with flammable liquid. According to the environmental nonprofit Bellona, the fire burned for 20 hours and the submarine finally had to submerge to put out the flames. The BBC reported at the time the fire required the use of fire-fighting helicopters, tugboats, and eleven firefighting crews. Here's footage (**https://vimeo.com/34515245**) of the fire at the time of the incident. It's entirely possible that a torpedo or missile explosion in the bow would have set off a chain of events that led to nuclear catastrophe. R-29RM missiles are liquid-fueled, and had the fire reached the fuel, the nuclear-tipped missiles probably would have exploded. The nuclear fuel aboard the missiles would have been scattered over a wide area, threatening the nearby town of Murmansk, a city of 300,000. At the time of the incident, as the BBC article reported, Russian officials insisted that the R-29RM missiles had been offloaded prior to the ship going into drydock. But Rogozin has indirectly admitted the missiles were onboard at the time of the fire, and the ***Kommersant*** interview makes clear that nuclear weapons were still onboard. The 2011 incident is just one in a string of recent submarine accidents in the Russian Navy. In August 2000, the cruise missile submarine ***Kursk*** was lost with all hands. In 2008, 20 sailors were killed on the submarine ***Nerpa*** when the fire suppression system was accidentally activated. In 2015, **K-266**, also known as ***Oryol***, caught fire while undergoing repairs. Just last month, in January 2018, a Kilo-class submarine appeared to catch fire in the Far Eastern port of Vladivostok. Accidents involving nuclear weapons, are infrequent but do occasionally happen. In 1980, an accident in a missile silo in Damascus, Arkansas sent a thermonuclear warhead hurtling a hundred feet into the air. It could have been much worse. **Source: https://www.popularmechanics.com**

HNIMS *Van Speijk* (F 828) patrolling the Caribbean with the cutter ***Jaguar*** **(P 810). Photo: Samen Sterk**

Average Type 23 Frigate and Type 45 running costs revealed

Nigel Evans Conservative MP for Ribble Valley asked a written parliamentary question regarding the running costs for the Type 23, Type 45 and yet to be built Type 31e. Guto Bebb, Parliamentary Under-Secretary of State for Defence, responded: "*The average annual running cost for a Type 23 Frigate and a Type 45 Destroyer is approximately £11 million and £13.5 million respectively. These figures have been rounded to the nearest £100,000. The Type 31e programme is in its pre-procurement phase and it is therefore premature to provide an estimate of running costs. The costs given include those items that are directly attributable to the ship, such as personnel costs, fuel and port visits and do not include such items as maintenance, training and generation costs*." Bebb also responded to a question regarding the build country of the Type 31e Frigate: "*The National Shipbuilding Strategy (paragraph 92) was clear that for reasons of national security, the UK prioritises the need to retain the ability to design, build and integrate warships*." **Source: UK Defence Journal**

France, US conclude Bois Belleau 100 amphibious cooperation

US sailors and marines have concluded two months of cooperation with their French counterparts aboard the French Navy amphibious assault ship **BPC *Tonnerre***. Approximately 150 US personnel spent the last two months working together with the French task group composed of **BPC *Tonnerre*** and Horizon-class air defense destroyer **FS *Chevalier Paul*** in the US 5th Fleet area of operations. The deployment, dubbed "**Bois Belleau 100**", commemorated the 100th anniversary of the

World War I Battle of Belleau Wood, where the US Marine Corps' 5th and 6th Infantry Regiments fought alongside French forces for a strategic stretch located in France's Belleau Wood.

A French landing craft transports a US Marine Corps medium tactical vehicle during an amphibious offload with French forces aboard French amphibious assault ship LHD ***Tonnerre*** (L9014). **Photo: US Marine Corps**

