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OF EGYPT'S ONLY  
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\* Special Report

## Egyptian Armed Forces

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## **African Navies dealing with matters governing maritime security**

The role of African navies and agencies in dealing with maritime security threats such as illegal fishing, piracy and organized crime at sea is not well documented. This creates the impression that they aren't actively involved, which is not the case.

While most incidents continue to occur in the Gulf of Guinea, waters of South-East Asia and the Western Indian Ocean, acts of piracy and armed robbery against vessels are not restricted to these known 'high risk' regions.

The increase in pirate attacks off the Horn of Africa was directly linked to continuing insecurity and the absence of the rule of law in war-torn Somalia. The absence of a functioning government in Somalia remains the single greatest challenge to regional security and provides freedom of action for those engaged in piracy along the Somali coast. Some observers also have alleged that the absence of coastal security authorities in Somalia has allowed illegal international fishing and maritime dumping to occur in Somali waters, which in turn has undermined the economic prospects of some Somalis and may be providing economic or political motivation to some groups engaged in piracy.

The Gulf of Guinea accounts for a large majority of seafarer kidnappings and ransom situations worldwide which presents many stressful, challenging situations for the maritime industry.

Much of the piracy that affects West Africa is a product of the disorder that surrounds the regional oil industry. A large share of the recent piracy attacks targeted vessels carrying petroleum products. These vessels are attacked because there is a booming black market for fuel in West Africa. Without this ready market, there would be little point in attacking these vessels. There are indications that oil may also be smuggled outside the region.

Maritime piracy has increased off the west coast of Africa, in the Gulf of Guinea, despite preventative measures. The number of crew members kidnapped by pirates worldwide has been increased. Nine out of 10 maritime incidents of piracy and kidnappings for ransom are reported in West Africa's Gulf of Guinea, which stretches 5,700 kilometres (3,500 miles) from Senegal to Angola.

According to the German Institute for International and Security Affairs (SWP), since 2018 there have

been a quarter fewer attacks on ships, but more hijackings. "The approach of the pirates has changed: instead of three seamen, they take the whole crew with them. Hostages for money."

The international community has taken up the Horn of Africa issue. Since 2008, ships and planes have been patrolling off the coast of Somalia as part of the EU mission Atalanta. However, as a link between the Indian Ocean and the Red Sea, and thus the Mediterranean, the region is also one of the world's busiest and therefore its most important shipping routes. Therefore, the Horn of Africa is where large flows of goods are brought from Europe to Asia.

There is a huge difference between the Gulf of Guinea and the Horn of Africa, the ships have to cross the Gulf of Aden, where most of the attacks take place. But the passage is in international waters, so the international community can protect the ships. Thirty countries have provided ships for this purpose. However, in the Gulf of Guinea, many attacks also occur near the coast. In West Africa, most attacks take place on the territory and in the ports of the countries concerned, and the nations themselves have to intervene.

The use of naval capacity is one of the most effective ways to counter piracy. International bodies and agreements provide the opportunity to use military measures for the purpose of securing maritime navigation. The issues concerning the counteraction of piracy by military force are also regulated by agreements between countries and by internal regulations. To more effectively combat piracy, it is necessary to initiate the constant patrolling of the hot spots of the world's oceans by warships through the joint efforts of several states. A patrol boat is a relatively small naval vessel generally designed for coastal defence, border protection, immigration law-enforcement, search and rescue duties. There have been many designs for patrol boats. They may be operated by a nation's navy, coast guard, police force or customs. They are commonly found engaged in various border protection roles, including anti-smuggling, anti-piracy, fisheries patrols, and immigration law enforcement. They are also often called upon to participate in rescue operations. They may be broadly classified as inshore patrol vessels (IPVs) and offshore patrol vessels (OPVs). They are warships typically smaller in size than a corvette and can include fast attack craft, torpedo boats and missile boats, although some are as large as a frigate.

The current shipbuilding market asks for a fast patrol boat able to enhance maritime security in the African continent and to combat piracy, illegal fishing, human and drugs trafficking. Around the world, patrol boats are critical assets for providing coastal security and surveillance. The coastal patrol boats



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are designed to enhance maritime surveillance capabilities of the naval forces. In addition to supporting private security efforts, many different types of patrol boats are used within the government and military programs of nearly every nation.

Acquisition of Offshore Patrol Vessels (OPVs) by African coastal states has attracted significant attention. The offshore patrol vessel is intended to carry out a range of economic exclusion zone management tasks such as maritime security, border control, routine patrols, and anti-smuggling. OPV also facilitates counterterrorism and piracy, fishery protection, and effective disaster relief. It can also be used for the protection of natural resources. In recent years, all coastal African nations have widely acknowledged a growing trend in the threat to national security as sea based. Included is the explosion of maritime piracy, the increased focus on countering smuggling, drug-running and border control, and the rising value of the fishing industry, oil industry and naval trade routes. The Offshore Patrol Vessel has become one of the most significant emerging tools for coastal protection worldwide. Acquisition programs continue to dominate the immediate priority lists of navy and coastguard commanders, a development that is likely to continue over the next ten years and beyond. The high incidents of piracy and other maritime crimes have prompted several national,

bilateral, regional, and extra-regional engagements to improve maritime security. Maritime security can only be ensured via regional, interregional, or international cooperation, optimised information sharing and joint intervention capabilities. At the regional level, measures to improve maritime security have come in the form of joint training exercises among Navies.

In terms of extra-regional interventions to improve maritime security in the GG, the role of the US military is very salient. Through its AFRICOM's African Partnership Station (APS) initiative, the US military has been involved in joint training exercises with navies in the region to develop proficiencies in areas such as maritime interdiction operations, search and rescue operations, and counterterrorism, among others. The emerging intra- and extra- regional naval collaborations need to be expanded and sustained. To this end, African navies need to evolve an integrated maritime strategy that will comprehensively address the various threats, challenges and opportunities that confront the region.



*Dimitrios Angelopoulos M.Sc. Captain (Rtd)HN  
Advisor on Defence and Maritime Security issues*

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## Egyptian Armed Forces



LTG Mohamed Farid is on an inspection tour to a number of border security points and meet

Egypt's armed forces are among the largest in Africa and the Middle East. The Egyptian military is comprised of the army, air force, navy and air defense forces.

As per the constitution of Egypt, the armed forces of the country are under the jurisdiction of the Supreme Court led by the President who is the Supreme Commander of the armed forces. Underneath the President there are 21 senior ranking officers in charge of the different departments and armies of the military. The Egyptian army has proven itself time and again and stood strong in protecting the wellbeing of the people.

The military in Egypt has been involved in the completion of many national infrastructure projects like the construction of sewers, power lines, overpass, bridges, schools, roads, telephone exchanges and more. There have been many reviews about the intervention of the military in such infrastructural developments, but most agree that the development was affordable to the government only due to the military's effective use of their resources.

Industries that the military owns have always been a powerful contributor to the economy of the country, even when profits have not been made public.

The Egyptian military has been strongly supported by Egypt's American ally, receiving \$1.3 billion in military aid annually since 1987, including American-manufactured weapons and equipment. The United States has favored regime stability in Egypt and values a regional ally that maintains peace with Israel; both the United States and Israel are viewed with suspicion and sometimes hostility by many Egyptians.

The Armed Forces' inventory includes equipment from different countries around the world. Equipment from the Soviet Union is being progressively replaced by more modern U.S., French, and British equipment, a significant portion of which is built under license in Egypt, such as the M1 Abrams tank. Egypt is a participant in NATO's Mediterranean Dialogue forum. Egypt is one of the few countries in the Middle East, and the only Arab state, with a reconnaissance satellite.

The inventory of the Egyptian armed forces includes equipment from the United States, France, Brazil, the United Kingdom, the Soviet Union, and the People's Republic of China. Equipment from the Soviet Union is being progressively replaced by more modern U.S., French, and British equipment, a significant portion of which is built under license in Egypt, such as the M1A1 Abrams tank.

Conscripts for the Egyptian Army and other service branches without a university degree serve three years as enlisted soldiers. Conscripts with a General Secondary School Degree serve two years as enlisted personnel. Conscripts with a university degree serve one year as enlisted personnel or three years as a reserve officer. Officers for the army are trained at the Egyptian Military Academy.

### Egyptian Army

The Egyptian Army remains one of the world's largest. It operates more than 1,360 M1 Abrams main battle tanks which has been produced locally under license since 2005. Cairo will also procure at least 500 units of the highly capable T-90 main battle tanks from Russia.

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Egypt also operates more than 300 M60 Patton and 500 T-62 main battle tanks and is acquiring almost 800 Caiman mine-resistant ambush protection (MRAP) vehicles, as well as 800 RG-33 MRAPs from the United States plus more than 5000 various types of Infantry Armored Vehicles and Armored Personnel Carriers. The Egyptian army in its inventory has 11800 armored vehicles, 1130 self-propelled artillery, 2180 towed artillery and 1085 rocket projectors.

### **Egyptian Air Force**

The Egyptian Air Force (EAF) is the aviation branch of the Egyptian Armed Forces.

On 3 March 2010, the EAF ordered 20 Lockheed Martin F-16C/D Block 52 aircraft. On 16 February 2015, Egypt became the Dassault Rafale's first international customer when it officially ordered 24 Rafales.

In April 2014, it was reported that Egypt plans to order 24 MiG-35 fighters as part of an arms deal with Russia. In 2015, Russia agreed on a contract with Egypt for 46 MiG-29M/M2 fighters and it is expected to be worth up to \$2 billion. In addition, Russia and Egypt signed a contract for delivery of 50 Ka-52 helicopters.

SAGEM and AOI-Aircraft Factory have signed a collaboration agreement concerning the Patroller UAV. AOI-Aircraft Factory could handle final assembly of the drones and will develop a dedicated training center in Egypt to train staff for

the operation and maintenance of the drone systems.

On 18 April 2016, Egypt signed a contract with France for the sale of a military telecommunications satellite after discussions between the Egyptian and French presidents and between the Ministers of Defense, which took place during a visit by French President Francois Hollande to Cairo. The satellite will be supplied by Airbus Defence and Space and Thales Alenia Space. The price of the contract wasn't announced but is estimated at around 600 million euros.

In December 2015, Russian Helicopters agreed to provide after-sales service and maintenance for the Egyptian Air Force's fleet of 41 Mi-8Ts and 3 Mi-17-1V helicopters in Russia.

In August 2019, the Royal Jordanian Air Force transferred two of its Ilyushin Il-76MF aircraft to the Egyptian Air Force. The two aircraft are unique because they are the only stretched version of the famous Il-76 air-frame. On 4 May 2021, France agreed to sell Egypt an additional 30 Dassault Rafale warplanes in a 4 billion euro (\$4.8 billion) deal.

### **The Egyptian Air Defense Forces**

The Egyptian Air Defense Forces or ADF is Egypt's military command responsible for air defense. Egypt patterned its Air Defense Force (ADF) after the Soviet Air Defence Force, which integrated all its air defense capabilities – antiaircraft guns,



rocket and missile units, interceptor planes, and radar and warning installations. It appears to comprise five subordinate divisions, 110 surface-to-air missile battalions, and 12 anti-aircraft artillery brigades. Egypt has in its inventory the American Patriot and Hawk, the German IRIS-T, the French Crotale, the Russian Buk, Tor and Antey-2500 ballistic missile defence system while is considered the procurement of the S-400.

