

Fiyat: 120 TL - Price: US\$ 5,99

VOLUME 17 . ISSUE 125 . YEAR 2023

# DEFENCE TURKEY



**GENDARMERIE AVIATION  
DEPARTMENT CELEBRATES  
55<sup>TH</sup> ANNIVERSARY**

**JANDARMA HAVACILIK  
BAŞKANLIĞI 55 YAŞINDA**

ISSN 1306 5998

**GENDARMERIE AVIATION  
SPECIAL ISSUE**

# The Gendarmerie Aviation Directorate, with a History Marked by Heroism, Sacrifice, and Courage, Celebrates its 55th Anniversary!



The Gendarmerie Aviation Directorate traces its history back to the "Light Helicopter Unit" founded in Diyarbakır in 1968. The unit was established for various purposes including troop deployment, security and public order, reconnaissance and surveillance, as well as the evacuation of the sick and wounded. Over the years, it has become an integral part of the Gendarmerie General Command, accumulating more than 500,000 flight hours. To celebrate its 55th anniversary, the Directorate will hold a ceremony in Ankara on August 29, 2023. Additionally, this year marks the 10th anniversary of the Gendarmerie Aviation School and the 5th anniversary of the Çelik Kanatlar Flight Demonstration Team, which is Türkiye's first and only helicopter demonstration team.

It was 55 years ago that the Gendarmerie Aviation Directorate set out on a journey guided by the motto **"We will leave no one behind."** Today, the Directorate proudly says, **"We Left No One Behind."** Throughout this remarkable journey, the Directorate has been unwaveringly dedicated to air transportation, command and control, reconnaissance and surveillance, security and public order services, aerial supply, medical evacuation, as well as engaging in responses to natural disasters and providing humanitarian aid, in addition to counter-terrorism missions. Their operations encompass search and rescue missions across the entire country, diligently carried out around the clock. The Gendarmerie Aviation Directorate stands as a crucial force multiplier in supporting public assistance and search and rescue operations during natural disasters, a role carried out under the purview of the Gendarmerie General Command. The Directorate consistently steps forward to aid our nation in all kinds of natural disasters and search and rescue missions, as evidenced by their active

involvement in critical events such as the July 2021 Marmaris Fire, the August 2021 Western Black Sea Flood Disaster, and the February 6, 2023 Kahramanmaraş Earthquakes.

With special permission from the Gendarmerie General Command, we embarked on a series of visits to the Gendarmerie Aviation Directorate located at the Martyr General Eşref BİTLİS Barracks in Güvercinlik, Ankara, on July 12, 17, 24, and 31, as well as the Van Gendarmerie Squadron Command on August 7-8, 2023. These visits were undertaken to gather firsthand insights into the Directorate's rich history of heroism, sacrifice, and courage, its ongoing aviation projects, organizational structure, current state, as well as its future expectations and objectives.

To commemorate the 55th anniversary of the establishment of the Gendarmerie Aviation Directorate, we have curated this special issue, which is available in both Turkish and English. Within the pages of this issue, we are delighted to share with you the captivating insights we gathered during our visits, accompanied by the stunning photographs skillfully captured by our colleague, Cem DOĞUT, a renowned Aerial Photographer (Spotter) of international acclaim.

In this special issue, which has been meticulously prepared in close collaboration with the Gendarmerie Aviation Directorate for distribution during the 55th anniversary celebrations in Ankara on August 29, 2023, we have curated a comprehensive array of content. Our publication encompasses in-depth insights into the training initiatives tailored for Pilots, Mission Commander Technicians, and Payload Operators engaged in both fixed and rotary wing manned and unmanned aerial vehicles within the Directorate's

inventory, along with an exploration of the simulators used in training process. Furthermore, our special issue features exclusive interviews conducted with key figures from the Gendarmerie Aviation Directorate. These interviews provide firsthand information about the roles undertaken and invaluable lessons gleaned from their endeavors to restore normalcy in the aftermath of natural disasters such as fires, earthquakes, and floods that have occurred in our country. Our interviews with Gendarmerie Pilot Major General Ali DOĞAN, Director of Gendarmerie Aviation, Head of Gendarmerie Aviation Department, Head of Administrative Management Department, Aviation School Commander, UAV Commander, Support Group Commander, and Ankara Gendarmerie Air Group Commander offer an array of compelling insights and remarkable information.

Within the pages of our Gendarmerie Aviation Directorate Special Issue, we commence by presenting a collection of articles crafted by our leader writer İbrahim SÜNNETÇİ. Subsequently, we delve into a series of exclusive interviews conducted with the esteemed management staff of the Gendarmerie Aviation Directorate.

We would like to thank the General Command of the Gendarmerie for granting us the privilege of visiting the Gendarmerie Aviation Directorate as we crafted this special issue. We would like to express our sincere appreciation to Major General Ali DOĞAN, the esteemed Director of Gendarmerie Aviation, Gendarmerie Pilot Senior Colonel Arif HAKERLER, Head of Gendarmerie Aviation Department, Gendarmerie Pilot Colonel Türker TÜRKÜCÜ, Head of Maintenance Section, as well as the entire staff of the Gendarmerie Aviation Directorate for their valuable contributions and support ■

Chief of Gendarmerie Aviation  
Department Major General Ali DOĞAN,  
who was a Brigadier General at that  
time, together with Main and Sub-Unit  
Commanders, flight personnel, ground  
support personnel, and TUSAŞ staff,  
stands in a commemorative photo  
in front of the first of the T129 ATAK  
Helicopters, J-1453 FATİH



# Proud of Saying “We Didn't Leave Anyone Behind,” Gendarmerie Aviation Department Celebrates Its 55th Anniversary



by Ibrahim SÜNNETÇİ

Today, Gendarmerie Aviation, an unshakable symbol of the power of the Gendarmerie General Command, a subordinate of the Ministry of Interior, which continues to serve in line with its vision of being an exemplary law enforcement agency that provides respectable, reliable and quality service in the national and international arena, carries out all kinds of natural disasters, search/rescue, sanitary evacuation, etc. duties entrusted to it within the scope of public aid activities, with great devotion, on a 24/7 basis throughout the country, in addition to its task of struggling the terrorists with experienced and devoted flight crew, more than 100 manned and unmanned fixed and rotary wing aircraft and modern technologies, some of which are the product of their own R&D studies, initiated in the light of the lessons learned in the tasks performed.



Adopting the principle of “We will not leave anyone behind” throughout its 55-year history, the Gendarmerie Aviation Department provides the Gendarmerie General Command, which serves 93% of Türkiye's land area and 30% of the population, the aviation support it needs in a timely, effective and uninterrupted manner due to the characteristics of the region of responsibility in the execution of its duties entrusted with the legal legislation.

Gendarmerie Aviation, which started with a small number of AB-206 Helicopters in Diyarbakır in 1968, started to organize throughout the country in order to meet the increasing need for air support of the Gendarmerie General Command overtime and put the modern aircraft offered by technology into service, and it has reached a significant air power today comprising with over 70 fixed and rotary wing manned aircraft such as T129 ATAK Attack and Tactical Reconnaissance Helicopter, T-70, S-70i, S-70A-17/28, AB-205 (UH-1) and Mi-17-1V Utility Helicopters, AutoGyro Cavalon Gyrocopter, King Air B-350 JIKU (Gendarme Manned Reconnaissance Aircraft) and Citation C680 Sovereign Command and Control Aircraft as well as more than 20 Tactical and Operative Class Armed Unmanned Aerial Vehicles (UAV) such as BAYRAKTAR TB2 and ANKA-S. Gendarmerie Aviation Department, which has carried out more than 500,000 hours of flight with manned aircraft from August 1968 to July 2023, has performed an average of 20,000 hours of flight per



*The Maintenance Service Section of the Gendarmerie Aviation Department and Tarmac in the 1970s (Diyarbakır).*

year with manned aircraft, while the Gendarmerie UAV Command, whose total flight hours have reached approximately 170,000 hours from 2017 to July 2023, also performs over 35,000 hours of flight per year with Tactical and Operative Class UAVs. The total flight time realized with drones of different capabilities, the number of which exceeds 3,500, has reached 450,000 hours. In today's security environment where risks and threats are constantly changing, Gendarmerie Aviation Department, which has gained the trust and appreciation of our nation with its outstanding efforts and achievements in all tasks, aims to increase the number of aircraft in its inventory by 50% in the next 4 years, the number of pilots to 450 and the number of technicians to 512.

Based on the information and impressions I gained during the facility tour I made at the Gendarmerie Aviation Department campus located in the Martyr General Eşref BİTLİS Barracks in Güvençinlik, Ankara on both

12 and 17 July, I will first take a brief look at the history of the Gendarmerie Aviation Department, which is full of examples of heroism, sacrifice and courage in this comprehensive article, which I compiled from open sources such as the Activity Reports of the Gendarmerie General Command and the information in my news archive, then, I will mention the remarkable technological capabilities used by the Gendarmerie Aviation Units, respectively, and then I will introduce you to the simulator systems that are developed and produced with national facilities used in the training activities of the pilots and technicians with superior qualifications that form the heart of the Gendarmerie Aviation. Afterwards, I will take a look at the improvement works carried out on Mi-17-1V Utility Helicopters, some of which are still in progress, in the light of the lessons learned during the Wildfire Suppression Missions, and I will share my impressions with you of a tour of the Gendarmerie UAV Command, which has a great share in the

success of Türkiye's counter-terrorism operations. I will end my article with information on T129 ATAK Helicopter, T-70 Utility Helicopter, T625 GÖKBEY Light Utility Helicopter, AutoGyro Cavalon Gyrocopter, HÜRKUŞ-C New Generation Light Attack/Reconnaissance Aircraft and Liaison and Utility Aircraft Projects which are being developed by Gendarmerie Aviation Department following the constantly changing and developing aerospace and defense technologies, procures new manned and unmanned aerial vehicles and systems within the budget possibilities, and has the aircraft in the inventory undergo revisions and modernizations in accordance with current needs.

## History:

The Gendarmerie General Command, which was established on 14 June 1839, is the general law enforcement agency that ensures the protection of security and public order and fulfills the duties

assigned by other laws and was subordinated to the Ministry of Interior with the Decree Law No. 668 in 2016.

The Gendarmerie of the Republic of Türkiye needed a strong air support due to the characteristics of its area of responsibility and in line with this need, especially in order to provide aviation support of the Gendarmerie Units in the Eastern and Southeastern Anatolia Regions, formed the first aviation unit under the name of "Light Helicopter Company" in Diyarbakir in 1968, in the establishment of the Eastern Gendarmerie Regional Command, with the newly added AB-206 Helicopters into the inventory. The "Light Helicopter Company", which was recruited to the Diyarbakir Gendarmerie Regional Command on April 28, 1969, was moved to the 7th Corps Command's Galip Naval Barracks in 1970. To provide aviation support of Gendarmerie Units in Central and Western Anatolia Region, to be used in security-security, search-rescue, courier and liaison services; on August 25, 1970, the 1st Gendarmerie Helicopter Company was established in Güvercinlik under the Support Continental Command.

Within the scope of the agreement signed for the supply of 28 various types of helicopters from Italy within the framework of the Gendarmerie General Command Force Targets Plan, 10 AB-205 and 2 AB-206 Helicopters were included in the inventory of the 1st Gendarmerie Helicopter Company between 1974-1977, following the completion of the procurement process.



*September 13, 1974: Gendarmerie General Command's AB-206 Helicopter with No. J100 in Famagusta*

In 1974, Gendarmerie Aviation Units and Gendarmerie Commando Units participated in the Cyprus Peace Operation and as the first units to reach the island within the scope of the Operation, they took their place at the forefront of the Turkish Cypriots' struggle for independence. Gendarmerie Aviators, who went to the Turkish Republic of Northern Cyprus (TRNC) for the first time in 2022 as part of an exercise after 1974, immortalized this special moment with the

photo they took in front of the TRNC Flag on the Beşparmak Mountains with the new S-70i Helicopters painted in blue, red and white colors.

Gendarmerie Aircraft and Helicopter Maintenance Supply Squadron, which was established on February 27, 1976 in order to carry out the maintenance and supply services that increased in line with the increasing number of aircraft over time, became operational in the Hangar

Building built in Güvercinlik on March 7, 1977. This hangar is currently used for the maintenance and supply activities of AutoGyro Cavalon Gyrocopters and AB-205 (UH-1H) Helicopters.

In order to control the illegal poppy cultivation areas from the air, a Narcotic Air Team was established within the 1st Gendarmerie Helicopter Company with 3 single-engine aircraft given by the American Drug Enforcement Organization. Narcotic



*April 5, 1976: Ceremony held for the commissioning of 3 AB-205 Utility Helicopters*



© Jandarma Havacılık Başkanlığı

January 1, 1989: Commissioning ceremony of the Sikorsky Helicopter

Aviation Team, which started to perform more effective operations after being reinforced within the scope of the United Nations aid project with a twin-engine Rockwell 690A Aero Commander photographic aircraft, a Cessna F182P Skylane and a Piper PA-32 reconnaissance surveillance aircraft and 2 photo baths and analysis laboratories, was directly subordinated to the Gendarmerie General Command under the name of Gendarmerie Narcotic Air Squadron on 9 May 1978.

Meanwhile, the “Light Helicopter Company”

was transformed into the Gendarmerie Air Battalion Command on March 1, 1979 and attached to the Gendarmerie General Command; in 1990, it was reorganized as the Air Group Command and was given the operational command of the Gendarmerie Public Security Command. The Gendarmerie Air Group Command was established on March 1, 1979 in Güvercinlik, by combining the aviation units under the Gendarmerie General Command, with the personnel, equipment, staff and existing ones being preserved.

The Gendarmerie Aviation Supply and Maintenance Command was attached to the Gendarmerie Logistics Command on November 1, 1985, and became a unit affiliated to the Air Group Command on February 13, 1987. The Aviation Branch Directorate, which operated under the Operations Presidency until 1987, was transformed into an independent branch after this date and was attached to the Chief of Staff. The new name of the Gendarmerie Aviation Supply and Maintenance Command, which was reorganized on 9 November 1988,

became the Gendarmerie Air Maintenance Command.

In the meantime, 6 Sikorsky S-70A-17 Helicopters, which were ordered to the American Sikorsky Company with the contract worth US\$40 Million signed in 1988 as part of the urgent need, were brought to İzmir Port by ship at the end of 1988. The commissioning ceremony of the first S-70A-17 Black Hawk Helicopter with a serial number of 701333 and powered by a pair of T700-701A engines each generating 1,700 shp, was held on January 1, 1989, and all helicopters entered the inventory as of January 30, 1989. With this delivery, Gendarmerie Aviation became the first S-70A Black Hawk user in our country. The last of the S-70A-28 Helicopters, powered by T700-701C engines each generating 1,900 shp, which was ordered later, entered service on 21 July 1994.

Within the scope of the efforts to expand across the country, the Aviation Branch Directorate was transformed into the Aviation Division on 1 July 1993 so that the Gendarmerie Aviation Units could serve more effectively. In 1993, the Van Gendarmerie Fleet Command was established in order to respond to the increasing terrorist incidents in a shorter time. The first batch of 6 of 19 Mi-17-1V/1VA Helicopters, two of which were in Ambulance (Mi-17-1VA) configuration, two were in Armed configuration and 15 were in Utility configuration, were delivered to Türkiye in March 1995 and the others in June 1995. Mi-17s were ordered under the US\$65 Million contract signed in November 1993 with the Russian Kazan Company

In this photo taken in Hakkari in June 2002, a Gendarmerie Team is seen performing an aerial insertion using the Fast-Rope method from the S-70A-17 Black Hawk Helicopter at a high-altitude area

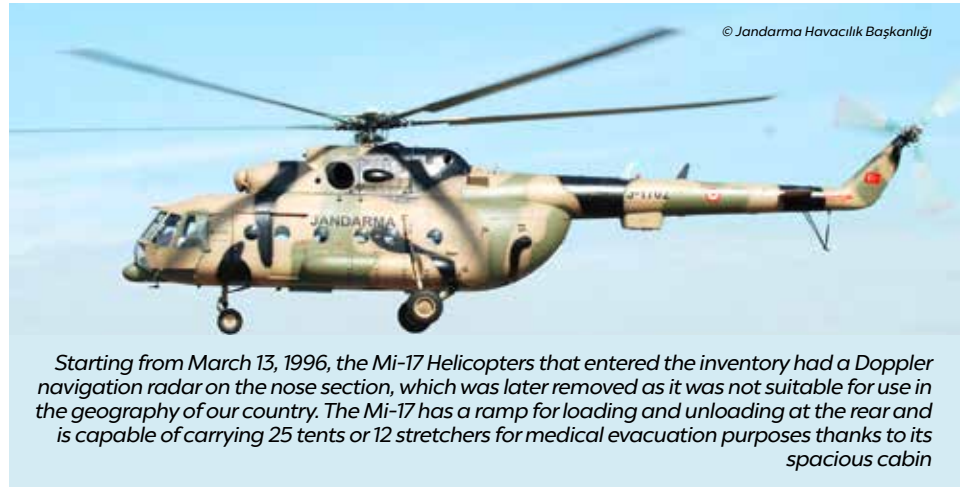


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located in Tatarstan in return for the Eximbank loan debts of the Russian Federation. However, due to the technical problems observed in some of the helicopters flown to Türkiye, the Final Acceptance process of the helicopters was prolonged and the helicopters only started to enter the inventory as of March 13, 1996. One of the Mi-17 Helicopters, while performing courier duty, made a hard landing on the Hakkari Mountain and Commando Brigade Command Heliport on October 1, 2003, and the helicopter was completely burnt out of service as a result of the fire that broke out due to the fuel tank of the helicopter being punctured during the crash.

The Gendarmerie Aviation Command was established on May 25, 2000, in order to provide single-handed management and administration of the Gendarmerie Aviation Units. Aydın Gendarmerie Fleet Command was established in 2003 in order to meet the helicopter needs of the Gendarmerie Units in the Western Region within the scope of safety, public order, tourism and public aid activities. In order to train the pilots and helicopter technicians needed by the Gendarmerie General Command, the staff of the Gendarmerie Aviation Teaching Presidency was amended and the Gendarmerie Aviation School Command was established with the approval of the General Staff on May 31, 2013.

With the approval of the Gendarmerie General Command dated August 4, 2016, the Gendarmerie



*Starting from March 13, 1996, the Mi-17 Helicopters that entered the inventory had a Doppler navigation radar on the nose section, which was later removed as it was not suitable for use in the geography of our country. The Mi-17 has a ramp for loading and unloading at the rear and is capable of carrying 25 tents or 12 stretchers for medical evacuation purposes thanks to its spacious cabin*

Aviation Command was abolished and the Gendarmerie Aviation Units were first gathered under the Aviation Division, and with the approval dated February 20, 2018, the Aviation Division was reorganized and the Gendarmerie Aviation Department was established. On May 3, 2021, the Gendarmerie UAV Command was established under the Aviation Department for the activities carried out with Unmanned Aerial Vehicles to neutralize targets in aerial reconnaissance, surveillance and counter-terrorism.

### Original Technologies Used in Gendarmerie Aviation Units

Gendarmerie Aviation Department utilizes many modern and indigenous technology product software and hardware, some of which are the product of its own R&D studies, and some of it is specially produced within the framework of the requirements it has defined for domestic companies and institutions in order to facilitate the tasks of Pilots, Mission Commanders, Technicians and Payload

Operators and to increase their effectiveness in their duties.

One of these was the Mission Planning Ground Station (GPYİ, Mission Planning Ground Station/MPGS) software that I had the opportunity to see at the Gendarmerie Aviation Department Operations Center, which is kept on watch 24/7 by the Specialized Personnel. The GPYİ software, developed by ASELSAN and defined as a "legendary software" by the personnel, allows pilots to automatically make their mission planning electronically, including information such as how many minutes they will fly and which route they will follow before they take off. The computer now automatically calculates the flight route and flight time calculation, which was previously drawn on paper with a ruler. In the GPYİ, where the entire aviation database and all maps of Türkiye are loaded, even the outposts in the mission area are marked. Pilots can transfer the mission planning work they prepared in GPYİ to the helicopter they will fly with flash disk later.

Helicopter Tracking System (HeliTR), developed by

TÜBİTAK BİLGEM and consisting of a satellite phone, GSM and tracking device integrated into the helicopter, allows pilots to talk to satellite and GSM via the helicopter's mission computer. HeliTR has the feature of sending location information via GSM network or satellite, depending on whether they are deployed in the required region or not. The development of the system, which will have an encryption system, and its integration into helicopters are continuing.

The UAV Image Transfer System to Mobile Devices (KUZGUN), a system developed by the Gendarmerie General Command and capable of transferring images onto defined tablets, is still actively used in the field. According to the 2022 Annual Report of the Gendarmerie General Command, KUZGUN provides instant viewing of the images obtained by UAVs in the fight against Counter-Terrorism Operations (CTO/TMH), public order incidents and natural disasters on tablets and computers, and in this way, Commando Battalion Commands can instantly monitor the images transmitted by the UAVs entering their area of responsibility.





*Gendarmerie Manned Airborne ISR (Intelligence, Surveillance, Reconnaissance) Aircraft*

## The View of the Gendarmerie Aviation Department to Education and the Importance of Simulators

In Gendarmerie Aviation, where the culture of training an inexperienced pilot by flying together with an experienced pilot for 3-4 years, general-purpose helicopter pilots were trained to operate B-350 JIKU, and T129 ATAK Helicopter pilots to operate Sikorsky or Mi-17 Helicopters in the past when the anti-terror operations were intense in order to benefit more from the flight personnel at hand, to save personnel in some cases, and to use the ready-to-fly aircraft in its inventory more effectively.

Senior First Pilots include pilots who can operate AB-205, Sikorsky and Mi-17 Utility Helicopters and B-350 Aircraft. With the increase in the number of personnel in terms of technicians, training activities that increase the

specialization according to the types have been started. The pilots were divided into Helicopter Pilot and Aircraft Pilot. Helicopter pilots are also divided into utility and ATAK Pilots. Similarly, the Gendarmerie UAV Command aims to benefit more from its pilots and to use the ready-to-fly UAVs in its inventory more effectively, giving the same training to ANKA and TB2 UAV Pilots and then passing them through Difference Training. Thus, when necessary, the pilot flying ANKA UAV can also fly TB2.

Gendarmerie Aviators, who see all missions as training opportunities, also attach

great importance to crew coordination and team cohesion.

AB-205 (UH-1) Helicopters are used as Basic Training Aircraft in the Helicopter Pilot Basic Course, which is given at the Gendarmerie Aviation School and consists of 2 phases. Hand-trained personnel and a sufficient stock of spare parts play a major role in the preference of AB-205s. However, the Gendarmerie Aviation Department has started to work on the supply of a new generation training helicopter to be used in the training activities of the flying personnel who will serve in rotary wing aircraft.



*The B-350 MAISR Flight Training Simulator features a digital cockpit layout that closely resembles the actual aircraft cockpit*

The Flight Training Simulators and Personnel Candidate Selection System (PASS) are used at the Gendarmerie Aviation School, which are developed and produced with national means. During our visit to the Aviation School Command with Cem DOĞUT, we had the opportunity to see this simulator on site and even have a flight experience with some of it.

Approximately 7 km of cables were used in the UH-1 Flight Training Simulator. The cabin of the Simulator, in which different meteorological conditions can be simulated, was dismantled from a decommissioned UH-1H Helicopter used in training, while the cockpit was built by a company in Sincan Organized Industry by molding the removed cockpit of a real helicopter.

The body of the Mi-17 Flight Training Simulator, which was developed using the troops' facilities and started to be used in 2018 in order to make in-cockpit practical training more effective, efficient and cost-effective in Pilot and Navigation Officer Courses, was produced using the spare nose part which was previously purchased and put into storage under Mi-17 Helicopter Procurement Project. After being in storage for a long time, the nose of the Mi-17 was painted and used as the body of the Mi-17 Flight Training Simulator. The Projection System used in the simulator was commissioned by a local company that combines three projection images and converts them into a single

image. Real conditions, including previous accident incidents, are simulated in the simulators and trainees are offered a realistic flight training. According to the Gendarmerie General Command's 2022 Annual Report, 5,270 hours of training flight have been carried out with the Mi-17 Helicopter Flight Training Simulator as of the end of 2022.

Flight safety has been increased by ensuring that emergency training, which cannot be done during the flight, is carried out in all meteorological conditions, without the risk of accident, in addition to flight training, with Flight Training Simulators. In the simulator, the actual task coordinates are entered for the trainee lieutenant who will be on duty in the future, and real scenarios are run. The trainees learn which button in the cockpit will be used under which situation and how, which is known as 'switchology' and become familiar with the buttons. Flight Training Simulators are very useful in the training of trainee Lieutenants, since the same things are applied when the person goes to the duty area.

In fact, the Personnel Candidate Selection System (PASS), which was developed as a Pilot Candidate Selection System, is used for psychomotor test of all Gendarmerie personnel and new recruits in this system by the order of the Gendarmerie General Command, in other branches than the pilots upon being decided that they will be subjected to test in this system. Upon



*Above: A snapshot from a training flight using the Mi-17 Flight Training Simulator, which has been in use since 2018 and can simulate real conditions. Below: A snapshot from a training flight using the AB-205 Flight Training Simulator*

the system's success, all flight personnel of the Ministry of Interior, Security Aviation and Coast Guard Command, apart from the Gendarmerie Aviation Department, are also subjected to the PASS test. With PASS, which was put into service in 2019, more than 4,000 personnel have been tested to date. Among them, in addition to the flight personnel, there are also personnel from different branches such as

UAV personnel and JÖAK personnel.

In the PASS cabinet, there are 7 separate test modules that include different tests such as visual and auditory memory, mathematical memory, psychomotor, control abilities, joystick use and measuring the reaction time to the data coming to the sense organs at the same time. The candidate taking the test must pass each of

these 7 modules. It takes about 45 minutes for a candidate to pass the tests. The minimum time for the PASS test is 40 minutes and the maximum time is 60 minutes. A software program prepared with domestic facilities is running on the Personnel Candidate Selection System, which was developed after examining similar systems in use in our country and in the world, and the hardware





Personnel Candidate Selection System (PASS)

(such as cabin and screen) designed by the Aviation Presidency used in the system was also produced in OSTİM. According to the information I have learned, while US\$60-70 per trainee was paid from the Gendarmerie General Command Aviation Presidency budget for this type of test abroad, PASS paid for itself after the first 150 personnel were tested after it was put into use.