One of the first orders issued to the French Amphibious Task Group (ATG) was to participate in **Alligator Dagger** – TF 51/5's premier integrated combat proficiency training for subordinate units entering the US Central Command's (CENTCOM) area of responsibility. Specifically, this bilateral training (held off the coast of Djibouti) enables military forces to hone their skills in amphibious operations, air defense, non-combatant and medical casualty evacuations, replenishment-at-sea, tactical recovery of aircraft and personnel as well as combat marksmanship and visit, board, search and seizure evolutions.
The US-French team followed up with a series of exercises throughout the Middle East, aimed at building capacity and capability with regional militaries including Kuwait and United Arab Emirates (UAE). "*The deployment started with amphibious operations in Djibouti during* ***Alligator Dagger*** *and moved to the Arabian Gulf with Alligator Thunder*," said US Marine Maj. Christopher Warnagiris, operations officer for the US landing force command element aboard ***Tonnerre***. "*We ended with an exercise in Kuwait during Alligator Lightning, where we employed SPMAGTF-CR-CC to conduct our first tactical use of the MV-22 Osprey aboard a French ship, which entailed deck landings and amphibious raid exercises.*"
Warnagiris noted that while there were many firsts during the deployment, the inclusion of a new R2LM team was one of the highlights. Although it was designed to support US and North Atlantic Treaty Organization forces or allied ships to perform en route emergency care, the R2LM team offered critical care capabilities during the multilateral exercises aboard Tonnerre. "*We successfully integrated with the French medical team and proved that we can conduct maritime operations on a NATO-allied vessel and various medical and amphibious operations*," said Lt. Cmdr. Patrick Magajna, a R2LM emergency medicine physician aboard ***Tonnerre***. "*Even though we did business a little differently and experienced a language barrier in the beginning, we managed to work through the challenges quickly*." "*Working with the US Marines and Sailors aboard the* ***Tonnerre*** *was a very good experience*," said French Navy Second Master Marine LePage with the information management cell aboard ***Tonnerre***. "*It wasn't easy at first because of the language barrier, but it was great because we discovered a lot and used the occasion to improve our English and learn from each other. If I have another opportunity, I'd really appreciate working with the US again. The* ***Tonnerre*** *deployment was a great time and it was nice to work with the US*." The ATG operated in the CENTCOM area of responsibility from November 2017 to February 2018. The **Tonnerre**'s Air Task Group reported to Commander, US 5th Fleet and was under tactical control of TF 51/5 but also remained flexible to conduct multiple missions simultaneously in support of France's national tasking operations as required. **Source: Naval Today**

Frigate winner to be announced mid-year

The announcement for the foreign shipbuilder to take on Australia's frigate project is expected before mid-year.
Australian Associated PressFebruary 28, 20184:01pm
The three foreign shipbuilders in the running to build Australia's new frigates have officially submitted their bids and are now playing the waiting game. The UK's BAE Systems with its Type 26, Fincantieri of Italy with its FREMM and Navantia of Spain with an updated F100 are vying for the $30 billion Future Frigate program contract. The new frigates will replace the Anzac-class from the mid-2020s, in a project that will create more than 2000 jobs. Defence department officials told a Senate estimates hearing the winner will be announced before mid-year. Official Kim Gillis said he was comfortable the three bidders were offering Australia sovereignty and intellectual property. "*We will probably get an outcome that is better than we've seen in the past*," he told the hearing. Production is scheduled to start from 2020 at the federal government-owned shipyard in Osborne, South Australia. **Source: http://www.news.com.au**

India, Russia discuss support mechanism for INS *Vikramaditya*

The statement also said they discussed about the refits of EKM Submarines and enhancing the reliability of aircraft and missile systems on-board other ships and submarines.
Updated: Feb 28, 2018 21:16 IST
Indo Asian News Service, Panaji

Indian Navy personnel stand on the **INS *Vikramaditya***, a modified Kiev-class aircraft carrier, during the International Fleet Review in Visakhapatnam on February 6, 2016. (AFP File Photo)

A meeting of the Indo-Russian inter-governmental committee on military-technical co-operation, which is currently underway in Goa, discussed issues related to speedy support mechanisms for aircraft carrier ***Vikramaditya***, said a statement issued by the Indian Navy on Wednesday. The statement also said they discussed about the refits of EKM Submarines and enhancing the reliability of aircraft and missile systems on-board other ships and submarines. "*The two sides discussed a number of aspects related to enhancing operational availability and life cycle support of the naval acquisitions from Russia. Notably, the sides deliberated mechanisms for speedy support of aircraft carrier **Vikramaditya**, refits of EKM Submarines and enhancing the reliability of aircrafts and missile systems on-board ships and submarines*," the official statement said. The statement also said that the four-day meet, which concludes on March 1, is being chaired by senior officials from the two navies, including Vice Admiral GS Pabby from the Indian Navy and Vice Admiral VI Bursuk from the Russian Navy. It was attended by 65 original equipment manufacturers from Russia which "*facilitated direct interaction on various technical issues between the departments of Indian Navy and the Russian OEMs*". "*The committee is a forum to discuss various aspects related to acquisition and product support of military equipment on-board Indian naval ships, submarines, and aircraft acquired from Russia. The Russian delegation comprised of more than 120 delegates representing the Russian Navy, Russian government departments and other directors and senior representatives of the Russian industry*," the statement said. **Source: https://www.hindustantimes.com**

GULF OF THAILAND (Feb. 27, 2018) Amphibious assault vehicles assigned to the 3rd Assault Amphibious Battalion, 3rd Marine Division, approach the well deck of the amphibious assault ship **USS *Bonhomme Richard* (LHD 6). *Bonhomme Richard*** is operating in the Indo-Pacific region as part of a regularly scheduled patrol and provides a rapid-response capability in the event of regional contingency or natural disaster. (U.S. Navy photo by Mass Communication Specialist 3rd Class Cosmo Walrath/Released)

Israeli firm will provide armour for Royal Navy's newest frigates

AN ISRAELI-based defence firm has been contracted to provide the armour for the Royal Navy's newest fleet of warships.