### **The Egyptian Navy**

The Egyptian Navy was established after the Second World War. Some fleet units are stationed in the Red Sea, but the bulk of the force remains in the Mediterranean. Navy headquarters and the main operational and training base are located at Ras el Tin near Alexandria.

The Navy also controls the Egyptian Coast Guard. The Coast Guard is responsible for the onshore protection of public installations near the coast and the patrol of coastal waters to prevent smuggling. It has an inventory consisting of about thirty-five large patrol craft (each between twenty and thirty meters in length) and twenty smaller Bertram-class coastal patrol craft built in the United States.

The Egyptian Navy has been undergoing significant equipment modernization. In 2014, the Egyptian Navy inducted four US-made Ambassador MK III fast missile craft and ordered four 2,500-tonne French-made Gowind-class corvettes with an option for two more.

In 2015, the Egyptian Army received a Russian-made P-32 Molniya-class missile craft, one French-made FREMM multi-purpose frigate.

On 24 September 2015, the French presidency announced that an agreement had been reached with Egypt for the supply of two amphibious assault ship Mistral class originally intended for Russia that will be equipped with Russian-made Ka-52 Alligator helicopters. The Egyptian Navy has into service four German-made diesel-electric attack

submarines based on the Type-209 design. In April 2019, the German parliament approved the Euler Hermes guarantee of 2.3 billion euros for the sale of 6 Meko A200 class frigates to the Egyptian navy. In 2020, the Italian government accepted the proposal to sell two Bergamini-class frigates to Egypt for a value of 1.2 billion euros.

On 22 July 2021 President Abdel Fatah el-Sisi received in Egypt a delegation from Lürssen Defense to examine ways of developing the Egyptian naval industries system and plans of technological upgrade in the sector. The meeting was attended by Commander of the Egyptian Naval Force Ahmed Khaled and CEO of the German shipyard Peter Lürssen among others.

With these acquisitions Egypt has been modernizing its forces with an approach that except the USA has clearly looked to new suppliers, notably Russia, but also France and Germany, to meet future capability requirements.



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- **General \ Mohamed Zaki, Minister of Defense**



- **Lieutenant General Osama Askar, Chief of Staff of the Armed Forces**



- **Lieutenant General \ Ahmed Khaled Hassan Said Ahmed, Commander of the Navy**



- **Lieutenant General \ Mohammed Abbas Helmy Hashem, Air Force Commander**



- **Lieutenant General \ Mohamed Hegazy Abdul-Mawgoud, Air Defense Forces Commander**





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## CONTRACT SIGNING CEREMONY FOR THE PROCUREMENT OF 2 NEW OFFSHORE PATROL VESSELS FROM MESSRS DEARSAN

On 3 November 2021, the Nigerian Navy signed a contract with a Turkish company, Messrs Dearsan Shipyard Limited for the purchase of 2 brand new Offshore Patrol Vessels. The 2 vessels are expected to be completed within 37 months. Speaking at the ceremony, Chief of the Naval Staff, Vice Admiral Awwal Gambo recalled that Nigerian Navy has in the last couple of months brought to bear her dominant status in the region by sustaining an aggressive presence in the nation's maritime environment, leading to drastic reduction in acts of criminality in the domain. This development he added has been acknowledged by the International Maritime Bureau (IMB) in its Global Piracy Report of 14 July 2021, indicating the lowest total of piracy and armed attacks against ships in 27 years. According to the CNS, this report was corroborated by the Defence Web maritime security report of 15 October 2021 which noted further decline in reported cases of piracy and armed attacks against shipping in the Gulf of Guinea (GoG), a development he attributed to the impact of NN maritime security operations efforts.

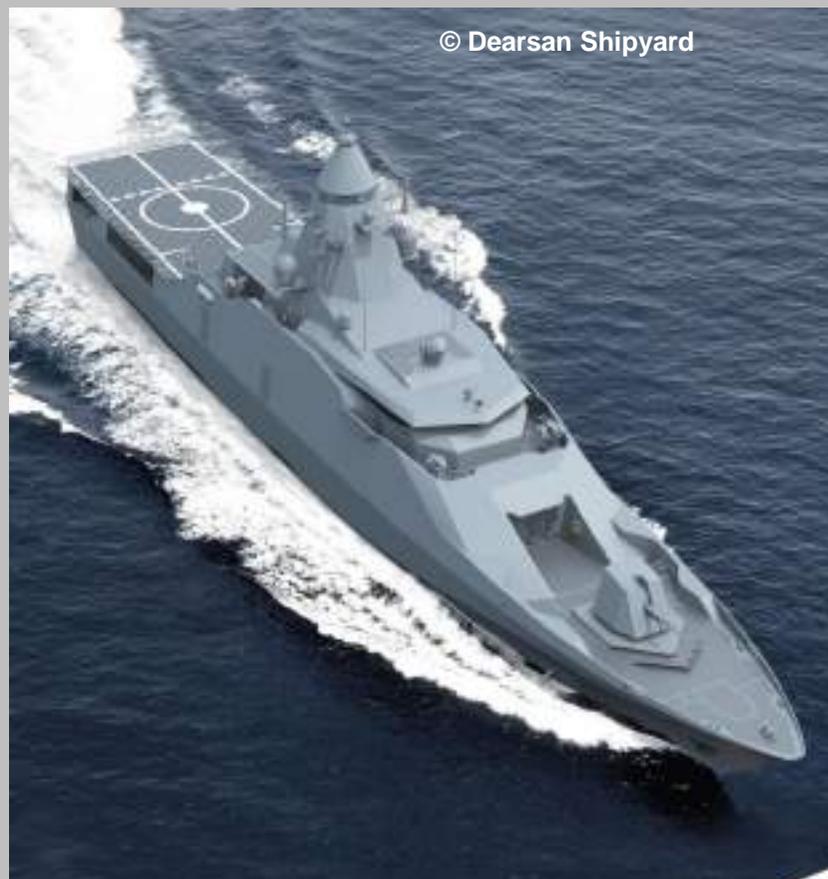
Admiral Gambo stated that the contract signing ceremony was another milestone achievement by the Nigerian Navy in her fleet renewal effort towards realizing her 2021-2030 Strategic Plan and expressed gratitude to the President and Commander-in-Chief of the Armed Forces, His Excellency President Muhammadu Buhari for his continued support and goodwill towards the Nigerian Navy. The CNS also recalled that on the directive of the President and Commander-in-Chief, the Nigerian Navy hosted the Chief of the Ghana Navy to discuss collaborative efforts to combat piracy and other maritime crimes in the GoG and during the meeting, it was agreed that there was a need to establish a standing ECOWAS Multinational Task Force in the GoG.

Pertinently, to sustain the upwards trajectory of the NN's operational engagements and actively participate in the proposed Task Force, the CNS informed that the President granted approval for the NN to procure 2 High Endurance Offshore Patrol Vessels with the capability to carry out maritime interdiction operations, surveillance and special forces operations as well as provide naval fire support to land forces. " The OPVs will also be

capable of conducting search and rescue operations, anti-piracy, anti-smuggling and anti-drug trafficking operations and disaster relief operations among others".

Admiral Gambo further revealed that the process of selecting a shipyard capable of constructing the OPVs began in earnest and Dearsan Shipyard Limited was selected based on its track record and the conviction that the shipyard would be able to construct a platform that could be deployed as an OPV in peacetime, while having the capability and flexibility to be quickly outfitted with sensors and weapons to re-role the platform for warfare and maritime defence purposes, at a cost effective price. According to him, today was a remarkable day as it marked the consummation of relationship between the NN and Messrs Dearsan which is hoped would lead to more fruitful engagements between Nigeria and Turkey in the future.

While responding, the Chief Executive Officer of Messrs Dearsan Shipyard, Mr Murat Gordi appreciated the Nigerian Navy and the Federal Government for the confidence placed on their company to construct the Offshore Patrol Vessels. He further assured that the company would reciprocate by building the best-in-class vessel for the Nigerian Navy and ensure the contract is faithfully executed to deliver true value for money. Mr Gordi added that this project will further strengthen ties between the Federal Republic of Nigeria and Turkey through the provision of added value in technological transfer and expertise. The event was graced by principal staff officers of the Naval Headquarters and representatives from Messrs Dearsan Shipyard Limited.





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- Sea Pollution
- Search and Rescue

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- CBRN-E Control and Management

### CHIEF OF DEFENCE STAFF LAUNCHES FOUR SEMI BALLISTIC GUNBOATS CONSTRUCTED BY NAVAL SHIPYARD LIMITED

The Chief of Defence Staff, General Leo Irabor on Monday, 25 October 2021 launched four Semi Ballistic Gunboats constructed for the Defence Headquarters by the Naval Shipyard Limited in Port Harcourt. According to the Chief of Defence Staff who was also the Special Guest of Honour for the occasion, the decision to provide armoured gunboats for operations was informed by the need to provide added protection to troops in the discharge of the Armed Forces of Nigeria's responsibility of ensuring safety and security of the nation's maritime environment.

Speaking further, the CDS reiterated the confidence emplaced on the Naval Shipyard Limited by awarding the contract to construct the boats. In his words, "From all indications and from what we are seeing here today, the decision has proven to be a wise one

I must also state quickly that the decision was borne out of the need to support the shipbuilding capability of our Armed Forces in order to improve local capacity and expertise for the production of our defence needs". General Irabor further commended the Nigerian Navy and the Naval Shipyard Limited for achieving this feat despite the interruption of industrial, commercial and economic activities that

emanated due to the outbreak of the COVID -19 pandemic. He further stated that this achievement would be a boost to enhancing military presence within the waterways in order to mitigate maritime security challenges in the Niger Delta region of Nigeria. The General enjoined the end users of the ballistic gunboats to imbibe the culture of maintenance to ensure their longevity.

In his remarks, the Chief of the Naval Staff, Vice Admiral Awwal Zubairu Gambo stated that the construction of the Semi Ballistic Gunboats is yet another milestone achievement by the Naval Shipyard Limited in the provision of necessary support to the on-going effort at combating threats to the nation's maritime interest. Speaking further, Admiral Gambo said the protection of Nigeria's maritime environment remains a key mandate of the Nigerian Navy hence the need for developing requisite capacity for ship building as well as provision of necessary logistics support for the sustenance of the fleet. Therefore, the construction of the platforms and their subsequent induction into the maritime assets of the Operation Delta Safe would bolster the operational capacity of the Joint Task Force in the Niger Delta area.

The Chief of the Naval Staff expressed delight on the project and appreciated the Chief of Defence Staff for the patronage as well as trust and believe in the capability of the Naval Shipyard Limited to build the boats for the Defence Headquarters. He said the achievement has contributed immensely to the development of expertise of the Naval Shipyard Limited and expectedly a cost saving option considering other competing demand for scarce resources. According to him, the endeavour also aligns with the Federal Governments agenda of encouraging local content towards developing indigenous capacity and reducing dependency on external vendors. The Admiral reaffirmed that the Nigerian Navy will not relent in its effort at developing the capacity of the Naval Shipyard Limited stating that the Navy is exploiting partnership with the Presidential Implementation Committee on Technology Transfer to further develop the infrastructure and human capacity of the Yard towards national socio-economic development. The event was graced by very senior officers from the Defence Headquarters and the Services.

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# ***EMPOWERING YOUR NAVAL PERFORMANCE***

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## **BEREZHOK Combat Turret for BMP-3 IFVs**



The High Precision Weapons Holding (HPW) unveiled the BMP-3 IFV fitted with a Berezhok combat turret at the ARMY-2021 Forum. The BMP-3 was developed by Kurganmashzavod while the turret was designed by KBP Instrument Design Bureau, both the HPW subsidiaries now.