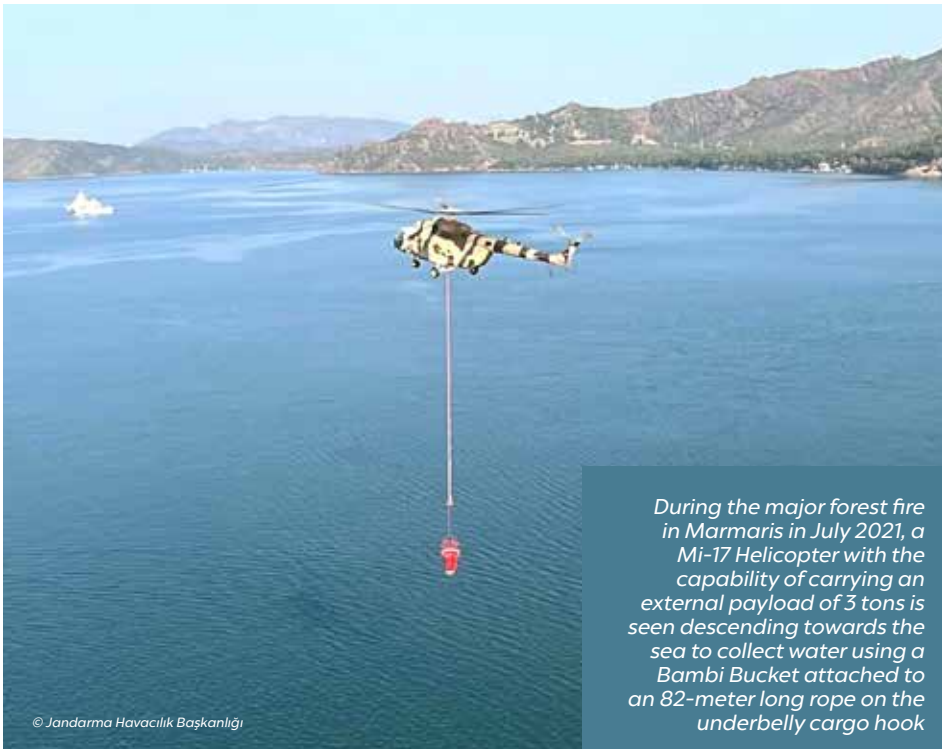
Candidates can only enter the PASS System once in their lifetime. Because each candidate enters his/her own TR Identity Number while taking the test into the System, and once the number is entered, it is not possible to change it by interfering with the database or to take the exam a second time. In this way, both merit is highlighted and the objectivity of the Personnel

Candidate Selection System is preserved. In the Personnel Selection process, PASS has the highest share with 30%. Academic Success has 25%, English 15% and Interview again 15%. The Gendarmerie Aviation School also plans to conduct a Postgraduate thesis on measuring the success of PASS in the selection of pilots and personnel.

## WildFire Fighting Missions, Lessons Learned and Mi-17 Modernization

Gendarmerie Aviation is very satisfied with the Mi-17 Helicopters it has been using for many years. It is stated that when a Mi-17 fails, only two Sikorsky Helicopters can do what it does. The cabin interior volume is quite large, and thanks to its high cabin structure, a soldier can easily stand in it. For example, while Sikorsky's electric Ground Power Unit cannot fit in the cabin of Sikorsky Helicopter, the rear ramp of Mi-17s can be opened and loaded into the cabin easily. The blades of the T129 ATAK Helicopter can be transported with the Mi-17. At the time of the earthquake, while Sikorsky could carry 6-7 tents, it was seen that 25 tents could be carried in the Mi-17 cabin. Mi-17s served very effectively in the transfer of patients/earthquake victims between hospitals after the February 6th Kahramanmaraş Earthquakes. Although its lifting capacity is quite high (with the ability to carry an external load of up to 3 tons) since it is sensitive to tailwind and crosswind, it is necessary to be careful when landing on terrain with the Mi-17.

There is also a Helicopter Obstacle Detection and Warning System (HETS) tablet in the cockpit of the Mi-17 Helicopter. HETS is a computer-based auxiliary navigation system used to detect and warn the natural and artificial obstacles that



During the major forest fire in Marmaris in July 2021, a Mi-17 Helicopter with the capability of carrying an external payload of 3 tons is seen descending towards the sea to collect water using a Bambi Bucket attached to an 82-meter long rope on the underbelly cargo hook

threaten the flight crew to perform their duties safely, and to enable the pilots to take precautions in sufficient time. While HETS with software developed by Piri Reis Information Technologies is running on Land Forces helicopters, software developed by ASELSAN is running on Air Force and Gendarmerie Helicopters. Pilots are very satisfied with HETS developed by ASELSAN, it has even saved lives several times. Mi-17 helicopters are equipped with ASELSAN product National Mode 5 IFF and ASPILSAN product batteries. Although the initial supply cost is high, ASPILSAN product batteries have well paid back, thanks to their much higher performance compared to original batteries. Meanwhile, according to the 2022 Annual Report of the Gendarmerie General Command, the operations of 16 helicopters have been completed within the scope of the Mi-17 Helicopters Warehouse Level Maintenance Project-II, which is being carried out in coordination with the Presidency of Defense Industries (SSB), under the Prime Contractorship of THY TeknikAS. Maintenance operations are planned to be completed in 2023.

In light of the lessons learned from the raging wildfire in Marmaris in July 2021, a series of modifications and improvements are being made on Mi-17 Helicopters, primarily for Flight capability with Night Vision Goggles (NVG), using the troops' facilities. During the July 2021 Marmaris Wildfire, the Gendarmerie Aviators, who were in search of



responding to the wildfires at night conditions by using the NVG, for example, flew in the region with the foreign team that made a late flight with Mi-8MTV-1 Helicopters at that time and examined how they were doing. Realizing that the NVGs used in the helicopters are older generation than the NVGs they use in Sikorsky Helicopters, Gendarmerie Aviators came to the conclusion that if necessary improvements are made in the cockpit

lighting for flight with NVG in night conditions, they can do this with their experience and modern NVGs, and thereupon, under the coordination of Major General Ali DOĞAN, Chief of Gendarmerie Aviation Department, the Project for Giving Mi-17 Helicopters Flight Capability with NVG was initiated. In this context, the original blue cockpit of the Mi-17 Helicopter is painted black to match the NVG, and the cockpit lighting

is completely renewed. In addition, in the light of the experience gained during fighting wildfires, a water spray system for wipers is installed on Mi-17 Helicopters, and a caravan type mini fridge is placed in the cabin. In addition, powerful floodlights are attached to the helicopters to illuminate the water so that the pilot can detect the drift while taking water with Bambi Bucket at night conditions and Bambi Bucket can detect



© Defence Turkey/Cem DOĞUT ve Jandarma Havacılık Başkanlığı

Above: As of July 2023, under of the Night Vision Conversion Project for Mi-17 Helicopters, 15 out of the 18 helicopters in inventory have been made compatible with NVG (Night Vision Goggles) for night flights. Below: During the major earthquakes that affected 11 provinces on February 6, 2023, a total of 250 hours of night flights were conducted using Mi-17 Helicopters.

its contact with the water. In this regard, a study is carried out with Tekom Company with the support of the General Directorate of Military Factories. On the other hand, the number of crane-equipped Mi-17s is increased by procuring additional rescue winches for Mi-17 Helicopters.

Sikorsky Helicopters have a Bambi Bucket (fire-fighting bucket) attached to the underbody cargo hook with a 270 feet (82m) long rope. On the Mi-17 helicopter, the external load hook is directly connected to the transmission. In addition, a scale has been placed at the mooring point in the cabin so that Technician can see how many tons of water has been loaded inside the Bambi Bucket at the cabin.

The Gendarmerie Aviation Department had a distance training video prepared

for the flight personnel at the Ministry of Interior Distance Education Center for fighting wildfires, and all Pilots and Technicians

who are likely to fly in a fire mission first received theoretical training through this video, and after the completion of



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the ground lessons, they received flight training using the lakes at Ankara Gölbaşı. In this way, the first team to respond to the Marmaris fires was ready for duty in a very short time like 1 day. In addition, Mi-17 Adaptation Difference Training was given to all utility helicopter pilots and instructor pilots working in the troops for night flight and external load operations training with the NVG.

Gendarmerie Aviation actually has the ability to fly with NVG in night vision and night conditions with Black Hawk Helicopters for many years. For example, Gendarmerie Aviation Units successfully carried out the operation of landing a battalion with NVG in the Bestler Dereler Region in Şırnak, for the first time in the world, in 1998. However, the task of responding to the wildfires, which is actually an external load operation, in night conditions has a feature that conflicts with the general characteristics of the flight with the NVG. Because pilots intervene in a bright environment (due to intense burning of trees) under dense smoke with an external load (fire extinguisher bucket/ Bambi Bucket) that weighs 2.5 tons, which is attached to a 270 feet (82m) long rope under the fuselage and pulls the helicopter downwards, and after unloading the external load, the helicopter suddenly becomes lighter. During the flight towards the fire area, the risk of getting that external load caught is much higher in night conditions as the obstacles cannot be seen

in detail as in the daytime. There is dense smoke in the environment, which makes flight and vision difficult, as well as the brightness of the fire that blinds the eyes of the pilot wearing the NVG. NVG brings the limited light power to our eyes by increasing it through the tubes in it. In this way, we can see a limited light more clearly but in 2 tones. Normally, a person's viewing angle is 200 degrees, while in NVG it drops to 40 degrees. While we can see everything in 3D with our eyes, with NVG we have to look through glasses, from within 2 dimensions. For this reason, even routine flights at night with NVG are quite stressful, but when the fire factor is added, the situation becomes much more difficult. After the Kahramanmaraş Earthquakes, which took place for the first time on February 6, 2023, the Mi-17 Helicopters, which gained flight capability with the NVG, also carried out the evacuation of patients, injured and personnel with the mission flights performed under night conditions.

Among the problems experienced by the flight crew participating in the Forest Fire Fighting Missions during the flight are the cockpit temperature rising to 55-65 degrees Celsius, dense smoke and ash being present in the air and thus that the helicopter's engine power cannot be used completely because clean oxygen/air does not come to the engines. In addition, Technicians who dangle from the door on Mi-17s and see the clear



*Above: During Forest Fire Suppression Operations, Technicians hanging out of the doors of Mi-17 helicopters ensure precise water drops with the Bambi Bucket by observing the fire from above. Below: A Mi-17 Helicopter is flying towards a nearby reservoir to collect water using the Bambi Bucket.*

fire and ensure that Bambi Bucket is left at the most suitable point can also be affected by the carbon dioxide caused by the dense smoke.

The Gendarmerie Aviation Department is also conducting a study to procure water tanks that can be transported under

the helicopter named Helitak, developed by an Australian company, for Sikorsky Helicopters, which have higher maneuverability compared to Mi-17s, for the purpose of Fighting Wildfires. In this context, 4 mounting kits and 2 Helitak water tanks will be supplied by the General Directorate

of Forestry for the Gendarmerie Aviation Department. Thus, 2 Helitaks can be exchanged between 4 Sikorsky Helicopters equipped with the necessary kit. Helitak-equipped Sikorsky Helicopters will actively operate during night flights where Mi-17s are restricted.



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The BAYRAKTAR TB2 Armed UAV is seen flying towards the mission area after takeoff



## My Impressions in Gendarmerie UAV Command Trip

Gendarmerie Aviation, which is struggling to do something for the Mehmetçik on the ground and to increase its effectiveness and survivability in the Fight Against Terrorism, has produced nationally and locally supplied Armed UAVs and T129 ATAK Helicopters in order to provide the close air fire support needed in this context in a timely and effective manner and it has thus established its own fleet.

During our tour at the Gendarmerie Aviation Department campus, we had the opportunity to see the Image Monitoring Center (GİM) in the UAV Command building. There were simulators and Ground Control Stations for BAYRAKTAR TB2 Armed UAVs in the UAV Command. In this way, for example, a UAV that takes off from Van or another base can be taken over from here and controlled. During our visit, the installation works for the simulator room prepared for ANKA-S UAV and for YKİ were continuing in the Headquarters building. After taking off from its home

base, the UAV climbs to the designated altitude and is taken over by YKİ in Ankara when requested.

Gendarmerie UAVs in the air could be followed instantly at the UAV GİM and the Gendarmerie Operations Center. While some of the TB2 Armed UAVs and ANKAs could only be controlled via LoS, ANKA-Ss were also controlled via SatCom.

The Gendarmerie UAV Command can update its daily flight planning in a way that reacts instantaneously according to current flights, ie target/threat detection, on the basis of 24, unlike

the Turkish Air Force (TurAF), which usually performs flights with routine planning. For example, when we were there, an image was taken in Siirt and an intelligence information came from Diyarbakır, and an order was given to land on a UAV whose flight time was about to expire, and to get up for a new UAV and go to that area. At that time, 6 UAVs were flying simultaneously in different regions, and 4 were preparing for take-off. As far as I could see, the Gendarmerie UAV operates a very different process compared to the Air and Land Forces in terms of both the concept of UAV usage and airspace control. Since the Gendarmerie General Command serves 93% of Türkiye's land area and 30% of its population, the Gendarmerie UAV Command can also perform tasks outside of Counter-Terrorism Operations (CTO/TMH). For example, the UAV that departs from Aydın can go to Muğla and provide support in the fight against migrant smuggling from the air. In order not to cause a disruption in civil air traffic



A snapshot from inside the Ground Control Station of the BAYRAKTAR TB2 Armed UAV: The Mission Commander is in the center, the UAV Pilot on the right, and the Payload Operator on the left are seen carrying out their tasks

during the execution of this task, it has to carry out many works in parallel, such as meeting with air traffic controllers in the region.

One of the most striking differences of the Gendarmerie UAV, which trains its own UAV Mission Commander, UAV Pilot, Technician and Payload Operator, is that the entire UAV team is from the continent, that is, it consists of personnel who have worked in the field before. For example, there are officers, non-commissioned officers and Specialist Private personnel who previously worked in the Gendarmerie Special Operations, Gendarmerie Commando Units, and served as the District Gendarmerie Command, Gendarmerie Station Command. Therefore, these personnel know both the area of duty and the personnel on the ground very well. In this way, it is sometimes possible to detect and destroy a target by taking an image from a very unrelated point. It is easy to fly with a UAV and find a target on the ground in a region that he has seen in the field before, but it is more difficult to fly and search for a target in a region that is visited for the first time. Because when you look from the camera, you get a two-dimensional image, but when you look at a Payload Operator who has walked there before, their situational awareness is higher, they know better where the threat can hide, so where to look. The staff do their duty with greater enthusiasm and care, with the motivation to find the terrorist and protect their friends on the ground.

According to the information I have received,



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While some of the BAYRAKTAR TB2 and ANKA Armed UAVs can be controlled solely via Line-of-Sight (LoS), ANKA-S Armed UAVs can also be controlled via Satellite Communication (SatCom)

the Gendarmerie UAV Command, which is preparing to receive the last two ANKA-S orders as New Generation ANKA UAV (with 4 external load stations under the wing), is also interested in higher-capacity Armed UAVs such as AKINCI and AKSUNGUR.

The Gendarmerie General Command's 2022 Annual Report contains the following information regarding the ongoing UAV studies:

“Within the scope of the Project of Using Images Obtained from Air Platforms for Intelligence Purposes and Establishment of UAV System, carried out in order to meet the near/far air reconnaissance and surveillance needs of the Gendarmerie units, especially

CTO, while carrying out their safety and security duties; in the year 2022,

- UAV Systems, subcomponents have been supplied (Ground Control Station, Ground Data Terminal, etc.),
- Revisions were performed on the UAVs in order to increase their mission effectiveness against the effects RF jamming/blinding and deception.
- Within the scope of the works to increase the line of sight (LoS) range of Tactical UAV Systems from 150 km to 300 km, the replacement of the Ground Data Terminals (GDTs) located in the West has been completed,
- In order to increase the effectiveness and efficiency

of the radio conversations between the ground troops, a contract was signed for the Integration of Mini Relays to Tactical UAVs,

• In order to increase the operational effectiveness of the troops such as teams, companies, the supply of the Mini UAV with Ammunition Release and the Mini UAV-D series UAV has been completed, and

• In order to meet the longer range (50-80 km) and medium altitude aerial reconnaissance and surveillance needs of Commando Battalions and Regiments and Provincial Gendarmerie Commands, VTOL UAV supply is planned within the scope of the Vertical Take-off Little UAV (VTOL UAV) Project contract.



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The BAYRAKTAR TB2 Armed UAV is being loaded with MAM-L Smart Munitions before a mission



## Notes from New Aircraft Procurement Projects

### T129 ATAK Attack Helicopter

13 T129 ATAK helicopters were received within the scope of the Gendarmerie General Command's Attack Helicopter Project, which was initiated for the supply of national and locally produced T129 ATAK helicopters in order to provide timely and effective close air fire support to the Gendarmerie General Command and are currently being used effectively in the counter-terrorism operation. It is planned to complete the deliveries of the remaining T129 Helicopters to the Gendarmerie Aviation Units, which are gaining strength, with the new domestic ATAK helicopters entering the inventory. ASEFLIR R-410D FLIR payload is expected to be used in new ATAKs.



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*Loading of 70mm Unguided Rockets onto the T129 ATAK Helicopter*

Normally T129s have IDM-501 Data Modem with PRISM capability that

allows sending messages and sharing photos. But Gendarmerie T129s do

not have IDM-501 modem and HF radio. So it's a little lighter. The image transmission modem of the UAV is connected to the PRISM video channel of the IDM-501. Thus, when the UAV broadcasts, the T129 Helicopter can take the UAV image from very long distances. Gendarmerie Aviation goes one step further and is working on a software integration that will allow the flight information of the UAV to be displayed on the digital map system by getting the telemetry data, in addition to the image obtained by ANKA and BAYRAKTAR TB2 SiHA with data link, as the target coordinate marked with the laser directly falls into the target list of the T129 ATAK Helicopter pilot. Gendarmerie Aviators are also working on ASELSAN 9681 Radios to automatically display friendly unit and target coordinates.



T129 ATAK Helicopters in two-ship formation flight

## T-70 Utility Helicopter

The Gendarmerie Aviation Department took the first T-70 Utility Helicopter (with tail number J-5001) into its inventory on December 7, 2022, within the scope of the T-70 Turkish Utility Helicopter Program (TUHP), which was signed on February 21, 2014 and carried out with Sikorsky Company under the Main Contractor of TUSAŞ. Gendarmerie Aviation, which is the biggest buyer of T-70 TUHP with a package of 33 helicopters, has added 3 T-70 utility Helicopters, all equipped with an internal additional fuel tank (which increases the helicopter's airtime by approximately 50%) and a rescue winch, to its inventory as of the end of July 2023. A total of 5 T-70s will be delivered to the Gendarmerie Aviation Department in the first package of 38 helicopters, the production license of which covers 109 T-70 Helicopters under TUHP. The first T-70 helicopter received flew for a total of 60 hours, of which 10 hours were on the first day the air aid began after the 6 February Kahramanmaraş



Earthquakes (6 at night and 4 during the day). While the T-70 and S-70i helicopters in the inventory of the Gendarmerie Aviation Department have full autopilot capability, the S-70A-17 and A-28 series helicopters do not have the autopilot feature. Almost half of the T-70s will have an electrically driven rescue winch.

The T-70s, which were shifted from the General Directorate of Forestry (OGM) order to the Gendarmerie Aviation Department, have an open exhaust configuration. Helicopters with Forest (OGM) Configuration have this type of exhaust. T-70s have two basic production

configurations, Forest Configuration and Common Configuration. Of the 109 T-70s to be delivered under TUHP, 89 were planned to be manufactured in Common Configuration and 20 in Forest Configuration. Thanks to its open exhaust structure, the T-70 Helicopter can stand outside the ground effect at higher altitudes and perform the rescue mission with a hover crane. Since there is no infrared suppression system and therefore no suppression in the open exhaust, there is no decrease or loss in power as the air is vented directly. Therefore, it is not planned to add equipment such as floor armor, Chaff/

Flare Launcher and HEWS that will cause additional weight to the T-70s in the Forest Configuration with open exhaust.

Unlike the old-style S-70s, the T-70s have an Air Traffic Alert and Collision Avoidance System (TCAS) integrated into the Digital Map. The T-70s are also equipped with a water jet system for the wipers. A small engine is placed in the cockpit to squirt water into the wipers. While the middle one of the 4-Color Multi-Purpose Display (MFD) in the cockpit is a super-intelligent computer equipped with an internal processor, the two leading MFDs are for demonstration purposes only. While the S-70i has an 8-inch color MFD, the T-70 has a 10-inch screen. The cabin of the T-70s also includes a motorized Active Vibration Control System. Since composite blades with wide cord lines are used in the T-70s, a certain increase is achieved in the lifting capacity.

ASELFLIR R-400D FLIR payload will be used in T-70 and T625 GÖKEY Helicopters.

*The second T-70 Utility Helicopter (J-5002) with an open exhaust configuration. Final preparations are being made with a Bambi Bucket inside the cabin for a Firefighting Mission before transferring to another province. Above: A snapshot of the helicopter's high-tech digital cockpit architecture*





*The first T625 GÖKBEY Helicopter with tail number J-6001, en route to the Gendarmerie Aviation Department premises in Güvercinlik, Ankara. The first 3 GÖKBEY Helicopters, expected to be delivered by the end of 2023, are designated as T625J due to their weight being approximately 250 kg heavier than the remaining 17 helicopters scheduled for serial production*

## T625 GÖKBEY Light utility Helicopter

Within the scope of the Turkish Light Utility Helicopter (TLUH) Procurement Project; it is planned to supply 20 T625 GÖKBEY Light Utility Helicopters for the Gendarmerie Aviation Department. It is expected that the first 3 of the T625 GÖKBEY Helicopters, whose design and production works are continuing by TUSAŞ with domestic and national resources, will enter the Gendarmerie Aviation inventory by the end of 2023. The T625 GÖKBEYs will be equipped with ASELFLIR R-400D FLIR payload, will feature full autopilot capability and all will have a rescue winch.

## AutoGyro Cavalon Gyrocopter

Within the scope of the Gyrocopter Procurement Project, a contract was signed between SSB and Sky Olympos A. S. on 9th August 2022 and the first 3 Gyrocopters were included in the inventory in the first quarter of 2023. As of the end of July 2023, more than 1,000 hours of flight have been

carried out with autopilot equipped Gyrocopters.

The Gendarmerie Aviation Department is able to carry out tasks such as air traffic and order control, combating migrant smuggling and returning life to normal in natural disasters in a more cost-effective and practical way, thanks to the AutoGyro Cavalon Gyrocopter, a product of the German AutoGyro GmbH Company, which has recently joined its inventory. The approximate cost of the Sikorsky helicopter for a traffic flight is US\$3,500 per hour, while the hourly maintenance and fuel cost of the gyrocopter is US\$35.

The gyrocopter, which is a rotary wing and propeller aircraft, has an engine and propeller at the rear for forward movement, and a motorless and free rotating rotor at the top for vertical movement (transport). In order for the gyrocopter to take off, it needs to move forward for a short time. With a maximum take-off weight of 560 kg, the AutoGyro Cavalon Gyrocopter needs to move 200m forward in order to take off. Once off the ground, the Gyrocopter can climb vertically.

In the cockpit of the AutoGyro Cavalon Gyrocopter with side-by-side seating, the pilot sits on the right axle of the helicopter. A Ukrainian product camera was chosen to be used in Gyrocopters whose tail numbers consisted of 3 numbers (J-101, J-102, J-103) instead of 4 numbers, but since the image stabilization was insufficient, the cameras were sent back and were obtained from a local company, LAPIS. Also, although not in the original configuration, the Gendarmerie Aviation version has a Throttle, siren and a tablet holder. The image obtained with the camera in the nose can be transferred to this tablet via the modems located at the back and shared with the station on the ground. AutoGyro Cavalon Gyrocopter also has 2 touch screens (Garmin G3X) from Garmin in the cockpit. There was no need for air conditioning, as the ventilation from the window was sufficient. Gendarmerie Aviation Gyrocopters also use a 141 hp (104 kW) engine, different from the standard model (it has a 100 hp Rotax 912

engine). The Gendarmerie Aviation Department was the first official user of the Gyrocopter with an oil-cooled 141 hp Rotax 915iS engine, produced by the company and launched earlier this year. Likewise, the first autopilot equipped Gyrocopters are also included in the inventory of the Gendarmerie Aviation Department. It is stated that the gyrocopter, which has a fuel tank with a capacity of 100 liters, consumes 20-25 liters of fuel per hour depending on the load, speed and altitude during flight. The gyrocopter can climb to an altitude of 12,000 ft depending on air temperature and load. Gyrocopters, which are stated to be quite stable during flight, do not have a transmission on them, so they do not have a subsystem to break down. They fly constantly with a fairly high mission readiness rate. Gyrocopters cannot draw negative G in order not to leave the main rotor turned by the wind unloaded, all movements must be +G. The number of Gyrocopters, which is currently 3 in the inventory of the Gendarmerie Aviation Department, is expected to increase to 8 with an additional 5 aircraft by the end of this year, and this number is expected to reach 15 in the following period. Within the scope of the project, a vehicle used in the land transfer of the gyrocopter was supplied. For example, when a natural disaster cannot be reached by air when the weather is bad, the gyrocopter can be transported by land to a point close to that area, and can be transferred to the incident area by taking off from a short area.