Tom Cotterill

Published: 21:06 Wednesday 28 February 2018

Plasan has signed a contract with BAE Systems to produce the armour for the Type 26 Global Combat Ships. Armour production for the first three ships is due to begin later this year, with the vessels being constructed in Scotland. The new City-class warships are touted as being the most advanced frigates in the world. A total of eight will be built, which are expected to be based at the navy's base in Plymouth. Once completed, the ships will replace the navy's ageing Duke-class of anti-submarine warfare vessels. They will provide the Senior Service with an increased capability and flexibility, with a

larger flight deck and hangar than previous frigate models. Combined with the cheaper Type 31 general purpose frigates, the new ships will form the back bone of future naval operations. **Source: https://www.portsmouth.co.uk**

China Wants to Build a Nuclear-Powered Aircraft Carrier Within 7 Years

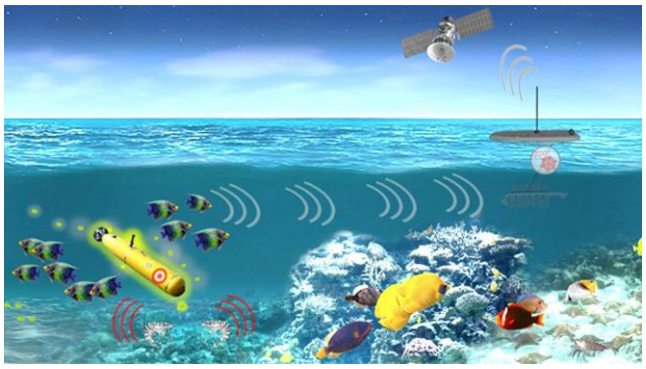
22:08 28.02.2018(updated 22:11 28.02.2018)

China's military wants to field its first nuclear-powered aircraft carrier by the middle of the next decade, according to a new report. The China Shipbuilding Industry Corporation announced on Tuesday a list of ambitions it hopes to achieve in weaponry and technical developments for the People's Liberation Army-Navy by 2025, the state-backed Global Times reported. The defense company said it will "*speed the up the process of making technological breakthroughs in nuclear-powered aircraft carriers, new-type nuclear submarines, quiet submarines, maritime unmanned intelligent confrontation systems, maritime three-dimensional offensive and defensive systems and naval warfare comprehensive electronic information systems*," according to the Global Times. It was the first time a Chinese defense firm revealed that a nuclear-powered aircraft carrier was on its list of priorities, the Global Time notes, adding that the China Shipbuilding Industry Corporation "*removed the sentence involving nuclear-powered vessels from the announcement on its site*." It's unclear why this action was taken. For now, China's navy has two aircraft carriers running on conventional oil. The French Navy's flagship, the ***Charles de Gaulle***, is the only non-US aircraft carrier powered by nuclear reactors. Each Nimitz-class and Ford-class carrier in the US Navy is or will be run by nuclear power. China's ambition is to have four carrier groups operating with the People's Liberation Army-Navy by 2030. The ***Liaoning*** is currently the only carrier in the fleet, but the Type 001A is expected to go into full service by the end of 2018. The Type 001A was the first aircraft carrier built by shipyard workers in China, yet China is already at work building its third domestically produced carrier. The ***Liaoning*** is derived from an old and unfinished Soviet hull Beijing purchased from Ukraine, the ***Varyag***, which was to have become a Kuznetsov-class carrier before the Soviet Union was dissolved. **Source: https://sputniknews.com**

DARPA Wants to Use Fish and Other Sea Life to Track Enemy Submarines

As part of a larger "Ocean of Things," an array of sensors would watch marine animal activities for signs of man-made intruders.