The original BMP-3 is fitted with a two-man turret mounted in the center of the hull with the commander seated on the right and the gunner on the left. The turret is armed with one 100 mm 2A70 gun, a 30 mm 2A72 coaxial cannon, and a 7.62 mm PKT coaxial machine gun, all in a common mount. The armament is stabilized in two planes via the 2E52 electromechanical system.

The Berezhok combat weapon station mounted on BMP-3 IFV is armed with one 30 mm 2A42 main gun used on the BMP-2 IFV, a PKT 7.62 mm coaxial machine gun. The turret also includes two 9M133 Kornet-E anti-tank guided missile launchers mounted on each side of the turret and one AGS-30 30 mm automatic grenade launcher located on the roof. The Berezhok upgrade also includes a new fire-control system and optics.

ARMY-2021 witnessed the premier of the new version of BMP-3 IFV fitted with a Berezhok combat turret





According to the first analysis, the BMP-3 fitted with the Berezhok combat weapon station keeps the same hull and suspension. The vehicle has a crew of three including commander, gunner, and driver. A total of seven infantrymen can be carried, one aside of the driver with the remainder being seated to the sides and rear of the turret. The troop compartment is at the rear of the hull with entry via two doors in the hull rear opening left and right, with the left door having a firing port.

The BMP-3 IFV is powered by a UTD-29M 10-cylinder 4-stroke liquid-cooled diesel developing 500 hp coupled to hydro-mechanical transmission with 4 forward and 2 reverse gears located low down at the very rear of the hull. It can run at a maximum road speed of 70 km/h with a maximum cruising range of 600 km.

The BMP-3 fitted with the Berezhok turrets seems to keep its amphibious capabilities and is propelled in the water at a maximum speed of 10 km/h thanks to two water-jets mounted on either side low down at the rear of the hull.

The Berezhok universal combat module was developed for installation on light armored vehicles of the Soviet and Russian production. Since 2020 the Russian Army began modernization of the BMP-2 fleet, replacing the standard turret with the Berezhok combat weapon station.

Since 2010 the Russian companies has been working on the modernization of the BMP-1 IFVs of the Algerian Army into the BMP-2M version equipped with the Berezhok combat module. Indian Army, which is keen on upgrade of the BMP family of infantry fighting vehicles, could become next customer of the Berezhok turret.



### **‘Universal’ BRAHMOS: The Ultimate Force Multiplier**

World’s most powerful and deadliest supersonic cruise missile system BRAHMOS, jointly designed and developed by India’s DRDO and Russia’s NPOM, has strongly positioned itself as a formidable deterrent weapon during high intensity military conflicts of modern times. The ‘universal’ missile combining high speed, pin-point accuracy, deadly firepower, complex manoeuvrability along with range, has been successfully operationalised in the Indian Army, Navy and Air Force.

Designed as a state-of-the-art tactical weapon having impeccable anti-ship and land strike capability, BRAHMOS has swiftly evolved since its maiden successful test firing conducted on June 12, 2001 in anti-ship configuration, and has become the “ultimate weapon of choice” for network-centric warfare operations. Capable of being launched from across the spectrum of warfare – land, sea, and air – the incredible BRAHMOS has been tested for over 80 times to date, having charted the highest success rate no other weapon of its genre in the world has ever achieved.

BrahMos Aerospace, the India-Russia JV entity producing the supersonic cruise missile, has successfully designed and developed the BRAHMOS land-based weapon complex, ship- and shore-based weapon complex and the advanced air-launched cruise missile (ALCM) variants. An underwater version of the weapon was also tested successfully in 2013 to validate its capability to be armed on conventional attack submarines.

Indian Navy became the first force to deploy BRAHMOS in its Rajput-class guided missile destroyer (DDG) in 2005. The missile, having world-class anti-ship capability, was subsequently integrated into the combat suites of other frontline surface warships of Indian Navy. During a successful test firing conducted from an Indian naval frigate (FFG) in April 2017, BRAHMOS also validated its land-attack capability. In the naval configuration, BRAHMOS can be fired from both vertical and inclined launchers from static or moving naval platforms in single or salvo mode, thus giving the Navy an unparalleled flexibility and outreach to engage and neutralize sea and land-based targets from long, stand-off ranges in any weather conditions.

BRAHMOS ship-based weapon complex is a state-of-the-art modern combat system designed to carry out precision strikes against ships and coastal targets at beyond radar horizons up to a range of 290 kms. Featuring a modular design, the combat



**Dr. Sudhir K Mishra, Director General BrahMos,  
DRDO, CEO & MD of BrahMos Aerospace**

system can be integrated with various class of surface ships, including DDGs and FFGs. The system is equipped with world's best and deadliest supersonic cruise missile 'BRAHMOS' to undertake anti-ship and land-attack operations in multi-threat maritime environment for long, stand-off ranges. Having an open architecture configuration, the system can be seamlessly integrated with adjacent sensors and systems. Elements of BRAHMOS ship-based weapon complex include BRAHMOS Supersonic Cruise Missile System; Universal Launcher Module; BRAHMOS FCS & other support systems.

Likewise, the BRAHMOS shore-based weapon complex is designed for high precision strike missions against heavily defended targets at sea or on land for up to a range of 290-km. Offering a high performance coastal defence solution, the system uniquely features modern C4I network-centric architecture which can operate in a highly complex, multi-threat situation. With its open architecture, the 'universal' system can be integrated or adapted to adjacent weapons and command & control systems of the designated user. The shore-based weapon complex comprises of the precision-strike BRAHMOS surface-to-surface missile system; the Mobile Autonomous Launcher; Mobile Command Post; Mobile OTH Radar; Mobile Replenishment Vehicle and other supporting systems.

The land-attack BRAHMOS variant has been deployed by the Indian Army since 2007 to carry out land warfare operations in divergent conflict scenarios from varied and difficult land terrains. The land-attack cruise missile (LACM) has been inducted in advanced Block I, II and III configurations, each having distinct capability to neutralise high value land targets.

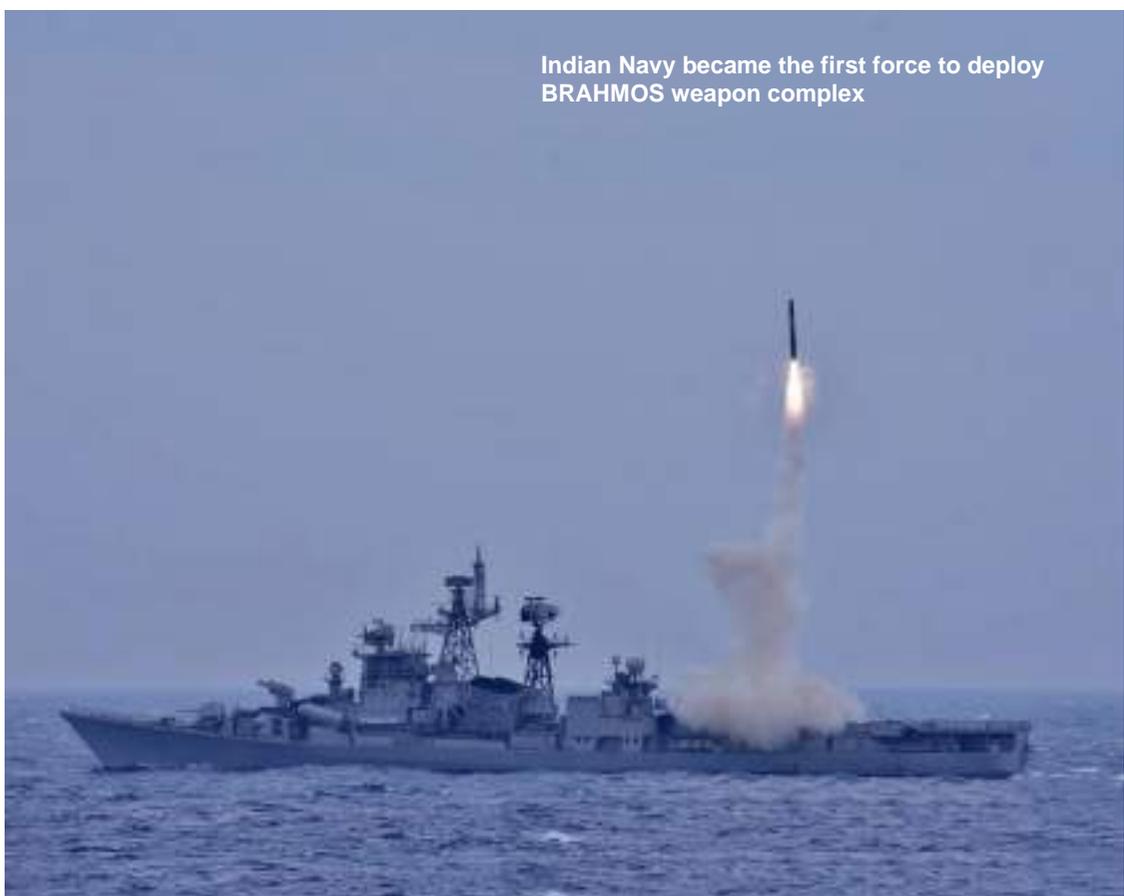
### **The Indian Air Force (IAF) has also deployed BRAHMOS LACM squadron.**

On January 20, 2020, the IAF raised the formidable "TigerSharks" squadron comprising the highly advanced BRAHMOS air-launched cruise missile (ALCM)-armed Sukhoi-30MKI strike fighter platform, in Southern India. Prior to its induction, BRAHMOS ALCM underwent a series of successful test firings from the IAF's Su-30 fighter aircraft between November 2017 and December 2019 and established its credibility as the world's most powerful conventional air-borne weapon capable of obliterating land and sea-based strategic targets from long, stand-off, beyond visual ranges in day & night and all-weather conditions.

"Development of BRAHMOS as the most versatile and an incredibly powerful missile has placed it among the best tactical weapon in the world. Its successful deployment in all three Services of Indian Armed Forces has made BRAHMOS a unique force multiplier, capable of conducting high-value combat missions from across the spectrum of modern warfare in net-centric environment," according to Dr. Sudhir K Mishra, Director General BrahMos, DRDO, and CEO & MD of BrahMos Aerospace. To retain this unparalleled edge among worldwide cruise missiles, the JV entity has also initiated work to design and develop more advanced, futuristic BRAHMOS versions, including the BRAHMOS-NG (next generation) and the hypersonic BRAHMOS-II (K).

BrahMos Aerospace will be displaying the world-class BRAHMOS Weapon System in its land, sea, sub-sea and air-launched configurations at the EDEX 2021 exhibition from 29th November to 2nd December 2021.

Indian Navy became the first force to deploy BRAHMOS weapon complex



## **International Flight Training School: technical arrangement signed for the training of Japanese military pilots in Italy**

Further to Qatar and Germany, Japan has also chosen to send its military pilots to complete their operational training at the Italian Air Force's and Leonardo's International Flight Training School (IFTS).

The Chief of Staff of the Italian Air Force, General Alberto Rosso, and the Chief of Staff of the Japan Air Self-Defense Force (JASDF), General Shunji Izutsu, have signed today an important technical arrangement on the training of Japanese military pilots.