## HÜRKUŞ-C Close Air Fire Support Aircraft Supply Project

For the purposes of supporting the HÜRJET Project, which is planned to be developed locally and nationally, to have the opportunity and ability to meet the need for close air support provided by the Turkish Air Force, with its own means, further increasing its effectiveness in the Counter-Terrorism Operations (CTO), and to rapidly and effectively close air support, and meeting the need for a new air platform that will provide fire support, the Gendarmerie General Command closely follows the HÜRKUŞ-C Next Generation Light Attack/Exploration Aircraft Procurement Project together with the Turkish Air Force Command.

Gendarmerie Aviators had previously tried HÜRKUŞ for 1,5 months in Van and made extensive training flights with it. In the light of this experience, Gendarmerie Aviators wanted HÜRKUŞ-Cs to have a full autopilot, anti-icing system and an integrated sight system for the gunman, and also requested improvements in avionics equipment.

## Liaison and Utility Aircraft Project

In order to ensure the dispatch of large operation units with their equipment and materials in a short time, without being affected by meteorological conditions, the Gendarmerie General Command has been involved in the Liaison and Utility Aircraft Procurement



AutoGyro Cavalon Gyrocopter on traffic control mission

Project carried out by the Defence Industry Agency (SSB) for the needs of the Land Forces Command and the General Directorate of Security. The source of the project, which aimed to supply 2+1 aircraft for the Gendarmerie Aviation Department, was planned as the national budget.

With the Liaison and Utility Aircraft Project, the Gendarmerie Aviation Department aimed to be able to transfer a Battalion Gendarmerie Search and Rescue (JAK) Personnel and the Special Units of the Gendarmerie Special Public Security Command (JÖAK) quickly from one place to another with minimal impact from

meteorological conditions. For such needs, CN235 Transport Aircraft allocation is requested from Turkish Air Force. With the entry of the Liaison and Utility Aircraft into the inventory, the Gendarmerie General Command will have the opportunity and capability to meet this need on its own initiative.

## Conclusion:

Gendarmerie Aviation, which has been carrying out its duties with great devotion for 55 years, will always continue to be at the disposal of our beloved nation with the projects it has developed and implemented with its existing facilities. Gendarmerie Aviation

Units, which include Gendarmerie Pilot Officers and Aircraft/Helicopter Technician NCOs, and Mission Commander, Pilot, Technician and Payload Operator Officers, NCOs and Specialized Officers working in UAV Systems, who have the opportunity to train themselves and increase their experience within the scope of the tasks carried out in the fight against terrorists, as well as activities for search/rescue in various parts of our country, fighting wildfires, patient transport, safety, security and prevention of smuggling, are ready to do all the tasks that will be given in the future with devotion, as it has been before ■



© TUSAŞ

During the HÜRKUŞ-C Preliminary Project, TUSAŞ (Turkish Aerospace) carried out a modernization package in 2019 on the second prototype of HÜRKUŞ-A by equipping it with FLIR and external weapon payloads, aiming to provide Mission Flight Services to the Gendarmerie General Command. The aircraft was painted in black color upon the request of Gendarmerie Aviation.

# ORGANIZ



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ANKARA**

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SUPPORT**

**FLEET  
AYDIN**

**FLEET  
VAN**





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**As Gendarmerie Aviation Department,**

**We Stand Unwaveringly by Our**

**Nation and Are Ever Ready to Assist!"**

”



Gendarmerie Aviation, which is preparing to celebrate its 55th anniversary, is today an important element of the Gendarmerie General Command. While Gendarmerie Aviation is considered as a separate force multiplier in the calculation of combat effectiveness, on the other hand, with the help of its experience gained within the scope of the Counter-Terrorism Operations (CTO), it plays a crucial role in the recovery process in the aftermath of natural disasters such as wildfires, earthquakes, and floods.

Established in Diyarbakır in 1968 under the name of the "Light Helicopter Company" for unit transportation, public security, reconnaissance and surveillance, and the evacuation of patients and wounded, the Gendarmerie Aviation Department has conducted over 500,000 flight hours to date and holds a prominent place within the Gendarmerie General Command. In this regard, we conducted a comprehensive interview with Major General Ali DOĞAN, Chief of the Gendarmerie Aviation Department, to get first-hand up-to-date information about its primary roles, missions, vision, ongoing modernization efforts, views on UAVs, its place in the Gendarmerie Units around the world, as well as its performance and contributions following the Kahramanmaraş earthquakes. The interview was held on July 31, 2023, at the Gendarmerie Aviation Command Headquarters located at the Martyr General Eşref BİTLİS Barracks in Güvercinlik, Ankara. This exclusive interview sheds light on the current status and achievements of Gendarmerie Aviation.



**Defence Turkey: While Gendarmerie Aviation is an important element of the Gendarmerie General Command, it is also considered as a separate force multiplier in the calculation of combat effectiveness. What can you say about the role, duties, and vision of the Gendarmerie Aviation Department within the Gendarmerie General Command?**

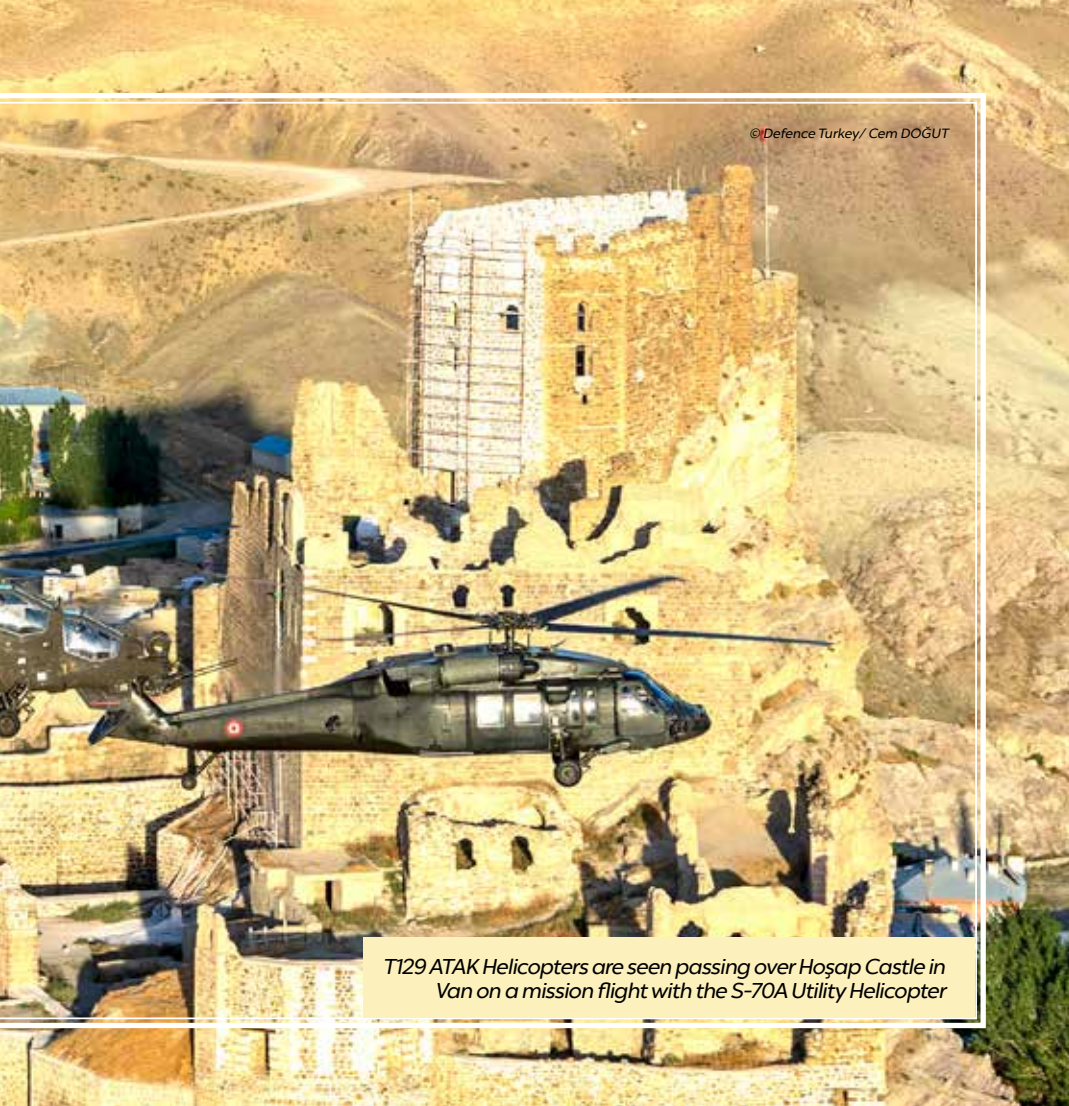
**Major General Ali DOĞAN:** First and foremost, I would like to express my heartfelt gratitude for collaborating with us on this project. It is indeed a distinct pleasure for us to present ourselves to the Turkish nation through this special issue on the 55th anniversary of the Gendarmerie Aviation

Department, as well as to be featured in Defence Turkey, a national aerospace and defence magazine. We also extend our gratitude to you for granting us this opportunity.

The primary mission of the Gendarmerie Aviation is to provide aviation support necessary for the execution of law enforcement and security services entrusted to the Gendarmerie General Command by legislation. The uninterrupted continuation of the tasks of the Aviation Department Units and their ability to perform their duties in all weather conditions hold paramount importance. Our Gendarmerie Aviation units, with their full complement of aircraft and personnel, are an integral part of the

Gendarmerie General Command. They provide aerial support to all units of our Gendarmerie as needed, in locations and times required, for counter-terrorism operations, disaster relief efforts, as well as public safety and security duties. While staying abreast of all technological advancements worldwide, our department aims to enhance Gendarmerie's aviation capacity by further modernizing it. This includes acquiring new aircraft, training aviation personnel, effectively upgrading and equipping existing aircraft, and staying up to date with the most efficient equipment.

**Defence Turkey: Which aircraft and systems does the Gendarmerie Aviation**



*T129 ATAK Helicopters are seen passing over Hoşap Castle in Van on a mission flight with the S-70A Utility Helicopter*

**Department, which assumes significant roles in national security and defence, currently operate in its inventory? Can we also get your opinions on the aircraft that are planned to be procured in the upcoming period?**

**Major General Ali DOĞAN:** Efforts are ongoing to ensure the effective continuity of aerial support in all tasks executed by the Gendarmerie General Command.

a) To primarily support aerial traffic enforcement tasks of the Gendarmerie General Command, three gyrocopters have been added to our inventory. With common features with aircraft and helicopters, these ultra-light aerial

vehicles can take off and land on short runways and carry payloads of up to 250 kg. Notably, the gyrocopters are exclusively operated by the Gendarmerie General Command.

b) To fulfill the requirement for a medium transport/utility helicopter with low maintenance/operating costs, high maneuverability, carrying capacity, secure communication, and high-precision navigation systems, T-70 Helicopters have been produced and assembled at the TUSAŞ facilities. The initial delivery of these helicopters has been made to the Gendarmerie General Command.

c) To provide day and night air support capabilities during the Counter-

Terrorism Operations of the Gendarmerie General Command, such as close air support (CAS), armed reconnaissance, aerial assault operations, and protection of SAR (Search & Rescue) helicopters, T129 ATAK Helicopters, produced at TUSAŞ facilities, have been added to our inventory.

d) To address the Gendarmerie General Command's requirement for a light transport/utility helicopter, we aim to contribute to the Indigenous Helicopter Program carried out by TUSAŞ and to include the T625 GÖKBAY Helicopter, the first domestic and national helicopter produced by Türkiye, into the inventory of the Gendarmerie General Command.

e) The Gendarmerie General Command continues its efforts for the procurement of the HÜRKUŞ-C Next Generation Light Attack/ Reconnaissance Aircraft to support the domestic and national development of the project, to possess the capability to independently meet the need for close air support provided by the Turkish Air Force, to increase effectiveness in Counter-Terrorism Operations, and to meet the need for a rapid and effective aerial CAS platform.

f) Procurement efforts for the Initial Training Aircraft Project continue to address the increased pilot demand by introducing new aircraft. The project aims to provide initial pilot training for all pilot candidates and standardization, instrument card control, and emergency training for existing aircraft pilots.

**Defence Turkey: How does Gendarmerie Aviation prepare itself for the battlefield environment of the future in terms of personnel training? Could you inform our readers about the ongoing pilot and technician training programs within this scope?**

**Major General Ali DOĞAN:** Training is one of the most crucial aspects for a pilot, a technician, and all units within the aviation sector. Training a pilot or technician is not merely a course; it's an educational endeavor. Obtaining a pilot's certificate requires a minimum of 52 weeks of training. Both globally and in Türkiye, the shortage of



Gendarmerie AB-205/UH-1H Helicopters in Formation Flight

pilots and aviation schools has made it challenging to secure a skilled workforce for the aviation sector. The Gendarmerie Aviation Department established the Gendarmerie Aviation School Command in June 2013, and since then, it has consistently expanded its activities. We have increased the number of Instructor Pilots from a mere 12 to 48 during this period and simultaneously augmented the number of aircraft. Additionally, our initial pilot and technician training program, which began with just 7 trainees, has grown to accommodate 60 Pilots and 60 Technicians. As you know, the unfortunate coup attempt in our country in 2016 created significant human resource issues across the country, which also affected Gendarmerie Aviation. In response, our Aviation School rapidly took measures to increase

pilot and technician sources. Consequently, we initiated the recruitment of university graduate Pilot and Technician candidates in 2017 without waiting for the graduation of Officer Pilot Candidates and Non-Commissioned Officer Technician Candidates from our existing schools and the Gendarmerie Academy. These candidates completed a one-year training program and graduated as Second Lieutenants (2Lt) and Staff Sergeants (SSG). Subsequently, after providing them with one more year of training, we recruited the first outsourced Pilots and Technicians in 2018, and they joined the Gendarmerie Aviation Department. This swift response somewhat alleviated the shortage of pilots and technicians across all military branches.

In 2022, Pilots and

Technicians who graduated from the Academy after completing a five-year education started their training as Pilot and Technician Candidates in the Aviation Gendarmerie Aviation Department. As of today, we continue the training for the 11th Pilot and Technician Course. This year, we expect to graduate more than 20 Pilots and over 40 Technicians. Since 2017, our Gendarmerie Aviation School Command has been graduating candidates for other units of the Ministry of Interior, such as the Aviation Department of the General Directorate of Security and the Aviation Department of the Coast Guard, particularly for technician requirements. With our Basic Course, which will start this year, we will also train pilots for the Aviation Department of the General Directorate of Security and the Coast Guard for the first time. In addition

to the Basic Courses for Pilots and Technicians, we offer training in 36 different branches, including UAV (Unmanned Aerial Vehicle) Pilots and Technicians. Starting this year, our Gendarmerie Aviation School Command will also fulfill the entire pilot and technician needs of the UAV Command. We have already begun conducting our first Basic Courses for this purpose.

**Defence Turkey: What types of aircraft are used for Basic and Advanced Training at the Gendarmerie Aviation School Command? Could you provide information about this?**

**Major General Ali DOĞAN:** Generally, pilots start their training with simple and small aircraft that allow them to showcase their capabilities and adapt to the helicopter. However, due to economic and technical

issues, we encountered some difficulties in the training provided by other institutions in Türkiye. As a result, we extensively discussed with our Instructor Pilots whether we could initiate our Basic Course with our smallest aircraft, the AB-205/UH-1H Helicopter. Subsequently, we saw that the quality of the training provided is what matters! If you can ensure this quality, you can start the Basic Course with your largest aircraft. Based on this, we evaluated the smallest aircraft in our inventory, the AB-205/UH-1H Helicopter, by having our Instructor Pilots and some trainees experience it. Later on, we observed that trainees quickly adapted to the training. This is because, after UH-1, we transition to twin-engine aircraft in the Advanced Training. We conduct the first stage of the Helicopter Pilot Basic Course with the UH-1 and the second stage with S-70 and Mi-17 Helicopters by dividing the trainees. We noticed that graduates from our initial course now fly for 45 hours with the UH-1H instead of the 160 hours previously. Following that, they move on to twin-engine aircraft for Advanced Training Flights. We have observed our graduated pilots for the past year and received highly positive feedback from unit commanders. Currently, in our Basic Course, we start with the UH-1H and continue with twin-engine aircraft for the Advanced Training Flights. Thus, our trainees begin their service as pilots ready to operate directly on our S-70 and Mi-17 Helicopters. With this new plan, instead



Gendarmerie S-70 Utility Helicopter

of graduating as a pilot in a single-engine aircraft and then transitioning to a twin-engine aircraft in the next stage, we save around 60 hours of twin-engine aircraft training and reduce costs as well.

**Defence Turkey: Can you provide information about the ongoing modernization projects of the Gendarmerie Aviation Department?**

**Major General Ali DOĞAN:** Our S-70 Helicopter Modernization Project, which is largely completed, is currently ongoing. Through this modernization, we have introduced the Gendarmerie Configuration of the S-70 Helicopter. How did this come about? In a joint effort with ASELSAN, we planned the modernization of avionic systems (cockpit avionics) and communication systems, which involve the modernization of radios, in two main phases. The avionic modernization is entirely finished, and the modernization of communication systems is nearing completion.

Due to the mountainous terrain of the Turkish airspace, we experience communication problems. We have initiated another project to overcome this situation and establish telephone communication and improved communication between aircraft through radio messaging. This project is a collaborative effort between ASELSAN and TÜBİTAK. Currently, many existing systems rely on either GSM or satellite communication. With this project, we are working on a concept that simultaneously utilizes both GSM and satellite communication, enabling direct communication between a helicopter in İzmir and another in Hakkari, as well as tracking the movements of helicopters. This is a new and relatively unknown project. We have allocated resources to it. The project will be conducted in three phases, and the second phase is nearing completion. Hopefully, it will be completed soon. With this project, not only our inventory but all

aircraft in Türkiye will gain an additional capability.

Another modernization project we have is for our Mi-17 Helicopters, but this one does not involve a project partner. This project is the Night Vision Conversion Project for Mi-17 Helicopters. Some helicopters only fly during the day, while others operate both during the day and at night. However, in terms of hardware, our helicopters did not permit flight with Night Vision Goggles (NVGs). This was due to various issues, such as non-NVG compatible lighting in the cockpit, controls not being positioned in front of the pilot, and warning lights not being organized properly. Although we could perform night flights with all our aircraft, we couldn't do so with the Mi-17 Helicopters. After 1,5 years of work, we brought together all our mechanical, electrical, electronic, structural, and Navigation Officers, Flight Instructors, and Maintenance Officers to develop a conversion



Chief of Gendarmerie Aviation Department - Gendarmerie Pilot Major General Ali DOĞAN

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project, and we realized that we could carry it out ourselves. We prepared the project without any external support. We identified our needs by answering all the questions of where, when, and how within this project. For example, we needed to make the 250 bulbs used for lighting inside the helicopter and six control buttons compatible with NVGs. The helicopter needed a radar altimeter, and there are many other details that I can't mention right now, but I'm focusing on the most important

aspects. We completed this modification within a week with six technicians working on a single helicopter, making it compatible with NVGs for night flights. We are currently implementing this on the 15th helicopter.

With this project, we have made the Mi-17 Helicopters that couldn't fly at night for 27 years capable of night flights. Thanks be to God; we are very proud of our team. During the major earthquakes that affected 11 provinces on February 6, 2023, our Mi-17 Helicopters conducted 250 hours of

night flights. The most significant feature of this helicopter is its spacious and tall cabin, allowing you to move around while standing. Two years ago, we implemented a project for the Mi-17 Helicopters, which was the first of its kind in Türkiye, aiming to be used in a potential earthquake scenario and to evacuate casualties. We established a stretcher system for the helicopters. I'd like to talk about this project as well. The project was entirely our own, and we collaborated with a company in Ankara's

OSTİM that manufactures ambulance stretchers. This company installed a stretcher on a helicopter for the first time. They designed and carried out the project. Today, we have set up a three-story stretcher system in five Mi-17 Helicopters, capable of carrying 12 patients or casualties in one helicopter. Normally, the Mi-17 Helicopter could carry a maximum of four or five patients or casualties side by side. With this project, we evacuated more than 12 patients or casualties in one helicopter from the disaster area. We applied the same system to Sikorsky Helicopters. In the S-70, which has a smaller interior space and lower ceiling, we established a two-story stretcher system with a capacity of eight people. From the very moment of the earthquake, we evacuated more than 350 injured individuals (rescued from debris) using Sikorsky and Mi-17 Helicopters from Maraş, Hatay, and other affected provinces to nearby hospitals. This portable system can be set up in 20 minutes. We have it in all of our units. We can instantly mount it on all our helicopters. There's no need for a separate helicopter for this. In the aftermath of the earthquake, we used four helicopters solely with stretchers for the first three days. After the patient evacuation was completed, we dismantled the stretcher system in 20 minutes and used our helicopters to evacuate citizens and materials.

In this regard, this capability was of utmost importance. We used it for the first time; unfortunately, our foresight came true. Gendarmerie



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Gendarmerie Mi-17 Utility/Transport Helicopter

The first GÖKBAY Helicopter with tail number J-6001 during a test flight. The testing and certification process continues

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Aviation always operates with the principle of being there for the citizens' needs, at the right place and time, nearby, and ready to assist. When the time comes, we need to be ready for our duty. The Stretcher Project was initiated with this purpose in mind. It was a project that brought us reassurance, and it was a project that gave us the joy and pride of being there for our citizens. I would like to emphasize this point especially.

#### **Defence Turkey: What can you share about the future procurement projects of the Gendarmerie Aviation Department?**

**Major General Ali DOĞAN:** Deliveries are ongoing for the T-70 Project. As of today (July 31), we have received the third helicopter. In total, we will receive 33 helicopters within the project. Regarding training, as I mentioned before, we are currently using the UH-1. However, we also have plans to

procure a Training Aircraft and a Training Helicopter. The priority is the Training Aircraft because we have been forming a fleet with an emphasis on fixed-wing aircraft in recent years. We have a jet-powered Command and Control Aircraft and three propeller-powered aircraft for reconnaissance and surveillance. Approximately 15% of our pilots are trained to operate fixed-wing aircraft, and they are actively flying. Therefore, we aim to provide Fixed-Wing Aircraft Pilot Training at our Aviation School. We have trained Fixed-Wing Aircraft Instructors, and we have Fixed-Wing Flight Examiners. Our Fixed-Wing Training Aircraft Procurement Project is currently a priority, and we consider this matter with great importance. Afterward, based on the current situation, we plan to initiate the Training Helicopter Project.

#### **Defence Turkey: Sir, the Gendarmerie**

**Aviation Department will be the first user of the T625 GÖKBAY Light Utility Helicopter, locally developed and produced by the Turkish Defence Industry. With the introduction of the GÖKBAY Helicopter into the inventory, what additional capabilities will the Gendarmerie Aviation gain?**

#### **Major General Ali DOĞAN:**

We have been a part of the GÖKBAY Project for approximately 3,5 years. The GÖKBAY Project was conceived by TUSAŞ, and from the moment we became aware of it about 3 years ago, we have been supporting this project. As I mentioned before, we have UH-1H helicopters in our inventory. These UH-1H helicopters will gradually be phased out in the coming years. Therefore, we need a Utility Helicopter that is smaller than the Mi-17 and Sikorsky Helicopters. As you know, the Gendarmerie covers 93% of Türkiye's land area, and we

needed a helicopter that could transport a team or a Gendarmerie patrol to the farthest points. We decided to support the GÖKBAY Project for this purpose. We intend to use the GÖKBAY not only for transport missions but also for Search and Rescue (SAR) operations, given its smaller size compared to the S-70. We specifically requested that the Gendarmerie helicopters have EO/IR cameras (FLIR payload) and rescue hoists. We are closely collaborating with TUSAŞ. In the first helicopters we will receive, we have stated that these systems must be included and set this as a condition. TUSAŞ previously declared that the first GÖKBAY Helicopters produced would be delivered to the Gendarmerie. We want to be the ones receiving these helicopters because we have been together with TUSAŞ from the very beginning. The contract has been signed in this regard. We will take delivery



of the first three helicopters produced under the project. It will be a source of great pride for us to fly these helicopters, which are entirely domestically produced.

**Defence Turkey:** Sir, as you mentioned earlier, the Gendarmerie General Command serves 93% of Türkiye's land area and 30% of its population. Hence, the responsibilities of the Gendarmerie Aviation are extensive, and consequently, there is a need for numerous aerial vehicles. In recent months, a small rotary-wing Gyrocopter with Gendarmerie colors was seen in Ankara's skies, bringing public attention to the newly acquired

**Gyrocopters.** Subsequently, they were exhibited at Teknofest Istanbul and IDEF '23 Fairs at the Gendarmerie Aviation booth. Compared to larger platforms, these aircraft have significantly lower acquisition, flight, and maintenance costs. What are the fundamental factors underlying the decision to procure these Gyrocopters, and what can you share about their usage concept within the Gendarmerie Aviation and your experience and impressions on Gyrocopters since their introduction?

**Major General Ali DOĞAN:** Let me put it this way: In late 1988, S-70 Helicopters were delivered to the Gendarmerie General

Command for the first time in Türkiye. Until that date, counter-terrorism efforts in Eastern and Southeastern Anatolia were carried out using AB-205/UH-1H Helicopters, which had been in service since the 1974 Cyprus Peace Operation. In 1994, Mi-17 Helicopters were added to our inventory. The aircraft in our inventory were primarily used for counter-terrorism operations regarding flight hours. However, particularly over the last 6-7 years, due to events like floods in Sinop, Bartın, Rize, and Düzce provinces, as well as wildfires in various regions of the country, including Antalya province, we accelerated the acquisition of new equipment for our aircraft to enhance our effectiveness in

disaster response. In 2017, we initiated a project to equip our helicopters with new capabilities, with the goal of increasing our effectiveness in natural disaster response. We focused on acquiring rescue hoists for our aircraft and aimed to equip most of our helicopters with hoists, an indispensable tool and a crucial component of search and rescue operations. Today, in the Gendarmerie Aviation inventory, we have 6 Sikorsky and 5 Mi-17 Helicopters equipped with rescue hoists. We went from having zero systems of this kind to having 11 systems in our inventory. This August, we will procure 3 more hoist systems. The GÖKBEY Helicopters we will acquire will also be equipped with hoist systems. Another



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important payload is the EO/IR camera systems. If you are conducting a search and rescue operation, whether it's related to natural disasters, personnel rescue, mountain climbers lost in mountainous areas, or citizens lost in rural regions, you must utilize helicopters equipped with EO/IR cameras (FLIR) for these operations. Thermal cameras are used for search and rescue operations during both day and night flights.

