

## Holes in the skies over NATO's Central European member states

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Over the past few months, four Central European states have made decisions which will determine the shape of their air forces over the next decade. On 11 October, Romania signed a contract under which it will buy twelve used US F-16A/B multi-role fighter aircraft from Portugal. In August, Slovakia signed contracts with Russia's MiG for repairs and the limited modernisation of its twelve MiG-29 fighter aircraft currently in service. The Czech Republic entered into a preliminary agreement in July with Sweden on extending the lease of fourteen JAS-39 Gripen multi-role fighter aircraft (the new Czech government will hammer out the details following the parliamentary election). Bulgaria, which has been facing financial problems and political instability, in June postponed the purchase of new (non-Soviet) combat aircraft at least until the end of this year. If Sofia decides to buy any within the next few years, these will be not more than twelve relatively old and worn-out machines (most likely F-16A/B from Portuguese or Dutch army surplus). Given the fact that Hungary in 2012 made the same decision regarding its fourteen Gripen aircraft as the Czech Republic, there are good grounds to claim that the capabilities Central European NATO member states have to take action in airspace are durably limited.

The region's saturation with combat aircraft is the lowest when compared to the entire continent (with the exception of the Baltic states). Furthermore, the machines to be used in the coming decade will be the oldest and the least advanced technologically (all of them belong to the so-called "fourth generation", the roots of which date back to the 1970s). The problem with gaining full interoperability within NATO has not been resolved in its Central European member states. By modernising its MiG-29 aircraft, Slovakia is to say the least postponing the achievement of interoperability once again. Bulgaria will gain interoperability by buying any Western combat aircraft. However, it is very unlikely to introduce new machines into service earlier than at the end of the present decade. Since the introduction of new fifth generation multi-role combat aircraft or transitional 4+ generation machines in the region's air forces is unrealistic, the defence of the airspace of NATO member states in Central Europe can be termed an ever more porous sky.

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### Tribute to NATO

When the states of Central Europe joined NATO (the Czech Republic, Poland and Hungary in 1999, Bulgaria, Romania and Slovakia in 2004) they needed to adjust their armed forces to NATO standards, including technical standards,

in order to gain compatibility and interoperability. While NATO viewed a relatively simple replacement of means of communication and command in the new NATO member states as being sufficient for the ground forces and navy, in the case of the air forces, NATO considered full interoperability (capability to take joint ac-

tion during combat) would be achieved when their combat aircraft would be replaced with machines based on Western constructions.

Another stimulus for the modernisation of the stock of combat aircraft was the increasingly high costs for their purchase and use. This provided the grounds for changing the tactical requirements for this category of weapons.

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It was already during the decline of the Cold War that the focus was placed on developing a construction that would combine the capabilities required in classical air combat and attacking ground targets. The reduction in the number of types of combat aircraft in use made it possible to save a lot of money. In effect, most medium-sized and small NATO member states switched to using one type of multi-role fighter aircraft (the US F-16 being the most frequent choice) in the 1990s at the latest. The ultimate use of one type of aircraft (referred to as a multi-role combat aircraft or MRCA) is currently the standard in NATO (the exception being the United States, which uses several types of combat aircraft, and also the United Kingdom in the medium term). No evolution of this kind has taken place in Soviet constructions, on which the military equipment of the new NATO member states is based (work on multi-role aircraft commenced in Russia as late as in the 1990s).

The Czech Republic, Hungary and Poland were the first (and until October this year, the only ones among the Central European NATO member states) to have obtained multi-role combat aircraft based on Western constructions. In 2004, the Czech Republic leased fourteen Swedish JAS-39C/D Gripen aircraft, and was granted the right to use them until 2014. Hun-

gary also leased fourteen machines of the same kind, valid until 2016. Budapest signed two agreements: one in 2001 concerning JAS-39A/B (older generation aircraft) and one in 2003, under which newer JAS-39C/D aircraft were purchased. However, the Hungarian air forces received the Gripens as late as in 2006. Poland was the only one among these countries to buy a larger quantity of new aircraft, forty eight US F-16C/D Block 52, which at that time was the most cutting-edge version (they were supplied in 2006–2008). Despite the declared multi-role capabilities, the Gripen aircraft supplied to the Czech Republic and Hungary were classical fighters unable to attack ground targets. The aircraft purchased by Poland were the only ones which could be classified as multi-role.