The technical arrangement was signed in "distance mode", through a connection between the offices of the two Generals in Italy and Japan. Thanks to this agreement, the Japanese military pilots will take part in the advanced training courses (Phase IV) at International Flight Training School (IFTS). The IFTS is a joint project made by Italian Air Force and Leonardo, that includes also an industrial partnership between Leonardo and CAE for the maintenance/support of the aircraft fleet and simulators.

Japan's interest in the training capabilities developed by the Italian Air Force was consolidated after a series of discussions and initiatives that culminated in a visit to the 61st Wing at Lecce-Galatina Air Force Base on September 2020. This was when a JASDF delegation was able to appreciate the excellence of the Italian Air Force's training system, particularly the Integrated Training System developed by Leonardo and centered around the T-346A aircraft.

The newly signed technical arrangement enables a gradual increase in JASDF student pilot intake over the forthcoming years. In the future, Japanese instructors could be welcomed into the school to work side-by-side with Italian colleagues, in an approach that favours the exchange of experiences, the optimization and standardization of procedures, to benefit all the operators in the sector.

Japan is the third country, after Qatar and Germany, to choose the International Flight Training School (IFTS) for its pilots.

The Chief of Staff of the Italian Air Force, General Alberto Rosso, before signing the document, underlined its profound significance: "Today is an important and historical date. I am proud and honoured to be able to sign this agreement, which will outline for both countries the track for growing together, for sharing professional skills, allowing our staff to work in close contact, synergy and friendship. This is another important step in the collaboration between our Air Forces: we are already cooperating with great success in many



© Leonardo Italian Air Force M-346 Full Mission Simulator

© Leonardo M-346 with IFTS Logo



areas, for example having common platforms such as the F-35 aircraft and the KC-767 tanker. The distance that separates us today is geographical only, but our countries are close, joined in harmony on many themes and historically connected. We remember, for example, the “Rome - Tokyo flight” of the pioneer Arturo Ferrarin, which we celebrated last week in his hometown of Thiene (North Italy): a historic undertaking and also a powerful symbol of the strong and lasting bond that joins our two countries.”

Chief of Staff of the Japan Air Self-Defense Force (JASDF), General Shunji Izutsu, commented: “Signing today the technical arrangement, I deeply appreciate your and your staff’s extensive support and cooperation. I believe that this is a significant step to deepen defense cooperation and exchanges between the Koku-Jieitai (Japan Air Self-Defense Force) and Italian Air Force. This is one of your great achievements. Let me extend my heartfelt respect to your achievements and gratitude to your contribution to Japan-Italy relationship. I really wish your continuous success and prosperity, and progress for the Italian Air Force.”

The International Flight Training School (IFTS) is the result of a strategic collaboration between the Italian Air Force and Leonardo, which is aimed at the establishment of an advanced flight training centre based in Italy. It is a virtuous example of collaboration and public-private synergy, capable of

satisfying the growing demand of partner countries for the training of their pilots at highest standards.

The project is intended to double today’s training offer by creating a new training center distributed between the bases of Galatina and Decimomannu, in Sardinia, where the new IFTS Campus is under construction. It will be a real flight academy capable of hosting students, technical staff and featuring accommodations as well as recreational areas, a cafeteria, sports facilities. Its logistic-maintenance infrastructures will assure the operations of the fleet of 22 M-346 (designated T-346A by the Italian Air Force) airplane fleet. An entire building will be home to the Ground Based Training System (GBTS), with classrooms and the installation of a modern training system based on the latest generation simulation devices. The partnership between Italian Air Force and Leonardo combined the Air Force’s established know-how and Leonardo’s excellence in military pilot integrated training systems maximizing cost-effectiveness for Italian Air Force, whilst strengthening the international role played by Leonardo as a Training Service Provider.”

## Rosoboronexport showcased latest security equipment and solutions at Interpolitex 2021

JSC Rosoboronexport (part of the Rostec State Corporation) took part in the 25-th International Exhibition of Means of State Security Provision "INTERPOLITEX-2021" in Moscow.

At Interpolitex-2021, Rosoboronexport promoted civilian and dual-use products, special equipment for law enforcement and security agencies, developed and manufactured by leading Russian companies.

"At the invitation of Rosoboronexport, guests from 30 countries visited the exhibition in 2021. These are representatives of law enforcement agencies, emergency response agencies, private security and IT companies, as well as regional authorities," said Alexander Mikheev Director General of Rosoboronexport and Deputy Chairman of the Russian Engineering Union. "We, together with industrial enterprises, presented our partners the full range of professional security equipment exhibited at Interpolitex and familiarized them with Rosoboronexport's integrated solutions to counter the main challenges and threats confronting modern society."

At Interpolitex-2021, Rosoboronexport showcased modern personal protective equipment manufactured by NPP Klass, NR-2000 nonlinear junction detector and Larets-4 cell phone anti-eavesdrop safe-box from the YUTTA Group, non-lethal self-defense and defense systems from the Research Institute of Applied Chemistry, a Federal Research and Production Center, stun guns from the MART GROUP, thermal and optical sights produced by Argus-NV and Dedal-NV, and screening systems and devices offered by JSC Set-1.



© Rosoboronexport - Pishal. Portable anti-UAV complex



© Rosoboronexport - Cerberus. Ideal for use at airports

In addition, Lobaev Arms and ORSIS small arms and hunting weapons, as well as anti-UAV systems produced by the Avtomatika Concern were on display at the company's stand.

Representatives of security agencies were most interested in a line of electroshock weapons offered by Rosoboronexport, which have proved effective in practice. The Cerberus precision and easy-to-use metal detector with a built-in stun gun is ideal for use at various checkpoints, airports or secure facilities where it is necessary to screen persons.

To provide VIP security, specialized law enforcement units need special precision weapons. Thanks to its modular design, Lobaev Arms DVL-10V3 Volkodav (Wolfhound) compact, light and accurate sniper rifle is suitable for various tasks. The user can change the barrel using ammunition of different calibers, including in the field. The Volkodav accurately hits a target at a range of up to 1000 m, allowing the shooter to maintain a high level of mobility.

The modern Taktika versatile bulletproof vest is designed to perform a wide range of tasks. Its unique feature is the opportunity to adapt to any conditions encountered by law enforcement agencies. A set of removable ballistic inserts and an ergonomic design provide reliable protection and a wide variability of optional equipment, whereby the vest can be easily adapted to specific needs. The officer chooses the level of necessary protection, which is provided by removable ballistic inserts. The basic bulletproof vest with installed front, back and side armor panels can be fitted with Level II to V removable ballistic inserts

Rosoboronexport introduced these products in detail during public presentations at the company's stand: "Personal Armor", "Equipment for Law Enforcement Agencies" and "Anti-UAV Weapons".

© Rosoboronexport - Kupol. Portable anti-UAV complex



## Ready for the challenges of the future Lürssen realigns itself

Effective immediately, the Lürssen Group continues to operate its naval shipbuilding business under the new umbrella brand NVL (Naval Vessels Lürssen). The new NVL Group will unite all Defence locations and thus all shipbuilding competencies of the Defence division. The new company NVL was spun off from Fr. Lürssen Werft as it is going to be the future lead company of the NVL Group. The NVL Group's responsibilities therefore include the entire newbuild spectrum as well as all repair activities of naval vessels and coast guard boats. Newbuilds and refits of the Yachts division will remain unchanged under the Lürssen brand, run in the future by Fr. Lürssen Werft as the lead company. The family-run Group of companies, with its headquarters based in Bremen, is thereby setting the course for a sustainable and long-term future for both divisions.

'With the Yachts and Defence divisions, we serve very different and increasingly heterogeneous markets and target groups. In addition, complexity is growing in both civil and military shipbuilding. In order to make the most of our competencies as shipbuilders and our infrastructure at our shipyard locations, we have decided to clearly separate the

two divisions,' explains Friedrich Lürssen, shareholder of the Lürssen Group.

His cousin and fellow shareholder, Peter Lürssen, adds: 'With this strategic decision, we want to give our two divisions the scope they need to tailor structures and processes even more specifically to the needs of their respective customers. We are convinced that this approach will allow us to strengthen our domestic and international competitiveness and to ensure that our Group is positioned to meet the challenges of the future in the long run.'

The lead company of the NVL Group, which is headquartered in Bremen-Vegesack, will be jointly managed by Dr Klaus Borgschulde and Tim Wagner as spokespersons, together with Dirk Malgowski and Lena Ströbele.

The NVL Group includes the newbuild sites Peene-Werft in Wolgast and Blohm+Voss in Hamburg, the service activities of Lürssen Logistics, the two repair yards Neue Jadewerft in Wilhelmshaven and Norderwerft in Hamburg, and operations in Australia, Bulgaria and Brunei.

The NVL Group's shipyards cover the entire newbuild and repair portfolio for naval vessels and coast guard boats for the domestic and international markets. The merger allows us to use synergies between the individual sites even more efficiently,' explains Klaus Borgschulde.

All current projects for the German Navy and for our international customers will continue unchanged under the new umbrella brand,' says Tim Wagner. 'As a privately managed shipyard Group, we are



and will remain independent and thus highly flexible. We continue to offer our customers high-quality speciality vessels and related services.'

Under the Lürssen brand, the entire newbuild portfolio of the Yacht division will be continued unchanged by the Bremen-based Fr. Lürssen Werft, steeped in tradition, together with the Lürssen-Kröger Werft in Schacht-Audorf. Likewise, all activities for yacht refits and services at the Bremen and Hamburg locations will be managed by the Yacht division. Fr. Lürssen Werft as the holding company of the Yacht division is managed by Peter Lürßen as chairman, Dr Justus Reinke, Lena Ströbele, Sebastian Rheineck and York Ilgner.

Both divisions and all associated companies will remain part of the Lürssen Group, which will continue to be family-run.



## HAVELSAN Integrated Border Security System

HAVELSAN is one of the leading technology companies of Turkey, established in 1982 as a corporation affiliated with the Turkish Armed Forces Foundation. Thanks to its decades-long experience and highly qualified human resources, HAVELSAN provides high technology-based software-intensive solutions and products for armed forces, public and private sectors at home and abroad.

As HAVELSAN we understand the growing importance of geostrategic aspects and dynamics of African continent in respect of natural resources and protecting sovereignty, integrity, economy and wealth of the various African nations. As a result, we are dedicated to provide state of art technologies, proven and reliable end to end solutions for every kind of challenge, threat and need of African nations.

