The aim of this paper is to examine and analyse the RuAF's present and future doctrinal and operational situation and perspectives, using as a basis its involvement in the Chechen Wars (1994 – 96 and 1999 – present) and the forgotten Afghanistan War (1979 – 89), and looking ahead to 2010 – 15

THE

Russian Air Force in Chechnya –

have lessons been learnt and what are the future perspectives?

By Major J Takacs Slovak Air and Air-Defence Force

More than fifteen years ago Mikhail Gorbachov, the new, relatively young and energetic General Secretary of the mighty Communist Party began his attempt to extensively reform the whole structure of the politically and economically rapidly declining Soviet Union. Without a clearly defined end state, goals, identified ways or available means this attempt completely failed as many similarly constructed reform efforts had also done in the past. He paradoxically became the first and the last President of the Soviet Union. The unsuccessful coup against Gorbachov in August 1991 could not save the old regime; on the contrary it expedited the collapse of the USSR. Fifteen new, differently 'independent' countries have since emerged from the ruins of the biggest state formation of the world. The main successor state, Russia, was literally thrown back hundreds of years, whereupon she started her long lasting struggle to re-create and safeguard an imperium based on fear, and where inner cohesion was maintained mainly by force, manipulation, division, and by adapting various levels of religious and ideological pressure.

Boris Yeltzin, the first Russian President (1992-1999), inherited a widespread crisis situation that was poorly managed by his administration. Extensive reforms, not only of the political and economical sphere, but also the whole society, turned out to be inevitable. The new Russia, with her fragile democracy, could not rely any more on the old-style power approach towards its allies, neighbours and other partners on the international scene to retain at best a fraction of her previous influence. There were no longer such 'useful' institutions like the Warsaw Pact, COMECON,[1] former Soviet buffer states in western and southern regions of Russia and '*special relations*' with many Third World countries. The once mighty and feared Soviet Armed Forces in their current Russian 'format' were no longer the solid pillar of the political system and the whole society as they used to be. Moreover, Russia had to cope with a huge number of international commitments, treaties and obligations, most of which transferred from the former USSR. These commitments created very tight and legally binding boundaries that Russia could move within.

Russia had been trying hard to form a defence policy and an appropriate military doctrine consistent with its foreign and domestic policy, economic resources and the aforementioned commitments to the international community. Russia had remained a major player on the international scene, but was no longer a real superpower. The first Military Doctrine from 1993 (MD1993) failed to recognize this reality. It was based on false perceptions and unrealistic expectations. Moreover, the long and painful period of transition and reform of the armed forces was re-defining an appropriate military doctrine with an '*open architecture*' more closely reflecting this period. The MD1993 did not become a system of views on the prevention of wars and armed conflicts, nor on the development of the Russian armed forces, nor the country's preparation to defend itself. It did not examine threats to the military security of the state or the use of armed forces to defend the state's '*vital interests*'. This doctrine did not answer questions emerging from the difficult situation of the Russian Federation (RF) as a state, its armed forces and the most negatively affected military branch, the Russian Air Force (RuAF). The MD1993 also failed to provide the necessary rudder to control the armed forces, proving to be anachronistic and unrealistic.

THE RUAF PRIOR TO THE FIRST CHECHEN WAR

Within quite a short period of time (1992-93), the former Soviet Air Force was transformed into the RuAF, which was significantly smaller in terms of numbers, size and more importantly, in operational resources. The first '*earthquake-like*' changes after the disappearance of the USSR brought about a huge decrease in numbers of pilots, from about 20,000 to 13,000, and aircraft from 13,000 to 5,000. Russia lost many of these assets to the Ukraine and Belarus; approximately 37 percent of all former Soviet Air Force MiG-29s, 23 percent of Su-27s, half of Il-78

The Ukranian Air Force operates approximately 60 Sukhoi Su-27 FLANKER aircraft.

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flight refuelling tankers, almost half of Il-76 transport aircraft, most of the Tu-95s, and all but three of its flight-worthy Tu-160 strategic bombers went to these countries.[2] These assets were the best and most modern combat equipment in the RuAF inventory. However, another very sensitive loss was the dismantling of the massive integrated air defence and air force structure built up during a long period of time and spread throughout the former USSR and in many Warsaw Pact allied countries.

The most important commitment inherited from the Soviet Union was the Conventional Forces in Europe Treaty (CFE), which came into force in July 1992. It had an immediate effect on the composition of the newly emerging RuAF. In order to retain as many aircraft as possible, Russia joined the Tashkent Treaty (May 1993), which divided the former USSR's quotas among the former Soviet States. These treaties together meant the reduction of aircraft to 3,450 by the year 1995.

Russia's aviation manpower also underwent an unprecedented decline from its former Soviet level. From a total of about one million personnel in the Soviet Air Force, Air Defence Forces and naval aviation, the overall number for the three Russian Air Arms by 1998 was down to 335,000.[3]

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While numbers of aircraft, personnel and equipment were dramatically falling during huge defence budget cutbacks, the organizational structure of the new RuAF remained practically the same as it was under the previous Soviet era.

General Pyotr Deynekin, the CinC of the RuAF (1992-1997) made some attempts in 1993 to gain greater coherence and efficiency in the RuAF organization by rearranging the Frontal Aviation Command and creating a new Reserve and Training Command. At the same time, he left untouched the Long Range Aviation and Military Transport Aviation Commands. The Air Defence Forces also retained their separate service status until 1998. These changes, however, were aimed to consolidate the evolving crisis situation rather than lay down a firm base for future deep and systematic reforms.