The attempts made by Bulgaria and Romania since the mid-90s to acquire Western aircraft have been unsuccessful each time for financial reasons. Slovakia has not made any such efforts; its air force has been unalterably based on post-Soviet MiG-29 aircraft, which were upgraded in the previous decade in co-operation with Russia to AS standard. MiG-29 fighters, adjusted to achieve limited interoperability within NATO, have been the basic combat aircraft in the region for years. Apart from Slovakia, they are still in use in Bulgaria and Poland. The Czech Republic ceased to use MiG-29 aircraft already in 1995 (it was temporarily using older MiG-21 fighters manufactured in Czechoslovakia under a licence). Romania withdrew MiG-29 in 2003 (similarly to the Czech Republic, it used the post-Soviet MiG-21 construction upgraded by the Czech industry to Lancer standard, which partly met the requirements of a multi-role machine), and Hungary withdrew them in 2010.

### **Saving the flight capabilities**

At the beginning of this decade, the countries from this region, except Poland, faced the need to make binding decisions concerning the future of their air forces. Delaying such decisions

could result in a total loss of the capabilities to conduct combat operations in the air. The Gripen lease agreements signed by the Czech Republic and Hungary would have expired in the middle of the decade. In both cases the options included extending the lease or buying aircraft, not necessarily the Swedish ones (this option was being considered primarily in the Czech Republic). In turn, the post-Soviet MiG-29 aircraft were wearing out, and had to be modernised or replaced with other machines. MiG-21 in Romania could only be demobilised and replaced with newer aircraft.

Hungary chose the simplest option. Already in January 2012, it signed an annexe to the agreement of 2003 and thus extended the lease term by a further ten years (until 2026), and at the same time reduced the yearly cost. This solution was chosen due to the deteriorating financial situation in Hungary, which had originally intended to buy the aircraft from Sweden after ten years of using them. One disadvantage of this solution is the very high likelihood that the leased machines would not be modernised in any way, since at the turn of the decade, when fifth generation aircraft (American F-35) are to be introduced into operation in other NATO member states, these machines will already be outdated. The Czech Republic is in a similar situation. However, the preliminary agreement signed in July this year provides for the modernisation of the aircraft. One of the basic elements of this agreement is to be the upgrading of the Czech Gripen aircraft into full-grade MRCA through being adjusted to participation in air-ground operations. The modernisation is most likely to entail an extension of the lease period by twelve years, with an option for two more years (until 2026 or 2028). The annual cost has also been reduced for Prague.

The greatest progress has been seen in Romania. Its purchase of twelve F-16A/B aircraft, which had been modernised to reach the MLU (Mid-Life Upgrade) standard, from Portugal will not only allow it to maintain the capabil-

ity to conduct air operations within the next few years, but will also offer it interoperability within NATO. These machines will only gain operational readiness in 2017, when fifth generation (F-35) or 4+ generation aircraft (French Rafale and the British-Spanish-German-Italian Typhoon from the so-called "third tranche", on condition that radars with so-called "active electronically scanned array" are installed in the European consortium's machines) will be introduced into the air forces of Western NATO member states as standard. Therefore, the allies' interoperability with what are after all outdated Romanian F-16 aircraft will be uncertain. The fact that Bucharest has bought the machines which had previously been used not only by Portugal but also by the US air forces (three of them are to be supplied via Portugal directly from the US reserve) does not solve the question of the modernisation of the Romanian Air Force; it only slightly puts it off.

**The fact that Bucharest has bought F-16 aircraft, which had been used for several decades, does not solve the question of the modernisation of the Romanian Air Force.**

The promises which Romania's politicians have made that fifth generation MRCA (F-35) will be introduced into operation should now be seen merely as declarations of intent. Even if Bucharest could afford to buy machines of this class, considering the lengthy prototype work, the increasing costs and the need to carry out the orders already placed by the participants of the F-35 construction programme (including several Western NATO member states), Romania could receive the first aircraft of this class at the end of the next decade at the earliest. It will in all likelihood be necessary by that time to replace the F-16A/B aircraft it is buying now with another machine for a transitional period,

although officially the aircraft ordered now are to remain in operation until 2037.