**HAVELSAN Integrated Border Security System** is developed to protect a wide critical and strategical areas against any threats that attempting to cross borders and attack critical facilities. IBSS can be scripted upon scenarios that includes popular threats, possible threats, and geography specific

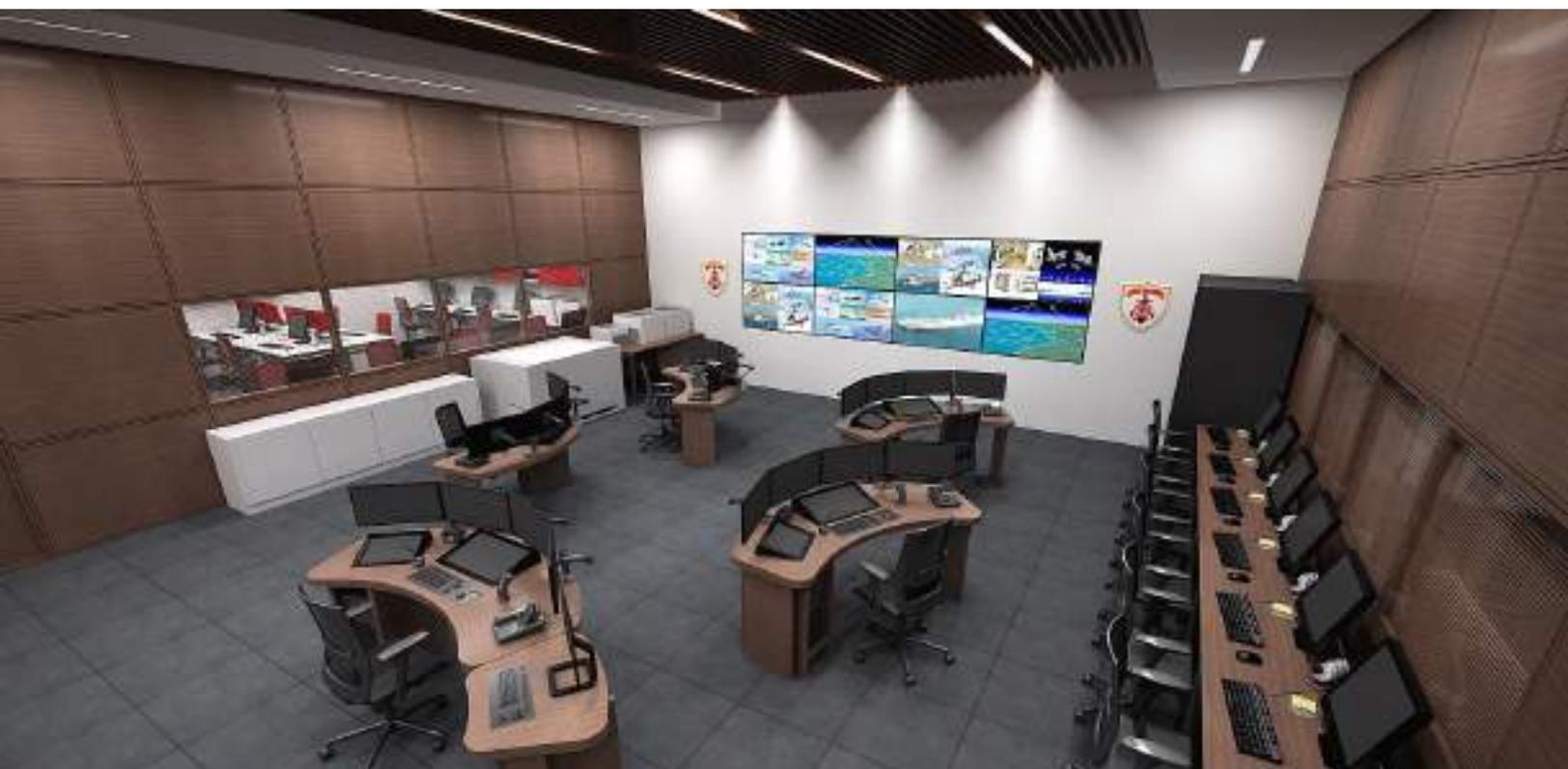
threats and so on. IBSS is based on a hybrid architecture that combines distributed data fusion and central command & control and generates Joint Border Picture from continuously updated Recognized Land, Air, Maritime Border Pictures and Critical Facility Situation received from sublevel C4I systems.

IBSS ensures surveilling the current border situation with UAV/COMBAT UAV integration at tactical level. In addition to that, the IBSS also ensures necessary information flow in an absolute and accurate manner and provides increased common situational awareness for dismounted border units.

The IBSS will be complemented with number of borderline surveillance sites across the border, land assets such as Radar, Electro-Optical Cameras, Remote Controlled Weapons and unattended sensors, surface assets including patrolling vehicles and personnel equipment.

Perimeter protection of the bases and facilities behind the borderline, from surveillance sites to bases and headquarters are also ensured in the IBSS scope. A casual CCTV solution in these areas with Video Analytics for software is supported surveillance. So, it is further enhanced with SWIR cameras, Motion Detection Sensors, Fiber Optic Acoustic Sensors, UAVs for increased intrusion detection and controlled entry/exit/access control systems with road blockers, barriers, strengthened gates, ballistic guard houses for extended physical security purposes.

Coastal security as well as the border security is another essential part of Integrated Border Security System concept. IBSS is complemented by numerous defense technologies are the other essential elements of an integrated border security.

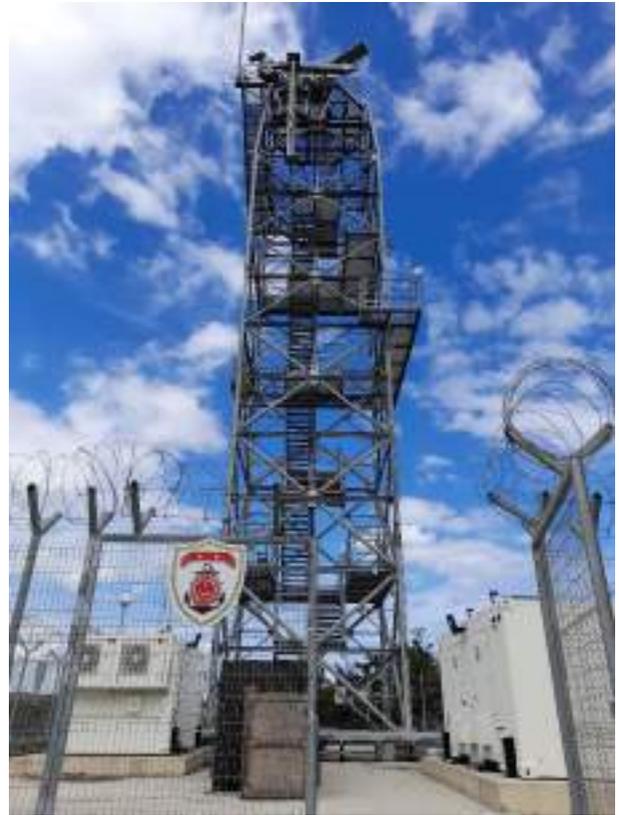


**HAVELSAN Coastal Surveillance radar System (CSRS)** aims to provide situational awareness by compiling a Recognized Maritime Picture through the countries' coastal and territorial waters by fusing data of coastal surveillance radars, electro-optical sensors, Automated Identification Systems (AIS), public institutions, and/or other organizations. CSRS also increases the effectiveness of search and rescue, outpost, and reconnoitring activities.

With the completion of the project, all territorial waters and adjacent areas within the country's sovereignty will be fully and effectively monitored, and crimes such as smuggling, illegal immigration, fishing and marine pollution will be combated more effectively.

HAVELSAN is the main contractor for the first phase of the project for developing a CSRS software integrated with internal and external systems/institutions and for the installation and integration of coastal surveillance stations and operations centers in order to ensure uninterrupted surveillance of the countries with the coastline using radar and electro-optical sensors.

HAVELSAN is ready to share its experience and know-how with friendly African countries in a sense of real transfer of technology to realize numerous opportunities in its fields of operation. Whatever the requirement, HAVELSAN as a reliable solution partner, is dedicated to work in partnership with various African nations to deliver its smart solutions and advanced technologies.



©HAVELSAN



## Iskander-E hits for export

**By Yuri Laskin**

The Iskander-E operational-tactical missile system showed exceptional accuracy in the firing in presence of a foreign customer, Bekhan Ozdoev, industrial director of the Rostec armament complex, recently announced.

The target was a 30 by 30 meters square with elements of an obsolete piece of military equipment being placed in the middle. "The ballistic missile launched by the complex overcame 180 kilometers and hit exactly the crosshair of the target - this was confirmed by the cameras installed around the target. The products of Rostec enterprises once again proved to be extremely efficient," Ozdoev said.



Alexander Romaniuk, Deputy Head of the Export-Import Directorate of KBM (part of the High-Precision Weapons Holding, the Rostec Corporation subsidiary), said the generals of the customer were present at the shooting to witness the broadcast. "After the missile hit the" cross ", the applause did not subside for a long time," - said the KBM representative.

Iskander-E was developed by the Mechanical Engineering Design Bureau. The combat vehicle carries two 9M723-E ballistic missiles being able to destroy critical enemy targets at ranges of slightly less than 300 kilometers. Iskander-E is an export version of the Iskander complex which is at service with the Russian Army.

### The complex main characteristic according to Rosoboronexport catalogue

**Range of fire, km:**

|     |     |
|-----|-----|
| max | 280 |
| min | 50  |

**Number of missiles:**

|                                    |   |
|------------------------------------|---|
| TEL (transporter/erector launcher) | 2 |
| TLV (transporter/loader vehicle)   | 2 |

**Time to launch the first missile, min:**

|                          |    |
|--------------------------|----|
| ready-to-launch position | 4  |
| march                    | 16 |

**Interval between launches, min** 1

**Transportability:** rail, sea, and air transport

**Assigned service life, years** 10

**Operating temperature range, °C** ± 50



## Russia revealed Arena-M features

By Yuri Laskin

The Russian complex of active protection of armored vehicles (KAZ in Russian) Arena-M can repel an attack from any direction, national media claims. The system received modern radar and maneuverable ammunition to destroy the attacking projectile. The complex features were revealed by the head of the development and design department of the Kolomna KBM Vladimir Kharkin on the Russian MoD TV channel.

Protective ammunition of the Arena-M complex is capable to counter a threat from the approaching projectile being shot from any direction. Thanks to impulse engines, ammunition reacts almost instantly, the designer emphasized. This allows to provide all-round defense of the tank.

Arena-M operates in automatic mode. The Arena-M radar records launches of missiles made in the direction of the vehicle. When an attacking ammunition is detected, two protective shells being stored in protected boxes explode in the approaching threat direction. As a result, a directed stream of debris destroys the attacking missile. The enemy projectile is hit in a close distance from the armored vehicle to prevent any damage for supporting troops.

According to KBM, the Arena-M is to equip the Russian MBT such as T-90 and T-72.

Earlier, Bekhan Ozdov, industrial director of the Rostec Corporation, said that Arena-M can intercept all modern anti-tank guided missiles. He claimed the Arena-M being capable to intercept the FGM-148 Javelin and Spike missiles that attack armored vehicles in the weakly protected upper hemisphere.

Arena-M is a further derivative from the Arena — an older KBM Design Bureau product which was developed in 1990s and primarily installed at T-80 MBT. The system has an export version being designated as Arena-E. Moscow region-based KBM is a High Precision Weapons subsidiary and is famous for its Iskander and Khrizantema missiles.



## CAS PLEDGES SUPPORT FOR IMPLEMENTATION COMMITTEE ON ARMED FORCES REFORM

The Chief of the Air Staff (CAS), Air Marshal Oladayo Amao has pledged the support of the Nigerian Air Force (NAF) to the Ministry of Defence Implementation and Advisory Committee as it executes the recommendations of the Committee earlier set up to reform the Armed Forces of Nigeria (AFN) for effective and efficient service delivery. Air Marshal Amao stated this while hosting members of the Committee led by the Vice Chairman, Lieutenant General Abel Akale (Rtd) at NAF Headquarters, Abuja. While noting that in the past, there have been several reform recommendations that never saw the light of day, the CAS expressed optimism that with the rich pedigree of the Implementation Committee members, there was no doubt that the recommendations, when implemented, will return the AFN to its rightful place of global reckoning. The CAS also commended the Honourable Minister of Defence, Maj Gen Bashir Magashi (Rtd) for seeing the need to reform the entire military noting that the timing for such reform could not have been apt in view of the dynamic nature of modern warfare.