Traditional Soviet military doctrine provided air power with only a supporting role in a combined-arms type of war fought mainly by infantry and armoured forces. However, the 1993 doctrine outlined a shift in the operational focus for Russian armed forces from theatre offensive warfare to regional power projection, where air power could naturally play a very important role. The success of Coalition air operations against Iraq in the Gulf War clearly helped, at least to a group of progressive thinking Russian military experts, who recognized and acknowledged the capabilities of air power, when it was properly used, in determining outcomes of joint operations. Unfortunately, this recognition and acknowledgment had not materialised in the RuAF's structures, equipment, training and operational and tactical approaches before the first Chechen War, and there still remains a long way to go (as we will see later).

In 1994, the RuAF Central Research Institute published an unprecedented analysis describing the RuAF's roles, missions, organizational status and force development plans up to the year 2015. This analysis openly concluded that the RuAF's current structure, aircraft, weapon platforms, its industrial support, its deployment, basing and maintenance infrastructure, its command, control, communications, intelligence and its redeployment capabilities were completely inadequate to respond to the requirements outlined by the MD1993.[4]

Few months after publication of the analysis, the RuAF took part in a conflict in Chechnya (known as the first Chechen War in 1994-96), which fully bore out all the problems and shortcomings described in this document.

AIR CAMPAIGNS

The origins of the Chechen '*problems*' were very complex and dated back to the period of Russian expansion in the Caucasus in the 18th and 19th Centuries. Since the forced annexation to the Russian Empire, the Chechens never willingly accepted Russian rule. They utilized, in more or less organized forms, every possible opportunity to get rid of Russian control; unsurprisingly, this happened again in 1991 in the wake of the USSR demise. Although Chechnya was legally a part of the Russian Federation, it remained a '*foreign body*' inside Russia. The tragedy results from the inability of both sides to recognize each other's interests and establish conditions for long-term, mutually acceptable political solutions.

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Chechnya declared itself independent from the Russian Federation in September 1991 under the leadership of Dzhokhar Dudayev, a former Soviet bomber pilot. When several Russian-backed attempts to overthrow Dudayev's government and reinstall a pro-Russian one had failed during 1993-94, a wide-scale conventional military operation became the only '*available*' solution to this problem. Whilst making preparations for this operation, Russian political and military leaders had the opportunity to take full advantage of the lessons which could be learnt from a number of recent conflicts, with or without Russian involvement. Knowledge and ramifications of wars, campaigns and conflicts, like those between Arabic states and Israel (1967, 1973, 1982), the Afghanistan War (1979-89) and the Gulf War (1991) offered an excellent

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starting point for creating a modern and firm doctrine with both a theoretical and operational basis for a RuAF emerging from the ruins of the former Soviet system. All of the aforementioned campaigns were analysed to '*death*' by the most important and influential military academies such as the Frunze Military Academy, the Gagarin Military Air Academy and the Military Academy of the General Staff. It was not surprising given the Russian preoccupation with military theory. What was, however, less understandable was the fact that lessons learned from previous operations could only slowly and cautiously find their way towards practical military applications. Closer examination of the air operations in support of the land forces engaged in destroying rebel resistance throughout the Chechen conflict, indicated a repeat of all the old problems and mistakes so apparent during the Soviet era multiplied by turbulences caused by the ongoing military reforms of the RuAF.

Analysis of the '*Afghan experience*' demonstrated many of the fundamental problems associated with air force operations, such as the inherent inflexibility of air and ground crew training blinded with formalism and stereotypic approaches. Many of the lessons learned in Afghanistan were ignored, highlighted problems remained unresolved or no solutions were found. The Air Force Command failed to capitalise on the enormous potential gained through the combat experience of thousands of pilots, ground support and maintenance personnel. To minimize the possible '*bad impact*' of the Afghan veterans on the moral and tactical training programs of combat units, they were spread all over the Soviet Air Force structure. Therefore, changes in standard and rigid operating procedures were insignificant, remained restricted to the Afghan combat theatre itself, and not implemented in Air Force training schemes.

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Although the first Chechen conflict was clearly a failed attempt by Russian ground forces to suppress the Chechen rebels with overwhelming power, the RuAF played an important role either supporting the ground contingent or conducting independent offensive air operations. This conflict offered a test of the RuAF's primary role expressed in the MD1993, which required sufficient air power projection into areas of interest alongside the periphery of the former Soviet Union.

Air operations were conducted mainly by units from the 4th Air Army deployed on a number of air bases of the North Caucasus Military District (NCMD) reinforced with frontal, transport and long-range aviation assets. Assets of the separate Air Defence Aviation (ADA) and helicopters of the Army Aviation (AA) took part as well. Problems of co-ordination among these different units were further complicated by the involvement of helicopters used by troops of the Ministry of Internal Affairs (MIA). By the end of November 1994, almost 140 combat aircraft,[5] 55 Army Aviation helicopters,[6] up to 30 transport aircraft[7] and 12 Mi-8 helicopters of the MIA were dedicated for air operations against Chechen rebels. Numbers of sorties carried out by specialized reconnaissance version of the Su-24 (limited to carry out only visual and photographic recce) were flown to build up a current picture of Chechen forces' deployment, their movements, status of their air and air defence assets. As it later became obvious, information obtained by this way was neither precise nor flexibly distributed to fighting units; therefore it added very little value. This was even more evident during operations in urban areas, mainly in Groznyy, where '*old fashioned*' airborne reconnaissance methods were completely ineffective and were only partially useful for battle damage assessment (BDA).