None of the problems have been resolved by the decision Bulgaria made this June to delay the purchase of aircraft. It is likely to make a decision in the medium term analogous to the Romanian one (with similar consequences) and will buy between eight and twelve second-hand machines. These will most likely

### **Slovakia has no clear vision for the future of its air force once the post-Soviet MiG-29 aircraft are withdrawn from service.**

be the remaining Portuguese F-16A/B aircraft (this country could for financial reasons entirely withdraw from having combat aircraft) or the Dutch machines which have been recently withdrawn from service. However, it cannot be ruled out that Germany will renew the proposal it made in January 2012, offering Bulgaria eight Eurofighter Typhoon fighter aircraft from the “first tranche” used by the Luftwaffe. This offer can be accepted for other than military reasons (e.g. the German stance in the EU favourable to Bulgaria). However, this would be the least strategic choice – the first Typhoons are newer than the F-16A/B aircraft offered to Bulgaria, yet their construction enables them to be used only as classical fighter aircraft, exactly as is the case with the post-Soviet MiG-29 and the Czech and Hungarian Gripens in their present version. The purchase of these aircraft would also complicate possible logistic co-operation in the region.

The agreements on repair, limited modernisation (replacing part of the components with slightly more modern ones) and maintenance by the Russian manufacturer of Slovak MiG-29 aircraft signed in August this year should be seen as a costly postponement of binding decisions (until November 2016). The only positive aspect of these agreements will be the resto-

ration to operational condition of all Slovak fighters (at present, probably three out of the twelve machines are fully operational). However, it is worth reminding that the Russian manufacturer had already undertaken to conduct repair and maintenance of these aircraft by the end of 2015 in the agreement signed in November 2011 and that this has not been implemented. If the recently signed agreements are implemented, it is very likely that the MiG-29 aircraft will remain in use also after the present maintenance agreement has expired (unless it is extended) until the aircraft completely wear out by the end of the present decade. Slovakia has no clear vision for the future of its air force once MiG-29 aircraft are withdrawn from service. The most likely of the versions under discussion appears to be co-operation in airspace protection with the Czech Republic, combined with leasing as few as four Gripen aircraft from Sweden (it cannot be ruled out that Slovakia will try to join the talks on the extension of the lease term for the Swedish machines by the Czech Republic, which will be finalised after a new government is formed in Prague). In this case – considering the technical and training issues and above all the operational and maintenance costs of these machines – Slovakia would receive the key to JAS-39 most probably only after its MiG-29 aircraft have worn out. Furthermore, it is still not possible to rule out that ultimately Bratislava will apply for its airspace to be covered with NATO’s Air Policing mission, as with the one extended over the Baltic states, and will decide to have no combat aircraft, either temporarily or at all.

### **The hole in NATO’s airspace**

Even given the continuing reduction of expenses on military purposes seen over the past few years in NATO, and thus the reduction of the military potentials of NATO member states, the capabilities Central Europe members have to conduct operations in airspace are becom-

ing more and more symbolic. The Western allies have not consented to the adjustment of machines based on Soviet construction to be interoperable in NATO-led combat operations.

**When the machines based on Soviet construction are withdrawn from military service, a maximum of four combat aircraft squadrons will be in operation in an area of 570,000 km<sup>2</sup>.**

This means that within the next decade the countries from this region (excluding Poland) will have in total 40 combat aircraft (48-56 if Bulgaria purchases aircraft and if Slovakia enters into the lease). These will be not the most cutting-edge (a total of 28 Czech and Hungarian Gripens, and possibly four Slovakian ones) or *de facto* outdated machines (F-16 in Romania and possibly in Bulgaria). With the exception of Slovakia, whose decision made in August has perpetuated the limited presence of its air force in NATO, all the countries in the region have withdrawn or are planning to withdraw fighters based on Soviet construction from military service. In effect, a maximum of four combat aircraft squadrons will be in operation in an area of 570,000 km<sup>2</sup> in the coming years. Furthermore, these will be relatively small squadrons, formed by between twelve and fourteen aircraft each (the average number of aircraft per squadron being sixteen in NATO member states). Against this background, Poland, which has 48 quite modern F-16C/D aircraft and 30 MiG-29 aircraft, which have been modernised in co-operation with Israel (plus 48 Su-22 fighter-bomber aircraft, due to be withdrawn from military service in the middle of this decade) is an exception.