By Joseph TrevithickFebruary 28, 2018



The Defense Advanced Research Projects Agency, the U.S. military's top research arm, is looking into whether it might be possible to exploit fish, shellfish, and other marine organisms as unwitting sensors to spot and track submarines and other underwater threats. The idea is create a low cost means of persistently monitoring naval activity beneath the waves across a wide area, but it could be hard to get the sea life to reliably perform their new jobs as discreet undersea spies. DARPA first announced this project, which it calls the Persistent Aquatic Living Sensors, or PALS, earlier in February 2018. The month before it had unveiled a broader concept for an "**Ocean of Things**," which would also incorporate a large number of small, low cost, and environmentally friendly sensor nodes, either on the sea bed or floating up above, to monitor ship and submarine movements, as well as gather data about changing environmental conditions and other scientific information. "*The U.S. Navy's current approach to detecting and monitoring underwater vehicles is hardware-centric and resource intensive,"* Lori Adornato, the PALS program manager, said in an official statement. "*If we can tap into the innate sensing capabilities of living organisms that are ubiquitous in the oceans, we can extend our ability to track adversary activity and do so discreetly, on a persistent basis, and with enough precision to characterize the size and type of adversary vehicles*." At the most basic level, DARPA envisions developing a system that records marine animal activity, or the sounds they produce, and decodes that data to determine whether they're just swimming along as normal or dodging an enemy submarine. This would not require actually implanting or otherwise "modifying" any fish or crustaceans. "*Our ideal scenario for PALS is to leverage a wide range of native marine organisms, with no need to train, house, or modify them in any way, which would open up this type of sensing to many locations*," Adornato added. DARPA notes that marine animals are otherwise already equipped, thanks to millions

of years of evolution, to have the "*equipment*" necessary to monitor their own environment. Beyond just being able to see, touch, and hear potential prey or threats, they can often detect more subtle electro-magnetic and chemical changes to their surroundings. This could all make the system more cost effective, since the U.S. military would only need to establish a network to collect the relevant information, categorize it, and transmit it onward to wherever it might need to go. DARPA's goal is for each of those nodes to be able to monitor fish and other sea life more than 500 yards away and to be able to reliably discern between routine and abnormal movements and sounds. It's ambitious, but PALS could offer a novel solution to the U.S. Navy's very real problem of trying to adequately monitor the movements of potentially hostile submarines or underwater drones across broad areas, especially in the Pacific Ocean. Advanced diesel-electric subs with air-independent propulsion (AIP) technology are only becoming more common and affordable, even to smaller countries. AIP systems let conventional submarines sail more quietly and remain underwater for extended periods of time, offering capabilities closer to that of nuclear submarines, but without the costs and other factors associated with those boats. Among America's potential near-peer opponents, China actively pursuing expanded submarine capabilities, including both nuclear and AIP-equipped submarines. At the same time, the country is looking to improve its own abilities to track American submarines in the Pacific through underwater sensor networks.

A Chinese Type 091 nuclear powered submarine in 2009.

Russia is also slowly adding advanced diesel-electric submarines as it overhauls its existing fleet, while North Korea is steadily growing its own capabilities in this regard to potentially include designs capable of firing nuclear-armed ballistic missiles. Russia and China are also pushing their boats on the open market, and North Korea often collaborates with other potential opponents of America, all of which could put advanced designs into the hands of smaller, regional adversaries. To handle these emerging threats, the Navy is already exploring the potential of using long-endurance unmanned surface craft to scour the open ocean semi-autonomously for threats. Unfortunately, existing unmanned undersea vehicles operating with limited human interaction far from friendly forces have proven vulnerable to harassment and capture. Forward deployed ships, manned aircraft, and drones, all offer additional maritime surveillance capabilities, but require significant manpower and logistical resources, as well as often complicated basing agreements with host countries. It is possible that the Navy could look to link those more traditional assets with a working PALS system in the future in order to extend their capabilities. This in turn could help them narrow their search area or make it more difficult for a hostile submarine to elude its pursuers after an initiation detection. But leveraging sea life has the potential to eliminate many of those considerations entirely. Unfortunately, PALS' objectives are likely to be easier said than done. This is hardly the first time the U.S. military, including DARPA and its predecessor organizations, have investigated the possibility of employing local fauna to spot and track enemies with limited human interaction. Those past projects have almost universally failed to produce the results. The biggest issue is that without some sort of control mechanism, animals are, well, animals. They can behave unexpectedly or erratically and their basic habits can change as they age or in response to broader changing environmental factors. The same species of fish or invertebrate might not even manifest the same characteristics in different areas of the ocean, a problem that emerged in a previous Navy program to turn whale songs into a covert communications tool. Any sensor system collecting information about them will have to account for these things in order to avoid routinely sending back false positives. DARPA will need to run a wide array of tests with various species just build an initial dataset of the kind of responses it can expect when a submarine or other man-made underwater object passes by those creatures. It's a lot of potential clutter for any system to try and parse through quickly. Advances in artificial intelligence might be able to help speed up the process of identifying patterns of activity and correlating them into actionable information in the future, something the U.S. military is working on already as a way to help sift through bulk intelligence imagery. This lack of readily uniform results has stymied a number of earlier animal-based military projects, including the U.S. Army's attempts to develop what it called "*instrumented biosensors*" during the Vietnam War. The basic idea was to build a hand-held device full of insects that would become agitated when they became exposed to air with traces of human sweat or waste. The operator would listen for increased buzzing or clicking through a set of headphones. The plan was to use the units to detect ambushers and as "*people sniffers*" to track insurgents hiding in dense jungle environments. Needless to say, it didn't work. The bugs didn't always respond when the researchers hoped they would, or, more problematically, just did so in response to being shaken around as soldiers carried the prototype systems. As living organisms, they also had normal rest and activity schedules that meant they would regularly stop "*working*" entirely for extended periods of time. DARPA has left open the possibility of "*modifying*" fish or other sea creatures with some additional equipment, such as miniaturized sensors, to help improve the reliability of any such system. This could easily prove politically controversial and the Navy already routinely fields criticism from environmental advocates