In his remark, Lt Gen Akale (Retired) stated that the Committee members were at HQ NAF to brief the CAS on their efforts in implementing the various recommendations contained in the approved report and to solicit his support as well as inputs, on how to move the recommendation processes forward. While extolling the indispensability of airpower in counterinsurgency operations, Lt Gen Akale emphasized the importance of ensuring that the well-thought-out recommendations are implemented by the 3 Services to the later in view of the renewed emphasis on jointness. He also thanked the CAS for recommending a competent senior NAF officer, AVM Emmanuel Wonah, as NAF's representative on the Reform Committee. "The officer you sent to represent the NAF on the Committee has been excellent and should serve as a source of pride to the NAF", he said.

It may be recalled that in February 2021, the Minister of Defence, Maj Gen Bashir Magashi (Rtd) inaugurated a 21-man Committee to facilitate the Reforms of the Ministry of Defence and the Armed Forces of Nigeria. The Committee, which was headed by Air Vice Marshal Mohammed Ndatsu Umaru (Rtd), had a 10-point Terms of Reference basically aimed at repositioning the Armed Forces for 21st Century warfare. The main task of the Implementation Committee is to ensure the execution of the recommendations of the Reform Committee.

© Nigerian Air Force



## Meeting of President Vučić with Minister of Defence of Republic of Angola



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On 11 October 2021, the President of the Republic of Serbia Aleksandar Vučić received Minister of National Defence and Veterans of the Fatherland of the Republic of Angola, General João Ernesto dos Santos, with whom he recalled his visit to Angola back in 2013 and the traditional friendship that binds the two countries since the time of former Yugoslavia and membership in the Non-Aligned Movement. The meeting was attended by Deputy Prime Minister and Minister of Defence Nebojša Stefanović PhD, Chief of General Staff of the Serbian Armed Forces General Milan Mojsilović and Assistant Minister for Material Resources Nenad Miloradović PhD.

President Vučić asked Minister dos Santos to convey his gratitude to Angolan leadership for their understanding for Serbian positions in the matter of Kosovo and Metohija, and for the support to territorial integrity and sovereignty of our country, since it was the evidence of respect for international law. He advocated for greater cooperation of the two countries within international organisations.

## Ghana getting two Defender class boats from the United States

The United States' SAFE Boats International has been awarded a \$1.1 million contract to supply two Defender class boats to Ghana. The company was awarded the US Coast Guard-funded contract on 1 June 2021 and is due to complete the order by the end of September 2023. SAFE Boats International will supply two 38-foot (12 m) Defender class boats along with trailers, spare parts and training. They will be used to help Ghana fight piracy and other maritime crime. Ghana has previously received other Defender class boats from the United States: by 2015 the US Coast Guard had given Ghana's Navy five 27-foot Defender class boats to aid their operations.

## OPERATION HADIN KAI: TROOPS TO GET MORE EQUIPMENT - HMOD



The Honourable Minister of Defence (HMoD) Major General Bashir Magashi (Rtd) has assured troops of Joint Task Force North East Operation HADIN KAI of supply of more equipment and logistics for operational enhancement, as they combat terrorism and insurgency in north east Nigeria. The Defence minister made this known during his operational and assessment visit to the Headquarters Theater Command Operation HADIN KAI, in Maiduguri on Friday 29 October 2021. Speaking further, the minister, who was accompanied by the Chief of Defence Staff (CDS), Service Chiefs and the Chief of Defence Intelligence (CDI) disclosed that they were in the theatre to jointly assess ongoing operations and facilitate the progress of other operations across the country for security, peace and development.

Appreciating the Commander-in-Chief of the Armed Forces, President Muhammadu Buhari for providing requisite logistics support to prosecute the war against insurgency in the North East, General Magashi stated, "we are fully committed in providing all the necessary resources to enable you do your job professionally to the best of your ability. We have all seen your commitment and we are proud of you". He expressed optimism that success is near and that with sustained determination and commitment, insurgency will be brought to an end. He commended the overall performance of the Nigerian Military in the fight against insurgency in the North East. Operational Briefs were presented by the Theatre Commander OPHK, Major General Christopher Musa and the Force Commander Multinational Joint Task Force (MNJTF) to the HMoD, who later had a chat with members of the press on issues relating to his visit. The Honourable Minister also commissioned a set of twin buildings, newly constructed as transit accommodation for officers of Headquarters Joint Task Force North East OPHK. Aside the CDS and Service Chiefs, other senior officers who accompanied the minister during the visit, are Chiefs of Training and Operations from the Defence Headquarters and services, as well as the Commandant Nigerian Defence Academy.

© Nigerian Army

## President Pays Visit To GAF, Commissions Projects



<https://gafonline.mil.gh>

The President and Commander-in-Chief (C-in-C) of the Ghana Armed Forces (GAF) Nana Addo Dankwa Akufo-Addo has presented newly acquired vehicles to GAF at Burma Camp. The ceremony which took place on Wednesday 27 October 2021 saw him present 40 Jeeps, 6 Toyota Hiace Minibuses and 14 Toyota Pick-ups. As part of his itinerary for the visit, he cut sod for the commencement of phase II of a \$24.8 million housing project and inspected a 7 storey Army Headquarters office complex which is currently under construction.

In his welcome address, the Minister of Defence, Honourable Dominic Nitiwul expressed his appreciation to the President for his commitment to modernise GAF. He reassured him that the vehicles would enable the Service to conduct its internal and external duties with professionalism for peace and security of the country. He said Government was committed to the needs of the Armed Forces and that steps were being taken to ensure that those needs were met for equitable distribution of developmental projects in an atmosphere of peace and security. He noted that combating crimes posed by extremist groups operating along the northern borders required real time surveillance capacity, high mobility, force protection, fire power and communication. He commended the leadership of GAF for its commitment and dedication in ongoing operations such as Conquered Fist and Mother Land which were intended to create a secured and peaceful environment along the Northwestern, Northern and Northeastern borders.

"The all-round protection provided for the country has been made possible through your vigilance and sacrifice notwithstanding the modest resources you have to work with. Ghana is forever indebted to you," he added. Dignitaries present at the ceremony were the Chief of the Defence Staff (CDS), Vice Admiral Seth Amoama, Service Chiefs and Directors. In related news, the President also visited the Military Academy and Training Schools where he inspected the new Military Academy Administration Office, Platoon Commanders block, cadet accommodation and accommodation for Officers being constructed by Poly Changda Overseas Engineering Company Limited and Poly Technologies Incorporated.

### Newly acquired Armoured Personnel Carriers for the Nigerian Army



© TVC News

On November 3, 2021, TVC News reported that Nigerian Army deploys 60 newly acquired Armoured Personnel Carriers. These military vehicles arrived in Nigeria three months ago and are now to be immediately deployed to various theatres of operation where military offensive against insurgents is ongoing.

Chief of the Army staff, Lieutenant General Faruk Yahaya, who received the newly acquired platform in Jaji, Kaduna state, said they will be a game changer for the armed forces in their campaign against enemies of the Nigerian state. 106 Army personnel have been given three months training on the operation and maintenance of the Armoured personnel Carriers and will be deployed as well.

Mali receives four Mi-171 helicopters

### Mali received four Mi-171 helicopters

According to France 24, Mali received four Mi-171 helicopters. A cargo plane delivered four helicopters, weapons, and ammunition from Russia to Mali late on Thursday, Malian interim defence minister Sadio Camara said. He said Mali had bought the helicopters in a contract agreed in December 2020 to support its armed forces in their battle alongside French, European and UN troops with insurgents linked to the Islamic State group and al Qaeda. "Mali bought these helicopters from the Russia Federation, a friendly country with which Mali has always maintained a very fruitful partnership," he told local media on the tarmac after the plane landed in the capital Bamako, adding that the weapons and ammunition were given by Russia.

Mali's transitional government has restored Colonel Sadio Camara as defense minister, after he was removed from office last month in a government reshuffle.

According to various international media Russian mercenaries may soon be training Malian soldiers under a deal – not yet signed – that would significantly weaken French influence in the region.

### JUNTA WILL FACE DIFFICULTIES TO RULE SUDAN AGAIN

According to sudantribune.com, U.S. Special Envoy for the Horn of Africa Jeffrey Feltman said the Sudanese military would discover it is not easy to re-establish a military regime in Sudan. Feltman was the last foreign envoy to meet the head of the Sudanese army Abdel Fattah al-Burhan who dissolved the transitional government on 25 October. U.S. diplomats told Reuters that al-Burhan ignored warning from the Special Envoy to not seize power because he was under pressure from his deputy and head of the Rapid Support Forces (RSF) militias Mohamed Hamdan Daglo.

"I think the General Burhan is going to discover that it's not quite it's so easy as he and his forces may think to return Sudan to its dark past," Feltman told the U.S. Public Broadcasting Service (PBS). He also mentioned the ongoing protests against the military and the regional and international pressures on the junta to restore the transitional government and free the detained officials and political leaders. Saudi Arabia condemned the coup de force following a telephone call between U.S. Secretary of State Antony Blinken and Saudi Foreign Minister Faisal bin Farhan Al Saud.

### President Sisi appoints Lieutenant General Osama Askar chief of staff of Egyptian Armed Forces

President Abdel Fatah al-Sisi appointed Wednesday

Lieutenant General Osama Askar chief of staff of the Egyptian Armed Forces. Askar was born in Daqahlia governorate in 1957, and graduated from the Military Academy in 1970, according to



Al Ahram. He had begun his career in the infantry branch rising through the ranks until he became Commander of the Third Field Army, headquartered in Suez. In 2015, Askar was appointed commander of the forces in Sinai, assigned as main mission combating terrorism northern the peninsula, which came into existence in tandem with January 25, 2011 Revolution. The commander is married with three children.

Former Chief of Staff Mohamed Farid has been appointed consultant to the president for Decent Life initiative.

## DESA sells Royal Navy ships to Egypt for first time in more than 30 years

In a landmark deal, the UK has sold military vessels to Egypt for the first time in more than 30 years.

The Royal Fleet Auxiliary ships, Fort Austin and Fort Rosalie, were sold by the Defence Equipment Sales Authority (DESA).

Royal Navy Solid Support Ships were released from service earlier this year. Their new lease of life could also support UK jobs, with negotiations under way for refurbishment work on the vessels before they are exported.

Minister for Defence Procurement, Jeremy Quin, said: “Fort Austin and Fort Rosalie played an important role in sustaining our naval fleet for decades and I thank all involved in their essential work.

“As we nod to the past service of these ships, we can also look forward to the exciting future of welcoming our new Fleet Solid Support ships. Both the UK and Egyptian navies continue to strengthen relations to maintain peace and security in the region.”

Backed by the £24 billion investment announced last year, developing defence exports and investments is a key element to advancing Global Britain and asserting UK defence in the face of evolving threats. The recent Integrated Review and Defence Command Paper aids these ambitions by providing a strategic backbone for such commercial activity.

Clive Walker, the Head of DESA, which is part of Defence Equipment and Support (DE&S), said:

“DESA is exceptionally happy to be working with the Egyptian Navy on the regeneration of two former Royal Fleet Auxiliary ships.

“This represents a tangible demonstration of the strengthening relationship between the two navies and the importance of the strategic relationship between the UK and Egypt.”

