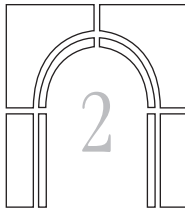

Cómo citar este artículo: Fernandez-Osorio, A. E. (2015, enero-julio). Full Spectrum Operations: the rationale behind the 2008 Russian Military Reform?. Rev. Cient. Gen. José María Córdova 13(15), 63-86



Full Spectrum Operations: the Rationale Behind the 2008 Russian Military Reform?*

Recibido: 05 de enero de 2015 • Aceptado: 20 de febrero de 2015.

Operaciones militares de espectro total: ¿fundamento de la Reforma Militar Rusa de 2008?

Des opérations militaires à spectre complet: le raisonnement caché derrière la réforme militaire russe de 2008?

Operações de pleno espectro: a lógica subjacente da Reforma das Forças Armadas da Rússia de 2008?

Andrés Eduardo Fernández-Osorio^a

* Research paper based on the first and second chapter of the author's master dissertation, completed at University College London, United Kingdom and National Research University - Higher School of Economics, Russian Federation.

^a University College London, London, United Kingdom & National Research University —Higher School of Economics, Moscow, Russian Federation. Major in the National Army of Colombia. MA in Economy, State and Society: Politics and Security, University College London, United Kingdom; MA in International Relations in Eurasia, National Research University —Higher School of Economics, Russian Federation; BA in International Relations and Political Studies, Nueva Granada Military University, Colombia; BSc in Military Sciences, Military Academy General Jose Maria Cordova, Colombia. Contact: foandres@live.com

Abstract. This paper examines contemporary Russian military thinking in relation with the concept of modern warfare and its adequateness to manage future threats and challenges. After providing an analysis on Russia's defence and security policies and the historical transformation of its military, this paper argues that the concept of *full spectrum operations* has been key factor to plan and develop the 2008 Russian Military Reform. In addition, it provides a framework to both analyse Russia's international policy and its influence on the international system, and endorses this reform as a remarkable case study for the discipline of military sciences.

Keywords: full spectrum operations, military doctrine, modernisation, Russian military reform.

Resumen. Este artículo analiza el pensamiento militar ruso contemporáneo con relación al concepto de guerra moderna y su capacidad para el manejo de amenazas y desafíos futuros. Luego de presentar un análisis de las políticas de seguridad y defensa de Rusia y de la transformación histórica de sus Fuerzas Armadas, se argumenta que el concepto de *operaciones militares de espectro total* fue crucial en la planeación y ejecución de la Reforma Militar Rusa de 2008. Asimismo, ofrece un marco de referencia para el análisis tanto de la política internacional de Rusia como de su impacto en el sistema internacional, y propone esta reforma como un estudio de caso de gran importancia en el contexto de las ciencias militares.

Palabras clave: doctrina militar, modernización, operaciones militares de espectro completo, reforma miliar rusa.

Résumé. Cet article examine la pensée militaire russe contemporaine en relation avec les concepts modernes de bien-être et son adéquation pour faire face aux menaces et les défis futurs. Après avoir analysé les politiques de sécurité et de défense de la Russie et de la transformation historique de son armée, il est soutenu que le concept des opérations du spectre complet a été crucial dans la planification et la mise en œuvre de la réforme militaire russe de 2008. En outre, le travail établit un cadre pour l'analyse de la politique internationale de la Russie et son influence sur le système international, considérant cette réforme comme une étude de cas intéressante, en particulier dans le contexte des sciences militaires.

Mots-clés : doctrine militaire, modernisation, opérations militaires à spectre complet, réforme militaire russe.

Resumo. Este artigo examina o pensamento militar russo contemporâneo em relação aos modernos conceitos de bem-estar e sua adequação para lidar com ameaças e desafios futuros. Depois de fazer a análise de políticas de segurança e defesa da Rússia e da transformação histórica de suas forças armadas, argumenta-se que o conceito de *operações militares no amplo espectro* foi crucial no planejamento e implementação da Reforma das Forças Armadas da Rússia de 2008. O artigo também apresenta um quadro para a análise da política externa da Rússia e do seu impacto no sistema internacional, e propõe-se que esta reforma é um estudo de caso de grande importância no contexto das ciências militares.