that its operations, especially the use of active sonar, endanger whales and other aquatic animals. Doing so would also likely limit the cost saving aspects of PALS, since it would require capturing the animals, installing the necessary components, and releasing them back into the wild. To make the system work at all, the U.S. military will already need to deploy and maintain the sensor net to process and transmit the data. It would also limit the life forms that the U.S. military would be able to use at all. "*DARPA expressly forbids the inclusion of endangered species and intelligent mammals, such as dolphins and whales, from researchers' proposals on the PALS program*," Jared Adams, a spokesperson for the agency, told Defense News. The Navy does use dolphins and sea lions to help hunt for underwater hazards and other items of interest, but in conjunction with human handlers. If DARPA can find a way to make PALS practical and reliable, it could definitely be a boon for the Navy's ability to locate potentially hostile submarines and other undersea threats. Unfortunately, past experience shows that there are already a number of challenges the project will have to overcome first.

Source: http://www.thedrive.com

China's ocean observation station at Maldives not a submarine base: Chinese media

Updated: Feb 28, 2018, 08.03 PM IST

The station which will come at Makunudhoo island of the Maldives is not far from Kerala and Sri Lankan coast.

BEIJING: An upcoming Chinese ocean observation station in the Maldives, not far off from the Indian coast, has neither a military application nor meant to be a submarine base, according to Chinese analysts. China and the Maldives had signed a protocol to build the joint ocean observation station during the visit of Maldives President Abdulla Yameen here in December last. The station which will come at Makunudhoo island of the Maldives is not far from Kerala and and Sri Lankan coast. "*The two countries would accelerate the plan to build the station to observe the climate and the ocean, and deepen cooperation in marine ecology preservation, prevention of marine disasters and marine scientific research*," the state-run Global Times said today, quoting the China's State Oceanic Administration as saying about the station. Though the visit took place in December last, during which Yameen, who is accused of pursuing pro-China polices also signed the Free Trade Agreement (FTA) sparking concerns in India, this is the first-time Chinese official media made mention of the station. Today's report comes in the backdrop of the political crisis in Maldives following stern measures like detention of Supreme Court judges, opposition leaders and the imposition of emergency by Yameen. While India and the international community including the US and the UN has called for restoration of democracy in Maldives by lifting the emergency, China has opposed any external interferences saying that the crisis should be resolved by relevant parties within the country. While mentioning the protocol to establish the station, the newspaper quoted the Chinese analysts refuting the perception that it has a military application or a submarine base.

Source: http://economictimes.indiatimes.com

Vard Marine design chosen for new South African survey vessel

Durban-based Southern **African Shipyards (SAS)** has been being selected for the design and construction of the South African Navy's new hydrographic survey vessel, which will replace the **SAS *Protea*.** The winning bid is based on Vard Marine's VARD 9 105 science vessel concept, a well-proven design that has been specifically tailored to South Africa's unique requirements and designed to incorporate the latest hydrographic and oceanographic sensor suite. Vard Marine has now been contracted to complete the Basic Design and support the shipbuilder through detailed design and construction of the VARD 9 105 science vessel. The vessel configuration results in a PC7 ice strengthened vessel of 95 m in length with approximately 7,800 kW propulsion power, a shafted controllable pitch propeller, and a maximum speed of 18 knots. The vessel has a 10,000 nm range with 44 days endurance; and will be manned by a total crew of 120 persons comprising ships' crew and scientists. The VARD 9 105 is an evolution from the Vard Marine designed hydrographic survey vessels **HMS *Echo*** and **HMS *Enterprise*** successfully delivered in 2002 to the U.K. Royal Navy.