Fort Austin and Fort Rosalie have helped to ensure Navy personnel all over the world have the food, ammunition and explosives they need to carry out vital operations.

The sister ships have two flight decks, which means as well as traditional replenishment at sea they are also able to use helicopters to offload supplies.

Vice Admiral Chris Gardner, DE&S Director General Ships, said: “Fort Austin and Fort Rosalie have both served the Royal Fleet

Auxiliary, Royal Navy and many of our allies with distinction, across the globe both at peacetime and during conflict.

“Their sale to the Egyptian Navy – the first sale of UK military vessels to this partner in more than 30 years – represents both an investment in a UK partner nation and an opportunity to continue supporting our industry partners who will prepare these vessels to hand over, which is central to the successful National Shipbuilding Strategy.”

Fort Austin and Fort Rosalie will be replaced by the Fleet Solid Support (FSS) ships, which will form part of the UK’s Carrier Strike Group.

At the end of August, four consortia successful at the pre-qualifying stage for the FSS build were awarded Competitive Procurement Phase contracts to enable designs to be matured.

The consortia are Larsen & Toubro, which includes UK company Leidos Innovations; Serco/Damen, which includes UK company Serco; Team Resolute, which includes UK companies Harland & Wolff and BMT; and Team UK, which includes UK companies Babcock and BAE Systems.



## **FINCANTIERI DELIVERS THE FIRST CORVETTE FOR QATAR**

On October 2021, at the presence of Senator Stefania Pucciarelli, Undersecretary of State for Defence, the delivery of the corvette “Al Zubarah”, the first of the class of the same name of four vessels ordered to Fincantieri by the Qatari Ministry of Defence within the national naval acquisition program, took place today at the Muggiano (La Spezia) shipyard.

The ceremony, held in a restricted format and in full compliance with anti-contagion requirements, was attended by Three-star General Salem Hamad Al Nabit, Chief of Staff of Qatar Armed Forces, Staff Major General (Sea) Abdullah Hassan Al-Sulaiti, Commander of Qatar Emiri Naval Forces, Vice Admiral Aurelio De Carolis, Deputy Chief of Staff of Italian Navy and Giuseppe Giordo, General Manager Naval Vessels Division of Fincantieri.

The Al Zubarah class corvettes, designed consistent with the RINAMIL rules, will be highly flexible and capable of fulfilling different kinds of tasks, from surveillance with sea rescue capacities to being fighting vessels. They will be about 107 meters long, 14.70 meters wide, and equipped with a combined diesel and diesel plant (CODAD), with a maximum speed of 28 knots. The units will be able to accommodate 112 persons on board.

Furthermore, the corvettes will be capable of operating high-speed boats such as RHIB (Rigid Hull Inflatable Boat) through lateral cranes or a hauling ramp located at the far stern. The flight deck and hangar are sized for hosting one NH90 helicopter.

On November 2, 2021, Fincantieri and Navantia have reached an agreement on a Memorandum of Understanding (MoU) in order to boost their relationship and explore the joint benefit of a broadened collaboration in the naval and maritime domains. Both companies, which are first class reference European shipyards, will assess future opportunities for Italian and Spanish Navies, including the development of joint projects and the participation in the development of future destroyers and other naval platforms that will be part of the future European Defence Force.

The signature will take place this Wednesday, November 3rd, in Navantia stand in FEINDEF exhibition in Madrid, by General Manager Naval Vessels Division of Fincantieri Giuseppe Giordo and Navantia Chairman Ricardo Domínguez.

Navantia and Fincantieri are already collaborating in the European Patrol Corvette (EPC) program, to date the most important naval initiative within the Permanent Structured Cooperation (PESCO) project, together with the French Naval Group.

Giuseppe Bono, CEO of Fincantieri, stated: “We have long agreed that, in order to stand its ground with the global challenges of the future, we need a robust and long-lasting cooperation in the defence and security field at a European level, just so our

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continent will be able to play an increasingly important role and this agreement goes in that direction. We are therefore very satisfied to give substance to a plan that can no longer be postponed and to build a collaboration path based on important programs of the two Navies”.

Navantia’s Chairman Ricardo Domínguez has emphasized “the real opportunity of collaboration that this MoU represents, as it is the first one signed between both companies at this level and with this ambitious scope”. “We aim to strengthen European Defence and boost European Defence Industry position and we think that agreements as ours pave the way towards this objective”, he has added.

### AL ZUBARAH CLASS

The vessel is designed consistent with the RINAMIL rules. She is a flexible type of ship capable of fulfilling a range of tasks, from surveillance with sea rescue capabilities to being a fighting vessel. Furthermore, the corvette will be capable of operating high-speed boats such as RHIB (Rigid Hull Inflatable Boat) through lateral cranes or a hauling ramp located at the far stern. The flight deck and hangar is sized for hosting one NH90 helicopter.

#### MAIN CHARACTERISTICS

|                               |                       |
|-------------------------------|-----------------------|
| Length overall                | 107.0 m               |
| Length between perpendiculars | 99.6 m                |
| Beam                          | 14.7 m                |
| Depth                         | 8.6 m                 |
| Full Load Displacement        | abt. 3 250 t          |
| Range (at cruising speed)     | above 3 500 nm        |
| Endurance                     | 21 days               |
| Crew                          | 98+14 persons         |
| Propulsion system             | 4xPDE + 2xRG + 2xFCPP |
| Generating sets               | 4 x DGS               |
| Flight deck                   | for NH90              |
| Hangar                        | for NH90              |
| Maximum continuous speed      | 28 knots              |
| Cruising speed                | 15 knots              |

#### COMBAT SYSTEM SENSORS

- Multi-Functional Radar
- IFF Interrogator & Transponder
- EWS Radar ESM & Communication ESM
- IR Search & Tracking Systems
- Radar & E/O Fire Control System
- E/O Fire Control Systems
- Towed Array Torpedo Detection System
- Obstacle & Mine Avoidance SONAR

#### EFFECTORS

- VLS for Medium Range SAM
- Short Range SAM Launcher
- SSM Launchers
- 76/62mm SR Multi Feeding Main Calibre Gun
- 30mm Secondary Calibre Guns
- EWS Radar ECM
- AAW Decoy Launchers
- ASW Decoy Launchers

#### COMMUNICATIONS

- Tactical Data Links 11, 16, JREAP, Y, (22 Fitted For)
- Satellite Communications
- Integrated Communications System

#### COMMAND & CONTROL

- Combat Management System



### **Paramount Group enhances protection levels of Mbombe 4 Armoured vehicle**

Paramount Group, the global technology and aerospace business, has announced that new add-on armour has been developed for its next generation Mbombe 4 Infantry Fighting Vehicle (IFV), resulting in some of the highest levels of protection that can be achieved globally by an armoured vehicle in its class. Designed and developed specifically for local manufacturing within customer countries and in response to the increasing requirement from governments for the development of their own defence industrial capabilities, the Mbombe 4 was first launched onto the global market in 2019.

Meeting the demands of modern warfare, the Mbombe 4 has successfully completed a series of extreme trials with several armed forces around the world, securing orders from the United Arab Emirates and a partnership with India's industrial giant, Bharat Forge for the in-country production of its localised variant, the Kalyani M4, for the Indian Army. Already recognised as one of the best protected armoured vehicles in the world, the newly tested and certified add-on armour increases the Mbombe 4's protection to cover all Level 3 threats within NATO STANAG 4569, the NATO standards agreement.

Designed to be quickly replaceable in the field, the add-on armour provides a lightweight shielding system that adds the least possible weight to the vehicle while providing maximum security against multi-hit ballistic threats, artillery shell fragments, and close proximity IED explosions. Importantly, the design includes the same full levels of protection for the engine and engine bay, without decreasing the effectiveness of the engine cooling system.

The Mbombe 4 received its final certification after successfully completing a series of independently certified blast tests designed and executed by the Landward Sciences division of the Council for Scientific and Industrial Research (CSIR), South Africa's leading and independent scientific research body. In the case of Mbombe 4, blast tests included two 10 kg TNT explosions under the wheels and the hull, and one

50kg side blast test carried out at a 5-meter distance, to simulate an Improvised Explosive Device (IED), equating to STANAG 4569 Level 4a and Level 4b mine and blast certification.

This development of enhanced add-on armour is the latest in a series of significant announcements regarding the exceptional performance of the Mbombe 4 and its rollout across strategic partner countries globally. The latter has been made possible through Paramount Group's 27-year history of championing portable manufacturing and co-operation in establishing indigenous production capabilities, which fosters high-skills job creation and economic growth. Key features of Mbombe 4 include Paramount Group-pioneered flat-floor mine protection technologies and a distinct, rear-door ramp design. The ease of access provided by the rear-door ensures the rapid deployment of the crew while the vehicle is static or on the move.

The Mbombe 4 performs with a burst speed of 140km/hr, an 800km operating range and benefits from an independent suspension system, which is designed to optimally meet the increasing demand for outstanding protection with mobility. The vehicle has an 'in-line' automotive driveline configuration, positioning the powerpack at the front of the vehicle and along its centre line, resulting in greater efficiency in the transfer of power from the powerpack to the wheels. The in-line configuration has additional benefits, such as ease of maintenance and low noise in the crew compartments.

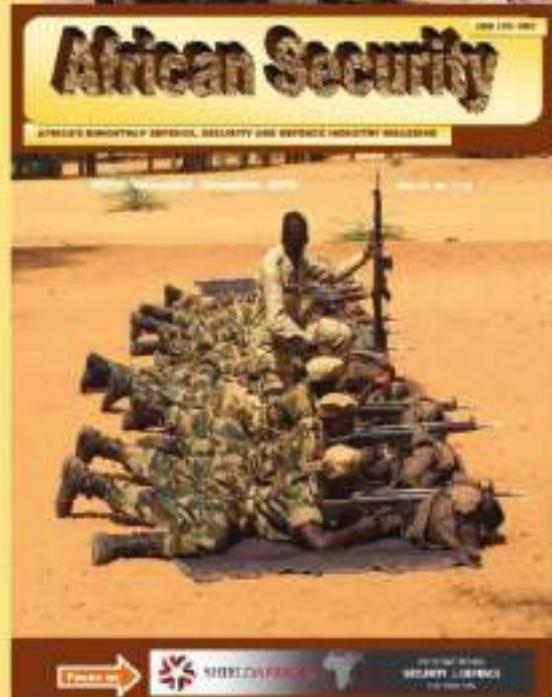
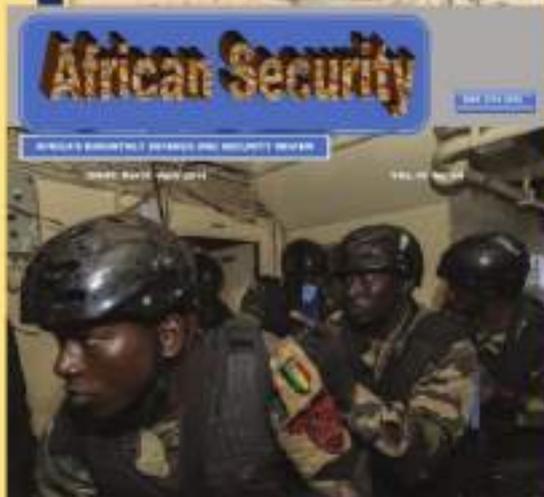
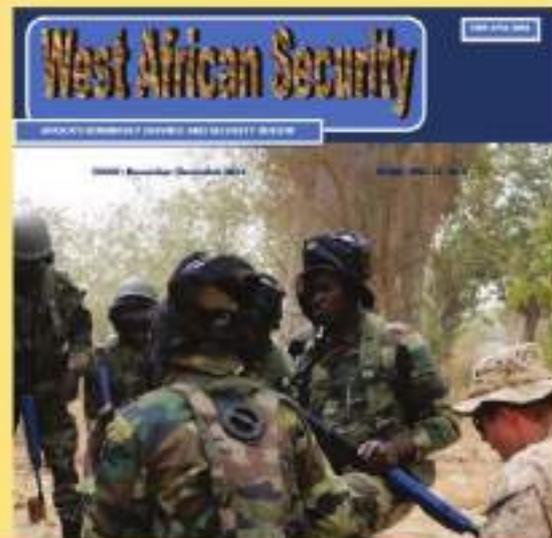
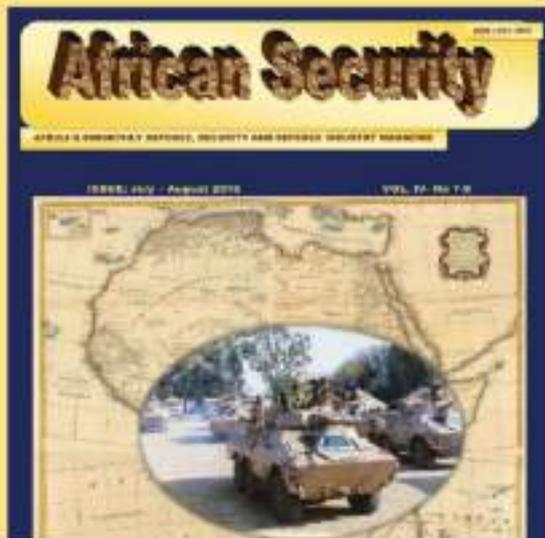
The Mbombe 4 offers a unique commonality of components across the entire 'Mbombé' family of armoured vehicles, which lessens the costs associated with support, repairs and training. Paramount Group's vehicles are affordable and are equally well suited to engage in counter-terrorism, border patrol, counter-insurgency, internal security and peacekeeping missions. ©