As compared to the other NATO member states, the total effort from the region's countries is similar to the one made by between a small and a medium-sized country (following

cuts, Holland's air force has 42 F-16 aircraft, and Norway has 57 F-16 aircraft; however, both of these countries are planning to introduce the first F-35 aircraft already before the end of this decade). Poland excluded, the total potential of Central Europe's combat air force is lower than that of most single European NATO/EU member states. From among the countries which have combat aircraft, at present only Portugal and Denmark – if reserve machines are not taken into account – have less aircraft. However, in aggregate Scandinavia, which shares with Central Europe the fact that it is a NATO/EU frontier region, has over 280 combat aircraft (not counting the reserve machines). Turkey, on the opposite flank, has more than 400 combat aircraft. Furthermore, the countries on the northern and southern flanks are currently implementing programmes aimed at obtaining fifth generation MRCA or upgrading the machines they have to the 4+ generation standard.

### Future co-operation?

Since the Central European countries under discussion are set to have a small number of combat aircraft in use, the issue of joint training for pilots (joint purchase and/or maintenance of advanced training aircraft) will have to be put on the agenda. The Czech Republic is the only country in the entire region to have maintained the capability to manufacture a relatively modern advanced training aircraft that can also carry out combat tasks (L-159 ALCA in stock in the air forces). If not more than one squadron of combat aircraft is to be in use, maintaining or gaining (except the Czech Republic) for one alone country to seek the capability of advanced training of combat aircraft pilots is uneconomical in all respects. Poland is an exception, even though it has put off the decision to buy more MRCA at least until the end of this decade (the Polish-US agreement of 2003 included the option of the purchase of a further 48 F-16C/D aircraft), since it intends to buy between eight

and twelve advanced training machines. It is therefore very likely that the countries from this region – unless they reach an agreement on the joint training of pilots (and technical staff) of combat aircraft and possibly on the joint purchase of adequate machines – will search for external services of this kind either in groups or as single states.

One factor which contributes to such co-operation is the fact that the countries in this region have similar combat aircraft. The constructions of F-16 and JAS-39 are in many regards similar, they have the same drive unit and use the same weapon sets, and, above all, they are designed to fulfil the same tactical guidelines. The differences regarding their joint operation and use are primarily of a commercial nature. The Czech Republic and Hungary do not own the machines they have. Therefore, if they want to make any modifications to the aircraft or use them outside their airspace, they must seek consent from Sweden (this issue was raised, for example, during the discussion on the possible engagement of the Czech Republic in the operation in Libya). Similarly, the United States

has been attempting to restrict the independence of F-16 users as much as possible for the benefit of its own industry. It is worth pointing out that the countries in this region at the beginning of the previous decade were planning to jointly choose one type of MRCA. If these plans had been fulfilled, co-operation would have been much easier. Nevertheless, the present situation has not rendered co-operation impossible, and the policy adopted by some countries facilitates co-operation (Bulgaria and Romania signed an agreement on co-operation in air policing operations in 2012). A real obstacle to co-operation could emerge if Bulgaria purchases the German Typhoon fighters, which have totally different construction and tactical assumptions. This obstacle would above all limit Sofia's co-operation capabilities, but it would also raise the co-operation costs for all the other countries in this region. However, even if Central European co-operation in maintaining, modernising and in the use of combat air forces turns out to be successful, this region's status as the worst secured part of NATO's airspace is becoming entrenched.

## APPENDIX

The numbers of combat aircraft (fighters and multi-role machines) stocked by Central European countries compared to the other NATO member states bordering on them and the other countries on NATO/EU eastern flank

	Western aircraft	Soviet aircraft	Planned type (by 2020)
<b>Countries in the region</b>			
<b>Bulgaria</b>	-	15 MiG-29A	F-16A/B**
<b>Czech Republic</b>	14 JAS-39C/D	-	JAS-39C/D
<b>Romania</b>	12* F-16A/B	48 MiG-21 Lancer	F-16A/B
<b>Slovakia</b>	-	12 MiG-29AS	-
<b>Hungary</b>	14 JAS-39C/D	-	JAS-39C/D
<b>Poland</b>	48 F-16C/D	31 MiG-29A	F-16C/D
<b>Other countries</b>			
<b>Finland</b>	61 F-18A/B	-	F-18A/B modernised
<b>Germany</b>	221 Typhoon, Tornado	-	Typhoon
<b>Norway</b>	57 F-16A/B	-	F-35
<b>Sweden</b>	134 JAS-39C/D	-	JAS-39E/F
<b>Turkey</b>	402 F-16C/D, F-4E	-	F-35

\* contracted

\*\* most likely

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