Chechnya inherited about 250 aircraft[8] from the Armavir flight school. The vast majority of them were in poor flying condition, with very limited combat value.[9] They were deployed on three airfields: Kalinovskaya, Khankala and Groznyy-Severnyy. Moreover, Dudayev's '*Air Force*' could only rely on less than 40 inadequately trained pilots. However, the RuAF's first step was to eliminate this threat of possible Chechen air attacks on Russian territory. In a three-day airfield attack operation, the RuAF managed to destroy or neutralize all of the Chechen air assets on the ground, mindful of the need to keep damage to runways, taxiways and airfield installations to a minimum for follow-on redeployment of RuAF units closer to areas of operations. This task was a relatively easy one, bearing in mind that Dudayev's forces were not able to pose any substantial counter-air challenge with their limited, antiquated air defence weapons.[10] Typically flights of four Su-25 Frogfoots in standard tactical formations were used in this operation delivering free-fall, high explosive (HE) fragmentation bombs with a combination of 57mm, 80mm and 240mm unguided rockets. These aircraft, thanks to their massive armour protection, duplication of vital systems and relatively good manoeuvrability close to the ground, were well suited for the mission. In this phase of operations, Chechen rebels did not manage to cause any losses or substantial damage to the attacking aircraft with their small arms and sporadic anti-aircraft gunfire.

Rough and tough; the virtually indestructable Su-25 'FROGFOOT'.

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Aircraft from the Russian Air Defence Aviation from the end of December 1994 were constantly monitoring Chechen airspace supported by the A-50 Mainstay AWACS platform. To prevent any transport of military assets by air to the rebels, one to three pairs of MiG-31 Foxhound or Su-27 Flanker interceptors were kept on round-the-clock combat air patrol missions (CAP) over Chechnya. Air Defence radar companies and platoons were also covering low and very low level gaps in the overall radar picture. There was no real recorded attempt to provide any support for Chechen fighters from any country by air throughout the conflict. These preliminary measures taken by the RuAF and Air Defence Aviation allowed Russian troops to conduct ground operations without any Chechen interference from the air. Despite Russian air superiority, and the expectations of RuAF and army aviation high command, Chechen forces were still able to cause high losses to the enemy's air supporting elements, as the follow-on stages of the conflict revealed.

Russian air campaign planners once again underestimated the 'power' of the weather. Winter months in this part of the North Caucasus were extremely severe with long lasting ground fogs, blowing snow, strong icing, heavy cloud build-up, low cloud ceilings and high top levels

The next phase of the air war began in the middle of December with the advance of Russian ground troops towards main Chechen strongholds around and in the capital city Groznyy and nearby important towns of Argun and Gudermes. Russian air campaign planners once again underestimated the '*power*' of the weather. Winter months (December, January and February) in this part of the North Caucasus were extremely severe with long lasting ground fogs, blowing snow, strong icing, heavy cloud build-up, low cloud ceilings and high top levels. Slowly advancing ground troops were struggling with small rebel units, which flexibly changed their positions and fighting tactics,[11] without much-needed close air support (CAS). The weather made it impossible to use Su-25s and Mi-24s for their primary role of CAS (with no all-weather, precision weapon delivery capability and not least without adequately trained crews). Under these conditions, the RuAF could employ only its Su-24s in day and night medium altitude

radar or inertial bombing through clouds. The inaccuracy of these weapon delivery modes resulted in many casualties and collateral damage to their own troops and was indiscriminate against the Chechen civilian population as well. In these early stages of the Chechen war, forgotten lessons from Afghanistan, well-known and widely published experiences of other modern air forces in recent conflicts elsewhere, were frequently recalled through the painful failures of Russian air power. Four years of rapid decline in pilot proficiency, under-funded aircrew training,[12] a small percentage of pilots with night, all-weather, precision weapons delivery preparedness could only end in poor performance. A partial solution was found in the creation of small combat units from the most experienced weapon instructors and test pilots from different RuAF regiments, weapon and flying training centres. This '*concentration*' of force and experience helped to substantially increase the effectiveness of air strikes against high-value targets of Chechen infrastructure, communications and transportation network and some of the militarily and politically important buildings.[13]

Short or longer periods of improved weather were utilised to provide CAS to ground forces struggling to set up the tempo of operations regardless of the overwhelming superiority in numbers of fighting personnel (about 8:1), equipment and firepower. CAS operations in Chechenya once again revealed the problems in co-ordination between ground and supporting air operations. Many of the difficulties experienced in Chechenya were not at all new. Ten years of the Afghan War clearly showed how important well-trained, equipped and able to cope with the demands of the combat environment, forward air controllers (FAC) were for effective and efficient CAS. The RuAF and Army Aviation allocated some forty FACs to ground units to provide the crucial link for co-ordination between ground and air operations. With no previous combined training and operational procedures, the effectiveness of FAC-controlled CAS missions remained low throughout the Chechen conflict and produced numerous '*blue-on-blue*' incidents with many friendly casualties.[14] To make things even worse, poor communications, navigation and transportation equipment further undermined the conduct of CAS operations. Chechen rebels operating the same military '*hardware*' as their Russian counterparts were able to intercept and monitor most of the radio frequencies used by Russian forces. They also made special efforts to find out the FACs' positions and eliminate this important link in the chain of air-ground co-operation. Moreover, information about ground force concentrations, weapons and enemy positions were exploited by Chechen commanders either to quickly change their positions to avoid CAS attacks, or engage Russian positions with artillery and mortar fire. The lack of secure communications and data exchanging lines made many Russian ground force unit commanders unwilling to transfer information through radio links. For the same reason, they were also reluctant to call for CAS, thus severely reducing flexible and joint combat capabilities to deal with Chechen fighting tactics.