At the same time, for the past four years, we have been conducting aerial traffic control operations. When we examined the 13 different tasks that the Gendarmerie's helicopters were capable of, we embarked on the idea



AutoGyro Cavalon Gyrocopter on traffic control mission

of performing these tasks with a more cost-effective and simpler aircraft. This is because the flight and maintenance costs of S-70 and Mi-17 Helicopters are quite high. These helicopters are large, and the equipment they carry is naturally expensive.

Search and Rescue Operations consist of two main parts: search and rescue. The time you spend during an aerial search can be almost ten times longer than the time you allocate for the rescue phase. For instance, you may spend 10 hours searching from the air, and then it takes only 45 minutes to perform the actual rescue using a helicopter. Therefore, the rescue phase is relatively short. We thought, let's split the search and rescue mission into two parts and start with the aerial search. The search part involves not only searching for accident victims but also searching for drug cultivation areas,

human traffickers engaged in illegal immigration, immigrants themselves, tracking criminals from the air and locating them, providing aerial security for VIPs, and ensuring the security of natural gas and oil pipelines from the air, among many other tasks. We needed a cost-effective aerial vehicle capable of performing these tasks and transmitting images from the air. We examined every flying vehicle that could meet these criteria. We discovered a small rotary-winged aircraft, a gyrocopter, which has amassed over 3 million flight hours and is used by more than 3,000 different users worldwide. We started examining the Gyrocopter about 2,5 years ago. This aircraft is used for recreational purposes in Türkiye and many parts of the world. We engaged with the representatives of this aircraft in Türkiye. After concluding our investigations, we procured

these aircraft in February 2023. Initially, we acquired three aircraft and examined them. Before this, we conducted field studies with different vehicles but hadn't actively flown them. We trained Gyrocopter pilots from our existing fixed-wing and helicopter pilots using these three aircraft. Currently, we have over 16 Gyrocopter pilots and more than 28 Gyrocopter technicians. Our adaptation training is completed, and I proudly announce that we opened our first Adaptation Course at the Gendarmerie Aviation School and trained 6 pilots. We conducted our first traffic flights during the Eid al-Adha holiday in June this year. Since that day, we have also begun operations in the areas I mentioned earlier. The Gyrocopter was designed according to our specifications. The manufacturer outfitted the platform with various equipment according to our requests. Riot control is one of our important





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mission areas. In this context, we installed a high-decibel megaphone on the aircraft. Flying at an altitude of approximately 500 meters, people on the ground can easily hear your voice. Additionally, we added sirens with different tones. This also exerts pressure on people on the ground and draws attention. The aircraft has autopilot and navigation systems. So far, we have completed over 1,000 hours of flight with the Gyrocopter.

The cost of acquiring this aircraft is nearly 1/200th of the cost of acquiring a helicopter. The hourly flight cost is also around 1/200th of that of a helicopter. Therefore, it's very cost-effective. Responding to the "how" question can be a bit unclear in people's minds because they may not know the upper limit. While the hourly flight cost of a helicopter averages between US\$3,500 and

US\$4,000, the Gyrocopter's cost is around US\$35. A helicopter can stay in the air for a maximum of 2,5 hours, whereas this aircraft can remain airborne for 4 to 6 hours, depending on the weather conditions. This is significant to us because endurance (flight duration) is one of the most important advantages of an aircraft. Additionally, we fly with a single pilot along with a Payload Operator, also known as a Camera Operator, or depending on the nature of the mission, these personnel can change. Helicopters must be flown with two certified pilots, whereas a Gyrocopter requires only one pilot. Thus, you can fly two different Gyrocopters with two pilots. In this regard, there are many advantages. It can easily ascend up to 12,000 feet. It has an average cruising speed of 80 knots, and its wind resistance limits are

quite high. This is the biggest advantage compared to UAVs. It can take off in crosswinds of up to 25 knots and headwinds of up to 40 knots. UH-1H Helicopters can't take off under these conditions, but the Gyrocopter can. Currently, all three of our Gyrocopters are flying actively. We plan to acquire an additional 5 Gyrocopters within this year. This will bring our total Gyrocopter count to 8. We will also consider optional additional purchases. It only takes 10 hours for airplane pilots and 15 hours for helicopter pilots to become certified Gyrocopter pilots. They already have a pilot background. To fly a Gyrocopter, you obtain an Ultralight Pilot License. The ability to transport the Gyrocopter by road to the desired location independently of weather conditions is also a significant aspect.

**Defence Turkey: Could you elaborate on your goals and expectations for the future of Turkish Gendarmerie Aviation? You have closely followed technological advancements in this process that began with the Gyrocopter and have invested considerable effort in acquiring new capabilities. With various types and models of manned and unmanned fixed-wing and rotary-wing aircraft currently in the inventory of Turkish Gendarmerie Aviation, is there a need for new types of aerial vehicles in the upcoming period? Do you plan to establish new fleets in different regions of the country alongside these new acquisitions?**

**Major General Ali DOĞAN:** The primary mission of Gendarmerie Aviation has historically been focused on counter-terrorism efforts and ensuring public safety

and order through flights, a mission that began in the 1990s. In recent years, our flight operations have significantly increased. Gendarmerie Aviation maintains an annual average of approximately 20,000 flight hours, which is quite substantial. The increased flight operations, particularly related to law enforcement, crime prevention, firefighting, and disaster relief efforts, constitute around 20-25% of this annual flight time. We anticipate that these flight operations will further increase in the coming years. Therefore, we aim to reduce our reaction times as Gendarmerie Aviation serves across every corner of Türkiye, and we aspire to enhance our institution with this vision. In this context, we have a fleet project in the Mediterranean region. Additionally, we are considering establishing a Gendarmerie Aviation Fleet in the Black Sea region. Following the establishment of these fleets, we are contemplating opening another fleet in or near İstanbul. Our aircraft inventory has diversified. Notably, after 2017, our fixed-wing aircraft fleet was established. Before 2017, we did not possess attack helicopters, but today we have ATAK Helicopters. The procurement of ATAK Helicopters will continue. Plans were devised for each year, leading to the need to establish a larger unit in Eastern and Southeastern Anatolia. As a result, we decided to establish a Gendarmerie Aviation Base in Elazığ. Our organizational structure is based on the Group system, where a Group corresponds to the level of a Regiment.



However, our planning for Elazığ surpasses the size of a Group. Our UAVs are already present in Elazığ. We are referring to a significant Gendarmerie Aviation Base Project in Elazığ, where our UAV Command is located, along with our aircraft, ATAK Helicopters, and Utility Helicopters. This project is progressing rapidly. Consequently, within the next four years, we will increase the number of our existing aircraft inventory by 50%. Our plans are aligned with this expansion. As a result, we will increase the number of our pilots and flight personnel by 100%. Our human resource project is complete, and our annual procurement purchases are ongoing. Pilot and Technician training efforts continue. The number of our pilots will reach 450, and the number of our technicians will reach 512. While we also have a fixed-wing procurement project, the bulk of this capacity increase will mainly be through rotary-wing platforms. If you wonder why we emphasize rotary-wing platforms, it's due

to Türkiye's mountainous geography. Even if you use fixed-wing aircraft, you still need to transport your personnel to the mission area using rotary-wing platforms.

**Defence Turkey: The Gendarmerie General Command was also joined in the Liaison and Utility Aircraft Procurement Project, conducted by the Defence Industry Agency (SSB) to meet the needs of the Land Forces Command and the General Directorate of Security for rapid transportation of units with their equipment and materials over long distances regardless of meteorological conditions. Can you provide information about the current status of the project, the planned number of aircraft to be procured, and the involvement of the Gendarmerie Aviation? While a requirement of 6 aircraft has been defined for the Land Forces Command and 3 aircraft for the General Directorate of Security, the number of Liaison and Utility Aircraft**

**to be procured for the Gendarmerie Aviation has not been publicly disclosed.**

**Major General Ali DOĞAN:**

One of the most crucial necessities during disaster situations, as exemplified by our recent experience with earthquakes, is the swift transportation of personnel to disaster-stricken areas. Beyond climate-related disasters such as floods and fires, Türkiye also encounters devastating earthquakes. Furthermore, a significant task of Gendarmerie Aviation is counter-terrorism. Thus, the timing, location, and atmospheric conditions for personnel transport remain uncertain. Particularly in scenarios with poor visibility and cold weather conditions, helicopter mobility can be hindered. The immediate deployment of Gendarmerie Search and Rescue (JAK) personnel and the Special Units of Gendarmerie Special Public Security Command (JÖAK) might be imperative. Consequently, after the studies carried out in 2019, we decided to join the project. We became part of the project with the



decision to acquire 2+1 aircraft. We consider the Utility Aircraft an essential asset and capability for the Ministry of Interior. This project, overseen by the Defense Industry Agency (SSB), is currently ongoing.

**Defence Turkey: Could you provide information about the role and usage concept of Unmanned Aerial Vehicles (UAVs) within the Gendarmerie Aviation?**

**Major General Ali DOĞAN:** Unmanned Aerial Vehicles (UAVs) play a pivotal role in reconnaissance and field surveillance. Armed UAVs, equipped with various munitions, are particularly crucial for neutralizing terrorists. I would like to emphasize this point specifically when considering the

development of the Turkish Defence Industry, especially the capabilities we have gained in the field of UAVs in past years; as a pilot engaged in counter-terrorism operations, I find the progress we have made incredibly gratifying. In the early 2000s, we fought terrorism using two or three leased UAVs. We encountered situations where the provider did not offer support due to technical malfunctions, sometimes lasting 15 days or a month, and we were unable to monitor the field. Today, I can assure you that the entirety of Türkiye's high-risk regions within its airspace is under continuous surveillance by UAVs 24/7. If we can express the number of terrorists in small numbers and if our country has achieved stability and

prosperity in counter-terrorism efforts, it owes a significant debt to the contribution of UAVs and Armed UAVs.

When we evaluate the current global situation, it's evident that numerous regions are experiencing conflicts, ranging from minor to major and even extending to regional wars. Holding air superiority is a defining factor on the battlefield. Unmanned Aerial Vehicles (UAVs) and Armed UAVs have demonstrated their successes in Türkiye and many other countries and regions, receiving applause, particularly from the victims of conflict worldwide. In Türkiye, we have been conducting flights with indigenous UAV platforms since 2017. I believe that Gendarmerie Aviation alone has

accounted for a third of the total UAV flights in Türkiye, as we have reached a notable figure of approximately 170,000 flight hours with UAVs. However, I am pleased to emphasize that UAVs and Armed UAVs are not solely used in counter-terrorism operations. Within our scope of responsibilities, Gendarmerie UAVs are actively engaged in various tasks across all regions of our country, including combating human trafficking, monitoring forest fires, tracking criminals, and conducting traffic control, ranging from Izmir to Hakkari, from Trabzon to Hatay. Our Gendarmerie UAV fleet is quite robust, and we continue our efforts to procure new UAVs. We maintain continuous communication with the Defense Industry Agency (SSB). We have UAV bases



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in different regions. Our westernmost base is in Aydın, and our project to establish UAV bases in various locations across the western region is ongoing.

Furthermore, aside from Tactical UAVs, we have approximately 3,500 drone systems of various sizes in our inventory. Our Gendarmerie Commands actively employ UAVs in crime prevention and law enforcement efforts. We closely monitor developments in UAV technology. I tend not to use the term "Sub-Cloud UAV" because UAVs operating on the Line-of-Sight (LoS) principle can descend to any altitude within their line of sight, encompassing low altitudes as well. Hence, I refer to them as low or very-low-altitude UAVs, or more precisely, as Vertical Take-Off and Landing (VTOL) UAVs. Although recent advancements may involve catapult-launched UAVs, the focus has been more on VTOL technology. Our

procurement projects align with this direction, and we meticulously monitor these advancements. We maintain close collaborations, primarily with domestic companies, as well as with numerous other firms.

**Defence Turkey: Gendarmerie Aviation personnel demonstrate their experience and skills in helicopter operations as the Gendarmerie Steel Wings Helicopter Display Team. Celebrating its 5th year, Steel Wings, Türkiye's first and only helicopter display team, established its place among flight display teams with their performance during the 50th anniversary of Gendarmerie Aviation. Could you briefly introduce the Steel Wings Helicopter Display Team to our readers?**

**Major General Ali DOĞAN:** The Steel Wings flight demonstration team commenced its activities in Türkiye for the first time

in 2018. Across the world, many countries host fixed-wing flight demonstration teams. However, helicopter display teams that have established themselves and become well-known are relatively scarce. Particularly in Türkiye, there were no established brands or helicopters performing scheduled displays. In 2018, during the 50th anniversary of Gendarmerie Aviation's establishment, the idea to form a helicopter display team, named "Çelik Kanatlar" (Steel Wings), emerged following a suggestion from one of our colleagues. This led us to contemplate whether we could accomplish this, and if so, with whom and how we could do it. Subsequently, in 2018, the Çelik Kanatlar Helicopter Flight Demonstration Team was established, utilizing our capabilities and expertise, with the objective of bringing aircraft closer to citizens' view from afar, as I mentioned earlier. Aiming to integrate Gendarmerie Aviation's extensive

experience with over 500,000 flight hours and capabilities with helicopters, we created this unique demonstration team. Its inaugural flight took place in 2018, which garnered considerable media attention. Subsequently, we started receiving requests for displays during various events across Türkiye, such as Sarıcamış, the Liberation of İzmir, and August 30 Victory Day, marking significant national days. With the approval of our esteemed Commander of the Gendarmerie General, today, the Çelik Kanatlar flight demonstration team participates in more than 11 different events annually throughout our country, including prominent venues like Teknofest. As a brand, our Çelik Kanatlar team engages with our citizens through captivating flight displays at different times and locations. We take pride in this accomplishment. In fact, during exhibitions, young children frequently ask about Çelik Kanatlar, wish to take photos and

The S-70 "Çelik Kanatlar" (Steel Wings) Helicopter Display Team is during a demonstration

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ask for autographed posters. Our happiness is further amplified by the fact that we are able to stand alongside our citizens in achieving these goals.

**Defence Turkey: Could you provide information about the position of the Gendarmerie Aviation Department among international Gendarmerie aviation organizations? Türkiye/Gendarmerie General Command joined the FIEP in 1998 (International Association of Gendarmeries and Police Forces with Military Status), which was founded in 1994 with the acronym representing the initial letters of its founding countries (France-Italia-España-Portugal). Could you evaluate the contributions of this membership to Gendarmerie Aviation?**

**Major General Ali DOĞAN:** Considering the diversity and quantity of aircraft within the fleet of Gendarmerie Aviation Department, along with the number of pilots and technicians for their operation and maintenance, it is evident that Gendarmerie Aviation constitutes a significantly sizable unit numerically. On a global scale, examining various countries shows that many lack a Gendarmerie Aviation unit. While they might not be named "Gendarmerie," law enforcement forces in different countries carry out similar duties and responsibilities under different titles. Often, these countries predominantly rely on aircraft from their police forces or those under the Ministry of Defence. However, the situation

in Türkiye is somewhat different. Due to the primary responsibility and role of counter-terrorism falling under the Ministry of Interior, Gendarmerie Aviation has evolved as an institution with its 55 years of history. As I previously mentioned, numerous aircraft were initially introduced into the inventory of the Gendarmerie General Command. Over time, owing to diverse operational requirements, the numbers and types of fixed and rotary-wing aircraft increased and diversified. Our most recent addition includes the Gyrocopters. From this perspective, when examining the diversity of aircraft and the personnel required to operate them, it is evident that the Gendarmerie Aviation

Department, including FIEP countries, is a larger institution compared to the Gendarmeries of many other nations. I can state this with complete clarity.

The relationships with the Gendarmerie law enforcement forces of FIEP member countries continue to thrive. Particularly during FIEP meetings, we have the opportunity to engage with aviation representatives from those nations. We have also visited FIEP member countries. Each country possesses distinct areas of expertise, mostly aligned with its economic strengths. For instance, European countries have mountainous, elevated, and snowy terrains intersecting their borders, fostering

stronger relationships between them. They have specialized in these areas. When we come together, they express their curiosity about how we conduct flights in counter-terrorism operations and manage these missions, leading to numerous inquiries. Notably, we have been actively engaged in forest fires in recent years. They mention that they follow our operations through their national and international media outlets and ask about our strategies for fighting forest fires. From the requests we've received, it's apparent that four countries are seeking Pilot and Technician Training from us, specifically related to helicopter use in wildfires. These inquiries primarily come from Turkish Republics rather than European countries. European nations, however, primarily follow us through the media. Currently, European countries are somewhat reserved, but we are also gradually establishing contact with them. There was a significant fire on the island of Rhodes. The deployment of two aircraft and one helicopter to Rhodes held great significance. I can confidently state this. The visits of aviation units foster ongoing collaboration with FIEP countries, encompassing both technology and training. We explore ways to collaborate and exchange experiences, further strengthening these ties.

**Defence Turkey: Can you provide an assessment of the performance and**



*Saffet UYANIK & Major General Ali DOĞAN & Ayşe AKALIN*

**contributions of the Gendarmerie Aviation Department following the Kahramanmaraş earthquakes that affected 11 provinces?**

**Major General Ali DOĞAN:** I am stating this unequivocally: if you do not adapt your capabilities and duties to the changing times, you will never be deemed necessary and will be forgotten. Especially considering that we have a structure that heavily occupies the state's budget. Both owning and operating aircraft are exceedingly costly endeavors. The fight against terrorism in the country has reached a certain level; instead of stepping aside and saying that our duty is over, we embarked on a path to determine how we can utilize our aerial assets more effectively. We asked ourselves how we could contribute to climate-related disasters, post-earthquake rescue, and

evacuation operations. On February 6, 2023, during the earthquake that struck Kahramanmaraş and affected nearby provinces, the Gendarmerie Aviation Department dispatched a total of 42 aircraft and 353 personnel, including 36 Utility Helicopters, 2 Manned Airborne ISR Aircraft, and 4 UAVs. Between February 6 and May 5, 2023, a total of 1,750 Search and Rescue (SAR) personnel aided 950 earthquake-stricken citizens, among whom 500 were injured. They airlifted 892 tons of food and essential supplies, 1,500 kg of medication, 3,500 tents, 10,000 blankets, heaters, generators, and SAR equipment. The operations encompassed 2,300 flight hours (4,700 sorties), with 250 hours (750 sorties) conducted at night.

**Defence Turkey: Would you like to add anything in the way of a message for our readers?**

**Major General Ali DOĞAN:** The Gendarmerie General Command Aviation Department actively engages in recovery efforts in the wake of natural disasters such as fires, earthquakes, and floods within our country. Our responsibilities extend to aerial traffic control, as well as the identification of illicit crop monitoring. We are continuously committed to these pursuits. We aspire to have all our young individuals who hold an affection for both Gendarmerie and aviation by our side, serving as companions on this journey. As the Gendarmerie General Command Aviation Department, we stand unwaveringly by our nation and are ever ready to provide assistance!

**Defence Turkey: Sir, thank you for sparing your valuable time for our readers** ■



## “GÖKBEY is the Most Important of the Projects We Manage”

We conducted a comprehensive interview with the Chief of the Gendarmerie Aviation Division, Senior Colonel and Gendarmerie Pilot Arif HAKERLER, focusing on the primary responsibilities, their critical role in wildfire suppression and ongoing modernization projects of the Gendarmerie Aviation Department, which set out the road 55 years ago by saying "Leave No One Behind" and today is taking just pride in that they have indeed "Left No One Behind." Maintenance Section Commander Gendarmerie Pilot Colonel Türker TÜRKÜCÜ was also present at the interview we held on July 17, 2023, at the Gendarmerie Aviation Department premises at the Martyr General Eşref BİTLİS Barracks in Güvercinlik, Ankara.

**Defence Turkey: Can we begin our interview by learning more about you? Could you briefly introduce yourself to our readers?**

**Senior Colonel Arif HAKERLER:** I am Arif HAKERLER. I serve as Chief of the Gendarmerie Aviation Division of the Gendarmerie Aviation Department. As it is widely known, aviation is a subject characterized by constant change, development, and advanced technology. When compared to civil aviation, the law enforcement duties we perform require specialized equipment and gear that enable us to operate under even

more challenging conditions. Alongside counter-terrorism operations, public security, and traffic duties, we are determined and committed to assisting our nation in all natural disasters and search and rescue missions when the need arises.

**Defence Turkey: Could you please tell us about the primary responsibilities of the Gendarmerie Aviation Division?**

**Senior Colonel Arif HAKERLER:** As the Aviation Division, our primary mission can be briefly defined as providing the Gendarmerie Aviation Department with the procurement of new aircraft,



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the modernization of our existing aircraft, and the acquisition of specialized equipment necessary for mission execution. To achieve this, we closely monitor global aviation advancements and strive to provide maximum support to our domestic defense industry for the development of indigenous aviation capabilities.

**Defence Turkey: As the Gendarmerie Aviation Department, you also come to the aid of our nation in various natural disasters and search and rescue missions when needed. In this context, what role do you play in suppressing the recent surge in wildfires?**

**Senior Colonel Arif HAKERLER:**

Within the Gendarmerie Aviation Department, our role in firefighting is to provide aerial support to the General Directorate of Forestry. In this context, when support requests arise, we intervene in wildfires using our existing utility helicopters. Our belief that burning forests are indispensable values of our nation gives us strength in these challenging missions. With this mindset, we have made the necessary preparations in terms of training and equipment for wildfire suppression, and we have strived to address our shortcomings to the fullest extent. In coordination with the General Directorate of Forestry, we provide significant assistance in the fight against wildfires, particularly during the summer season.

**Defence Turkey: In 2021, during the raging wildfire incident in Marmaris, did you actively participate in coordinating aerial interventions as the Chief of the Gendarmerie Aviation Division? Could you provide us with more**

**information about your involvement?**

**Senior Colonel Arif HAKERLER:**

In 2021, I was involved in managing the extensive wildfire in Marmaris from Ankara. The wildfire, particularly moving toward the thermal power plant in Marmaris, posed a significant threat to a facility of strategic importance for the country. The number of helicopters participating in firefighting operations increased to around 17. This means that, in addition to our essential ongoing counter-terrorism duties, we deployed the maximum number of utility helicopters from four main fleets in Ankara, Diyarbakır, Van, and Aydın to the fire-affected area.

**Defence Turkey: Could we receive information about the ongoing major aviation projects currently undertaken by the Gendarmerie Aviation Division?**

**Senior Colonel Arif HAKERLER:**

As we celebrate its 55th anniversary and take great pride and honor in being

a part of it, we undertake highly significant projects to ensure that the Gendarmerie Aviation will continue to serve alongside the Turkish nation in the future with the commitment of "Leave No One Behind," placing its life on the line, and upholding its duty.

Foremost among these projects are:

- **T-70 Medium Utility Helicopter Project:** This project involves the production of the most advanced version of Sikorsky Black Hawk helicopters in our country. As part of this effort, the first domestically produced T-70 Helicopter was delivered to the Gendarmerie General Command on December 27, 2022.
- **GÖKBEY Light Utility Helicopter Procurement Project:** The GÖKBEY Helicopters, the first domestically produced helicopters of our country, will be introduced into the inventory of the Gendarmerie General Command. In the very



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Gendarmerie T-70 Helicopter with Bambi Bucket en route to the mission area before deployment



near future, we will see these helicopters in our skies performing their duties.

- **ATAK Attack Helicopter Procurement Project:** The ATAK Helicopters, which play a crucial role in counter-terrorism operations, have been successfully serving in the inventory of the Gendarmerie General Command since 2018.

**Defence Turkey: Could you update us on the current status of the T625 GÖKBEY and T-70 Utility Helicopter Procurement Projects?**

**Senior Colonel Arif HAKERLER:** As I mentioned earlier, the role of the Aviation Division is to manage the future planning, ongoing procurement, as well as R&D activities of the Gendarmerie Aviation Directorate. Today, the rapidly progressing T625 GÖKBEY Project, which is on the path of becoming entirely domestic and national, has reached its current status with significant contributions from the Gendarmerie Aviation Department as its initial customer. The certification and qualification efforts for the

T625 are currently being carried out by TUSAŞ. As part of the 55th-anniversary celebrations of the Gendarmerie Aviation, we filmed the introduction video featuring the first GÖKBEY helicopter produced for the Gendarmerie General Command, and this was prepared by artist Oğuz SIRMALI. On August 29, this video will be available on both Mr. Oğuz's and the Gendarmerie General Command's social media channels. The T-70 Project is currently ongoing. We have acquired our first three helicopters thus far. We were fortunate enough

to include the first T-70 Helicopter domestically produced by TUSAŞ into the inventory of the Gendarmerie General Command in our country.

**Defence Turkey: Are Gendarmerie Aviation pilots currently flying the T625 GÖKBEY? What efforts are being made in terms of Test Pilot and Instructor Pilot Training for the T625 GÖKBEY?**

**Senior Colonel Arif HAKERLER:** No, because the qualification process for the helicopter is still ongoing. Training will begin once this process is completed. As you may be aware, training packages are included in the procurement contracts. The manufacturer provides these training packages as a comprehensive service to the end users.

**Defence Turkey: In other words, Turkish Aerospace (TUSAŞ) will provide Integrated Logistics Support along with training services and spare parts support for a certain period of time?**

**Senior Colonel Arif**



The T-70 Utility Helicopter with tail number J-5002, produced by TUSAŞ, was delivered to the Gendarmerie Aviation Department this year

**HAKERLER:** Yes. Alongside the Integrated Logistics Support package, TUSAŞ will also provide training services, including test pilot and instructor pilot training. I wholeheartedly believe that the T625 GÖKBAY will be the helicopter we will see flying the most in our country's skies in the future.