Palavras-chave: doutrina militar, modernização, operações militares de amplo espectro, Reforma de las Fuerzas Armadas de Rusia.

I remember the conversation with the then chief of the General Staff very well...in order to give an effective answer to the terrorists we needed to gather a force numbering at least 65,000 men, but in all of the Ground Forces, there were 55,000 in battle-ready units, and these were scattered all over the country. An Army of 1 million 400 thousand men, but there was no one who could go to war.

Vladimir Putin, President of the Russian Federation
(2006 as cited in Vendil Pallin, 2012, p.15)

Introduction

Since early in its life, the latest Russian military reform, introduced in 2008, has been criticised by scholars, experts, and military officers, due to a number of factors including budget limitations, systemic corruption, internal opposition, technological lag, and demographic constraints. Nevertheless, one of the most common questions has been on the adequateness and viability of the reform, and the military concept used for the reform in respect of Russia's contemporary scenario.

Since its two authors, Minister Anatoly E. Serdyukov and General Nikolay Y. Makarov¹ are no longer in office, the reform has been profoundly scrutinised by their successors – Army General Sergei K. Shoigu and Army General Valery V. Gerasimov – whose decisions have called into question some of the strategies adopted by the past administration. This situation has increased the debate on the feasibility of the goals and strategies of the reform, bringing back the perspective of uncompleted plans and contradictory resolutions suffered in the recent past by the Russian military.

This paper seeks to identify the rationale behind Russian military thinking, analysing the extent to which the concept of Full Spectrum Operations will prepare Russia to face contemporary and future threats and challenges. Besides, it discusses the theoretical framework on modern warfare, providing a historical background on reforms to the Russian military. In addition, it discusses Russia's national security and defence policy, and its relationship with contemporary military doctrine.

Generalities on the 2008 Russian military reform

In recent years, it has become increasingly difficult to ignore the importance of the latest Russian Military Reform (hereafter RMR) since its results will most probably affect the balance of power in the international arena and influence the foreign policy of its key actors. Moscow will most likely both reinforce its strategic vision and enhance its power-projection possibilities into the post-Soviet space, leading the international community to rethink its approaches to deal with Russia's new capabilities.


¹ Although dismissed from his post as Chief of the General Staff of the Armed Forces of Russia and First Deputy Minister of Defence in 2012, after Minister Serdyukov's ousting, General Makarov was appointed, in March 2013, as an advisor to the new Defence Minister Shoigu (Rosenberg, 2012; Ria Novosti, 2013). This was interpreted as an intention of continuing with the 2008 RMR as planned, making necessary adjustments, rather than radical changes. However, recent major decisions in organisation, personnel, materiel, and training suggest a different perspective.

This reform, announced in September 2008 by the then Russian President, Dmitry Medvedev, and intended to run beyond 2020, aims to transform the Russian military into a modern, fully capable and movable force to answer global threats and challenges of the twenty-first century. Given the importance of this task and the lack of effective results in past reforms, Moscow decided to take a rather different approach, which included the usage of Western military strategies and the appointment of a civilian –Anatoly E. Serdyukov, head of the Federal Tax Service as Minister of Defence, and a modernisation-supporter, Army General Nikolay Y. Makarov, as Chief of General Staff of the Armed Forces (Finn, 2007; Saradzhyan, 2008; Ria Novosti, 2012; Isachenkov, 2012).

The goals of the reform were reasonable: to counteract problematic issues such as corruption, lack of readiness and inoperability, and ageing armaments, while bringing the Russian military closer to western standards through transforming five main areas (Figure 1). This included: a major force downsizing as well as bringing all the remaining units to permanent combat readiness; a modification of forces' command and control structure; an enhancement of the military educational system; an improvement of weaponry and technology; and solving problems with salaries and military well-being (Medvedev, 2008; Renz, 2010, pp. 58-59; Bartles, 2011, p. 6; Nichol, 2011, p. 6; Barabanov, Makienko & Pukhov, 2012, p. 16).