The next phase of the campaign can be characterized by the shift towards air interdiction operations. The small number of politically or militarily significant targets that were destroyed or damaged by the RuAF throughout Chechenya had no visible impact on the rebels. They were operating in small groups, exploiting every opportunity and advantage offered by the terrain, weather, and weapons in their possession along with utilizing urban areas to wear down Russian troops. The RuAF lacked the

conceptual and doctrinal framework determining air power utility to contribute to urban warfare.[15] This was clearly visible throughout the Chechen air campaign. Army Aviation commander in chief, General Pavlov, expressed this problem stating that "urban combat is not suited to helicopters". The same applied to fixed wing assets of the RuAF. Some '*solutions*' were, however, found in the form of massive, indiscriminate bombing of Chechen cities, infrastructure and transportation lines to support ground troops overcoming the rebels' resistance. Thousands of casualties and widespread suffering of the civilian population resulted in adverse reactions from the international community, and surprisingly even on the changing domestic Russian political and military scene, against this method of air power '*application*'. Precision weapons played a limited role in the RuAF's campaign in Chechenya despite their well-known effectiveness and the possibility of minimizing collateral damage.[16] This was mainly due to their high cost, limited number and small percentage of frontline pilots with the appropriate proficiency to use them effectively. Nonetheless, lives and properties of Chechen civilians were valued as little as those of the rebels and there were no special measures taken to avoid unnecessary suffering of the civil population.[17]

Despite the well-known shortcomings and trade-offs revealed by air campaigns waged in these conflicts, the overall positive contribution of air power has proved undisputable

The first Chechen War was in many ways a repetition of the same failures in employing air power in a limited, low intensity conflict, as in Afghanistan during the previous decade. Despite the well-known shortcomings and trade-offs revealed by air campaigns waged in these conflicts, the overall positive contribution of air power has proved undisputable. The most important lessons learned and re-learned in the first Chechen War included the need for complex measures to maintain air superiority and minimize high-value air asset losses in a combat environment with no opposing air force, no integrated air defence systems, but substantial numbers and range of different mobile anti-aircraft weapons.[18] In the absence of ISTAR [19] coverage, it required much flexibility to obtain timely and accurate information along with tactics matching those of the adversary. This war revealed yet another important finding. Although the RuAF was able to maintain its superiority throughout the war, it was much less successful in preventing the rebels from exploiting commercially available communication assets such as cellular phones and radio transceivers to carry out command and control (C2). The RuAF made only a few isolated attempts to employ hi-tech precision weapons against key targets, interrupting the rebels' C2 system and providing air support

integrated with the advance of ground forces. Vague doctrinal fundamentals and ambiguous operational guidance, without tactical solutions, backed by low-level training, inevitably led to poor performance and extensive losses even when a reasonable number of adequate air assets and weapons were available from the RuAF's inventory to cope with the challenges of the war. The first Chechen War showed that the RuAF was still far from able to effectively and efficiently undertake complex and comprehensive tasks and missions in low intensity conflicts.

At a cost of huge military and civilian losses, Russian ground units managed to occupy Groznyy and the other major towns in Chechenya in the first half of 1996. Due to massive and intensive counter attacks launched by the rebels, Russian troops were forced to withdraw from Chechenya in August 1996. The peace agreement gave the Chechen Republic an undefined independence within the Russian Federation. Both sides were completely dissatisfied with this situation and the next attempt to find a long-term solution was just a question of time. Based on the antagonistic Russian and Chechen positions, the only open option was through military force. Tension reached a dangerous level in August 1999 after numerous Chechen incursions into the neighbouring Dagestan and a series of terrorist bomb attacks in Russian cities. The follow-on, large-scale campaign carefully orchestrated by a more jointly thinking and working task force command, achieved most of the planned objectives by the beginning of March 2000.[20] Chechen guerrillas were pushed back into the southern mountainous area, losing all their important military and support bases.

Although this war is far from over, some important changes can be identified in the employment of RuAF in this current conflict. First of all, although the task force was again set up of units and formations controlled by the Ministry of Defence (MOD), the Ministry of Internal Affairs (MIA), Federal Security Service, Ministry for Emergencies and so on, through the new concept of "Temporary Operational Groupings" and under one unified C2 structure, the MOD managed to maintain a more effective and

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streamlined chain of command throughout the period of intensive military operations. The main result of this was a more manoeuvrist approach of Russian forces along with the ability to dictate the tempo of operations, which was in sharp contrast with the first Chechen War.

Secondly, since 1997, the reform of Russian armed forces moved on a strategic level as well. Old Military Districts (MD) with their huge administrative and bureaucratic structures had been re-configured into “Operational-Strategic Commands”, which were intended to command all the armed forces on their territory. Although this concept is still evolving, the North Caucasus MD has been able to more flexibly meet the challenges of the second Chechen War waged inside its territorial responsibility.

Thirdly, down to the tactical level, this latest conflict was a confirmation of substantial changes in regiments, battalions and sub-units with much evidence of greater tactical sophistication. Nethertheless, the quality of conscripts (on which Russian ground forces are mainly based) had not improved since the first Chechen War and their ability to match Chechen guerrillas, especially in close combat, was still unsatisfactory.[21] Air power had been employed to minimize contact battles, generating massive firepower and creating favourable conditions for ground troops’ advance. Almost 80% of all fire missions had been carried out by fixed or rotary wing aviation and only about 15% by ground based artillery.[22] Air support of troops in the demanding form of CAS proved not to be any better in this conflict. The lack of adequately trained and equipped forward air controllers (FAC) remained a serious problem. However, more FACs have since allocated to battalions and companies, thus increasing the responsiveness of CAS to tactical commanders.

