

## Russian Air Power Is Too Brittle for Brinksmanship

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The rapid and smooth deployment of the Russian Air Force to Syria has made a significant impact on that country's protracted civil war while prompting a re-evaluation of Russia's capacity for power projection. The risky move in Syria is testing the limits to which Russian air power may be used as a political instrument that yields high impact from a relatively small effort. The Russian leadership had already been employing this instrument in the Baltic region with the expectation that provocative demonstrations could put pressure on risk-averse European states to change their policy toward Russia. However, NATO strengthened its resolve (and its regional air defenses), forcing Moscow to reduce the belligerent flyovers. The act of using air force assets for political gain inevitably reveals problems with the inconsistent modernization of the Russian Air Force while exposing vulnerabilities in Russia's defense posture.

### **Riding the Air Force Hard and Wide**

Modern wars are supposed to be fought with intensive use of various air assets. However, the Russian Air Force experience in local conflicts, of which there have been many, is in fact quite limited. The August 2008 war with **Georgia** provided mostly negative lessons: six aircraft, including a Tu-22M3 long-range bomber, were lost to enemy and friendly fire. Moreover, few targets of importance were hit and the international media shined a spotlight on several bombs that fell on the peaceful town of Gori.

As part of the swift operation to occupy **Crimea**, the Russian High Command took care to capture the Simferopol airport but saw no need to establish an "air bridge" of any kind, as most of the "polite green men" from the Russian Special Forces arrived by sea or truck via the narrow Kerch strait. By mid-2015, a multi-task air force division was formed at the Belbek airbase near Sevastopol in order to protect "Fortress Crimea." In April 2014 and May 2015, Su-24 fighter jets from this base made mock attacks on the USS

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*Donald Cook* and *USS Ross* destroyers that were in neutral Black Sea waters. In July 2015, Russia announced plans to deploy a squadron of Tu-22M3 long-range bombers to Crimea as a countermeasure to the U.S. deployment of European missile defense system assets in Romania.

As for the hybrid war in eastern **Ukraine**, Russia has been unable to use its Air Force there, primarily because even a single air strike would make it impossible for the Kremlin to deny its direct involvement in the war. In the initial phase of hostilities, a key problem for Donbas rebels was how to neutralize the air superiority of the Ukrainian armed forces. The solution they found was to deploy Russian tactical air defense weapon systems in the war zone. The Ukrainian Air Force took casualties from these, and in July 2014 a Buk-M1 surface-to-air missile destroyed Malaysian Airlines flight MH-17, killing 298. After this tragedy, Ukraine discontinued the use of its air force, and the conflict assumed the old-fashioned character of trench and occasional tank warfare.

While the Russian Army sustains a large-scale deployment on the borders with Ukraine, the Russian Air Force has been free to engage elsewhere. The **Baltic** “theater” was the area with the most provocative demonstrations, including the risky close intercept of a U.S. RC-135U reconnaissance plane by a Su-27 fighter jet last April. In response to Russian sorties, NATO expanded its Baltic Air Policing mission (16 fighter jets from 4 states), began to make use of the Amari airbase in Estonia, and moved additional assets to the Malbork airbase in Poland. The Russian Air Force continued testing the region’s air defenses into the fall of 2015, not only of NATO members (like Denmark) but also neutral Finland and Sweden, although it carefully avoided even minor incidents close to German airspace. In July, NATO fighters scrambled to intercept a group flight involving four Su-34, four MiG-31, and two An-26 planes, but large provocative demonstrations such as this have not occurred since September.

The **Arctic** is another area where there has been an increase in Russian Air Force activity. Several Soviet-era air bases (including on Novaya Zemlya and Kotelny Island) have been reconstructed. A remarkable feat of projecting air power was the drop of 90 paratroopers from an Il-76 transport plane onto a floating ice camp close to the North Pole in April 2014 and again one year later. In May, Norway, Sweden, and Finland hosted the international Arctic Challenge 2015 air force exercise with more than 100 aircraft (including NATO AWACS planes); Russia responded with snap exercises involving 250 aircraft in the Central Military District in the newly-created Joint Strategic Command North.

