

The Romanian Air Force

A Two-decade Transformation – From MiG-21 to F-35

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Chief of the Romanian Air Force Staff

Please reflect on the history of the Romanian Air Force and its major accomplishments since joining NATO 20 years ago.

In April last year, we marked an important milestone in Romania's recent history by celebrating the 20th anniversary of joining the North Atlantic Alliance. At the same time, we all celebrated the 75th anniversary of establishing the most powerful political and military Alliance and the 50th anniversary of establishing NATO's first air headquarters, now Allied Air Command. I want to offer the readers an overview of the current missions and challenges faced by the Romanian Air Force (ROU AF), and I want to highlight the efforts of the ROU AF personnel to fulfil their responsibilities amidst the unprecedentedly complex international security environment.

Over the past decades, we faced hybrid, conventional, and asymmetric threats, crossing from the Baltic Sea to the Black Sea, from the North Atlantic to the Mediterranean, and involving non-state actors and failed states. On top of that, on 24 February 2022, we all witnessed Russia's illegal and unjustified invasion of Ukraine, which proved that a long-term land war was still possible on European soil. Therefore, we need to keep pace with the new security environment and hybrid challenges, academically and doctrinally, and our equipment needs to have the embedded flexibility to adapt to future demands. We must execute our missions in partnership with our NATO Allies and partners to reinforce the cooperation and, at the same time, to effectively contribute to the collective effort to address the threats against Euro-Atlantic security.



The Romanian Air Force's main mission is to establish an adequately manned, trained, and equipped force able to generate, employ, and sustain air power in combat operations together with the allies or coalition partners. Moreover, besides accomplishing its missions assigned within national or collective defence arrangements, the ROU AF also supports civilian authorities during humanitarian crises and natural disasters.



Since joining NATO in April 2004, the ROU AF has made significant strides. The ROU AF immediately began supporting NATO missions abroad, first in 2005 with the deployment of four IAR-330 SOCAT helicopters to Bosnia for a year in support of Operation ALTHEA. Then in 2006, Romania took the lead nation role of Kabul Afghanistan International Airport (KAIA) for four months. In 2007, we deployed four MiG-21 LanceR aircraft to Lithuania to secure the Baltic Nations' airspace as part of the Air Policing mission, and in 2008, we played a crucial role in providing security for the NATO Summit in Bucharest together with our US allies.

In April 2011, we assumed the lead nation role at KAIA once more for an entire year until the end of March 2012. The Romanian Air Force has also contributed to international peacekeeping efforts by participating in MINUSMA – the UN Integrated Multi-dimensional Stabilization Mission in the Republic of Mali, with an Air Force detachment consisting of 120 military personnel and four IAR-330 L-RM helicopters, from October 2019 to October 2020. Most recently, from April to July 2023, the ROU AF took part in the NATO-led enhanced Air Policing mission in the

Baltic States, with a detachment of 100 personnel and four F-16 Fighting Falcon aircraft.

Furthermore, this year, we will once more assume the enhanced Air Policing mission in Lithuania, and from April to July, we will contribute with our F-16s, along with our Allied partners, to safeguard the Baltic Countries' airspace. In addition, we provide support to the ALTHEA mission in Bosnia and Herzegovina from January to December 2025. This support will include four Puma 330 helicopters and 100 military personnel.

How does the Romanian Air Force use training and exercises to enhance interoperability and readiness for NATO missions and achieve its objectives?