**Defence Turkey:** It's likely that GÖKBAY will replace the AB-205 (UH-1H) helicopters. Do you have a planned activity to phase out the AB-205s from the inventory upon the introduction of GÖKBAY?

**Senior Colonel Arif HAKERLER:** Currently, we do not have a planned activity in that regard. While aircraft also have a designated lifespan, similar to high-cost assets, assessments of the airframe condition and engine health, as well as the sustainable availability of spare parts, will determine whether they will remain in the inventory as long as deemed suitable by the management.

**Defence Turkey:** You emphasized the significance of the T129 ATAK Attack and Tactical Reconnaissance Helicopters. Are external fuel tanks used on ATAK helicopters?

**Senior Colonel Arif HAKERLER:** No, we do not use them. The current fuel capacity in our helicopters is sufficient to meet our operational requirements.

**Defence Turkey:** During missions, I assume the T129 ATAK Helicopter



T-129 ATAK Helicopter with Tail Number J-0445

is mostly equipped for 20 mm cannon and unguided rocket engagements. It seems that more expensive guided missiles like UMTAS and CİRİT are not preferred.

**Colonel Türker TÜRKÜCÜ:** The type of munition to be used is determined based on the operational requirements. Since all munitions are domestically produced, there are no restrictions

regarding the use of guided munitions.

**Defence Turkey:** Will all T-70 Helicopters be equipped with a rescue hoist?

**Colonel Türker TÜRKÜCÜ:** According to our Procurement Plan, there will be an adequate number of rescue hoists on the T-70 helicopters to meet our needs. Additionally, our newly added T-70 helicopters have extra fuel tanks,

which is a crucial capability that extends the duration of airborne rescue operations. We witnessed the benefits of this capability, especially during earthquake-related missions in Kahramanmaraş. Furthermore, the engines of the T-70 helicopters are more powerful.

**Defence Turkey:** Does the S-70i Helicopter's autopilot feature help the rescue operation?



Gendarmerie S-70i A-17 Helicopter



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One of the S-70A-17 Black Hawk Helicopters modernized under the Gendarmerie Helicopter Modernization Project is seen providing aerial support during an operation in Tatvan, Bitlis.

**Senior Colonel Arif HAKERLER:**

Rescue missions that require hoists can be performed without an autopilot. It's not mandatory, but having an autopilot is certainly a significant advantage. As you have seen on screens lately, the Gendarmerie General Command has been actively engaged in tasks such as flood response, earthquake relief, wildfire suppression, and medical evacuations. Unfortunately,

due to changing climate conditions, it is foreseen that these tasks will continue to increase in frequency. Therefore, we aim to enhance our existing capabilities, training, and equipment for these types of missions. In this context, the GÖKBEY Helicopters will be fully equipped with autopilots and rescue hoists. I believe that the helicopters we acquire and add to our inventory should possess these capabilities.

**Defence Turkey: You mentioned that all GÖKBEY Helicopters will be equipped with rescue hoists. Previously, I heard that the lifting capacity of GÖKBEY was limited. Are you working with the manufacturing company to improve this capacity?**

**Senior Colonel Arif HAKERLER:** Commander of the Gendarmerie General has a directive "We are the R&D of the Turkish Defense Industry." I was assigned



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With the rapid development of technological capabilities and integration of advanced systems, ATAK helicopters, along with Armed UAVs, have become a powerful force multiplier in fighting terrorism

to the Aviation Division in 2020. Having served for a long time in field units and then coming to the Central Headquarters, I saw that this directive was meticulously followed by the Aviation Department. Alongside the companies under the Turkish Armed Forces Foundation, I am also committed to fulfilling my duties in this regard to the best of my abilities. As for the GÖKBEY project, of course, we are continuing our collaboration with TUSAŞ (Turkish Aerospace).

**Defence Turkey: So, feedback, user input, and guidance are crucial.**

**Senior Colonel Arif HAKERLER:** Of course, absolutely.

**Colonel Türker TÜRKÜCÜ:** We can certainly say that GÖKBEY's transmission is quite robust at the moment. Its engines are also domestically produced. The imported engine is currently capable of 1,378 horsepower, but we expect the domestic TS1400 engine to surpass 1,600 horsepower. Since GÖKBEY's main transmission is designed to be very robust, its lifting capacity will also increase with the increased engine power. Since TUSAŞ has all design and testing information, the maximum takeoff weight of the helicopter could be improved through additional tests or modifications in the future.

**Defence Turkey: There's also another aspect to consider: GÖKBEY is still in the prototype phase. When it enters serial production, there might be efforts to lighten the fuselage.**

**Colonel Türker TÜRKÜCÜ:** Yes, that's already being

done. The first three will be heavier compared to the rest, and the subsequent ones will be lighter.

**Senior Colonel Arif HAKERLER:** There will be a weight difference of about 250 kg between them. Therefore, the first three will be designated T625J, and the rest will be T625. The lifting capacity of the subsequent helicopters will be slightly higher. We also provide significant support for the T-70, especially in the recent certification processes.

**Defence Turkey: As part of the Gyrocopter Procurement Project, a contract was signed between the Defense Industry Agency (SSB) and Sky Olympos Company on August 9, 2022. Three Cavalon Sentinel Gyrocopters from the German company AutoGyro were delivered in a ceremony on January 31, 2023. Could you tell us more about the Gyrocopter Procurement Project? Is there any consideration for additional acquisitions?**



**Senior Colonel Arif HAKERLER:** Primarily, in line with the orders and directives of our esteemed Minister of Interior and the Commander of the Gendarmerie General, traffic surveillance flights were initiated four years ago. These operations, which accumulate up to 500 flight hours annually, are conducted using helicopters such as the S-70 and Mi-17. Given the limited number of aircraft and the priority use of these helicopters in other missions and flight costs, the Aviation Department started to explore alternative solutions.

As a result of the efforts of our R&D Department, we became acquainted with Gyrocopters, which are more commonly used in recreational flying. Using rotating blades for lift and a rear-mounted piston-powered gasoline engine for propulsion, we decided that Gyrocopters could fulfill this role. We quickly integrated this system into our inventory, not only incorporating the electro-optical capabilities that a few of our helicopters possess but also enabling the transmission of these images to our personnel on the ground.

Subsequently, by coordinating with our units, we explored other potential areas of utilization. We expanded the inventory of Gyrocopters by adding tasks such as public safety, search and rescue, reconnaissance, surveillance, border security, wildfire monitoring, and illicit crop monitoring.

With many more projects, we remain committed to enhancing our operational effectiveness with the approach I mentioned earlier.

**Defence Turkey: Thank you for sparing your time for our readers ■**



# "When You Need Us, Just Look at the Sky..."



The Gendarmerie Aviation Department provides timely, effective, and uninterrupted air support to the Gendarmerie General Command in the execution of tasks assigned to it by legal regulations. The Gendarmerie Aviation Department is one of the most significant force multipliers in providing humanitarian aid and search and rescue (SAR) operations carried out by the Gendarmerie General Command during natural disasters. Search and rescue operations and medical evacuations during earthquakes, forest fires, and floods are conducted as part of humanitarian aid activities. Considering our country's location in an earthquake-prone area and the increasing frequency of hydrometeorological disasters due to global warming, it is assessed that we will continue to encounter such incidents frequently and with greater intensity in the future.

On July 17, 2023, we conducted an extensive interview with Gendarmerie Pilot Colonel Kenan KURT, the Ankara Air Group Commander of the Gendarmerie Aviation Department, regarding the duties of the Gendarmerie Aviation Department in the context of humanitarian aid activities during natural disasters such as earthquakes, fires, and floods, as well as search and rescue and medical evacuation operations.



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**Defence Turkey: The Gendarmerie General Command's first aviation unit was established in Diyarbakır in 1968 under the name "Light Helicopter Company," with the purposes of air transportation/dispatching units, security and public order, reconnaissance and surveillance, as well as the evacuation of patients and injured individuals. Could you provide us with information about the recent humanitarian aid and search and rescue**

**missions conducted by the Aviation Department, as well as the total flight hours accomplished?**

**Colonel Kenan KURT:** Since its establishment in 1968, the Gendarmerie Aviation has been actively engaged in providing disaster relief and carrying out search and rescue missions during numerous natural disasters. Recently, we can summarize some of the tasks we have undertaken within this scope as follows:

- During the earthquake that occurred on January 24, 2020, in Elazığ, a total of 91 hours of flight were recorded using 7 utility helicopters, consisting of 29 hours in daylight, 19 hours at night, and an additional 43 hours from a Manned Airborne ISR Aircraft.
- Following the earthquake in İzmir on October 30, 2020, a combined effort of 33 hours and 34 minutes of flight time was recorded. This involved 5 hours and 14 minutes of flight with 1

utility helicopter (2 hours 48 minutes during the day, and 2 hours 26 minutes at night) and 28 hours and 20 minutes with Manned Airborne ISR Aircraft in total (17 hours and 55 minutes in daylight and 5 hours and 25 minutes at night).

- During the flooding disaster in Sinop and Kastamonu on August 11, 2021, the Gendarmerie Aviation provided aerial support by deploying 7 utility helicopters, 2 Manned Airborne ISR Aircraft, and 4

UAVs. A total of 476 flight hours were executed, leading to the evacuation of 172 citizens. Furthermore, essential supplies such as 71,600 kg of food, 670 liters of fuel, 66 generators, miscellaneous materials, and medicines were airlifted to the necessary locations. Helicopters were also used to transport electricity poles and large generators to settlements that were cut off from road access due to the flooding.

- Between June 28, 2022, and July 7, 2022, during the flood disaster in Düzce, Kastamonu, and Bartın provinces, 2 utility helicopters and 1 Manned Airborne ISR Aircraft provided aerial support, resulting in 35 flight hours and the evacuation of 37 citizens.

- From July 31 to August 13, 2021, as part of efforts to extinguish forest fires in Antalya and Muğla provinces, a total of 2,750 sorties were carried out with 20 aerial assets, totaling 750 flight hours and dropping 5,500 tons of water.

- In 2022, during forest fire extinguishing efforts in Muğla, Kütahya, and Mersin provinces, a total of 1,150 sorties were conducted with 34 aerial assets, amounting to 435 flight hours and dropping 2,300 tons of water.

- From July 21 to 25, 2022, the extent of the forest fire in the Marmaris district of Muğla province was determined from the air using our UAVs through the Wide Area Mapping System (GAHS).

- On February 6, 2023,



*Gendarmerie Mi-17 Helicopters carried plenty of medical supplies to the earthquake zone after the devastating Kahramanmaraş earthquakes on 6th February*

following the earthquake in Kahramanmaraş and affecting neighboring provinces, despite unfavorable meteorological conditions, flight crews from all Gendarmerie Aviation units were prepared for deployment to the earthquake zone from 05:35 onwards. However, due to unsuitable flying conditions, the teams were unable to reach the area.

- On the second day of the earthquake (February 7, 2023), despite the continued unsuitability of meteorological conditions, flight operations commenced in the earthquake zone under the command of Major General Ali DOĞAN, the Chief of Gendarmerie Aviation, with all risks taken by our flight teams to stand by the side of our nation during this major disaster.

- Following the earthquake in Kahramanmaraş, a total of 42 aerial assets and 353 personnel were deployed from our units in Ankara, Diyarbakır, Aydın, and Van. These included 36 utility helicopters, 2 Manned Airborne ISR Aircraft, and 4 UAVs. In the earthquake zone, 1,750 Search and Rescue (SAR) personnel provided assistance to a total of 950 citizens affected by the earthquake, among which 500 were injured. Furthermore, 892 tons of provisions/aid materials, 1,500 kg of medicines, 3,500 tents, 10,000 blankets, heaters, generators, and SAR equipment were transported. Throughout this process, a total of 4,700 sorties were conducted, comprising 250 hours of night flights (750 sorties), resulting in a cumulative flight time of 2,300 hours. On February 7, 2023, the day the deployment to the earthquake zone took place, Gendarmerie Aviation dispatched 2 helicopters to handle a fire incident at Hatay İskenderun Port, involving 17 sorties and dropping 34 tons of water.



• Furthermore, with the introduction of night flight capability to the Mi-17 Helicopters, effectively responded to relief efforts in Kahramanmaraş such as the evacuation of patients, injured individuals and personnel with the first-time use of Night Vision Goggles (NVG) during night-time conditions.

**Defence Turkey: In the earthquake-stricken region, a significant number of aircraft from different branches, such as the Air Force, Land Forces, and Gendarmerie General Command, operated within a relatively confined area. Who was responsible for coordinating these units? Did each institution/branch handle the coordination of its own helicopters?**

**Colonel Kenan KURT:** The Ministry of National Defense has established its own Coordination Center. The Gendarmerie Aviation Department has assigned personnel to the AFAD (Disaster and Emergency Management Authority) Coordination Center for the coordination of flight operations.



Furthermore, representatives have been appointed from all institutions to the AFAD Coordination Center. Aircraft have been assigned to the provinces of Adıyaman, Kahramanmaraş, Gaziantep, Hatay, and Adana, and Major

General Ali DOĞAN, the Chief of Gendarmerie Aviation, personally supervised the flight operations of our assigned aircraft from the province of Kahramanmaraş, on-site in the region. Adana Şakir Paşa Airport was also

utilized as a maintenance base for helicopter maintenance support.

The Manned Airborne ISR Aircraft and UAVs (Unmanned Aerial Vehicles) of the Gendarmerie Aviation Department have also fulfilled significant roles in the earthquake-stricken area. They supported the ground units and decision-makers by conducting activities such as aerial reconnaissance of the earthquake-stricken area, identification of debris, aerial monitoring of operations, control of land traffic, and aerial surveillance in law enforcement incidents.

**Defence Turkey: Could you please provide us with information regarding the search and rescue as well as medical evacuation missions carried out by the Gendarmerie Aviation Department from 2019 until today?**

**Colonel Kenan KURT:** From 2019 up to the present day, a total of 3,312 flight hours have been accomplished in search and rescue as well as medical evacuation missions. These missions



King Air B-350 Manned Airborne ISR Aircraft (JIKU)

include 72 Search and Rescue operations and 155 Medical Evacuation missions, resulting in the aerial evacuation of 1,736 citizens. The conducted missions encompass various tasks such as organ transportation, evacuation of injured or sick individuals, rescue of individuals stranded or injured on mountains, and search and rescue of individuals lost due to adverse weather conditions or medical conditions.

**Defence Turkey: What additional capabilities is the Gendarmerie Aviation Department integrating into its helicopters to improve the execution of search and rescue, medical evacuation, humanitarian aid, and forest fire suppression missions more effectively?**

**Colonel Kenan KURT:** Colonel Kenan KURT: The Gendarmerie General Command's aerial assets undertake a significant role not only in tasks like counterterrorism but also in activities such as search and rescue, medical evacuation, humanitarian aid, and forest fire suppression. Portable stretchers for utility helicopters have been developed to improve the effectiveness of medical evacuation missions nationwide. Especially in the earthquakes in Kahramanmaraş, these helicopters have been effectively utilized for the inter-provincial transfer of patients and the injured.

With the introduction of the Airborne Tactical Extraction Platform (AirTEP), which has entered our inventory for the first time, rescue operations have become more efficient,



*Bambi Bucket*

overcoming the limitations of the current helicopters, which are only equipped with rescue hoists. In conjunction with our current hoist-equipped helicopters, efforts are underway to domestically manufacture a low-cost Rescue Hoist System that can be assembled and installed rapidly. Moreover, an ample quantity of Bambi Buckets has been incorporated into our inventory for firefighting purposes.

To ensure a more effective response in natural disasters and search and rescue activities, joint training sessions, such as "Rescue Basket, Fast-Rope, Hoist, and OverWater Low-Level Flight," are regularly conducted in collaboration with the Gendarmerie Special Public Security Command (JÖAK).

With the mottoes "Leave No Man Behind..." and "When You Need Us, Just Look at the Sky..." the Gendarmerie Aviation, which has been

carrying out its duties with great dedication for 55 years, will continue to serve our esteemed nation, always relying on its current capabilities and the projects it has developed and implemented.

**Defence Turkey: Can you inform us about the process of task assignment to the Gendarmerie Aviation Department carried out during natural disasters?**

**Colonel Kenan KURT:** The Ministry of Interior's Disaster and Emergency Management Authority (AFAD) conveys requests for aerial assets to the Gendarmerie General Command. The Gendarmerie General Command evaluates these requests and assigns tasks to the Aviation Department accordingly. Based on the needs and the current situation, aircraft and flight crews are swiftly determined, and the required missions are carried out.

**Defence Turkey: Commander, thank you for sparing your valuable time for our readers.**



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*G.Plt.Col. Kenan KURT & İbrahim SÜNNETÇİ*





## “Our Average Annual Flight Operations with Tactical and Operative Class UAVs Exceed 35,000 Hours!”

On the modern battlefield, intelligence is valuable to the extent that it can be obtained in a timely manner and contribute to the commander's planning and direction of battle. Unmanned Aerial Vehicles (UAVs) stand as one of the most valuable assets for gathering information, bringing accurate intelligence, and shaping the commander's decisions. Fixed and rotary wing UAVs are also of vital importance in terms of obtaining all kinds of information that the units and decision-making mechanisms need in their area of responsibility in the operational environment, in a quick and accurate manner.

Armed UAVs, which enable the detected targets to be neutralized with 'pinpoint' accuracy, suppress the tactical capacity utilization of terrorist elements. By reducing their ability to conduct attacks and effectively neutralizing terrorists in populated areas without causing civilian casualties, they play a vital role in enhancing the effectiveness and deterrence of the Gendarmerie General Command in Counter-Terrorism Operations (CTO). They also significantly elevate the technical and tactical capabilities of Gendarmerie units.

Established under the Aviation Department on May 3, 2021, the Gendarmerie UAV Division successfully utilized different models and types of domestically produced UAVs and Armed UAVs in critical tasks such as counter-terrorism operations, public safety, law enforcement, and aerial traffic monitoring. We present the exclusive interview conducted with Gendarmerie Pilot, Colonel H. Hüseyin ÖZKAN, the Commander of the Gendarmerie UAV Division, on July 17, 2023. This interview provides firsthand information on the history, responsibilities, affiliated units, the role and significance of UAVs



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**and Armed UAVs within Gendarmerie Aviation, and how the training needs of Pilots, Technicians, and Payload Operators are met within the Gendarmerie UAV Division.**

**Defence Turkey: Could you briefly discuss the development of the Gendarmerie UAV Division in Türkiye? What can you tell us about the development process and history from its establishment to today?**

**Colonel Hüseyin ÖZKAN:** The foundations of the Gendarmerie General Command's UAV Systems were laid in 2009 within the Gendarmerie Intelligence

Department. In response to the need for professional UAV management, the UAV and Mobile Support Branch Office was established in 2009. Initially, Fixed-Wing Mini UAV Systems were procured. Subsequently, to fulfill the aerial close reconnaissance needs under various day/night conditions, Mini/Micro/Nano UAVs and Simple Drones were procured and added to the inventory over the years.

Closely following advancing technology, the Gendarmerie General Command acquired domestically produced UAVs primarily for counter-terrorism operations and

meeting reconnaissance requirements. These UAVs were successively employed to establish the Tactical UAV Units in Elazığ, Van, Gaziantep, Cizre, and Aydın, with the aim of fulfilling aerial reconnaissance needs.

Since the establishment of the Gendarmerie UAV Division in 2021, we have continued our activities under the Gendarmerie Aviation Department.

**Defence Turkey: What are the main duties of the Gendarmerie UAV Division?**

**Colonel Hüseyin ÖZKAN:** The Gendarmerie UAV Division, equipped with its Tactical and Operative Class UAV Systems, primarily fulfills reconnaissance requirements in counter-terrorism operations, as well as in public safety and security missions. Additionally, it successfully carries out a range of tasks within its jurisdiction, including response to natural disasters and forest fires, combating human trafficking, search and rescue operations, protection of state officials, monitoring environmental pollution, ensuring prison security, traffic enforcement, and road control, and overseeing critical roads, facilities, and petroleum pipelines.

In this context:

- Procuring aerial reconnaissance vehicles (Tactical/Operative/Mini/Micro/Nano UAVs) and coordinating related activities.
- Planning and providing courses related to UAV Systems and delivering training.

- Conducting or arranging maintenance and repair activities to ensure readiness for immediate deployment.
- Following technological advancements, shaping the UAV structure for the Gendarmerie General Command and ensuring the effective utilization of UAVs according to their specific needs.

These are among the primary responsibilities of the Gendarmerie UAV Command.

**Defence Turkey: The personnel who contribute to the successful operations of the Gendarmerie UAV Division play a significant role. Could you provide us with insight into the selection process for personnel in UAV units?**

**Colonel Hüseyin ÖZKAN:** Our personnel in UAV units are selected from among Gendarmerie personnel who have successfully served in various provinces of our country, participated in critical operations, and played crucial roles in the fight against crime and criminals.

In addition to receiving courses and training related to the equipment they use, these selected personnel actively participate in domestic and international fairs and events to closely monitor technological advancements. The annual flight operations exceed 35,000 hours with Tactical and Operative Class UAVs, and the significant achievements are the fruits of these meticulous and diligent efforts.

On this occasion, I would like to extend our gratitude to the dedicated and

hardworking personnel of the Gendarmerie General Command, spread across the entire country from Edirne to Kars, Sinop to Hatay, including our commanders. They are a significant contributor to the success and teamwork achieved through their selfless and tireless efforts, irrespective of time constraints.

**Defence Turkey: The Gendarmerie Aviation Department has been successfully using Tactical and Operative Class UAVs such as Bayraktar TB2 and ANKA for Counter-Terrorism Operations (CTO) for many years. How does the Gendarmerie Aviation Department address the training needs of Pilots, Technicians, and Payload Operators using these aircraft?**

**Colonel Hüseyin ÖZKAN:**

Since the establishment of the Gendarmerie UAV Division, training covering pilots, payload operators, and maintenance personnel, including engine, mechanical, and avionic technicians, was outsourced from the manufacturers. The number of pilots, technicians, and payload operators to be trained was specified under the signed contracts. UAV manufacturers would then proceed to train and certify these personnel. We have carried out our flights with those personnel so far. Starting in 2017, the operation of UAVs continued through these training programs and with some experience. As of now, we have accumulated approximately 170,000 flight hours with UAVs. Consequently, a substantial

wealth of knowledge and experience has been amassed. Leveraging this knowledge and experience, we have initiated efforts to incorporate it into our own training programs, aiming to eventually provide our own training sessions.

Last year, within the structure of the Gendarmerie Aviation School Command, we established the UAV Training Squadron Command. This Training Squadron Command was divided into specific units. Qualified personnel holding both Pilot and Technician Instructor certificates are stationed there. Although these colleagues obtained their instructor certificates from relevant and authorized companies, we retrained and authorized them here based on our own aviation standards. This is because we intend to utilize them in training all our pilots and technicians. Therefore, when we talk about training, it's not just about taking off the UAV for a mission and bringing it back after the flight. It also involves serious coordination within the airspace where all aerial vehicles operate. As such, pilots need to be familiar with air traffic and airspace management. We incorporated these aspects as well. We redefined all the necessary courses within our School Command, and with regard to the required number of pilots, technicians, and payload operators, we devised a plan for how many should be enrolled in these courses each year. Accordingly, we've designed our course programs.

All our course programs are based on the training



provided by manufacturers, with additional experiential factors incorporated into them. They are aligned with the standards of our School Command. By including all these elements, we devised the programs. As of June 19, this year, we initiated our first courses for Pilots, Payload Operators, and UAV Technicians. These courses are currently ongoing. The Pilot course is divided into two stages: TB-2 Piloting and ANKA Piloting. We are closely monitoring the progress of our lessons. We have enlisted personnel from various units and organized courses for them. Hopefully, we will be graduating our first batch of students in December. In the subsequent phases, we will continue to train UAV Pilots and Technicians within our Aviation School Command.

The course programs we've developed for our Pilots and Technicians encompass a variety of training periods, including academic processes, flight training, and simulator training. We have simulators here where we provide flight training to UAV Pilot candidates. Subsequently, along with our instructors, we send them to UAV units in the field for real flight training. We also have our instructors in those units. We conduct practical flight and maintenance training there.

After our UAV Pilot candidates pass their stage-by-stage evaluations and examinations, we proceed to their On-the-Job Training. In other words, we don't simply graduate them from the course and tell them they can fly UAVs.



Gendarmerie  
BAYRAKTAR TB2 UAV  
with tail number J-10  
over Lake Van

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We take them through On-the-Job Training. Under the supervision of senior pilots, these candidates conduct their flights. Once they reach a certain level, we assign them as Second Pilots. They continue flying alongside the First Pilot until they attain a certain level of experience. This is how our training plan unfolds. We not only train the flight crew but also the maintenance and test teams, as well as our instructor personnel, with these courses.

**Defence Turkey: You mentioned earlier that within the Gendarmerie UAV Division, the Tactical UAV Units were established in Elazığ, Van, Gaziantep, Cizre, and Aydın. Do you have any other subordinate units? Can you inform us about the ongoing**

**restructuring efforts within the Gendarmerie UAV Division, including the Group and Fleet Commands?**

**Colonel Hüseyin ÖZKAN:** We also have an UAV Group Command in Ankara. We have a centralized command system here. The beauty of UAVs is that after you launch the aircraft, you can control and operate it from anywhere through a remote connection. Therefore, in the context of the Tactical UAV Units, if any technical limitations arise during flight operations (because when you have 4 UAVs airborne simultaneously, you encounter certain technical issues), we advise the personnel to launch the aircraft and hand over control to us in Ankara, and we then conduct the

mission from here. We have a dedicated unit here for running flights as well.

To further transform the structure of these UAV Units into aviation units, we introduced the UAV Group and Fleet Commands this year within the UAV Division. This structure will also be implemented in our other UAV units to manage and coordinate all aerial vehicles and the planning of flight teams. We will establish Group and Fleet Commands for units engaged in flying operations. Additionally, we will set up Central Maintenance and Line Maintenance Units to effectively manage maintenance activities in some units. For example, in Elazığ, we will have both a UAV Group Command and a Maintenance Squadron Command. In the upcoming phase, not only will we be able to perform flight tasks, but we will also conduct maintenance up to a certain level. According to our current plan, next year, all our units will be fully transformed into aviation units in terms of format, personnel, and organization.