The 2008 RMR based its goals upon several factors such as the bad shape of the armed forces and its lack of readiness, professionalisation, and modern equipment; the limited results of the conflict in Chechnya and the war against Georgia; and the outcome of failed reform attempts since the breakdown of the Soviet Union. In addition, it took into account: the optimistic forecast of the Russian economy for the following years; the adjustment of Moscow's threat awareness, including leaving behind global ambitions of the Soviet era; and a strong political support from the Kremlin due to public scepticism (Table 1) on the improvement of sensitive areas (Lannon, 2011, pp. 26-28; McDermott, 2011b, pp. 3-6; Barabanov, Makienko & Pukhov, 2012, pp. 5-8; Hedenskog & Vendil Pallin, 2013, pp. 23-25; Makarychev & Sergunin, 2013, pp. 356-357).

Table 1. Russian public perception towards sensitive areas (2004-2008)^a.

	2004	2005	2006	2007	2008	Trend
Increasing combat efficiency and reforming the military	11%	13%	9%	14%	14%	
Eliminating the danger of terrorism in the country	3%	6%	6%	10%	10%	
Solving the Chechen Problem	10%	10%	10%	21%	20%	
Fighting Crime	8%	10%	7%	9%	8%	

^a Research Question: In which areas has Vladimir Putin had success during his years in power?

Source: Prepared by the author on the basis of data in Russian Analytical Digest (2012, p. 8).

Reform of the Russian Armed Forces

By 2012, the military is to be downsized to 1 million personnel, a professional NCO corps is to be created, and its command and control system is to be streamlined

Structural Changes

At present: military district - army - division - regiment

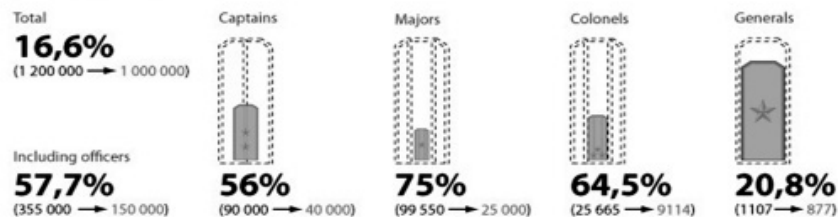
In the future: military district - operation command - brigade

Goals:

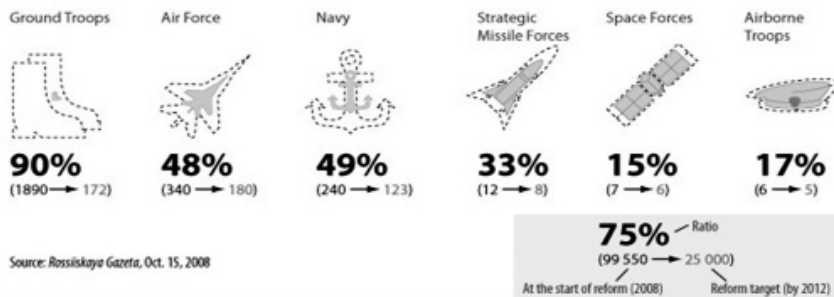
- ★ Keeping up with modern challenges (a division is a unit that is too large for local armed conflicts prevalent in the modern world)
- ★ Optimization of command and control (eliminating superfluous elements)

Division	Brigade
Numerical size	
8,000–14,000	4,500–6,500
Constituent units	
Brigades, regiments, battalions, companies	Battalions, companies
Commander's rank	
Major general	Colonel

Personnel reductions



Reduction in the number of military units



75% Ratio
(99 550 → 25 000)
At the start of reform (2008) Reform target (by 2012)

RIA/NOVOSTI © 2009

Figure 1. 2008 Russian Military Reform as planned by the Russian Ministry of Defence.

Source: Ria Novosti (2009), on the basis of data in Rossiiskaya Gazeta (2008).

Nonetheless, despite some advances on the ambitious goals of the 2008 RMR, the dismissal, in November 2012, of Minister Serdyukov, officially based on negligence,² and the detailed revision of the whole reform undertaken by the new Minister of Defence Army General Sergei

² Former defence minister Serdyukov was accused of using 56 million roubles from government funds to construct a road to a private cottage —owned by his brother-in-law, Valery Puzikov in the Astrakhan region (Krainova and Oliphant, 2012; Sukhov, 2013). As of 6 April 2014, Russia has granted amnesty to former defence minister Anatoly Serdyukov, applying a law recently passed to celebrate the twentieth anniversary of Russia's constitution, and closing the case against him on grounds of negligence and corruption (Reuters, 2014; RT, 2014).