It is also worth mentioning that during this conflict the RuAF and the Army Aviation conducted some experimental trials of new weaponry in a limited combat environment using the modernised and improved version of the Su-25TM ‘Frogfoot’ attack aircraft and the Ka-50/52 and Mi-24N attack helicopters. However, except for some very vague information regarding the actual combat effectiveness of these aircraft expressed in terms like “they performed 5 or even 10 times better than their predecessors”, no authentic evaluation results were revealed. Given the well-known Russian defence budget misery, there are no plans to procure any of the aforementioned aircraft or helicopters in significant numbers, at least in the next few years.

Finally, while in the first Chechen War, the Russian military authorities completely lost the information war as well; however, in this recent conflict they have been performing arguably better. Russian public opinion was not prepared for the first war; the MOD’s press centre totally underestimated the possible impact of the domestic media on the Russian population. Russian military leaders treated the press with little respect; on the other hand, the Chechens enabled the media to cover most of the evolving situation, with mainly scenes of destroyed Russian equipment and dead soldiers. They also fully utilized the power of the images showing bombed cities and masses of refugees. The result of this was a ‘*public relations disaster*’.

In the early stages of the second Chechen conflict, having properly analysed the previous ‘*disaster*’, the Russians won the information war. However, as the conflict went on, it became more and more difficult to maintain an intensive information campaign and the Chechens are ruthlessly exploiting every gap and shortcoming in it.

KOSOVO, CHECHNYA AND THE NEW MILITARY DOCTRINE

NATO's 78 days' intensive military campaign "Allied Force" against Yugoslavia in 1999 deeply and seriously affected the political and military establishment of Russia. It was seen as a humiliation and a '*spit in the face*' for Russia.[23] The period of stagnation and rehabilitation after the first Chechen War was replaced by a new wave of reforms and further downsizing in Russian armed forces.

As mentioned before, the 1993 Military Doctrine was not a coherent guide for the Russian armed forces to deal with possible future military challenges. Neither did the 1997 National Security Concept shed any light on the way to approach current and future security issues. The tension between the old Soviet legacy and new circumstances and realities remained. Desperate attempts to maintain a great power status with global reach have been seriously under-funded. These problems, multiplied by the ongoing economic and social reforms and underpinned by the very fragile nature of Russia's emerging democracy, inevitably led to the need to rethink security and military ramifications. Revised versions of Russia's National Security Concept (approved by a Presidential Decree in January 2000) and the Russian Federation Military Doctrine (approved by a Presidential Decree in April 2000) were aimed to more closely match and tackle possible external and internal threats during a period of transition of Russia into a politically and economically stable, democratic statehood. While still regarding itself as a major power with global influence (seen primarily through its massive strategic nuclear arsenal), the main emphasis in these documents was placed on the identification of internal and regional threats (mainly in areas inside or close to the borders of the former Soviet Union). This theoretical and conceptual appreciation of probable future military challenges, though painfully slow, is finding its way into strategic and operational outcomes, as the recent Chechen conflict has revealed. Air power is seen as not merely a support element of ground troops but as a force, which can be decisive when utilized in an effective and efficient manner.

The RuAF performed arguably better during the opening phase of the second Chechen War. Partially based on previous experiences from Afghanistan, from the first Chechen War and partially on lessons learned by the Allied Air Forces in the Gulf and in Kosovo, the RuAF's operations were more focused, coherent and integrated into the overall campaign plan. Except for the occasional employment of precision-guided munitions (PGM), the bulk of firepower was projected through non-precision bombs and rockets, thus confirming the existence of a substantial technological gap between the RuAF and its most developed NATO or Western counterparts. This gap is likely to remain or even to widen in the foreseeable future. Despite these well-known shortcomings, the RuAF's role in low intensity conflicts, and local or regional wars, will certainly rise, bearing in mind the framework given by the 2000 Security Concept and Military Doctrine.

FUTURE PERSPECTIVES

At the end of Yeltzin's presidency (1998-99), military reforms were both inconsistent and lacked any systematic, conceptual

approach. Continuing economic problems, miserable financial funding and budgeting further reduced the effectiveness of this process. The new President of Russia, Vladimir Putin (elected in March 2000), promised in his political programme to enhance and boost the reforms of Russia's armed forces. He seemed to clearly understand the importance of desperately needed complex and radical changes in the whole defence structure of the Russian Federation. Two key principles were recognized by Putin's administration as a basic requirement for any feasible and successful military reform. First of all, that any measures taken during a comprehensive process of reforms must be backed by a realistic and balanced economic assessment aimed to use available funds much more efficiently. Secondly, that the whole structure of the armed forces should correspond to current and foreseeable future threats. Nothing revolutionary new, rather a less politicised, more pragmatic and realistic approach.