**Defence Turkey: Could you elaborate on the role and significance of UAVs within Gendarmerie Aviation? As you mentioned earlier, UAVs are now used effectively not only in counter-terrorism operations but also in a wide range of tasks such as disaster and forest fire response, combating human trafficking, search and rescue operations, traffic control, and critical infrastructure and oil pipeline monitoring.**

**Colonel Hüseyin ÖZKAN:** Yes, exactly as you mentioned. In the past,

we had Gendarmerie patrols conducted on foot, village by village. Then, patrols began to be conducted using vehicles. So, nowadays, the speed has increased so much that almost all patrols have evolved into aerial patrols. Moreover, the Gendarmerie General Command has an extensive range of tasks, spanning from rescuing a cat from a tree to counter-terrorism operations. With such diverse duties, whether rescuing a cat or countering terrorism, there is a need for UAVs everywhere.

**Defence Turkey: Your area of responsibility is indeed vast, with the Gendarmerie providing services over 93% of Türkiye's territory and 30% of its population.**

**Colonel Hüseyin ÖZKAN:** Precisely. In such a large area, to be able to respond to any kind of security incident, from public safety concerns to counter-terrorism operations, you first need to have visibility of the situation. To gain that visibility, you require Unmanned Aerial Vehicles (UAVs). When we mention UAVs, it's not limited solely to platforms like BAYRAKTAR TB-2 and ANKA; we have a diverse range of drones. We possess drones with varying capabilities. For these, we've established maintenance and repair procedures within all Gendarmerie units. Depending on the scale, size, and need of the incident, these drones, especially during natural disaster scenarios, are utilized effectively. For longer-range missions, we prefer UAVs like TB-2 and ANKA. Although counter-terrorism operations currently garner significant attention and



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activity, the Gendarmerie deployed drones and UAVs to the earthquake-stricken areas in the aftermath of the earthquakes on February 6, for instance. However, what sets us apart from other drone and UAV users in the region? We conducted aerial assessments of the roadways, bridges, and dams surrounding the area. While everyone focuses on the areas that have collapsed during an earthquake, we also consider the possibility of damage to dams, potential collapses of bridges, or issues with roadways. Without UAVs, such evaluations would be impossible.

In designated regions, we have UAV Units. Consequently, we can conduct takeoffs and landings from these areas. Our efforts extend towards making UAV systems functional across the entirety of Türkiye. In this context, we are also engaged in establishing new UAV Units. When we refer to the entire country, we mean that while there might not be terrorism in the

western regions, there are instances of wildfires, traffic accidents, and missing individuals. Therefore, when it comes to public safety and security, anything related to ensuring human life's safety falls under the scope of the Gendarmerie. We have duties and responsibilities regarding all of these matters, and in order to fulfill them, we strive to employ UAVs throughout the entire region. Of course, this requires time, resources, and personnel. Additionally, it demands meticulous coordination among these elements.

No matter how many aircraft you have, they are rendered useless without a sufficient number of experienced personnel to operate them. Conversely, having an abundance of personnel but lacking the necessary aerial vehicles also renders efforts futile. In the current situation, it's not feasible to simply decide to acquire as many drones or UAVs as desired. We concentrate on how to use the resources we have in the most sensible and optimal way possible

while also considering the potential additional needs in this domain for the upcoming periods. This is because our agenda is in a constant state of change, and requirements evolve. Accordingly, we create an annual plan. As the UAV Command, we determine the required number of personnel, the quantity and type of drones, and the number of UAVs needed for the upcoming period. We monitor the process closely. When changes occur, we promptly assess whether to reduce the personnel count, increase the UAV count, or adjust drone numbers. This requires us to engage in highly dynamic planning. From overall planning, project management, and procurement all the way to personnel training and daily flight missions, the process demands dynamic and meticulous oversight. Managing this process is undoubtedly complex.

Therefore, in order to provide such exceptional services across such different regions, we truly require highly trained and

experienced personnel. We are dedicated to preserving this expertise. That's why it's crucial for the experienced professionals working here to remain within the UAV Units and continue their service. Retaining this experience is of utmost importance to us. We need to leverage this accumulated experience of 170,000 hours effectively.

**Defence Turkey: Colonel, when you mentioned the 170,000 flight hours, does that include the flight hours of drones as well?**

**Colonel Hüseyin ÖZKAN:**

No, this is time that was flown only with TB-2 and ANKA UAVs. Additionally, we have 450,000 hours of drone flights. This figure is from a month ago. We also make highly effective use of our drones. Hopefully, we will also commence VTOL flights in the coming period.

**Defence Turkey: You mentioned earlier that you focus on optimizing how to use your available resources. In terms of both personnel and platform numbers, do you find your current resources sufficient? Given the numerous tasks at hand and the broad responsibilities of the Gendarmerie General Command, you also mentioned the establishment of new UAV Units. Do you currently have any concrete UAV procurement projects? Is the acquisition of new UAVs and drones under consideration?**

**Colonel Hüseyin ÖZKAN:**

Definitely, it's inevitable. Let me give you an example with TB-2. Currently, one of our TB-2s has accumulated around 7,500-8,000 flight

hours. Just like everything else, an aircraft has a lifespan. Therefore, the aircraft must be continuously 'upgraded' throughout its service life. It requires equipping with new systems, and certain parts need to be replaced.

Considering the scope of our operational tasks, we have new UAV procurement plans for the upcoming period. We also have Vertical Takeoff and Landing Small UAV (VTOL UAV) procurement plans. Our drone procurements are ongoing as well. We assess where and in which tasks we cannot meet the requirements and ask ourselves what capabilities and platforms we need to fulfill those requirements. While meeting these capabilities, we evaluate whether the need can be fulfilled with a Tactical or Operative Class UAV, VTOL UAV, or a drone. In other words, we assess how we can address these requirements. The duration of this need is also important. If it is going to persist, I want to determine the required capability according to that. More accurately, I want to define the capability before the aircraft. What do I need to fulfill this capability? For instance, I need an aircraft that can stay in the air for 50 hours. I will be flying for a very long duration. If necessary, I might need to take off from Van and fly all the way to İzmir. Then, I will need to procure a UAV that matches that requirement and meets that need.

**Defence Turkey: You have the AKSUNGUR model here, for instance.**

**Colonel Hüseyin ÖZKAN:** Just to give an example, it could be AKSUNGUR or AKINCI. Each of these has



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Gendarmerie ANKA-S UAV while taxiing at the runway

different capabilities to meet your requirements.

**Defence Turkey: So, depending on how long the new UAVs will be needed, does your roadmap include options like leasing or service contracts? As far as I know, two ANKA Block-A**

**UAVs (11-003 and 12-004, deployed on March 25, 2016), were provided to the Gendarmerie General Command by TUSAŞ in January 2016 for a period of service, and these two ANKA Block-A UAVs were operated by TUSAŞ personnel in Elazığ.**

**Colonel Hüseyin ÖZKAN:**

This process needs to be decided by evaluating three or four different factors. We are currently assessing these factors. Let's talk about ANKA, for example. How many hours will I fly ANKA in the future? How many hours did it fly last year? How many hours did it fly the year before that? And what were the maintenance intervals? How much spare part requirement did I have? How many maintenance personnel did I need? What am I expecting in the upcoming period? If I anticipate that ANKAs will be flying extensively in the next period, then I might decide to take responsibility for their maintenance activities. Accordingly, I would train my personnel and form maintenance teams. After establishing maintenance levels like Line Maintenance and Central Maintenance, I would stock spare parts for them and carry out maintenance activities myself.

Ok, that's good. So, what would be the cost implication for me? What would it cost me if I were to meet this requirement through



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BAYRAKTAR TB2 UAVs (J-13 & J-12) in the maintenance hangar

service procurement? After all, in addition to the acquisition cost of an aircraft, the operating cost encompasses maintenance expenses throughout its service life, along with the cost of decommissioning. Let's say the service life of a UAV is 20,000 hours; although such a lifespan doesn't currently exist, let's assume it's 20,000 hours for this discussion. Hence, there is a cost associated with procuring these 20,000 hours. Let's assume I've flown this UAV for 20,000 hours. During these 20,000 hours, there will be maintenance costs at 25, 50, and 100 hours, the personnel required to perform these maintenance tasks, spare parts necessary for these maintenance intervals, and the materials I need to stock in the depots for these purposes. Additionally, there's a cost for retiring the aircraft from inventory once its service life is completed. What's the sum of all these costs in total? Let's say it amounts to US\$10,000. How many hours have I flown? I've flown 10,000 hours. This equates to US\$1 per hour.

You see, you're calculating the cost in this manner.

Another option is for me to outsource this service. In other words, whoever provides me with the UAV should also provide the maintenance service. This way, I can rid myself of the burden of stocking spare parts, training personnel, and establishing a complex maintenance infrastructure. I would solely handle basic maintenance at the user level while entrusting all other maintenance responsibilities to them. If the maintenance cost turns out to be less than US\$1 in doing so, then it might not be necessary for me to acquire this capability. Essentially, you examine the commissioning and decommissioning costs within a foreseeable process and make decisions accordingly. However, if the cost of maintenance from the provider company amounts to, let's say, US\$3 instead of US\$1, and if my expectations in terms of flight hours persist, then I should develop my own capabilities in this regard and perform these

tasks myself, rather than outsourcing them to a firm.

**Defence Turkey: Are the maintenance services for ANKA and Bayraktar UAVs provided by companies under warranty or as service contracts? Or have you established your own maintenance/repair capabilities?**

**Colonel Hüseyin ÖZKAN:** For some of the aircraft, we perform Organizational-Level (O-Level) Maintenance while the manufacturer carries out the higher-level maintenance. In this context, 75% of the responsibility lies with the manufacturer, and 25% is our responsibility, mainly to gain more experience and reinforce our training.

Why? There's no fixed timeframe for how long this maintenance service will continue. Currently, there's a need; UAVs are flying, and excellent services and support are being provided. During this process, even when maintenance responsibility is fully transferred to us, we will continue to

participate as observers to ensure uninterrupted and smooth maintenance operations. In this regard, all of our personnel actively participate in each phase and level of maintenance. We closely monitor them individually. For instance, if it's a motor technician, we ensure that every one of the five motor technicians is participating in addressing any motor-related issue or periodic maintenance. If there are any who haven't participated, we plan for their participation in the next maintenance cycle. We always strive to ensure that everyone is familiar with and witnesses the entire procedure of that maintenance.

For some of the aircraft, maintenance is now 90% under our control; we handle it ourselves. Of course, this transition doesn't happen suddenly. Although we have completed the entire training process for this, we still request personnel from the manufacturers as Field Supervisors or Observers. This continues for a period, like six months to a year. At the end of one year, all maintenance activities will be entirely managed by us.

**Defence Turkey: Manned aircraft undergoes Depot-Level Maintenance and Repair (D-Level) in certain periods. Is there a similar level of maintenance activity for UAVs?**

**Colonel Hüseyin ÖZKAN:** Currently, there is no such concept. There hasn't been a classification yet regarding what each level of maintenance entails, who has the authority, and who will perform it. With the transfer of maintenance responsibility to us, we

wanted to take charge of establishing this framework. Because if the responsibility is transferred to us, this classification needs to be established. I need to know what falls within my authority and what doesn't. There hasn't been any further allocation in this regard. It's an important matter for us as well.

The 2022 Activity Report of the Gendarmerie General Command mentions the KUZGUN (Raven) application, which transfers images from UAVs to mobile devices. Could you provide us with more details about the system?

**Colonel Hüseyin ÖZKAN:**

It's crucial to transmit the video feed of UAVs to the relevant operational unit as efficiently as possible. For instance, if you're conducting a mission during a wildfire, you need to transmit the imagery to the coordinating unit in that region. Similarly, you should transfer the imagery to the operation commander during an operation. This capability needs to be established nationwide. Thus, we aim to ensure that UAV feed is transmitted instantly to all units whenever possible. Currently, we have this infrastructure, but in locations where this infrastructure doesn't exist, we need devices for remote viewing, such as Remote Display Terminals or KUZGUN. For instance, when an aircraft is flying over a search and rescue zone, the Provincial Gendarmerie Commander and relevant unit commanders need to see those images.

KUZGUN System, which



is actively used in the field, is entirely developed by the Gendarmerie General Command. It features secure image transmission capabilities onto designated tablets. This means you can use any tablet you want, but not every tablet can receive this imagery. First, you need to define that tablet to the system. Additionally, the video feed is transmitted to the tablet in encrypted form. We allocate these tablets to the relevant unit commanders during operations.

**Defence Turkey: Did the Gendarmerie UAV Division take part in the development of the KUZGUN System?**

**Colonel Hüseyin ÖZKAN:** Let me explain. The UAV Division was integrated into the Aviation Department two years ago. The history of the KUZGUN tablet goes back even further. Previously, it was under the Intelligence Department. Therefore, many of the existing UAV projects were prepared while under the Intelligence Department's

umbrella. From the initial UAV procurement to personnel training and aerial operations, the Intelligence Department contributed significantly. UAVs operated within the Gendarmerie Intelligence Department from 2009 to 2021, achieving 100,000 flight hours in this period.

Regarding software, we have other target detection and identification systems integrated into our Ground Control Stations (GCS). There are many software-based programs similar to KUZGUN that assist the Pilot and Payload Operator in analyzing imagery. Most of these initiatives began under the Intelligence Department. So, it's important to mention the Intelligence Department in this context.

**Defence Turkey: So, if I understand correctly, out of the mentioned 170,000 flight hours, 100,000 hours were conducted between 2017 and 2021 while you were part of the Intelligence Department, and the remaining 70,000 hours were performed**

**under the Aviation Department over the past 2 years?**

**Colonel Hüseyin ÖZKAN:** Yes, we can say that.

**Defence Turkey: Is this rapid increase in flight hours due to the increased number of platforms, or is it due to more frequent flights/sorties?**

**Colonel Hüseyin ÖZKAN:** Actually, both could be said. UAV flights were conducted before as well, but there were fewer platforms. As the number of aerial vehicles has increased, we are conducting more flights now. Of course, it's not only the aerial platform that constrains us. The limitations that apply to all aerial vehicles are applicable to us as well. These include factors like meteorological conditions and environmental constraints. However, it seems that this number will continue to increase in the upcoming period.

**Defence Turkey: Colonel, thank you for sparing your time for our readers ■**





## “Our Plan Involves Establishing New Units to Provide Coverage Across the Entirety of Türkiye”

We present an exclusive interview with Gendarmerie Pilot Colonel Bayram KIRMIZI, who serves as the Head of the Administrative Management Division within the Gendarmerie Aviation Department. This interview delves into the historical perspective, current state, organizational structure, and capabilities of the Aviation Department, as well as its future plans. Joining the interview on July 17, 2023, were Gendarmerie Pilot Colonel Türker TÜRKÜCÜ, Chief of the Maintenance Section, and Gendarmerie Pilot Colonel Onur ALGÜL, Chief of the Operations Branch Plan Section.

**Defence Turkey: To begin, could you please provide us with an overview of the historical background of the Gendarmerie Aviation Department?**

**Colonel Bayram KIRMIZI:** In 1968, the first Aviation Unit of the Gendarmerie General Command was established in Diyarbakır under the name of "Light Helicopter Unit." Its primary objective was to offer aviation support to Gendarmerie Units situated in the Eastern and Southeastern Anatolia regions. The Gendarmerie Air Group Command was then formed in Güvercinlik

in 1979, followed by the establishment of the Van Gendarmerie Fleet Command in 1993. The Aydın Gendarmerie Fleet Command was established in 2003 to fulfill helicopter requirements for Gendarmerie Units in the western regions, as part of efforts related to public security, tourism, and public assistance. In 2013, the Gendarmerie Aviation School Command was established, undertaking the training of the flying personnel required by the Gendarmerie General Command. Subsequently, in 2018, the

Aviation Department was established, resulting in the consolidation of all aviation units under the umbrella of the Gendarmerie Aviation Department. In 2021, the Gendarmerie UAV Command was established within the Aviation Department, specifically to manage missions executed through Unmanned Aerial Vehicles (UAV) for aerial reconnaissance, surveillance, and target neutralization during Anti-Terrorist Operations (ATO).

**Defence Turkey: Could you provide us with insights into the current**



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### capabilities of the Gendarmerie Aviation Department and its vision for the future?

#### Colonel Bayram KIRMIZI:

At present, our pilots and technicians undergo training using AB-205 (UH-1H) Helicopters. Our inventory includes medical evacuation stretchers, an Airborne Tactical Extraction Platforms (AirTEP), and Bambi Buckets for fire suppression. These resources enable us to engage in a range of operations, such as search and rescue missions, providing aid during natural disasters, intervening in forest fires, and executing counter-terrorism activities. For these purposes, we employ



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S-70 / Mi-17 Helicopters, which are equipped with external cranes, as well as domestically produced T-70 Helicopters. The T-70 Helicopters, manufactured domestically, were finalized in 2022 and have recently been introduced into operational use by our Command.

Furthermore, our domestically produced T129B ATAK helicopters play a crucial role in our

Anti-Terrorist Operation (ATO) missions. Aerial reconnaissance, surveillance, and image transmission tasks are effectively accomplished through our fleet of ANKA and BAYRAKTAR Unmanned Aerial Vehicles (UAVs), alongside the King Air B-350 Manned Reconnaissance Aircraft (JİKU). Additionally, we utilize the Citation C680 Sovereign aircraft for both command-and-

control operations and VIP assignments. To enhance our capabilities, we have recently introduced gyrocopters into our inventory, allowing for more efficient airborne traffic control and image transmission tasks. The number of gyrocopters in our possession is expected to increase in the upcoming period.

Gendarmerie Aviation Units, comprising Aircraft/



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View of the wildfire area from the cockpit of the Mi-17 Helicopter



G.Plт.Col. Bayram KIRMIZI

Helicopter/UAV pilots and technicians who have the opportunity to train themselves and increase their experience within the scope of the Gendarmerie General Command's activities to fight against terrorism nationwide and search, rescue, patient transportation, security, public order, and prevention of smuggling in various parts of our country, will be ready to perform all the missions to be assigned to them with the same unwavering dedication as before, thanks to the entry of the domestically designed and produced T625 GÖKBЕY Helicopters into our inventory in the upcoming period, along with the establishment of new fleets in the Mediterranean and Black Sea regions.

**Defence Turkey: Could you tell us about the organizational structure of the Aviation Department and its affiliated units?**

**Colonel Bayram KIRMIZI:** Within our structure, there are dedicated squadrons in Aydın and Van, known

as Aydın Gendarmerie Fleet Command and Van Gendarmerie Fleet Command, respectively. We also have essential Gendarmerie Air Group Commands situated in Diyarbakır and Ankara. The Aydın Gendarmerie Fleet Command operates under the Ankara Gendarmerie Air Group Command, while the Van Gendarmerie Fleet Command is overseen by the Diyarbakır Gendarmerie Air Group Command. Additionally, we have the Gendarmerie Aviation School Command located in Ankara, the Support Group

Command responsible for supply and maintenance activities, the Administrative Management Division overseeing headquarters activities, and the UAV Command.

Functioning as the Administrative Management Division, our responsibilities encompass a range of administrative tasks. Our division comprises four sections: Intelligence, Operations, Personnel, and Administrative. We oversee matters falling within these sections' purview,



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*Sikorsky S-70i Helicopter of the Turkish Gendarmerie transporting a generator to the flood-stricken area for the aid teams*

extending to all units within the Aviation Division. You paid a visit to the Aviation Department, where their focus is on projects regarding aircraft supply and modernization. Our Support Group Command assumes the responsibility of aircraft maintenance. The Aviation Group Command is our operational unit. The Aviation School Command, on the other hand, is responsible for the training of pilots and technicians, as well as addressing the training needs of other institutions. Our scope of training extends beyond our own pilots and technicians; we also provide training for pilots and technicians from the Ministry of Interior, the General Directorate of Security, and the Coast Guard Command.

**Defence Turkey: Is it correct to say that they receive only Basic Training?**

**Colonel Bayram KIRMIZI:** In fact, our school offers programs on a wide range of subjects. We don't limit ourselves to just Basic Training; we consider requests for all topics within our expertise. Moreover, we strive to respond to training requests from abroad. For instance, we recently received a request from Azerbaijan for a Pilot Basic Training Course on the Mi-17 Helicopter. We are prepared to provide them with the necessary training. As you might be aware, we have also introduced the use of Night Vision Goggles (NVG) for flying the Mi-17 Helicopter, a practice that was not previously employed. We had experience using NVGs on the Sikorsky helicopter during night flights. Adapting this to

the Mi-17 required some modifications in the helicopter's cockpit design.

**Defence Turkey: Are you planning to share this experience with Azerbaijan and other friendly and allied countries that will receive training?**

**Colonel Bayram KIRMIZI:** Certainly. As of now, we haven't commenced operational night flights. Training for this is still ongoing. However, in addition to that, we are actively participating in firefighting flights.

**Defence Turkey: As the Aviation Department, could you provide an evaluation of the missions you've undertaken and the insights you've acquired in firefighting operations to combat forest fires?**

**Colonel Bayram KIRMIZI:** We've recently dispatched three helicopters to Hatay, and they've just reported their arrival in Dörtöy. Consequently, our helicopters are currently present in the area and will be engaged in firefighting efforts against the forest fires. Additionally, some helicopters are currently operating in Bursa. During the significant fire incident in 2021, we underwent training in the morning and were in Aydın by the

afternoon. On the very same day, firefighting flights were initiated in Milas, and I even took the lead. We were the first helicopter on the scene, dropping the initial water loads. Our training began at 7:00 in the morning, and we conducted a training flight later in the afternoon. Following this, two helicopters took off from our location to Aydın. We refueled in Aydın and picked up necessary supplies. By around 15:30-16:00, we commenced firefighting operations in Marmaris. This kind of rapid response is unparalleled in aviation history. We began with two helicopters, and subsequently, our colleagues joined us, including Major General Ali DOĞAN, the Head of Gendarmerie Aviation Department. Interestingly, our Head of Gendarmerie Aviation personally took flight during the Marmaris fires. However, it's important to note that we did not possess previous experience in such situations. It wouldn't be accurate to claim we were entirely inexperienced.

Between 2003 and 2005, we dealt with fire-related incidents. Nevertheless, it had been 16 years since then. After this significant lapse of time, we encountered a forest fire scenario once again. It's worth mentioning that the number of colleagues we considered experienced in firefighting was limited. Apart from myself, perhaps 3-5 others had direct experience, while the rest were unfamiliar with the process. Despite this, we rapidly adapted, swiftly navigating to the fire zones, and executed all necessary tasks, including safeguarding the thermal power plant. The fire had nearly reached the vicinity of the plant, posing a grave threat. Our Minister of Interior was on-site, providing directions as we carried out water drops. I was receiving coordinates from Ankara, but we weren't even looking at the coordinates, as the fire zone was already visible to me. Following each water drop, I would receive feedback from there,

expressing satisfaction with the outcome. Our efforts were undeniably pivotal in preventing the fire from encroaching on the thermal power plant. Moreover, we intervened in every fire within the region, accumulating invaluable firefighting experience. Subsequently, requests started pouring in from other institutions seeking our assistance. In response, we provided training to the Army Aviation Command, the General Directorate of Security, and the Special Forces. Naturally, we had great satisfaction in having been able to make such a contribution.

**Colonel Onur ALGÜL:** During firefighting flights, we face several challenges. One of the issues is the soaring cockpit temperatures, reaching between 55 to 65 degrees Celsius. Additionally, the presence of smoke and ash in the air poses a challenge to the engines as they lack a fresh supply of oxygen. This limitation leads to operating the engines at around 80% power instead of full capacity in such intense heat conditions. Furthermore, the smoke also affects the technicians stationed in the cabin responsible for releasing the Bambi Bucket. Many of our technicians had



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*Mi-17 Helicopter en route to the fire zone with a Bambi Bucket*



A citizen injured in the Kahramanmaraş earthquakes is being transported to a fully equipped hospital via a Mi-17 helicopter.

facial burns following the 2021 fire incident. This is because they dangled from the Mi-17's door, observing the flames directly and ensuring precise water discharge at the targeted spot.

**Colonel Bayram KIRMIZI:**

Just when we thought the fire was finally under control, floods began in the north, particularly in Kastamonu. Our team transitioned from firefighting to flood relief. It turned out to be an extraordinary year for us. Following that, we initiated search and rescue operations in the flood-affected areas of Kastamonu and Sinop regions.

**Colonel Türker TÜRKÜCÜ:**

We transported generators from one neighborhood to another due to power outages. Additionally, we

facilitated the distribution of medicine, supplies, and assisted in the transportation of patients.

**Colonel Bayram KIRMIZI:**

Transporting generators as external loads is a highly risky operation. Similarly, firefighting activities also involve external load operations, where you carry 2.5-3 tons of water externally. Such operations require extensive experience due to their inherent risks. It's not a task for just anyone to undertake. Our previous operational experiences in the Southeast, as part of Anti-Terrorist Operations (ATO), significantly contributed to our competence. During those operations, we frequently transported generators to base areas, navigating various terrains and even crossing borders.

Our diverse missions in challenging environments have provided us with a higher level of experience in such endeavors compared to other organizations. Thus, adapting to these situations wasn't overly challenging for us. Furthermore, this provided an excellent opportunity for our younger colleagues to gain valuable experience.

**Defence Turkey: Besides Azerbaijan, have you been contacted by any other countries expressing interest in receiving Mi-17 Helicopter training?**

**Colonel Bayram KIRMIZI:**

We will begin with Azerbaijan, and subsequently, we anticipate providing training to Libya and Turkmenistan. We are also expecting interest and demand from these countries.

**Colonel Türker TÜRKÜCÜ:**

If GÖKBAY is exported, we can anticipate even higher demand for our training programs. Currently, our common focus is on Mi-17 Helicopters, as we stand as the sole user of Mi-17s in Türkiye.