It is worth mentioning that ROU AF assets and personnel are routinely involved in numerous multinational and bilateral exercises, including ADRIATIC STRIKE in Slovenia, LOYAL LEDA in Poland, ANATOLIAN PHOENIX in Türkiye, AMPLE STRIKE in Czechia, APROC in Spain, and WISE WOLF in North Macedonia, where



our IAR 330 Puma helicopters have trained on CAS, CSAR, SOF missions, and executed live firings. Exercises such as THRACIAN VIPER and THRACIAN STAR in Bulgaria, REAL THAW in Portugal, TLP in Spain, INIOCHOS, and RAMSTEIN FLAG in Greece have seen our F-16 aircraft participate in various missions and improve the interoperability of all participants while exchanging training concepts, doctrine, and multiple tactics, techniques and procedures specific to the air domain. In terms of Surface-Based Air and Missile Defence (SBAMD) training, the ROU AF has actively participated in multinational exercises to enhance operational readiness. Notably, Romania hosted RAMSTEIN LEGACY 24 in June 2024, where live firing and missile launches by different air defence systems from participating nations were the main ingredients, showcasing Romania's growing role as a key contributor to NATO's collective air and missile defence.

Since joining the North Atlantic Alliance, we've transformed the Air Force to accomplish the following objectives: achieve NATO's and EU's commitments,

Defending the national airspace is our main mission!

upgrading Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) systems, enhancing logistic support structures, and modernizing the force through new acquisition programmes. Our main goals were to develop an Air Force capable of performing a broad spectrum of tasks, including transport, Search and Rescue (SAR), Non-Combatant Evacuation Operations (NEO), air traffic management, reconnaissance, and, most importantly, protecting national and Allied airspace within the NATO Integrated Air and Missile Defence System (NATINAMDS).

What capabilities are you relying on to defend national and NATO airspace?

Romania plays a crucial role in maintaining security and stability in the Black Sea region, which has been strategically important for centuries. Our current capabilities and future enhancements are designed to address both national defence and regional security challenges.

Today, the core of the ROU AF is represented by our fighters (F-16 Fighting Falcon), helicopters (IAR-330



The Romanian Air Force only operates as a team!

Puma), transport aircraft (C-130 H, B, C-27J Spartan, and An-26/30), radars, and air defence systems (PATRIOT and Hawk), all of which are seamlessly integrated into our Air Command and Control (Air C2) system.

“...the ROU AF effectively contributes to homeland and alliance security by safeguarding its airspace...As we embarked on different missions abroad, we not only carried the legacy of Romanian peacekeepers but also represented the enduring values of integrity, commitment, and tenacity...”

We are committed to enhancing our operational capabilities through the multirole fighter aircraft procurement programme, projected to achieve full operational capability with three multirole fighter squadrons equipped with fifth-generation F-35 Lightning II Joint Strike Fighters (JSF), through a transition period covered by three F-16 squadrons. To date, in the first phase

of the programme, we have acquired 17 F-16 Mid-Life Upgrade (MLU) aircraft from the Republic of Portugal and have trained our pilots and technicians. The first squadron was declared operational in 2019 and has since performed Air Policing missions. There are ongoing activities to continue the programme; we expect that by the end of 2025, we will receive a total of 32 aircraft from Norway, 16 of them already delivered as of January 2025. Concurrently, we are training additional personnel, and at the same time, we are facilitating the preparations of our national defence industry to perform maintenance and logistic services for our fleet. The F-16 programme proves its strategic importance at the national and regional levels, strengthening Romania's capacity to contribute to the deterrence and defence posture in the Black Sea region.

Training is a crucial component of our daily operations, which is why we have launched a programme to enhance the capabilities of the IAR-99 aircraft in order to transform it into an advanced training platform. As we integrate the multirole F-16 aircraft into our inventory, the IAR-99 requires updated avionics and flight control systems to transition pilots through

to the F-16. This programme aims to upgrade 20 IAR-99 aircraft to a new configuration, enhancing the reliability of onboard systems and extending the aircraft lifecycle. We are pleased that this upgrade programme was predominantly introduced by our national industrial capacity.

Concerning movement and mobility, the Air Transport fleet is vital for sustaining our Armed Forces' operations and deployments and national humanitarian relief efforts. Four C-130 B aircraft established our initial airlift capability, further improved by four C-130 H models from the US and the procurement of seven C-27J Spartan aircraft. Their operational flexibility is essential for responding to both military and civilian requirements.