Source: Marinelog

Flying blind and freezing: Navy investigating terrifying EA-18G Growler flight

By: David B. Larter February 23

An EA-18G flies over the flight deck of the carrier **USS *Carl Vinson*** off the coast of Southern California. (MC3 Jake Cannady/Navy).

WASHINGTON — The two-seater EA-18G was cruising at 25,000 feet Jan. 29, about 60 miles south of Seattle on a flight from Washington state's Naval Air Station Whidbey Island to Naval Weapons Station China Lake. The crew received a warning that the system that controls the cockpit air temperature and cabin pressure, known as the environmental control system, was icing. By the time the flight was over, an elite aircrew with Air Test and Evaluation Squadron Nine was being rushed for medical treatment, and yet another failure of the EA-18G Growler's environmental control system — one not seen in any of the previous physiological episodes linked to the ECS — was raising new concerns in the Navy's sisyphean fight to stop physiological episodes from putting pilots at risk in the sky. The temperature inside the cockpit suddenly plunged to temperatures reaching -30 degrees and a mist pumped into the the cockpit, covering the instruments and windows in a layer of ice, rendering the pilots almost completely blind, according to several sources familiar with the incident and an internal report obtained by Defense News. The fog inside the aircraft iced over the instrument panel, forcing the pilot and electronic warfare officer to use a Garmin watch to keep track of their heading and altitude while air controllers began relaying instructions to the crew. The pilot and EWO were forced to use the emergency oxygen supply, which was completely depleted by the end of the flight. A heroic effort by the two-person crew and the ground-based controllers managed to guide the aircraft back to Whidbey Island, but both pilot and EWO suffered serious injuries due to frostbite. The aircrew suffered from "*severe blistering and burns on hands*," according to the Navy internal report. In a statement, Naval Air Forces spokesman Cmdr. Ron Flanders confirmed the incident and that the Navy was trying to determine the cause of the incident. "*The aircrew was treated upon landing; one of the aircrew is already back in a flight status; the other is not yet back in a flight status but is expected to make a complete recovery*," "*The mishap is under investigation; I cannot comment further. Once the investigation is complete, the Navy will determine which further actions are necessary*."

ECS failures

While the specific failure of the environmental control system in this instance hasn't been recorded by the Navy previously, the ECS has been a persistent problem as it grapples with a recent spike in PEs in Hornets and Growlers. The Navy describes the system as "*a complex aggregate of sub-components, all of which must function for the system to work as a whole.*" The Navy believes that aging parts and inadequate testing procedures have contributed to certain PEs that result from depressurization inside the cockpit and oxygen deprivation. But overpressurization has also been a problem. Two years ago, a pilot and EWO were horrifically injured when their cockpit overpressurized and exploded, shattering the plexiglass canopy and sending shards in all directions. Overall, about 25 percent of the PEs suffered by aircrews in the Super Hornets and the Growlers have been traced back to ECS failures, according to a Navy official who spoke on background. Those numbers were much higher in the legacy Hornets. Meanwhile the head of the Navy's Physiological Episodes Action Team, Sara "Clutch" Joyner, is being pulled from the project after less than a year in the position and is taking a job on the Joint Staff, raising some alarm bells in Congress. Her replacement has not been named. PEs have wreaked havoc in the aviation community. In 2016, the Navy had its worst year on record for PEs, including 125 total in the Growler/Hornet community. Last April, Navy instructor pilots staged a borderline mutiny when they felt like their supervisors were ignoring serious PE problems with the Navy's T-45 aircraft. The Navy has since made progress in T-45 PE incidents but the revolt of the instructor pilots grabbed the attention of senior leadership and made the PE issue front-and-center. But definitive answers as to what is causing the spike in PEs are elusive and the Navy is continuing to chip away at the issue. Joyner has said that she doesn't believe there is one solution for all the PE issues but that the Navy has made progress in some areas.

Source: https://www.defensenews.com

Russia's Arctic Ambitions Held Back by Economic Troubles

February 28, 2018 Guest Author

Russian submarine (Russian Ministry of Defense)