**Defence Turkey: As far as we know, following the 1999 earthquake, Gendarmerie Aviation established the first air bridge between Ankara and Istanbul. In the wake of the earthquake that struck Kahramanmaraş on February 6, 2023, and affected the surrounding regions, could you please provide an assessment of the operations you conducted to offer aerial support to the earthquake survivors and the insights you acquired from this experience?**

**Colonel Onur ALGÜL:** Once again, in the aftermath of this earthquake, our teams were fully prepared to establish the first air bridge immediately after daybreak. However, adverse weather conditions prevented us from doing so.

**Colonel Bayram KIRMIZI:** The most significant aspect for us following the earthquake was our deployment to the earthquake zone, which was particularly challenging due to adverse weather conditions. Under normal circumstances, flying a helicopter would have been impossible in such weather conditions.

**Colonel Onur ALGÜL:** A total of 10 helicopters were simultaneously dispatched to the earthquake zone. These helicopters managed to reach the earthquake-stricken area by flying at low speeds through the snow and fog, maintaining a close distance that allowed them to visually track the helicopter ahead. Despite our familiarity with the region, the visibility was severely limited.

**Colonel Türker TÜRKÜCÜ:** On the second day, the weather conditions were relatively better compared to the first day. Unfortunately, we were unable to conduct any flights on the first day due to the adverse weather. However, immediately following the earthquake, our entire team was on site and prepared for action. By around 9:00 am, all helicopters were fully equipped for takeoff. Nevertheless, the weather conditions in the earthquake zone remained unfavorable.



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*The portable stretchers that can be mounted on the Gendarmerie S-70i Utility helicopters provide the capability for airborne medical evacuation of up to 8 individuals*

We had been diligently preparing for two years, anticipating the potential impact of a major earthquake in Istanbul. Consequently, our helicopters were equipped with emergency medical equipment and stretchers. I can show you the stretchers we used after the earthquake, they're downstairs. Collaborating with AFAD, we had previously enhanced the stretcher carrying capacity of our helicopters, allowing us to evacuate more injured individuals simultaneously and facilitate their transfer from one hospital to another.

**Colonel Bayram KIRMIZI:** Our prior experiences with disasters had proved invaluable for us. Leveraging this experience, we proactively equipped both our Sikorsky and Mi-17 Helicopters with stretchers.

**Colonel Onur ALGÜL:** Upon our arrival in Kahramanmaraş, we immediately initiated

our operations. Over the following day and night, we facilitated the transportation of the injured individuals from Kahramanmaraş Hospital. One particularly critical mission involved the transfer of nine infants who were receiving care at the hospital during that period.

**Colonel Türker TÜRKÜCÜ:** During the 2011 Van earthquake, we employed a similar approach to transport infants by helicopter. I served as the duty supervisor during the Van earthquake. Our priority was to swiftly transport babies in incubators to the nearest hospitals to mitigate the potential risks associated with power outages, which could prove life-threatening for them. Once Diyarbakır Hospital reached its capacity, we proceeded to transport them to Erzurum. Similarly, when Erzurum Hospital was no longer able to accommodate more patients, we extended our efforts to transfer them

to Elazığ and Malatya. This ensured a dispersed distribution of patients. The helicopter plays a vital role in these scenarios, as it allows us to race against time. Additionally, it's worth noting that some of the flight personnel who were actively involved in the response to the Van earthquake were themselves affected by the disaster. On the second day of the earthquake, reinforcements arrived from Ankara. There was even a pilot who flew in almost his pajamas due to urgency. From the evening until the morning, they transferred critical patients from the hospital to nearby provinces.

**Colonel Onur ALGÜL:** In fact, our initial utilization of Mi-17 Helicopters during nighttime conditions occurred in the context of the Kahramanmaraş earthquake. In Kahramanmaraş, we executed the evacuation of the injured to Adana City Hospital utilizing Mi-



*With the introduction of the Airborne Tactical Extraction Platform (AirTEP) to the Gendarmerie Helicopters for the first time in 2021, rescue operations have become more efficient, overcoming the limitations of the current helicopters, which are only equipped with hoists*

17 Helicopters equipped with in-cabin stretchers and Night Vision Goggles. Hence, this instance marked our first experience in conducting flights using NVGs.

**Colonel Bayram KIRMIZI:** Although our training was not fully completed, the situation demanded our immediate response and we had to fly.

**Colonel Türker TÜRKÜCÜ:** The same situation applies to the T-70. We had recently completed adaptation training for the T-70, but it was among the first helicopters deployed to the region before we could become completely acquainted with it. It flew 11 hours of flight in the region, with 6 hours of those being during nighttime conditions.

**Defence Turkey: Could you share your future plans for the Gendarmerie Aviation Department?**

**Colonel Bayram KIRMIZI:** In the coming years, our future plans for the Gendarmerie

Aviation Department involve the establishment of new units that will cover the entirety of Turkey. In regions such as the Black Sea, where flood incidents have been frequent, having a dedicated unit there would alleviate challenges we currently face. Adverse weather conditions sometimes hinder our access during critical situations in these areas. With this in mind, we are considering the establishment of a fleet in either Trabzon or Rize, although the precise location has yet to be determined. Our presence in the Black Sea is essential. Furthermore, our aspirations extend to the southern part of the country, where we intend to set up a unit at the Çukurova Airport in the Mediterranean region. This initiative is also in progress. Our overarching goal is to structure our capabilities to ensure swift responses and coverage across the nation, enabling us to reach any incident or location in need within the shortest possible time frame. We

will hopefully these plans in the near future. Once we establish units in the Black Sea and Mediterranean regions, we will have covered the eastern, central, and western parts of the country with existing units in place. However, the situation regarding Istanbul and Thrace remains uncertain. Is there a need there? Absolutely. The consensus among experts is that, sooner or later, an earthquake will unfortunately strike those areas. There is no doubt that our presence will be indispensable in such areas. We are actively considering options for those locations. However, specific plans have not yet crystallized. Our strategy is to establish units wherever our General Commander deems necessary. Our overarching objective is to configure this organization in a manner that spans the entirety of Türkiye and enables us to swiftly respond to incidents anywhere they arise. With this purpose in mind, our Aviation Division remains dedicated to

acquiring new aircraft and advancing projects aimed at fulfilling these goals. Our commitment to pilot training remains steadfast. Recognizing the ongoing and future demand for skilled personnel, the Gendarmerie Aviation School Command is dedicated to delivering comprehensive training programs for pilots and technicians. Following their graduation from the Aviation School, our pilots and technicians further cultivate their expertise through these missions. Upon deployment to the eastern regions, they fortify their skillset through flight operations within the counter-terrorism operational zones. Consequently, our aviation unit emerges as a highly proficient and experienced entity. Through these endeavors, we are resolute in our mission to promptly respond to the needs of our citizens, wherever and whenever they require our assistance.

**Defence Turkey: Could you tell us about AirTEP, which was initially utilized by the Gendarmerie Aviation Department in Türkiye?**

**Colonel Onur ALGÜL:** Within our Aviation Division, we've established an R&D Branch that has developed a solution known as AirTEP. AirTEP, standing for Airborne Tactical Extrication Platform, is a specialized platform designed by our R&D Branch. It's designed to accommodate up to 10 individuals equipped with mountaineering gear. The introduction of this rescue platform to Türkiye was pioneered by the Gendarmerie Aviation

Department. AirTEP isn't solely intended for search and rescue operations; it's primarily specialized equipment for special operations. However, the Gendarmerie Aviation Department intends to deploy AirTEP for the evacuation of citizens who might be injured or trapped due to natural disasters, as part of our commitment to public assistance missions.

**Colonel Bayram KIRMIZI:**

To illustrate, consider a scenario where 3-5 citizens become stranded in a flood-affected region. In such cases, our approach involves deploying the AirTEP to the location. Specially trained JÖAK (Gendarmerie Commando Special Public Order Command) personnel will then utilize the AirTEP to safely extricate the stranded individuals and carry them to a secure area. It's worth noting that this versatile solution is used not only in flood scenarios but also in a range of other natural disasters, including fires.

**Defence Turkey: Apart from stretchers, do helicopters carry specialized equipment like oxygen tubes, CPR devices, and emergency response kits for facilitating medical evacuations following earthquakes?**

**Colonel Bayram KIRMIZI:**

We already have the first aid equipment you mentioned, and we currently employ them for these missions.

**Colonel Türker TÜRKÜCÜ:**

While the specialized team can bring their own equipment, we also have our own set of resources. Our equipment encompasses the tools required for CPR



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as well as those essential for establishing vascular access.

**Colonel Onur ALGÜL:**

We never embark on such missions without medical personnel on board. While our technicians have undergone First Aid Training, ultimately, procedures like administering intravenous lines or IV drips are crucial for patient care. This is exactly why we collaborate with the 112 Emergency team for both wounded evacuations and medical emergencies. Within our inventory both in Diyarbakır and Ankara, we possess a device designed for cardiac massages and blood pressure measurement. Furthermore, medical evacuation missions demand substantial experience. This encompasses everything from safely retrieving injured individuals to their transportation and subsequent delivery to hospitals. Leveraging the insights gained from our experiences in the Southeast, we've

shared these lessons with management at the earthquake zone. Consequently, we conducted 2-3 additional evacuation sorties every night to effectively respond to the situation.

For instance, last week we actively participated in the rescue operation of a group of climbers in the Kaçkar Mountains. A climber who had fallen and sustained injuries while scaling a glacier in Rize's Kaçkar Mountains was successfully rescued following 24 hours of intensive effort. Each flight represents a unique learning experience. It's important to note that piloting is not something that can be mastered solely through books; rather, it thrives on the mentorship and guidance of experienced pilots. We've acquired our skills under the guidance of our seasoned commanders and are committed to passing down our knowledge to our colleagues. In essence, a flight isn't merely a matter of the

first and second pilots deciding to undertake a task. Every flight serves as training for the second pilot, while the first pilot takes on the responsibility of transferring their experiences. Just as we continued the legacy of our predecessors upon their retirement, our second pilot colleagues will assume our roles when we eventually step down. The fact that the Gendarmerie Aviation Department remains the primary point of contact in Türkiye underscores our ability to uphold the legacy passed down by our commanders. If, even after our retirement, the Gendarmerie Aviation Department continues to be the primary unit to be contacted, it signifies our successful fulfillment of duty and passing the torch to our colleagues.

**Defence Turkey: We extend our gratitude on behalf of our readers for sparing your time for this insightful interview. We wish you continued success in your endeavors ■**





“The Gendarmerie Aviation School Command has successfully trained and graduated 35% of the Pilots and 51% of the Technicians who are presently serving within the Gendarmerie Aviation Department”



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We are pleased to share the interview we conducted with Gendarmerie Pilot Colonel Haydar YILDIZ, who serves as the Commander of the Gendarmerie Aviation School. In this interview, we delve into the current training activities at the Aviation School Command, the selection process of pilot candidates, the training curriculum, the role of simulators in training programs, and the requirement for new training helicopters and aircraft. Joining us during the interview on July 17, 2023, was Gendarmerie Pilot Colonel Türker TÜRKÜCÜ, who heads the Maintenance Section.

**Defence Turkey: Could you provide information on the founding purpose of the Gendarmerie Aviation School Command, the historical evolution of pilot and technician training, and the current organizational structure of the Command?**

**Colonel Haydar YILDIZ:** Initially, the Gendarmerie Aviation School Command was a unit at the level of Training Directorate, operating under the umbrella of the Gendarmerie Aviation Command in 2000. Yet, the burgeoning demand for training personnel due to advancements in aviation technologies and the introduction of new aircraft into the national inventory prompted a proactive initiative to establish a dedicated Aviation School

Command. As a culmination of these considerations, in the year 2013, the Training Directorate's teaching staff was revised and subsequently evolved into what is now recognized as the Gendarmerie Aviation School Command.

On August 5, 2013, the Gendarmerie Aviation School Command initiated its educational and training activities within the Gendarmerie Aviation Department campus, located at the Martyr General Eşref BİTLİS Barracks. The primary objective behind this initiative was to provide training for its own personnel while simultaneously addressing the escalating training demands within the aviation domain of the Gendarmerie

General Command, while ensuring alignment with the established corporate culture.

Initially, we encountered challenges regarding the aircraft for pilots' Basic Training. To address this, an agreement with Turkish Aerospace was made. As part of this arrangement, Turkish Aerospace administered the "Basic Training", followed by the "Advanced Training" provided by our School Command. This comprehensive approach ensured the successful training and qualification of our pilots, culminating in the issuance of their badges. Concurrently, within the same timeframe, our School Command effectively conducted both basic and advanced training for all our technicians. Candidate pilots who excel in the approximately year-long Basic Course are eligible to earn their badges. The corresponding period for our technicians is approximately 6 months. Moreover, as a noteworthy development during this period, technician candidates from the General Directorate of Security were participating in the Aircraft/Helicopter Technician Basic Courses we conducted.

In the year 2020, we established our vision for 2023. This particular year holds great significance as it marks Türkiye's centenary. Additionally, we recognized it as the 10th anniversary of our School Command's establishment. With these factors in mind, we embarked on a mission to evolve into an institution capable of addressing all aviation training requirements of the Gendarmerie General Command. Our aim was to remain attuned to evolving technology,



rigorously adhere to aviation regulations, and concurrently meet the aviation training requirements of other affiliated institutions under the Ministry of Interior, namely the General Directorate of Security and the Coast Guard Command. At the point we have reached today, we have successfully graduated our first group of pilots this year. This signifies our journey of starting from scratch and independently nurturing skilled aviation professionals without any external dependencies.

By the end of November 2023, we plan to conduct a ceremony to honor our accomplished pilots. Meanwhile we have initiated the training of pilot candidates affiliated to the Coast Guard Command. In our ongoing 11th Term Pilot Basic Course, two Coast Guard pilot candidates are actively participating in their training. Furthermore, as I previously mentioned, we have extended our training program to include technicians from both the Coast Guard Command and the General Directorate of Security, reinforcing our self-reliant status. Similarly, in our upcoming 12th Term Pilot Basic Course, scheduled

to commence in September, we are introducing a novel dimension by providing training to pilot candidates from the General Directorate of Security. In addition to our 25 pilot candidates, we include 6 General Directorate of Security pilot candidates in our course. Additionally, we have received a request from the Coast Guard Command, which we are actively evaluating. If feasible, we will include 4 pilot candidates from the Coast Guard Command in our September course.

Regarding the current organizational structure of the Gendarmerie Aviation School Command, it encompasses Administrative Units, the Measurement and Evaluation Branch Directorate, 6 Squadron Commands tasked with conducting training activities, and the Flight Control and Standardization Board.

**Defence Turkey: Could you provide insights into the founding purpose of the Gendarmerie Aviation School Command and elaborate on the initiatives undertaken to train flying personnel in alignment with this purpose?**

**Colonel Haydar YILDIZ:** The Gendarmerie Aviation School Command's founding purpose is to train adept pilots and technicians. These individuals are trained to excel in their roles without compromising flight safety, by closely adhering to ever-evolving aviation regulations and technological advancements. The command also focuses on sustaining the skills acquired through training.

In terms of our capability to train pilots, it's also crucial to address the sustained proficiency in this acquired skill. To maintain these abilities, each year, all our pilots and technicians undergo Training to Ensure the Continuation of Flight Ability (refreshing training), which is overseen by our Flight Control and Standardization Board. Subsequently, a combination of written exams and flight evaluations is conducted to uphold and update the flight skills and aviation knowledge of our personnel while ensuring standardization. For those who excel in the written exam and flight evaluation, it serves as an attestation that their flight capabilities remain at a high level for one



Gendarmerie S-70 & Mi-17 Helicopters are in formation flight

year. Subsequently, these individuals are reevaluated the following year through the same process.

Each year, we offer refreshing training to nearly all our pilots, tailored to the specific aircraft type selected for that particular year. This training is annually organized to refresh the knowledge about ATAK Helicopter piloting. Moreover, in the event of an "emergency" aircraft incident or accident, we harness the insights garnered from such situations and share them with our fellow pilots. Furthermore, if there are subjects beyond our expertise, but our pilot peers attending the training have knowledge in those areas, our aim is to sustain this knowledge exchange by incorporating their insights. Put simply, our approach involves embracing alternative practices that prove genuinely advantageous for the system, thereby prompting us to proactively undertake relevant initiatives.

In line with our founding purpose, given the advanced level of our

aviation training activities and the fact that airspace oversight is managed by the State Airports Authority and the Directorate General of Civil Aviation under specific regulations, we submitted an application to have our training activities monitored by the Directorate General of Civil Aviation. Within this framework, we undertook updates and revisions to our training system to ensure alignment with relevant regulations and aspects of civil aviation. As a result, our Gendarmerie Aviation School Command was granted the status of an Approved Flight Training Organization (ATO) by the Directorate General of Civil Aviation in 2016. This authorization ensured that pilots joining the Gendarmerie Aviation Directorate could confidently navigate Turkish airspace, grounded in Civil Aviation regulations. This harmony in aviation practices facilitated effective communication among pilots and enabled them to maintain their knowledge up to date. Consequently, we are effectively integrating our flying personnel into the civil aviation realm. The

General Directorate of Civil Aviation carries out periodic inspections to verify this qualification.

**Defence Turkey: Could you share details about the training offered at the Gendarmerie Aviation School Command for both manned and unmanned fixed-wing and rotary-wing aircraft?**

**Colonel Haydar YILDIZ:** Initially, the Aviation School Command conducted Basic, Advanced, and Specialization Courses for a variety of aircraft, including T129 ATAK, S-70 Sikorsky, Mi-17, AB-205 Helicopters, and King Air B-350 JIKU and Citation C680 Sovereign Command and Control Aircraft. In 2022, with the establishment of the UAV Training Squadron Command, courses were introduced for BAYRAKTAR TB-2 and ANKA-S Unmanned Aerial Vehicles (UAVs), as well as mini/micro/nano drones. In fact, just around two months ago, we conducted instructor training for the BAYRAKTAR TB-2 and ANKA-S UAV systems already in our inventory. Subsequently,

we prepared our training materials, and we have recently initiated the 1st Term Pilot, Technician, and Payload Operator Course for Unmanned Aerial Vehicles.

**Defence Turkey: As far as I know, Azerbaijan has requested a Pilot Basic Training Course for Mi-17 Helicopters sometime ago.**

**Colonel Haydar YILDIZ:** There are certain external wrequests, but nothing has been finalized yet. Presently, discussions are ongoing with Azerbaijan, Turkmenistan, and Libya. Should a consensus be reached, we are also willing to conduct training activities.

**Defence Turkey: Could you furnish details about the training initiatives undertaken for pilots, technicians, and UAV Systems at the Aviation School Command throughout an academic year? Additionally, could you elaborate on the training materials, methodologies, and programs utilized during these training sessions?**

**Colonel Haydar YILDIZ:** The Gendarmerie Aviation School Command administers a total of 18 diverse courses for pilots, 23 courses for technicians, and 33 courses for UAV Systems throughout each academic year. To uphold the quality and consistency of our training, we meticulously plan our training schedule for the year. In this process, we address factors that ensure not only effective training but also its sustained quality. During this phase, we encounter challenges related to the preparation of training materials and the provision of suitable training environments for these courses. However, I believe we have effectively

addressed these challenges so far, successfully ensuring the provision of appropriate resources and environments for the courses.

In the campus of our School Command, training activities are carried out across a total of 10 classrooms, including one Computer Based Training System Classroom, one Interactive Training Classroom, and two Application Classrooms. To enhance contemporary learning experiences, these classrooms are equipped with smart boards. In instances where we need to convey information to personnel stationed in our external units in Aydın, Diyarbakır, and Van, we utilize our Interactive Training Classroom to offer in-person training. To illustrate, during the previous week, we had scheduled a three-day flight training program for the T-70 Helicopter in Aydın. Normally, our colleagues would have traveled to Aydın to conduct the training. However, for the preliminary theoretical training that precedes flight sessions, we utilized the Interactive Training Classroom to effectively provide comprehensive training on the subject over the span of three days. Presently, we are in the process of conducting trials using the Interactive Training System. Additionally, we are initiating a project that involves the administration of yearly written exams and flight control assessments for pilots and technicians stationed in our external units. This will be facilitated centrally through the Interactive Training Classroom. In fact, we recently executed a trial run, achieving successful outcomes. Following a few more trials, we will have



the capability to centrally administer this examination by effectively utilizing our question bank. It's worth noting that our question bank is a secure and restricted area accessible to authorized individuals only; even I don't have access. Through its application, we will enhance our ability to assess our personnel in a more streamlined and impactful manner.

We place significant value on the development and enhancement of training materials to facilitate efficient training activities. Presently, we have curated a collection of 103 materials for use within our training

programs. Guided by the principles of sustainable and continuous training, coupled with the evolution of training technologies, we are actively developing mobile training applications. These applications serve to grant flight personnel access to information regardless of time or location. Considering the importance of remote training brought about by the pandemic, we ensure the accessibility of training videos and presentations crafted by our training personnel. These resources are made available to our personnel via the JUZEK and UZEM (Distance Education Center) System.

Moreover, we've incorporated projects stemming from innovative ideas into our training framework, with the intention of enhancing the training's efficiency. A notable example is the Three-Dimensional Visual Training Program developed for the aircraft within our inventory. The aim of this program is to fully introduce the personnel to the aircraft they will be assigned to. To achieve this, intricate three-dimensional photographs of the aircraft were captured using specialized cameras and combined with a program. This program is employed during hands-on training sessions, effectively describing the various parts and their corresponding locations.



**Defence Turkey: Could you provide details about the pilot candidate selection process? During our visit to the campus, we were able to see the domestically developed and manufactured Personnel Candidate Selection System (PASS) simulator. How does the PASS simulator contribute to the selection process?**



### Colonel Haydar YILDIZ:

Our pilot candidates are selected through two different channels. One approach involves selecting candidates from a specific quota among the officer candidates who have enrolled in the Gendarmerie Coast Guard Academy and completed a 5-year educational program (comprising 4 years of study plus an additional preparatory year). Alternatively, candidates are also selected from the pool of contracted officer candidates who have received education at a different university and have subsequently applied to the Officer Training Center (SUEM) in alignment with the official announcement.

**Defence Turkey: Do both categories of pilot candidates undergo the same one-year training? What is the rationale behind selecting pilot candidates through two different channels?**

**Colonel Haydar YILDIZ:** Yes, all pilot candidates undergo one year of training. The selection of pilot candidates from two different channels serves to create two distinct groups, allowing us to integrate and leverage the advantages of each group during the training process. For instance, one group may consist of candidates

with backgrounds in electronics engineering, computer engineering, or mechanical engineering, having completed four years of university education. Meanwhile, the other group comprises personnel who have undergone rigorous training within the framework of the Gendarmerie Command, thus embodying the Gendarmerie culture and institutional ethos. Bringing these two groups together enables us to foster a distinctive dynamic, where the convergence and interchange of ideas occur between them.

Therefore, our pilot candidates are primarily chosen from within these two groups of applicants. Subsequently, they undergo a foreign language examination. Additionally, their achievements in their academic studies are assessed. The Personnel Candidate Selection System (PASS) Test is conducted, followed by an interview. Based on the average performance across these four assessments, candidates are graded on a scale of 0 to 100 and subsequently ranked. In accordance with this ranking, candidates proceed to a medical examination before commencing the course. Their evaluation is based on the average of

these four assessments, leading to a score out of 100 points and subsequent ranking. Following this ranking, candidates undergo a personnel health examination before commencing the course.

**Defence Turkey: How extensively are flight simulators employed in the training provided to flying personnel at the Aviation School Command?**

**Colonel Haydar YILDIZ:** Flight simulators offer cost-effective and efficient training, enhancing pilots' command of aircraft through repeated practice of flight maneuvers. They mitigate challenges posed by air traffic delays, aircraft maintenance, and restrictions like weather conditions and NOTAMs.

Therefore, simulator systems have been developed and integrated into training programs for four aircraft within the inventory, namely AB-205, S-70, and Mi-17 helicopters, as well as the King Air B-350 aircraft. Notably, scenario-driven training initiatives are implemented, involving extensive repetitions, to elevate the competence and expertise of flight personnel. To align with evolving aviation practices, new programs are in the pipeline, aimed at enhancing flight

safety, including VFR (Visual Flight Rules) 'emergency' training addressing pilot responses in adverse weather scenarios.

Flight Training Simulators for the AB-205, S-70, Mi-17 Helicopters, and King Air B-350 Aircraft were developed at different time intervals. The Mi-17 simulator was produced in 2018, the S-70 in 2021, and most recently, the B-350 and AB-205 simulators were manufactured in 2023. Currently, preparations are underway for the B-350 simulator. Utilizing these four flight simulators, a total of approximately 5,600 flight hours of training has been accomplished thus far, yielding cost savings of nearly USD 24 million through the implementation of these virtual training programs. Flight Training Simulators offer the unique capability to conduct both standard flight training and specialized 'emergency' training that might not be feasible in actual conditions. For instance, the Mi-17 Helicopter is equipped with a Fire Extinguishing System. In conventional training, you can only verbally explain the system without practical demonstration. However, within the simulator, you can elevate the training by simulating scenarios like an onboard fire. This enables you to engage your crew with questions such as, "There's a fire in the left engine after take-off. What steps should we take?" The crew responds with appropriate actions, enriching the learning experience beyond theoretical comprehension. This is an illustrative instance of the capabilities inherent in the Mi-17 Flight Simulator. Through external control, simulated fire emergencies can be triggered in specific areas. Pilots are required to

respond to these situations based on cockpit warning lights and audible alerts. The Navigation Officer intervenes accordingly. Additionally, it offers advantages in enhancing Crew Resource Management (CRM). The unlimited nature of these simulations allows for repeated practice sessions to be conducted as often as necessary.