To support missions, the ROU AF operates five Puma helicopter squadrons in different configurations, from the gunship version to transport, Medical Evacuation (MEDEVAC), and Search and Rescue (SAR). The versatility of our helicopter fleet enhances our ability to conduct a wide range of operations, from combat and peacetime mission support to central and local authorities during emergencies or disasters and participating in international missions as a part of Romania's commitment. We have recently started an upgrade programme for the remaining helicopters in order to modernize the whole fleet.

Due to our constant drive to better equip our Air Force to address emerging security challenges and to contribute to a robust and resilient defence network in the Black Sea region, a significant acquisition programme was triggered with the decision to procure the long-range surface-to-air PATRIOT missile system. This programme aims to equip the Air Force with seven modern PATRIOT missile systems (3+ configuration), encompassing the missiles, C2 elements, and initial logistic support and personnel training. This system will contribute to safeguarding national airspace and protect vital strategic military and civilian assets. The first four systems were delivered by the end of 2023, and plans are in place to acquire three additional firing units in the near future. The ROU government has since donated one system to Ukraine in order to support their fight to defend their own territory and population.

As part of its commitment to fully implement the Integrated Air and Missile Defence (IAMD) concept, Romania is considering acquiring the Short-Range Air Defence/Very Short-Range Air Defence (SHORAD/VSHORAD) integrated weapon systems.

To maximize our defence capabilities, we have upgraded our digital radar stations such as Fixed Radar Surveillance (FPS 117), Transportable Radar Surveillance (TPS-79), Gap Filler, and TPS-77. We further aim to establish a reliable and sustainable C4ISR system.



ROU air defence was enhanced by the acquisition of four PATRIOT systems.



A Romanian F-16 performing fourth-, and fifth-generation integration with two US Air Force F-22s.

What do you consider as the key factors as you transition from legacy systems to fifth-generation aircraft?

The MiG-21 LanceR served as the backbone of the ROU AF for decades, maintaining Quick Reaction Alert (QRA) to address potential airborne threats. With its retirement in May 2023, this task has been gradually assumed by the F-16s, ensuring increased responsiveness and reactivity.

In light of the MiG-21 LanceR's decommissioning and the acquisition of 32 F-16 fighter jets from Norway's surplus, the Ministry of National Defence has identified the need to train, in a relatively short time, a significant number of Romanian pilots to operate the F-16 fighter jets. Efforts to identify appropriate F-16 training solutions within the Alliance showed that the existing facilities could not accommodate the rapid training of a large number of pilots. Thus, at the proposal by the Kingdom of the Netherlands, negotiations were initiated and carried out for signing a Letter of Intent (LOI) between the Ministry of Defence of the Kingdom of the Netherlands, the Ministry of National Defence of Romania, and Lockheed Martin, the manufacturer of the F-16, to establish and operate an F-16 Training Centre in Romania.

The F-16 Training Centre, the first project of its kind in Europe, marks a significant milestone for Romanian-Dutch cooperation and demonstrates the solidarity and determination of the NATO members. Moreover, the Centre will accelerate the training of the Romanian pilots and technicians to operate the F-16 fighter jets acquired from Norway and to obtain new qualifications for those who already fly and operate the F-16 in Romania. Last year, the first seven Romanian pilots graduated from the F-16 Training Centre in July, and in September, a new batch of pilots started their training programme. Intended initially for training Romanian pilots, the training centre is also open for the participation of personnel from NATO Allies and partners, including Ukraine.

The advancements we have achieved thus far would not have been possible without the unwavering dedication of our Air Force personnel. Consequently, our human resources play a crucial role, and one of our primary objectives is to guarantee that our airmen and airwomen are well trained and equipped to tackle upcoming challenges.