The earlier-mentioned National Security Concept along with the Military Doctrine, still contain elements of Cold War style perception of some of the external threats (like NATO's capability to project out-of-area operations and its enlargement especially towards Russia's western borders), and are a '*product*' of Russia's changing vision of its own vital national interests. We need to refer here to visions rather than exact and precise definitions because Russia has still a long way to go down the '*doctrinal road*'. The Military Doctrine provides the means and basic guidance on the use of military forces, answering the *when, where* and *how* questions. It describes the goals of the use of Russian armed forces as follows:

- *in a large scale (regional) war in the event that it is unleashed by a state (group or coalition of states): to protect the independence, sovereignty and territorial integrity of the Russian Federation (RF) and its allies, to repulse aggression, to effectively engage the enemy and to force it to end its military operations on terms according with the interests of RF and its allies;*
- *in local wars and international armed conflicts: to localize the seat of tension, to create the prerequisites for ending the war or armed conflict or for bringing it to an end at an early stage; to neutralize the aggressor and achieve a settlement on terms according with the interests of RF and its allies;*
- *in internal armed conflicts: to rout and liquidate illegal armed formations, to create the conditions for a full settlement of the conflict on the basis of RF Constitution and federal legislation;*
- *in peacekeeping and peace restoration operations: to disengage the warring factions, to stabilize the situation and to ensure the conditions for a just peace settlement.*

The main ways of utilizing RF armed forces are:

- *strategic operations, operations and combat operations; in large scale and regional wars;*
- *operations and combat operations; in local wars and international armed conflicts;*
- *joint special operations: in internal armed conflicts;*

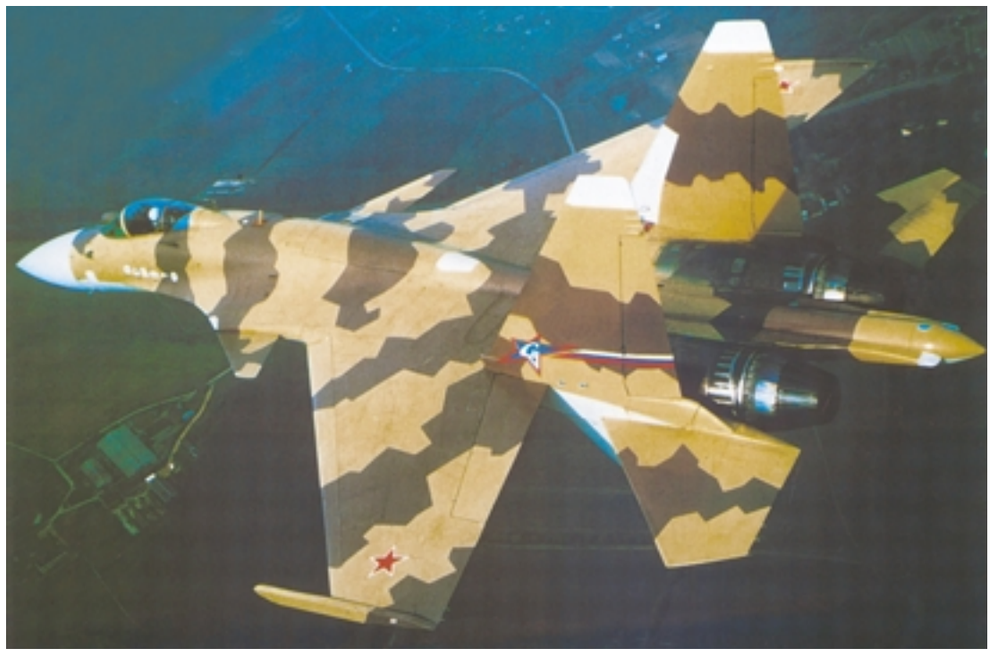
– counter terrorist operations; in fight against terrorism in accordance with federal legislation;

– peacekeeping operations.[24]

Air power is recognized as an indisputably key contributor to the success of the aforementioned operations and missions. The RuAF's real current and future capabilities however need to be seen and assessed in the light of Russia's overall situation and position at the beginning of the 21st Century.

Russia's conventional forces were especially weakened by ill-planned reform attempts during the 1990s. The first Chechen War was a confirmation of this. With no time for recovery, evaluation and at least identification of lessons, a new round of downsizing was launched in 1997. The amalgamation of the former Air Defence Troops and Frontal Aviation under one Air Force Command was completed in 2000. A joint, reorganized air defence system now covers Russia and some of the members of the Commonwealth of Independent States (CIS) like Belarus, Armenia, Kazakhstan, Kyrgyzstan and Uzbekistan. At the end of 2000, the overall strength of the RuAF's personnel was down to 190,000 and the number of operational combat aircraft went down to 2,300.[25] This was hardly one fourth of the level maintained ten years ago. However, only about 50-80% of the aircraft in the current inventory are serviceable, thus severely degrading the projection of combat capabilities (the worst situation is in the transport aviation, improving through the long-range aviation and reaching the highest level in the tactical aviation). The RuAF now consists of two Air Armies (the Long Range Aviation and Military Transport Aviation), seven operational tactical air and air defence formations along with 70 air regiments. Air formations deployed within Military Districts (MD) are subordinate to commanders of MDs, but overall control is the central RuAF command responsibility. In 2001, all of Russia's air force assets, including 37 surface-to-air missile regiments, anti-missile and space defence units were merged into an automatic command and control system based on the former Air Defence Command's enhanced C2 system. However, the current C2 structure desperately needs to be thoroughly modernized to maintain its effectiveness across the whole spectrum of conflict described in the latest Military Doctrine. Further changes, '*rearrangements*' and '*streamlining*' are likely to follow according to requirements dictated by

At the end of 2000 the number of operational combat aircraft went down to 2,300. This was hardly one fourth of the level maintained ten years ago. However, only about 50-80% of the aircraft in the current inventory are serviceable…



not only the evolving operational environment, but also by the available resources for defence expenditure.