### **Wings Over Syria**

The first delivery of Russian heavy cargo to Tartus was reported in early September. Four weeks later, the Russian Air Force began to fly combat missions from the hastily prepared Hmeymim airbase outside Latakia. The first month of the bombing went

remarkably smoothly, but sustaining a campaign of 30 to 50 sorties a day is logistically difficult (not to mention operationally senseless). The composition of the air regiment of about 50 aircraft (including a squadron of Su-25SM fighter-bombers and a squadron of Mi-24 attack helicopters) is best suited for close air support. Their use only makes sense as support in a ground offensive, in this case by Syrian troops, but the latter's attempts to advance have so far brought meager results. Expanding on this intervention is proving to be extremely difficult: the Russian Navy had to lease eight commercial transport ships to supply Russia's Syria operations at the current scale. The salvo of cruise missiles from the Caspian flotilla on Vladimir Putin's birthday was sensational, but Kazakhstan and Azerbaijan were not amused, so this type of long-distance strike has not been repeated. When it comes to costs, keeping the mission going is actually not that expensive—a conservative Russian [estimate](#) is \$2.5 million a day—but it is bound to eventually suffer a technical setback or larger disaster. Russia's "escalate-or-suffer" tactic is proving to be a bit of a trap. Putin may continue to talk about Russia's readiness to take risks, but it is doubtful he has the stomach to accept any type of real operational setback.

### **The Risks of Halfway Modernization**

Russia's sustained increase in Air Force activity has brought about a chain of dangerous—though rather predictable—breakdowns. In June-July 2015, no less than six aircraft (two Tu-95MS strategic bombers, two MiG-29 fighter jets, one Su-24M attack jet, and one Su-34 fighter-bomber) were lost in accidents or crashes. Fortunately, none of these happened in the course of missions that involved close interaction with NATO planes or ships; otherwise, there could have been repercussions. The Syria deployment has been spared catastrophe so far, but the crash of a MiG-31 fighter jet over Kamchatka at the end of October was a reminder of the risks. The technical failures and human errors that have caused all these crashes are a result of Moscow's demands for more exercises and demonstrations, as well as by a steady contraction of funding; logistics and maintenance are always the first to be cut in the search to save funds.

Funding problems have bedeviled Russia's "State Armament Program 2020" from the moment it was approved in 2011. The program's hugely ambitious goals (including 350 tactical aircraft and 1,000 helicopters) clashed from the start with rapidly-increasing production costs.<sup>2</sup> The interruption of cooperative ties with Ukraine in the spring of 2014 disrupted elements of Russia's Air Force rearmament program. For example, engines for the ageing Mil and Kamov helicopters were produced at the Motor Sich factory in Zaporizhye; the An-124 and An-70 transport airplanes were being developed in the Antonov design bureau in Kiev; and radars for the Mig-27 and Su-27 fighter jets were produced by the Novator radar plant in Khemlnytsky. Also, Russia had to write off its

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<sup>2</sup> See Dmitry Gorenburg, "[Russia's State Armaments Program 2020: Is the Third Time the Charm for Military Modernization?](#)," PONARS Eurasia Policy Memo No. 125, October 2010.

plan to create helicopter squadrons for two *Mistral*-class amphibious assault ships that the Russian Navy was going to receive from France when the contract was cancelled in late 2014. Finally, the huge cost overruns and technical challenges with the long-promised fifth-generation fighter T-50 (PAK-FA) compelled the Ministry of Defense to reduce its order to just 12 planes, instead of 52 as stipulated by the 2020 Armament Program.

While this master program was supposed to be overhauled by the end of 2014 into a new 2025 Armament Program, Russia's deepening economic recession allowed for only some ad-hoc revisions, made through bitter bureaucratic bargaining. One such revision concerns long-range aviation, which was always the weakest leg of the Soviet, then Russian, strategic nuclear triad. The original plan envisaged the development of a new PAK-DA strategic bomber, but the Tupolev design bureau was only able to commit to building the first prototype by the end of 2019. At its present rate of attrition, Russia's current fleet of Tu-95MS bombers will have to be grounded by the middle of the next decade. In order to close the gap, a decision was announced in May to resume production of Tu-160 bombers at the Kazan aviation plant with a target of 50 planes. The main problem with this is the restoration of serial production of NK-32 engines (designed in the late 1970s) at the Samara plant, since most of the accidents, including the explosion of a Tu-160 in September 2003 and the crash of a Tu-95MS in July 2015, were caused by failures of poorly serviced engines.