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By Michael Lambert

During the Cold War, the geographical position of the Arctic and the technology available put the region in the geopolitical spotlight. The Arctic was the shortest flight path for Soviet and American intercontinental bombers between the United States and Soviet Union. Later, with the advent of ballistic missiles, the Arctic's strategic relevance began to fade – only to be reignited in the 1970s with the arrival of nuclear ballistic missile submarines (SSBNs) and strategic bombers armed with long-range cruise missiles. The United States cooperated closely with Canada to stop the bomber threat coming from Moscow. The end result was a number of early warning radar lines across Canadian territory, most recently the joint Canada-U.S. North Warning System (NWS) built in the late 1980s, as well as significant air defense (and later aerospace) cooperation evident in the bi-national North American Aerospace Defense Command (NORAD). By the 1980s, the U.S. Navy was also increasingly intent on penetrating the Soviet nuclear bastion in the Arctic with its own nuclear attack submarines. The Soviet Union was itself directly exposed to strategic bombers located in Alaska. Looking at the strategic context until 1991, the USSR gathered a significant number of defense forces in the Soviet Arctic, going from advanced air defense systems in Rogachevo, Amderma, and Alykeland Ugolnye Kopi to submarines able to launch nuclear weapons from the Soviet Far East. The United States and the Soviet Union both conducted military exercises in the Arctic, and eventually had the technological capabilities to destroy each other multiple times. However, it was difficult for the United States to say if Moscow was trying to develop a defensive or offensive policy in that part of the world – although that uncertainty did not prevent the U.S. from moving decisively to try to mitigate this potential threat. Moscow conducted an impressive number of nuclear experiments in the area. By the end of the 1980s, the USSR Northern Fleet had 172 submarines, including 39 SSBNs, 46 cruise missile submarines and 87 attack submarines, and between 1967 and 1993 Soviet and Russian submarines carried out a total of 4,600 training missions. However, looking at the size of the Arctic, the numbers are less impressive, and it seems difficult to know if the area was considered to be an outpost or a buffer zone, in so far as archives regarding Soviet nuclear weapons are still classified in Russia today. After the break-up of the Soviet Union, Russia inherited almost all Soviet facilities and nuclear equipment, including in the High North. Does the Russian approach toward the Arctic differ from the Soviet one? Under then Prime Minister Yevgeny Primakov, supported by Russia's first president Boris Yeltsin, Russia's Arctic forces were almost entirely disbanded for economic reasons during the 1990s. The Kremlin did keep its SSBNs to ensure nuclear deterrence and a minimum presence in the area. But it also diminished the number of aircraft and anti-aircraft systems as well, the latter decision largely due to the difficulty with modernizing equipment needed to detect and intercept American bomber aircraft, such as the Northrop B-2 Spirit. With the return of Moscow on the international stage, Russia's new nuclear policy in the Arctic has become a major issue for the relationship between the United States, Canada, Northern Europe (NATO and non-NATO members) and Russia after the annexation of Crimea in 2014. Indeed, current Russian President Vladimir Putin considers the modernization of Moscow's strategic nuclear forces and its Northern Fleet to be a state priority. More than 80 percent of Russia's strategic maritime nuclear capabilities is located in the Northern Fleet, mostly in the form of its ballistic missile submarine fleet. It is also focused on developing infrastructure needed to operate such capabilities, such as the refurbished military airfields in its northern region that will provide aerial support for its Northern Fleet. In the Russian Military Doctrine of 2014, the Arctic was highlighted as one of the three key regions for military development, alongside Crimea and Kaliningrad. And, since 2008, Russia has reestablished long-range aviation patrols and increased the presence and activity of the Northern Fleet. Putin's policy in the Arctic can be interpreted as partly an attempt to protect future economic and military interests of the Russian Federation. After all, Russia has significant economic interests in the Arctic and needs to protect them. More than 20 percent of the country's GDP is produced in the northern part of Russia, with approximately 75 percent of oil and 95 percent of natural gas reserves located in the area. In addition, it also is a means to put more pressure on Washington and its allies (including Canada) in the context of the ongoing crisis in Eastern Ukraine. As well, it provides an opportunity to threaten (and therefore possibly deter) countries showing a growing interest for NATO membership, such as Sweden and Finland. Russia has recently unveiled a new military base at Franz Joseph Land in the Arctic Sea, following its initial Northern Clover Arctic base on Kotelny Island, north of Siberia. The Franz Joseph Land archipelago had been abandoned in 1991 but the Russian Air Force decided to reopen Graham Bell Airfield (named the "**Arctic Trefoil**") to protect Moscow's interest in the area. However, Russia's 150 soldiers are probably not enough to stop any foreign forces and control the 191 islands in this peninsula. A recent article published at the Department of Geography at Laval University also underlines the limitations of Russian Air Force operations in the Arctic, pointing particularly at the relative modest number of air military patrols in the region compared to the significant number of intrusive patrols (bombers and fighters) close to Japan, Northern Europe, and the Baltics. In that context, it seems difficult to say if Russia is able to conduct any large military exercises in the Arctic, due to the size of the region and the limited number of troops on the ground. A brief look at the equipment available like the Tupolev Tu-160 – a Soviet bomber produced in the USSR between 1984-1991 and upgraded by the Russian Air Force – shows their limited capabilities to conduct an attack against Alaska or Northern Europe from the area, although their development of long-range cruise missile technology could change that calculus. The Russian Federation is also facing difficulties when it comes to submarines. The Russian Navy cancelled the modernization program for its venerable Typhoon-class vessel in 2012, and most of its newer Borey-class SSBNs are under construction and those vessels earmarked for the Northern Fleet (***Knyaz Pozharskiy*, *Generalissimus Suvorov***) won't be ready until 2020. Indeed, the *Yury Dolgorukiy* is