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### Blue Flag 2021: IAI's Scorpius T AESA EW Next Generation Threat Simulator Debuts in Blue Flag 2021

Israel Aerospace Industries' (IAI) subsidiary, ELTA, is excited to unveil the Training Scorpius (Scorpius T) system participating in the Blue Flag 2021 military exercise- the first use of the system in an international military exercise.

The mobile, Scorpius T, AESA EW threat simulator, emulates modern, signal-dense, multi-threat scenarios for aircrews and operators training, as well as test EW functions. The system is compatible with 5th generation fighters, mission-aircraft and fighter aircraft. The technology uses a range of small transmitter/receiver units, opposed to a single mechanical antenna, to provide a mobile training unit capable of simulating a range of combat scenarios. In addition, Scorpius T is the first system to combine IAI/ELTA's AESA technology with EW systems to simulate multiple land-based threats in training exercises.

Scorpius T AESA EW threat simulator is capable of producing an exact RF signature of any system, version or mode, to simulate full engagement cycles.

The system supports multiple simulation beams simultaneously with multiple enemy SAMs and RF systems and can simulate double- and triple-digit threats.

The threat database can be updated to mirror emerging threats based on relevant data. Scorpius T can synchronize with other simulators, ADMI or command and control centers. The system includes a post-mission debriefing function to analyze and improve performance.

The Blue Flag exercise brings together some of the strongest air forces in the world for comprehensive and rigorous training and synchronization. IAI understands that practice makes perfect. This is why IAI puts significant research and development into engineering training system that simulate real-world combat scenarios to prepare forces as much as possible. The new Scorpius T is unlike any training system available, providing the user with a mobile combat scenario generator to simulate a full range of combat scenarios with minimal time and cost. In addition, IAI's flagship OPAL system continues to assist forces in synchronizing data in real time, while EHUD trains the world's most advanced aircraft to face the most complex battle scenarios. In addition to Scorpius T, IAI's OPAL and EHUD systems are participating in Blue Flag 2021.

The Autonomous Air Combat Maneuvering Instrumentation system is a unique real-time air combat training, debriefing and safety enhancement system for fighter aircraft pilots. EHUD enables live training at a sophisticated level - including the simulated armament firing, real-time hit and miss assessments, and exceptional debriefing capabilities. The EHUD ACMI training system has been in use in the Israeli Air Force (IAF) since 2017. The system also participated in Blue Flag 2019. For the first time, the EHUD system processed data from the Israeli F35I Adir and Italian F35B fighters. In addition, images of moving targets were transferred in real-time to aircraft, along with the effects of air defense launches from real and simulated weapon systems. Combined with these live-virtual effects, EHUD provided all participants the most realistic, complete combat environment and the best experience they could gain from such exercise.

Throughout Blue Flag 2021 the Israeli Air Force (IAF) will simulate, together with foreign air forces, advanced combat scenarios that require complex coordination and communication. Successful mission completion is made possible, in part, thanks to IAI's OPAL system that operates on IAF aircraft. OPAL aggregates, builds and shares a comprehensive combat picture across participating units, allowing information-sharing in real time. At every point in time each participating platform is fully updated and synchronized with all combat related data. All combat units are immediately updated as new threats are identified. In addition, all combat units are updated as new targets are identified based on data gathered from a range of sensors integrated on each aerial platform, thus allowing synchronized targeting.

**Pictured (Credit: IAI): Scorpius T**



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## The 10th Exhibition of Arms and Defense Equipment “PARTNER” was a great success

From 11 to 14 October 2021 at the Belgrade Fair, the 10th International Exhibition of Arms and Defense Equipment „PARTNER 2021 “was held under the auspices of the Ministry of Defense of the Republic of Serbia, co-organized by the „Jugoimport-SDPR“ and supported by the Belgrade Fair. The year 2021 is the first jubilee year of the PARTNER Exhibition. This is the 10th anniversary of an initiative which was started in 2004, strongly supported by the workmen of the Ministry of Defense, the Jugoimport-SDPR and the Belgrade Fair.

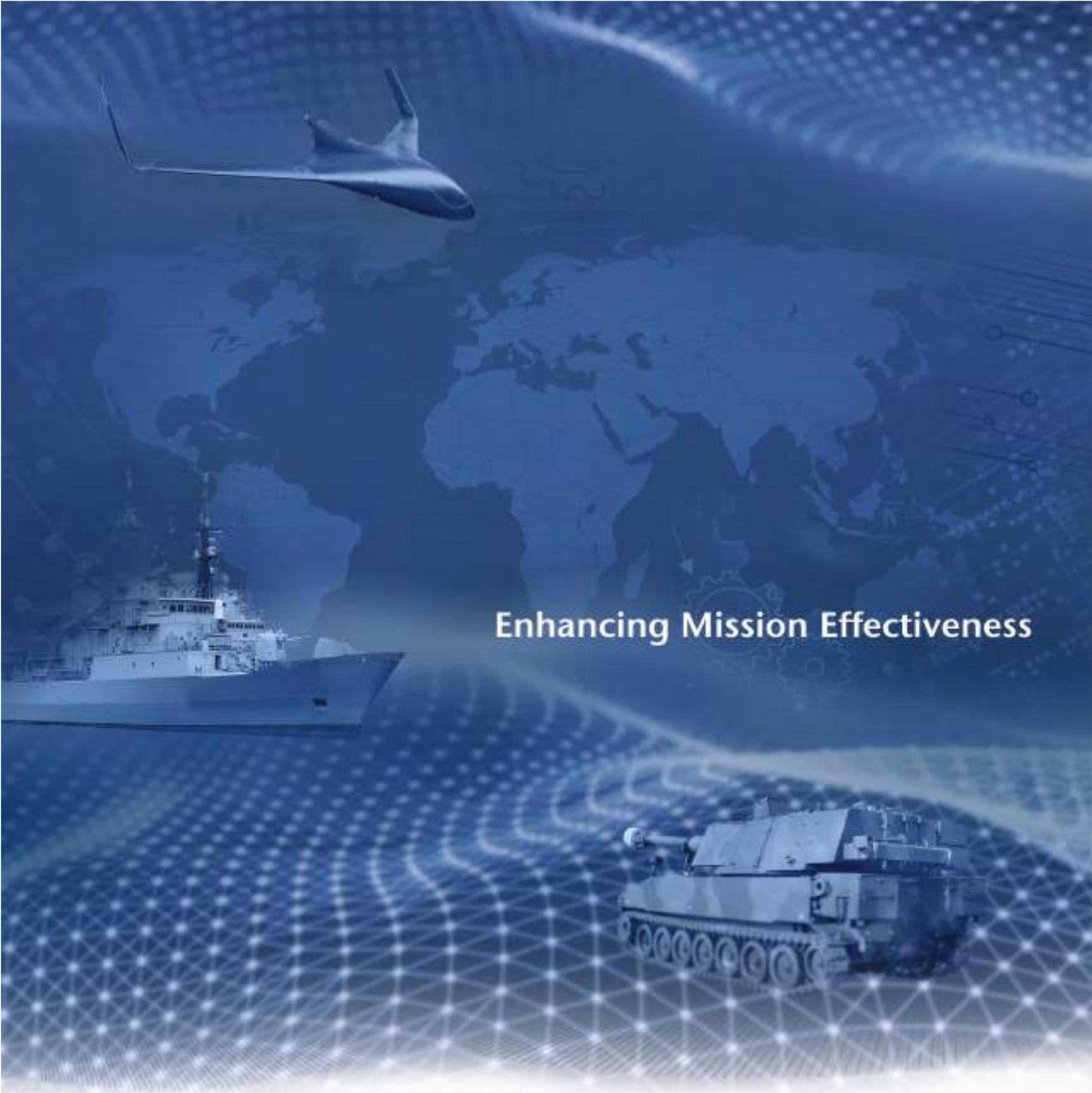
PARTNER has become the largest and the most prominent exhibition of arms and defense equipment in the Southeast Europe. Among other VIP guest speakers participating in PARTNER exhibition conference were Mr. Nenad Miloradović, PhD, Assistant Minister of Defense, RS, Mr. Aleksandar Lijaković, Assistant Director for Commercial Affairs of the public company „Jugoimport-SDPR“, and Ms. Mirjana Lukić, Advisor to the Acting Director of the Belgrade Fair.

Along with the companies operating as a group called Serbian Defense Industry, were manufacturers of arms and defense equipment from Serbia, arms trading companies, scientific, educational, and research institutions, as well as institutions within the Ministry of Defense which deal in overhaul, maintenance, and testing of arms and defense equipment.

Jugoimport-SDPR“presented its capabilities within the frame of the the main three business strategy missions: as the holder of R&D and production of complex combat systems and ammunition, as the integrator of the Serbian Defense Industry on the global market, and as the company procuring arms and defense equipment for the Serbian Defense Forces and the Ministry of Interior, both from domestic and foreign manufacturers.

Products from R&D departments of Jugoimport subsidiaries, such as „Complex Combat Systems“Velika Plana (Kuršumljija facility), „Belom“ Uzići, manufacturer of small arms ammunition, „Utva“ Pančevo, „Forging Center“ Valjevo, PMC, Atera etc were presented in the PARTNER. The group of Jugoimport subsidiaries, although mostly technological companies such as „Srpska banka“, acting as the financial and strategic partner.





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