Since 1994, only a dozen new combat aircraft have been introduced into frontline service. They were from the family of Su-27 Flankers, modernized into a capable tactical strike (Su-30) and fighter (Su-35) version. The current fleet of aircraft is relatively young (from 10 to 17 years) since the majority of older aircraft was phased out or scrapped. Nevertheless, the situation will become very serious around 2005, when a large number of aircraft reach the end of their service lives.[26] There are plans for substantial procurement of new generation combat aircraft from 2005 onwards, but the assumptions, which these plans are based on, lack a great deal of realism. Even the most optimistically constructed economic recovery with a sustained annual growth of GDP around 3-5% allows for only a modest increase in defence spending. Research, development and procurement programs for the RuAF are not at the top of a long list of 'burning' priorities. What is, however, feasible in the coming years is to overhaul, upgrade and modernise at least the core of the current inventory, thus meeting possible internal and external challenges over the next 10-15 years. This solution certainly leads to an increasing technological gap between the RuAF and its advanced counterparts, but this decade is more about realistic survival for the RuAF, rather than keeping pace or competing with the USA, as at the peak of the Cold War. Therefore, a whole range of optimistic and ambitious combat aircraft development programs were either cancelled entirely or indefinitely postponed.[27] The only recognized solution currently available and affordable was to keep the present fleet flying as long as possible with targeted upgrade. Platforms like the MiG-29 and Su-27 were perfectly suitable to fulfil the whole range of combat missions after increasing their capabilities by cost effective modernisation. In small numbers, the RuAF already possesses a potent and capable renewed 'family' of aircraft like the truly multirole MiG-29SMT, Su-30 long-range interceptor, Su-34 tactical strike and Su-35/37 fighter aircraft. The ageing Su-25 ground attack aircraft is being replaced by the completely rebuilt version designated as the Su-39. The fleet of Tu-160, Tu-95 and Tu-22 long-range bombers is also gradually being modernised. This trend is most likely to continue in the foreseeable future as the only available solution to provide the RuAF with appropriate 'tools' to fulfil tasks and missions derived from the Military Doctrine.

Russia's defence industry, which comprises around one-fifth of the country's total industrial capacity, remains a huge complex of ineffective and inflexible design bureaux and production facilities. Reforming this area has been the least successful so far. It was, however, more than clear for the present administration that maintaining its status quo seriously undermined upgrading and modernising programs for the RuAF. Moreover, a future capability to produce new generation aircraft was jeopardized by spreading among them the already low level of state funding for research and development. Only a third of the most 'healthy' defence companies from the current number of 1,500 were expected to survive the planned drastic 'cure prescribed' by the new Russian government. To protect and sustain the necessary defence industrial base, the Military Doctrine identified the need for state purchases from a selected group of enterprises with guaranteed fixed prices for equipment. Moreover, it emphasised the importance to retain an independent research and development capability across the range of weapon systems and

platforms, including nuclear and conventional ones. As domestic demand for new weapons was on a historically low level (due to budget constraints), Russia's arms exports will remain a major source of revenue for the defence industry.[28]

Putin's administration is determined to keep Russia's defence budget on the present level of 4-5% of GDP in the next few years. This seems to be a relatively high number,[29] but in real purchasing terms on the domestic market it is still just around $50 bn. After a long period of decline, Russia's economy in 2000 achieved a remarkable growth of 5% of GDP and in 2001 a similar trend is seen. This growth is, however, very fragile bearing in mind that is mainly based on high oil, natural gas and raw materials market prices. Nevertheless, it allows carrying on with some of the outlined modernization programs for the RuAF.

Except for the last 2-3 years, when reforms in Russian armed forces took a more coherent and planned form, the steps taken by political and military decision makers throughout the 1990s can be characterized as '*management of chaos*'. It should be acknowledged that management was rather poor, lacking any cohesion and vision. The transition from an authoritarian state and communist party controlled system into a democratic country is still going on after ten years. This process in its complexity is comparable to the creation of Soviet Russia after the communist revolution in 1917. It is an extraordinarily complicated task to build up a democratic statehood with solid institutional pillars especially after seventy years of rigid central control. Economic, political and societal problems are magnified by the painful realization of the loss of superpower status. The RuAF has been one of the most adversely affected branches of the transforming Russian Armed Forces. At the end of a decade characterized by constant cuts in numbers and resources, the RuAF emerged with little respect as a service. In spite of many changes, the RuAF is still seen (by military analysts inside and outside Russia) as a force unable to project full-scale air power.

The first Chechen War revealed many problems and shortcomings from doctrinal down to operational and tactical levels. The 1993 Military Doctrine, still deeply influenced by perceptions from the previous Soviet era, saw air power merely as a support element of massive ground forces. Many useful lessons learned in Afghanistan were either forgotten or ignored by political and military decision-makers and planners. Pilot training schemes were rigid and unimaginative coupled with a low number of flying hours (about one fifth of the amount for NATO operational, combat ready pilots). In addition to poor equipment, lack of appropriate type and sufficient stockpiles of all weather, precision-guided munitions, caused the RuAF to suffer substantial losses in a rather benign combat environment with little challenging Chechen air defence. The second Chechen conflict (still unresolved because the Kremlin's decision makers failed to address themselves to the political end state of this war), though heavily influenced by the need to quickly '*produce*' satisfying results before the oncoming presidential elections in March 2000, can be assessed from an air power perspective as a turning point in the right direction. Unified command and control, changes to force structures, pooling well-trained personnel and forming the most modern air assets into a responsive task force helped to achieve, in a short time, most of the goals and objectives of the air campaign. Better coordination was achieved between various elements of the joint task force grouping comprising units and formations from three ministries, and from numbers of state institutions all of them carrying their differing doctrines, rules of engagements etc. On the other hand, it again highlighted

how limited the RuAF's current operational capabilities were. Starting with aircrew training, continuing through aircraft inventory modernization and ending with a full range of high-accuracy weapons and their delivery capabilities – these were the key areas where substantial improvements and upgrading were essential. The leadership of the RuAF was fully aware of these challenges and its main effort was focused into these directions. It also remains to be seen, what impact ongoing structural changes, reforms, further decreasing of manpower numbers and defence budget constraints will have on the RuAF's operational capabilities.