An emphasis on prolonging the service life of Russia's existing aircraft through technical modernization has resulted in excessive diversity within the Air Force fleet. Various modifications of basic Soviet-era models now co-exist uncomfortably. In the category of multirole/air superiority fighters, there are four modifications of both the MiG-29 and Su-27, as well as variations across the MiG-31, Su-30, and Su-35 platforms. This problem was aggravated in the first stage of the military reforms, when larger air bases were established that brought together squadrons of different types. One example is the newly-built 27<sup>th</sup> multi-task air force division in Crimea, which has squadrons of Su-27/Su-30, Su-24, Su-25, and MiG-29 jets; Mi-24, Mi-8, Ka-52 helicopters; and Tu-22M3 bombers. This makes logistics and maintenance extremely complicated. The air forces deployed to Syria are another such example.

Another problem within the military reform scheme is the radical reorganization of the military higher education system. The Zhukovsky Air Force Engineering Academy was merged with the Gagarin Air Force Academy and moved from Moscow to Monino, while the educational and scientific center of both academies is now located in Voronezh. Also, for several years there was no enrollment of new cadets, while more than half the professors resigned or were sent into retirement. This has severely disrupted the normal pattern of cadre organization. While many squadrons have a shortage of lieutenant-pilots, the dearth of technical personnel is more harmful in the short- to medium-term. While Russia's emphasis on intensive training might

compensate for the shortage of pilots, it does not solve the problem of insufficient qualified engineers and technicians.

### **Pragmatic Scaling Down Is Not an Option**

The Russian Air Force is caught in a trap much worse than the usual gap between tasks and capabilities. The urge to perform more demanding flight missions is growing fast, but funding is shrinking and the material base is deteriorating. Russia has attempted to scale down its rearmament plans, but this conflicts with the lack of reappraising the risks involved with continued high-intensity exercises and provocative demonstrations. In fact, every step in reducing targets for acquisitions comes together with greater steps in expanding other items the state orders.

The political prescriptions that make the pattern of Air Force modernization so incoherent and unsustainable are informed not only by an urge to achieve superiority but also by a profound concern about two major deficiencies in Russia's current force structure. The first is the lack of high-precision munitions. Russian propaganda praises the pinpoint accuracy of strikes in Syria, but on the tactical level a lack of "smart bombs" translates into a disregard for collateral damage. On the strategic level, there is a perception that Russia is vulnerable to a massive strike with conventional long-range high-precision missiles. This perception is aggravated by a second deficiency: Russia lags in deploying long-endurance unmanned aerial vehicles (UAVs) of the Predator RQ1/MQ1/MQ9 class. A combination of air-launched cruise missiles and drone strikes is seen as a threat that Russian air defenses would not be able to counter, at least in the near term. This feeds into a tendency to resort to nuclear weapons as a universal political instrument, which presumably compensates for Russia's conventional weaknesses.

Heightened nuclear rhetoric is not necessarily a sign of the Kremlin's readiness to experiment in turning Russia's nuclear arsenal into a usable instrument of politics. However, it is definitely a means to expand space for Russian maneuvering in its asymmetric and unbalanced confrontation with the West. While Syria has provided a useful distraction, Ukraine remains the main focus of this confrontation. A general decline in hostilities in the Donbas war zone is gradually turning into a losing proposition for Russia, and the High Command may find it imperative to regain the initiative by launching a limited offensive. It is always possible to score a small victory by achieving tactical surprise, but gradual improvement in the preparedness of the Ukrainian military has created a defensive deadlock. This cannot be broken by deploying a few battalion groups (as in the battle of Debaltsevo in February 2015), and a penetrating attack may only be possible with close air support. Russia's Air Force is capable of establishing effective air superiority over these battlefields, but this will change the character of the war from hybrid to conventional, making Moscow unable to deny its involvement any longer.

Russia's dual interventions in Ukraine and Syria generates a taxing demand for logistics and reinforcements. This combination means that Russia will be hard pressed to engage in any hybrid operations in the Baltic theater. Having assessed its long series of quasi-combat missions and NATO counter-measures in that region, the Russian High Command has apparently concluded that it cannot achieve any usable air superiority there. If a setback in Syria requires Kremlin strategists to find a quick "victory" in a different conflict arena, Georgia might be singled out as the most convenient target.

In sum, with Russian aircraft performing at the limits of "acceptable risk" and the Kremlin unable to revise its necessary but infeasible plans for military modernization, the fragility of the weakest link in Russia's military system will persist.