the only submarine located in the Arctic at the moment. Despite Putin's stated interest in strengthening the Northern Fleet, this situation should remain the same for the foreseeable future – especially following Moscow's revised funding scheme for the Arctic. The expected budget approved for the military in the Arctic until 2020 is 17 times lower than the original sum. This arises from Russia's current economic crisis, brought on not least by international sanctions after its military intervention in Ukraine. In this context, rather than fixating on Russian activities in the Arctic, the United States and Canada should continue to focus the brunt of their attention on Europe and Syria – where the Russian presence remains far more intrusive, robust, and ultimately destabilizing.

Michael Eric Lambert received a PhD in History of Europe and International Relations from Sorbonne University, France. He is Founder and Director of the Caucasus Initiative, a new independent and unaligned European Policy Center with the mission to analyze contemporary issues related to de facto states and the Black Sea area. **Source: http://cimsec.org**

Fisheries to work with Hawks in graft probe

News / 6 March 2018, 11:57am / **Chevon Booysen**

Cape Town - The Department of Agriculture, Forestry and Fisheries has thrown its weight behind a probe by the Hawks, saying it was determined to take a stand against corruption. This followed the arrest of nine Fisheries' control officers who are based mainly in the Overberg region. The department said it would continue to support the police in their endeavour to investigate allegations of corruption among its officers. The department's acting chief director for monitoring, control and surveillance Thembalethu Vico said: "*This forms part of the department's efforts to enhance discipline and integrity among its workforce by ensuring that reported corruption is dealt with through the relevant state systems*." Vico said illegal, unregulated and unreported (IUU) fishing - which abalone poaching is classified under - is a global challenge that threatens world food security and ecosystems, and South Africa is not exempted. The department galvanised other law-enforcement agencies through its Operation Phakisa Oceans Economy initiative to deal with IUU fishing. He said the department understood there is a need for organised international communities to work together to combat IUU fishing. "*As a result, the department has ensured that South Africa ratifies the UN Food and Agriculture Organisation: Port State Measure Agreement to curb IUU fishing. The department also plays an integral role in enhancing collaboration through the relevant structures of SADC and Interpol to curb IUU fishing in the region*," said Vico. South African Deep-Sea Trawling Industry Association secretary Johann Augustyn said: "*We welcome any arrests related to corruption. We are concerned about the threatened resources and if thorough investigations lead to arrests, we are very happy about it. "We understand there might be an issue when we offload our catches at Gansbaai This affects us directly. "When we offload (catches) there has to be an inspector to oversee it. "And if they don't have the capacity we sit with one of two contraventions which is to offload without an inspector present or to dump the fish*," Augustyn said. **Source: https://www.iol.co.za**

And now for some nerw technology

Veth Propulsion delivers first Z-Drives to tug Damen Shipyards

Papillon is the first tug from **Damen Shipyards** that sails with Veth Z-drives. Many years of cooperation and built up trust have ensured that Veth Propulsion was chosen to deliver the main propulsion system for this ASD tug (type VZ-1100A with Mitubishi engines of 1040 kW). "*Veth Propulsion and Damen Shipyards have been working together since the 1980s for the delivery of Veth Z-drives, tunnel bow thrusters and generator sets for different types of vessels. We are very proud that this cooperation is now awarded with the delivery of a Z-drive for an ASD tug*,"says Martin van der Jagt, General Sales Manager Veth Propulsion Papillon is the latest addition of De Boer Remorquage SARL from Cayenne (French Guiana – neighbouring Surinam), a subsidiary company of **Dutch Dredging (Baggerbedrijf De Boer)** from Sliedrecht and **Iskes Towage & Salvage** from IJmuiden, the Netherlands. "*Our delivery does not stay with this one tugboat. A new order has already been placed for a multipurpose tug/dredger, the WID 2915 Hybrid. Veth Propulsion will deliver 2 Veth Hybrid Drives (VZ-1250A-VHD) / 1425 kW) and a Tunnel bow thruster (200 kW)*,"conludes van der Jagt. **Source: Maasmond Maritime**