The latest Military Doctrine is a fundamental document, which tries to reflect (as much as possible) Russia's changed security position after ten years of evolution since the end of the Cold War. New tasks and missions are emerging from it for the RuAF. Air power projection in this decade is most probable in regions of interests along the rim surrounding Russia, rather than beyond it. We are certainly not going to witness Gulf or Kosovo-type '*high-tech*' air operations in the next few years orchestrated by the RuAF. There was no lack of scientific and human invention devoted to aircraft and weapon projects, which can give similarly new dimensions to the utility of air power as it is in countries with highly developed airspace research and manufacturing industries. In the next 10-15 years, the RuAF will mainly rely on current frontline aircraft and weapon platforms [30] partially modernized through cost-effective, affordable projects. Cuts in numbers will continue along with improvements in force structures making them leaner and more responsive. The central motive of this decade for the RuAF will be a struggle to retain limited air power projection capabilities and the justification of its own existence.

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NOTES

1 Council for Mutual Economic Support; institution promoting economic cooperation among socialist countries under the former Soviet Union 'protection' (1949-91).
2 Benjamin S. Lambeth, *Russia's Air Power in Crisis*, Smithsonian Institution, 1999, pp.15.
3 Ibid, pp. 39.
4 Ibid, pp. 34-43.
5 Su-25 (Frogfoot) ground attack, Su-22 (Fitter), fighter-bomber and Su-24 (Fencer) tactical bomber aircraft.
6 Mi-24 (Hind) attack, Mi-8/17 (Hip) transport/utility and Mi-6 (Hook) heavy transport helicopters.
7 An-12 (Cub), An-22 (Cock), An-26 (Curl), An-124 (Condor) and Il-76 (Candid) transport aircraft.
8 152 L-39 and 94 L-29 jet trainers and several MiG-15/17 old, first generation jet fighters.
9 Some of the L-39s were configured to carry two 250-pound bombs or two rocket pods each for 16 unguided 57mm rockets
10 Alltogether 4 mobile ZSU-23/4 radar and optically tracked anti-aircraft guns, 6 ZU-23 and DShK optically sighted machine guns and some SA-7/14 Strela and SA-16 Igla man-portable SAMs.
11 Many of the Chechen commanders and fighters were graduates of Soviet military schools and academies, skilfully adopting their knowledge of Russian tactics, using the same weapons (left behind Russian units withdrawn from Chechenya in 1991).
12 The average amount of flying time per year for frontline 'combat' pilots for four years prior to the Chechen conflict was well below 30 hours.
13 Bridges over the Argun River, presidential palace in Groznyy, former Soviet ICBM silos used as ammunition stores, etc.
14 N.N. Novichkov: *The Russian Armed Forces in the Chechen Conflict* (Moscow 1995), pp.10.
15 See also A. Hills: *The Airpower Taboo: Dialouge Across Perspectives? Airpower and Urban Operations* (Airman Scholar, Spring 2000).
16 Precision guided missiles and bombs (mainly the AS 12/14 laser or TV guided missiles and KAB 500L, 1500L, 500KR laser and TV guided bombs) were used in some cases against bridges over the Argun River, industrial infrastructure, defensive positions of the rebels and their military leadership.
17 According to Russian sources 6,000 Chechen civilians died in the conflict; Western sources indicate the loss of 20,000civilian lives.
18 The RuAF lost two Su-25s, one Su-24; 26 aircraft sustained battle damage and the Army Aviation lost ten helicopters and every forth of them were damaged.
19 ISTAR – Intelligence, Surveillance, Target Acquisition and Reconnaissance.
20 Driven by the enormous political pressure from the Kremlin under the leadership of Prime Minister Putin, the major candidate for the presidential elections held in March 2000.
21 The majority of Russian casualties were due to forcing unprepared soldiers to fight the guerrillas in Chechen urban areas.
22 Michael Orr: *Second Time Lucky? Evaluating Russian Performance in the Second Chechen War*; www.ppc.pims.org/Projects/csrc/JIRArticle.htm
23 G. Arbatov: *The Transformation of Russian Military Doctrine: Lessons Learned from Kosovo and Chechnya*; (The Marshall Center Papers, No.2; 2000).
24 See also: G. Arbatov: *The Transformation of Russian Military Doctrine: Lessons Learned from Kosovo and Chechnya*; (The Marshall Center papers, No.2; 2000).
25 Military Balance 2000, *Russia* ,pp.124.
26 It is almost 30% of the fleet, namely the Su-24 Fencer tactical bombers; Su-25 Frogfoot close air support aircraft and the first batch of the MiG-29 Fulcrum, Su-27 Flanker and MiG-31 Foxhound fighters, further reducing the number of effectively available air assets below 2000.
27 Like the MiG-MAPO aircraft manufacturer's future multirole frontal fighter known as 'Article 1.42' (MiG-35); or the Sukhoi Design Bureau's forward swept wing interceptor S-37, which in the lack of funding are remaining only in a form of 'technological demonstrators'.
28 In 2000 weapons' export achieved the level of $4bn and is steadily rising.
29 For example US defence budget is about 3.5% of GDP in FY2001 ($305.4 bn).
30 Little prospect for small-scale introduction of new generation combat aircraft.