To train our Flight Engineer on the Mi-17 helicopter, we typically need to perform 8 start/stop procedures on an actual helicopter. This involves following a checklist, activating the helicopter's systems, and starting and shutting down the engine without flying. Setting aside expenses related to fuel and other operational equipment, and solely focusing on the cost of the starter motor – which has a limited operational lifespan – we encounter significant costs. Each time the starter button is pressed during real flight, it contributes to the wear and tear of the starter motor. In aviation, all components have limited lifespans and need eventual replacement when reaching their limit. Yet, in the Mi-17 Flight Simulator, pressing the button has no cost associated with it. While there are costs for electricity and annual maintenance, the advantage lies in the ability to perform the procedure an unlimited number of times. Trainees and personnel can practice extensively in the simulator, diverging from the real helicopter practice, where only 8 instances are possible. The simulator environment offers invaluable repetitive training without incurring the costs associated with real flight operations.

**Defence Turkey: Based on the expertise and insights**

**gathered through the Gendarmerie Aviation Department's firefighting efforts, is it possible to enhance the S-70 and Mi-17 Flight Training Simulators with a software update to provide training on tasks such as carrying external loads like the Bambi Bucket and intervening in forest fires during nighttime conditions?**

**Colonel Haydar YILDIZ:** Currently, there is no existing product, but our team is actively working on it. A project has been initiated by our colleagues, and if successful, we will certainly use it. In the context of firefighting training, we comprehensively cover topics such as operating firefighting helicopters, entering flight patterns, water drainage procedures, executing escape maneuvers after water discharge, and the step-by-step sequence from water collection. At the onset of our training on extinguishing forest fires, we review the external load training. This involves explaining the specific buttons and controls utilized for external load operations, discussing their optimal positions for extinguishing forest fires or various fire scenarios. For instance, there are instances where the load could inadvertently touch the ground, leading to the automatic release of the hook and the rope falling. To prevent such occurrences during firefighting missions, we disable that button. As a result, we've established a 'checklist' procedure for forest firefighting activities. Training is also provided on the execution of this checklist procedure and the corresponding communication protocols. This training has been carried out in Gölbaşı, Ankara. Within



The cockpit view of Mi-17 Flight Simulator

this framework, we facilitate three flights for each pilot. A minimum of 10 successful fire drops are executed using the Bambi Bucket, targeting a specific area. After achieving a total of 7 accurate drops, we assess that the pilot's training is comprehensive, and they are capable of effective communication within the helicopter. Following this evaluation, we authorize them for forest firefighting missions. By adopting this approach, we ensure that colleagues who have not received this specialized training are not tasked with firefighting duties without proper preparation. In essence, our comprehensive training program equips our personnel to effectively address forest fire scenarios.

**Defence Turkey: Do you think there is a need for a flight simulator for the T129 ATAK Helicopter?**

**Colonel Haydar YILDIZ:**

We don't have an ATAK simulator because we didn't need one. However, there is an ATAK simulator at the Army Aviation Command. We believe it is suitable to leverage this simulator for our ATAK Helicopters. When the need arises, we submit a request, and they allocate it to us at appropriate times. This is how we go about using it.

Regarding our decision to develop our own S-70 simulators despite the presence of the S-70 Flight Training Simulator at the Army Aviation Command, this choice stems from the notable differences in the modifications between our S-70 helicopters and those of the Land Forces Command. The cockpit environment of our helicopter contrasts significantly with that of the Turkish Land Forces' helicopter. To effectively operate the S-70 Simulator there, we need differential training due to these



variations. Furthermore, we encountered challenges in integrating the training we received there into our unique system. Consequently, we acknowledged the necessity for a dedicated flight simulator and embarked on its development journey.

There is also a UH-1 Helicopter simulator in the Land Forces, however, it is currently inactive. While operational, it doesn't meet the desired standards we are aiming for. As a result, we took the initiative to develop our own simulator, which is now in use.

**Defence Turkey: In your capacity as the Aviation School Command, what is the annual capacity for training and graduating pilot candidates?**

**Colonel Haydar YILDIZ:** In our inaugural year of 2023, we initiated the program with a total of 38 pilot candidates during the first semester. Utilizing our internal resources, we effectively carried out the 10th Term Pilot Basic Course, culminating in the graduation of 20 pilot candidates.

**Defence Turkey: What is the process used to assess candidates in training programs? Can you elaborate on success rate in training programs?**

**Colonel Haydar YILDIZ:** We administer written exams and tests as part of our evaluation process. We have specific guidelines in our measurement and evaluation system. Should a trainee not pass a course, they are given the opportunity to take a make-up exam for that particular course. This arrangement is necessary due to the overlap of theoretical lessons and flight training after a certain timeframe. The course demands concentrated effort and commitment,

as trainees must navigate a period of intense training intertwined with flights.

We commenced our 11th Term Pilot Basic Course with a cohort of 35 individuals, and we are currently proceeding with 22 participants. The course has achieved a certain pace and structure. Those who have successfully reached the stage of solo flight generally proceed through the course without significant setbacks, maintaining their progress until its completion. In aviation training, a success rate falling within the range of 60% to 65% is generally regarded as acceptable.

Regarding the qualification criteria, it entails failing

in one specific course or encountering failure in two separate flight instances. This requirement holds significance due to the trainee's need to conduct solo flights within a span of 20 hours. By "solo flight," we are referring to the trainee assuming complete control of the aircraft without the presence of an instructor or any other individual. In this scenario, the trainee will independently take off, maneuver in circuit patterns during flight, and land.

**Defence Turkey: Do the trainees conduct solo flights within an AB-205 (UH-1)?**

**Colonel Haydar YILDIZ:** Yes, trainees do perform solo flights using an AB-205 (UH-1) helicopter as part of their training. The AB-205 serves as our Basic Trainer aircraft. Our training program comprises two phases, commencing the first phase of our Basic Course with the AB-205. During the previous semester, we tailored our training to our requirements and graduated candidates with either the S-70 or the ATAK Helicopter. However, this year, we have decided not to provide training on the ATAK Helicopter based on our current needs. At present, we are contemplating assigning candidates to either Sikorsky helicopters or Mi-17 helicopters, considering our operational considerations. We will formulate a plan once we reach that stage. In the previous year, we conducted a training program for a single semester. However, this year we are launching two semesters. The first semester started in April and will conclude in April 2024. Subsequently, another course will start in September and finish in September of the following



year. As we outline our plans for 2024, our intention is to initiate the first course in September 2024. This means that we will not commence another Pilot Basic Course until September of the subsequent year. This plan remains in effect unless circumstances dictate otherwise. Consequently, our training for September 2024 will encompass a total of 70 pilot candidates, including external units. Currently, our Technician Basic Course is ongoing with 52 trainees. Following the conclusion of this course, we will immediately initiate a new Technician Basic Course in October.

**Defence Turkey: You've just touched upon the qualification criteria in training. For instance, if a trainee initially enrolls as a rotary wing pilot candidate but doesn't succeed due to certain factors, do you provide these trainees with an opportunity to transition into UAV pilot roles, or do you receive any requests from them expressing interest in this direction?**

**Colonel Haydar YILDIZ:** UAV training follows a different process. This training is customized according to the specific requirements of the UAV Command. For instance, if there is a demand and the trainee meets the necessary criteria during the application period, they are not informed that their pilot candidacy disqualification prevents them from applying for UAV training. If the required criteria are met, trainees are allowed to apply. As an example, in the upcoming semester, a candidate who was previously disqualified from pilot training will participate as a trainee in the UAV Piloting course. Nevertheless, it's important



to note that the realization of this opportunity is not assured. If the necessary conditions are met, it would certainly be advantageous for the trainee to embark on this path.

**Defence Turkey: How was the training conducted for pilots who operate King Air B-350s within the Aviation Department's inventory? Is the use of a Trainer Aircraft necessary for this training?**

**Colonel Haydar YILDIZ:** When there was a need for King Air B-350 pilots, we signed a protocol with the Turkish Airlines Flight Academy to facilitate the necessary training. Currently, we are requesting aircraft pilot training from the Turkish Army Aviation School Command. Our objective is to graduate one or two pilots annually through this avenue. For instance, in August, a pilot candidate will complete aircraft pilot training at the Army Aviation School Command and subsequently join us. We will then provide specific adaptation training for the B-350 Aircraft over a designated period. Our focus is on delivering Type Adaptation Training, while simultaneously seeking a quota from the Army Aviation School for Basic Training. In the upcoming period, there is indeed a

requirement for an Aircraft Pilot Basic Course. However, this entails the need for a Basic Trainer Aircraft. As for infrastructure and instructor pilots, we have those aspects covered. The only missing component is the aircraft itself. Fortunately, we are actively addressing this issue as well. Our projected need is around 10 to 15 aircraft to satisfy our training demands.

**Defence Turkey: Could you please provide insight into the Aviation School Command's vision for the future and outline its primary objectives concerning the training of flying personnel?**

**Colonel Haydar YILDIZ:** Leveraging our School Command's robust institutional infrastructure, seasoned flight instructors, trainer aircraft to enter the inventory, and enhanced training facilities, we embarked on a journey in 2020 to evolve into a flight school capable of satisfying the flying personnel training needs of the Ministry of Interior's aviation units. Today, we proudly stand at a juncture where we are equipped to deliver comprehensive training requirements for various entities, most notably the Gendarmerie General Command, the General

Directorate of Security, and the Coast Guard Command. Our offerings encompass a wide spectrum, with a specific focus on providing Basic Training for both pilots and technicians.

Starting from 2013, the Gendarmerie Aviation School Command has been entrusted with the vital task of providing essential flying personnel to the Gendarmerie General Command. In the process, we have successfully graduated 35% of the pilots and 51% of the technicians who presently serve within the Gendarmerie Aviation Department. Looking back on the past decade, our achievement is clear: as the Gendarmerie Aviation School Command, we have been able to train 3 to 4 out of every 10 pilots and 5 out of every 10 technicians currently part of the Gendarmerie Aviation Department or other units. This accomplishment resonates with our primary objective of training the necessary flying personnel for the Gendarmerie General Command, and it fills us with a sense of pride.

**Defence Turkey: We sincerely thank you on behalf of our readers for your time and wish you success in all your future endeavors** ■





## Çelik Kanatlar Flight Demonstration Team: A Globally Acclaimed Brand Bridging the Gendarmerie Aviation Directorate's 500,000-Hour Flight Experience with the S-70 Helicopter

The formation of the Gendarmerie Çelik Kanatlar (Steel Wings) team coincided with the commemoration of the 50th Anniversary Ceremony in October 2018. As part of this event, a special ceremony was organized to honor the graduating Pilots and Technicians from the Gendarmerie Aviation School Command. An extraordinary moment unfolded during the graduation ceremony

when a remarkable milestone was achieved: a captivating aerobatic display featuring a Sikorsky S-70 Black Hawk Helicopter.

The Gendarmerie Aviation Directorate, playing a pivotal role in internal security operations, counter-terrorism efforts across different regions, as well as search and rescue missions and public assistance activities, has started to exhibit its

pro prowess and expertise in helicopter operations through the Gendarmerie Çelik Kanatlar Flight Demonstration Team. Consequently, following in the footsteps of SOLOTÜRK and TÜRK YILDIZLARI, the first and only helicopter flight demonstration team of Türkiye emerged, introducing a novel dimension to aerial acrobatics with the deployment of Black Hawk Helicopters.

The Gendarmerie Çelik Kanatlar Flight Demonstration Team, with its objectives of promoting the Gendarmerie General Command, cultivating public trust and engagement in the Gendarmerie, and fostering aviation enthusiasm among the youth, has successfully executed demonstration flights across various cities within Türkiye. These appearances have encompassed notable



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events such as the TEKNOFEST Aerospace and Technology Festivals and the Sivrihisar Airshow, following its inaugural display in October 2018. Çelik Kanatlar has become an aerial acrobatics team that pushes the boundaries of helicopter capabilities through its impressive flight demonstrations. The synchronized and harmonious maneuvers executed by two S-70 Black Hawk Helicopters during Çelik Kanatlar's demonstration flights have garnered immense admiration and appreciation from the spectators.

The Gendarmerie Çelik Kanatlar Flight



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Demonstration Team is comprised of two pilots and one technician in each helicopter. All pilots are instructor pilots with more than 5,000 hours of experience for first pilots and over 3,000 flight hours for second pilots. Prior to each demonstration, the flight crew meticulously plans every aspect of the performance, and the maneuvers to be executed are chosen based on various factors,

including the prevailing weather conditions at the demonstration site.

The Çelik Kanatlar Flight Demonstration Team, also dedicatedly participating in the Gendarmerie General Command's Internal Security Operations, has a future goal of showcasing the Gendarmerie Aviation Directorate internationally by conducting flight demonstrations abroad in the forthcoming years.

The Çelik Kanatlar Flight Demonstration Team, our country's first and only helicopter demonstration team within the Gendarmerie Aviation Directorate, which embarked on a journey 55 years ago guided by the motto "We will leave no one behind," and proudly says today, "We left no one behind," continues to rehearse regularly for their future demonstration flights ■



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## “The Project to Equip the Mi-17 Helicopters with NVG Flight Capability Is Expected to Save Approximately US\$7.5 Million”

We present our comprehensive interview with Gendarmerie Pilot Colonel Ruhi YÜKSEL, the Commander of the Support Group at the Gendarmerie Aviation Department, discussing the maintenance and repair capabilities of the Gendarmerie Aviation Department, ongoing maintenance activities for the existing aircraft in the inventory, and on the Çelik Kanatlar Hangar (of which an official inauguration ceremony was held on March 31, 2022 helicopter aerobatic team), Turkey's largest reinforced concrete hangar that can hold 18 aircraft at the same time.

**Defence Turkey: Can we begin our interview by getting information about the organizational structure of the Support Group Command and the services it provides to the units of the Gendarmerie Aviation Department?**

**Colonel Ruhi YÜKSEL:** Within the structure of the Support Group Command, there are the Group Headquarters, Maintenance Command, Depot Command, and Support Battalion Command. The Support Group Command is responsible for the aircraft maintenance, spare parts procurement, and logistical activities of the Gendarmerie Aviation Department. Additionally, the service and guard platoons under the Support Companies carry out the management and guard duties of all buildings and facilities under the department.

Furthermore, the Support Group Command is responsible for managing significant procurement and supply activities that need to be coordinated from the headquarters for the units stationed in different provinces under the Gendarmerie Aviation Department. The large-scale material and spare parts storage activities required by the Depot Command are also carried out by the Support Group Command. All financial transactions related to these procurement and supply activities are also handled by our group command.

The education and training activities carried out by the Gendarmerie Aviation School Command include the daily and phased maintenance of the AB-205 (UH-1) Helicopters, which serve as the basic training helicopters for pilots and technicians. These maintenance tasks are conducted by the Maintenance



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Command to ensure uninterrupted flight training for pilots and technicians, along with the provision of classrooms and training materials. Additionally, technician assignments for flight execution, accompanied by flight instructors, are managed by the Support Group Command. As of today, maintenance activities are conducted to keep up seven helicopters flight-ready on a daily basis. Pre-planned training flights are scheduled to depart at 09:00 in the morning, with the return typically around 11:45. If no malfunctions occur during or after the flight, the helicopter is refueled and positioned in the helicopter parking area, ready for the next flight. In the event of any malfunction or issue identified by the pilots during the flight or by technicians during



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post-flight checks, the relevant maintenance team promptly intervenes, regardless of working hours, to swiftly diagnose and rectify the issue. Once the problem is resolved, the helicopter is prepared for flight again. In the afternoon, flights resume around 13:30, and after the pilots shut down the engines around 16:30, end-of-day maintenance and checks are performed by technicians, as authorized. If any malfunctions are identified, they are addressed promptly, and the helicopters are positioned in the park hangar, ready

for the next flight, without delay or adherence to standard working hours.

The critical point here is the uninterrupted execution of maintenance. In other words, the concept of working hours does not apply. If necessary, maintenance activities can continue through the night until morning because it is of utmost importance that these helicopters are operational for the next day. This continuity ensures both the integrity of training courses and the seamless completion of training activities as planned.

What I am describing refers to daily flight and maintenance activities. Additionally, there are cases where significant malfunctions occur that cannot be rectified quickly or require higher-level maintenance authorization. In such instances, the relevant aircraft is taken to the Central Maintenance Hangar, where specialized technicians with expertise in the field intervene. After necessary interventions, once the aircraft is ready for flight, the maintenance officer presents it to the instructor and student pilots after a proficiency flight conducted by pilots.



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Mi-17 Helicopter and B-350 MAISR Aircraft in Maintenance and Repair Hangar



The fuel tanker is waiting to refuel the AB-205 Helicopter

All these maintenance activities are carried out with great dedication and strict adherence to maximum safety protocols. Otherwise, the slightest negligence or failure to comply with safety rules could result in significant material and human losses.

While our main principle is zero error and maximum safety, we also have a fire brigade team capable of responding to accidents and fires that could occur within our unit or neighboring units. Additionally, we have a rescue vehicle and personnel within the Support Group Command to handle potential accidents, ensuring prompt response and casualty recovery activities in case of accidents or emergencies, all while maintaining the highest level of safety standards.

Our fire brigade team responds to fires that could occur in neighboring units or within administrative boundaries. Comprised of professional firefighters and expert enlisted personnel, our fire brigade operates on a shift basis, providing 24-hour coverage.

The maintenance and sustainment activities for our newly acquired Gyrocopters are carried out by our own technicians. Additionally, since Gyrocopters operate on regular gasoline and our existing tankers cannot be used for refueling due to incompatibility, we have efficiently addressed this challenge by procuring two fuel tankers, each with a capacity of 1,000 liters. This self-reliant solution has proven to be the most cost-effective way to address the refueling issue. The

use of regular gasoline for Gyrocopters significantly reduces flight costs, making operational expenses incredibly economical. While the hourly flight cost for a helicopter is approximately US\$3,000, for a Gyrocopter, this cost reduces to around US\$35.

As a result of these economic advantages, Gyrocopters have been actively employed in aerial traffic control and law enforcement tasks and are expected to be utilized for many years to come. Currently, our inventory includes 3 Gyrocopters, which have collectively accumulated 750 flight hours, with 200 hours dedicated to traffic and road control flights. Throughout this period, the Gendarmerie Aviation Maintenance Personnel have performed 6 maintenance checks,

each lasting 100 hours, on the Gyrocopters. The cost of each maintenance check is estimated at 300 Euros. Two Gyrocopters are stationed at the Ankara Gendarmerie Aviation Group, while one is assigned to the Aydın Gendarmerie Fleet Command.

**Defence Turkey: Could you inform us about the total flight hours of the King Air B-350 Gendarmerie MAISR (Manned Airborne, Intelligence, Surveillance and Reconnaissance) Aircraft, Citation C680 Sovereign, and Gyrocopter aircraft in the inventory of the Gendarmerie Aviation Department, as well as the maintenance activities conducted on these aircraft?**

**Colonel Ruhi YÜKSEL:** Until 2016, there were no fixed-wing aircraft in the Gendarmerie Aviation Department's inventory. The first three King Air B-350 turboprop aircraft joined the ranks of the aviation department in 2016. Initially procured through service contracts, these aircraft were employed to meet the aerial reconnaissance and surveillance needs of the Gendarmerie General Command. After the initial 3-year service contract, the aircraft were officially integrated into the Gendarmerie General Command's inventory. Until then, the aviation department did not even have a single aircraft technician. However, with the commencement of the second service contract signed with TUSAŞ, technician training became a crucial aspect. Immediate technician training began, and over the course of the ongoing



Gyrocopter with tail number J-103 taxis on the runway, while an S-70i Utility Helicopter is approaching for landing

contract, experienced aircraft technicians were trained through on-the-job training, equipping them with valuable expertise. As the contract with TUSAŞ concluded, the aviation department, now with around 40 technicians, took over all maintenance, logistics, and sustainment activities for the B-350 aircraft, including procurement activities.

The maintenance management of the three B-350 MAISR aircraft was transferred to the Gendarmerie Aviation Department on November 23, 2022. Since the moment we stopped receiving maintenance services from the company (November 23, 2022), B-350 MAISR aircraft have completed a total of 1,100 flight hours. During this period, the Gendarmerie Aviation Maintenance Personnel conducted 5 major 200-hour phase maintenance checks on the B-350 aircraft. This transition has reduced the hourly flight cost from US\$3,500 (under the service contract) to US\$2,000.

The Citation C680 Sovereign Command and Control Aircraft entered service on July 12, 2017, and has accumulated a total of 1,147 flight hours to date. The Citation aircraft boasts higher performance compared to the B-350s but requires a longer runway, leading us to operate this aircraft from the Esenboğa Airport. It is transferred from the General Directorate of State Airports Authority under protocol and maintained in our custom-built hangar.

**Defence Turkey: Can you enlighten us about the recent maintenance**



King Air B350 MAISR in Gendarmerie Aviation Department Maintenance and Repair Hangar

**activities carried out for the AB-205(UH-1H), Mi-17, S-70, and T129 BATAK Helicopters within the inventory of the Gendarmerie Aviation Department?**

**Colonel Ruhi YÜKSEL:** In 2022-2023, a total of 33 Intermediate Level Maintenance and 13 Major Level Maintenance activities were conducted for UH-1 Helicopters. During the same period, for the Mi-17 Helicopters, a total of 4 Intermediate Level Maintenance and 3 Major Level Maintenance activities were completed. For the S-70 Helicopters, in 2022-2023, a total of 15 Intermediate Level Maintenance and 3 Major Level Maintenance activities were performed.

As for the ATAK Helicopters, a total of 7 Intermediate Level Maintenance and 4 Major Level Maintenance activities were carried out during the same timeframe. The maintenance operations for ATAK Helicopters take place in Diyarbakır.

The maintenance periods for Sikorsky helicopters consist of 10, 50, 100, 250, and 500-hour maintenance intervals. During the 10-hour maintenance, checks are conducted for oil leakage or any potential cracks on the helicopter. The 25 and 50-hour maintenance checks are considered intermediate maintenance phases. The 100-hour maintenance is more detailed and could take up to 2 days, depending

on the condition of the aircraft. Subsequently, the 250-hour Intermediate Level Maintenance lasts approximately one week. The 500-hour maintenance is performed as Major Level Maintenance and takes around a month to complete. During the 500-hour maintenance, the helicopter is essentially disassembled down to its smallest parts. All components, including the engines and rotor blades, are dismantled, and these systems undergo meticulous inspection. Depending on flight intensity, each Sikorsky helicopter generally undergoes 500-hour Major Level Maintenance approximately once every 1.5 years. For the Mi-17



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G.Pt.Col. Ruhi YÜKSEL & İbrahim SÜNNETÇİ

Helicopters, maintenance intervals are set at 25, 50, and 300 hours.

**Defence Turkey: Could we receive an update on the current status of the Night Vision Goggles (NVG) Flight Capability Project for the Mi-17 Helicopters, which has been entirely carried out through unit capabilities?**

**Colonel Ruhi YÜKSEL:**

Until now, flights with NVGs were only possible with our S-70 Helicopters. The increasing focus on natural disaster search and rescue operations in recent times has necessitated enhancing this capability. A project was initiated using solely our unit's resources to make our MI-17 Helicopters, which previously had only daytime flight capability, compatible with NVGs. With this project carried out entirely by our own personnel, 15 out of 18 helicopters in our inventory were adapted to fly at night, and flights were started. As part of the project, a total of 248 lamps were manufactured and assembled per helicopter, and fuse panel labels were re-manufactured.

Additionally, a crucial element for NVG flights, a digital radar altimeter compatible with night vision, was developed by one of our skilled technicians to fulfill this requirement. As part of this effort, a total of 108 dim/bright adjustment potentiometers were manufactured and installed.

We expect to complete the remaining 3 helicopters by the end of this year. The project is expected to result in a total savings of approximately US\$7,5 Million.



*Modernized Mi-17 Cockpit*

Furthermore, based on our experiences from firefighting flights, when approaching the sea or a lake to collect water, regardless of day or night, the downwash effect of rotor blades would raise the water into the air, causing it to hit the helicopter's windows directly. If the water were salty, activating the wipers would immediately dry the saltwater on the windshield, obstructing visibility completely. To address this issue, our technicians devised a project to install a water spraying mechanism onto the wipers of our MI-17 Helicopters, thereby enabling the windshield to be washed with water.

During firefighting flights, although external air temperature measurements read 38 - 40°C, the inside of the helicopter, exposed directly to the sun, can exceed 50°C. Taking into account the challenging nature of firefighting flights and aiming to reduce pilot and technician fatigue and

improve flight comfort, a mini refrigerator has been installed on all our MI-17 helicopters. This addition has bolstered endurance during intensive flight activities, enabling personnel to carry out tasks more efficiently.

**Defence Turkey: Can we inquire about the capacity of the Çelik Kanatlar (Steel Wings) Hangar, the construction activities of which began on November 23, 2020, and was officially inaugurated on March 31, 2022, establishing itself as Turkey's largest reinforced concrete maintenance hangar? Can you provide details about the new capabilities it has brought to the Gendarmerie Aviation Department?**

**Colonel Ruhi YÜKSEL:**

The Çelik Kanatlar Hangar is composed of three sections and boasts a covered area of 18,000 square meters. Spanning across a ground level and three additional floors, the hangar has the capacity

to accommodate up to 18 aircraft simultaneously. Within the central section, there is a 10-ton crane designed for conducting major maintenance operations. This crane is equipped with a movable structure capable of lifting engines and rotor blades. The other two sections are utilized as helicopter parking areas. Furthermore, we have workshops where our colleagues specializing in airframe, engine, and avionics both work and carry out maintenance tasks and repairs for the respective components. Moreover, our Çelik Kanatlar Hangar includes 52 working offices, a personnel rest area, a briefing room, a gymnasium, and a masjid.

Our Conference Hall, which can accommodate up to 240 people for educational and cultural activities, as well as our personnel dining hall, are located on the top floor. The Conference Hall has the technical means to provide simultaneous interpretation in four languages.

Constructed by the Housing Development Administration of Türkiye (TOKİ) in a mere 400 days, the Çelik Kanatlar Hangar is equipped with the latest technological features, embodying the concept of a smart building. To minimize potential damage to the aircraft, an automatic fire suppression system has been integrated into the hangar, capable of filling the hangar with 1,5 meters every of foam in 2 minutes when necessary.

**Defence Turkey: Commander, thank you for sparing your valuable time for our readers ■**