Promoting the military profession and career, along with the selection and training of our personnel, is essential for increasing the force structure manning level. We continuously review our training methodologies and syllabus to enhance situational awareness and leverage knowledge. Ultimately, our goal is to ensure that the right airmen are making the right decisions to execute the mission most effectively and maintain a robust Air Force committed achieving national and allied objectives.

In summary, how do you envision the Romanian Air Force as a force multiplier within NATO's deterrence and defence plans?

The enhanced Air Policing missions, enhanced Vigilance Activities missions, and, if necessary, Flexible Deterrence Options missions executed in partnership with our NATO Allies and partners reinforce our cooperation and, at the same time, demonstrate Romania's effective contribution to the collective effort to deter and defend against threats to Euro-Atlantic security. In this respect, it is worth mentioning that we have set-up cross-border agreements with our neighbours, Bulgaria and Hungary, to allow our F-16 fighters under NATO Air Policing command (controlled by CAOC Torrejon) to execute cross-border operations and vice versa. On the same line of effort, the Allies have collectively carried out enhanced Air Policing missions in Romanian airspace alongside Romanian fighter jets with frequent common training and exercising for ten years already.

Moreover, Romania has made a significant leap in advancing its defence capabilities, signing a landmark

protocol to launch the Romanian Air Force's transition to fifth-generation F-35 aircraft. The programme includes the acquisition of 32 F-35 Lightning II aircraft, marking a pivotal moment in Romania's defence modernization efforts. The agreement, finalized through a Letter of Offer and Acceptance (LOA) between the Romanian and USA governments, enables the purchase of the aircraft under the USA's Foreign Military Financing programme. The deal also includes pilot and maintenance training, further enhancing Romania's operational and technical capabilities.

Furthermore, we are in the advanced process of implementing the Agile Combat Employment concept, which represents a basic pillar of our national and NATO air forces' resilience, based on the cooperation of all Allies in the fields of command and control systems, armaments, infrastructure, and personnel. To date, we have aligned the majority of required CIS equipment, developed the necessary infrastructure, and started revitalizing the Aircraft Cross Servicing programme. Our agile and deployable force structure, supported by the ongoing modernization and procurement programmes,

will further strengthen our Air Force and the Alliance's deterrence and defence posture on the Eastern flank.

To conclude, the ROU AF effectively contributes to homeland and Alliance security by safeguarding its airspace. We will continue to upgrade and consolidate our combat capabilities to defend our national and rule-of-law values and respect our country's international commitments to bolster regional and Alliance security. As we embarked on different missions abroad, we not only carried the legacy of Romanian peacekeepers but also represented the enduring values of integrity, commitment, and tenacity. Our contribution to numerous missions executed under NATO, EU, or UN mandate is a testament to Romania's steadfast dedication to global security and cooperation.

As I have mentioned the anniversary of the Allied Air Command, I would also like to quote one of its former commanders, General Frank Gorenc, who said: 'Airpower is like oxygen. When you have enough, you don't have to think about it. When you don't have enough it's the only thing you can think about.' ●

ABOUT THE AUTHOR

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Lieutenant General Leonard-Gabriel Baraboi started his military career in 1998 and has flown IAK-52, L-39ZA, IAR 99 HAWK, MiG 21 LanceR and C-27J as a pilot and flight instructor, logging more than 1,400 hours. Throughout his career, Lieutenant General Baraboi has performed executive and command functions, both in Romania and in operational theatres.

Lieutenant General Baraboi has completed numerous military and civilian education courses. Most notably he is

a graduate of the US Air Command and Staff College in 2011 and the US Air War College in 2017 and holds several master's degrees. Between December 2017 and April 2023, he commanded the 95th Air Base in Bacău and the 71st Air Base in Câmpia Turzii. In May 2024, he was promoted from Deputy to Chief of the Romanian Air Force Staff. His guiding principle is 'Only as a team!'. He was promoted to the rank of Lieutenant General on 1 December 2024.