K. Shoigu, who has halted or reversed several of Serdyukov's measures, have brought serious doubts on the whole reform and its results (Rosenberg, 2012; Kramer, 2012; Krainova & Oliphant, 2012; Andreyeva, 2012; Isachenkov, 2012; Kramer, 2013; McDermott, 2013; Ria Novosti, 2013; Weir, 2013; Rusmilitary, 2013; Felgenhauer, 2013; Gorenburg, 2013; Golts, 2013; Smirnov, 2013).³

Central to the entire discussion on the 2008 RMR is the achievement of real modernisation in the Russian armed forces and, by extension, in the Russian Military-Industrial Complex (MIC),⁴ with the strategy and methods given by the reform; and whether or not it will be an adequate response to contemporary global threats and challenges.

Historical framework

For the USSR, its military capabilities not only served to fulfil its strategic, operational, and tactical defence schemes but also strengthened its political position, foreign policy and defence/security doctrine in different regions of the world, through Military-Technical Cooperation (MTC) agreements (Fomin, 2013, p. 12). Nonetheless, with the disintegration of the Soviet Union and the rise of the Russian Federation, the old Soviet military strategies had to be redesigned to prepare Russia for new defence/security scenarios: a military reform was urgently needed.

Since the breakdown of the Soviet Union, Russian armed forces have undergone several attempts at modernisation, looking forward to improve an inherited Soviet-dated organisation. Moscow now understands of global threats and challenges of the twenty-first century such as terrorism, drug trafficking and weapons of mass destruction; and the reduction of Soviet-era global ambitions, also urged an update of the national security and military doctrine (Makarychev & Sergunin, 2013, p. 356). Nonetheless, renovating a huge force —estimated, by 1986, at about 4.9 million active servicemen and women (Nichol, 2011, p. 1), operating one of the most extensive war inventories in the world and with profound Soviet traditions, proved to be a difficult task.

The last Soviet leader, Mikhail S. Gorbachev, established the first transformation plans for the Soviet military, which were inherited by the Russian Federation. Along with his policies of *perestroika* (restructuring) and *glasnost* (openness), Gorbachev understood the inadequateness of the Soviet military towards the post-cold-war scenario; hence, important funds for the

³ Former Minister Serdyukov has been involved in irregularities committed by Oboronservis – a military contractor created under his direction, as an answer to the corruption in the Ministry of Defence (MoD), and responsible for servicing military equipment, constructing military facilities and providing logistic services to the military. Reports to date suggest Oboronservis malpractices on auctions of Ministry of Defence properties at prices below market value to private companies, leading to a loss of nearly 3 billion roubles (Rosenberg, 2012; Isachenkov, 2012; Cohen, 2012).

⁴ Military Industrial-Complex refers to the formal or informal “alliance of the military and related government departments with defence industries that is held to influence government policy” (Merriam-Webster Dictionary, 2014b). It also refers to a “network of individuals and institutions involved in the production of weapons and military technologies...that in a country typically attempts to marshal political support for continued or increased military spending by the national government” (Encyclopedia Britannica, 2014). In Russia, since 2007 the MIC is led by the state corporation, Rostec, established to assure “the furtherance of state policy for industrial development and modernization” for civil and defence sectors (Rostec, 2012). Further information is available at: <http://rostec.ru/en/>

military were shifted to development and social welfare programmes, depriving the military of its historical precedence in this matter (Herspring, 2008a). In addition, mutual blame between Gorbachev and the military for the deployment and disproportionate use of the force in Tbilisi, Baku, and Vilnius in 1989-1991 undermined both public opinion and common trust on each side (Brown, 1996, p. 264; Barylski, 1998, p. 61; Karavayev, 2012) and highlighted the need for a restructuring. Nevertheless, despite all Gorbachev's intentions, the only change achieved was a reduction in armed forces personnel, from five million to four million (Thornton, 2011, p. 3).

The first president of the Russian Federation, Boris N. Yeltsin, agreed in general with the necessity for a military reform, as suggested by Gorbachev, however, he focused its goals on measures that would increase its efficiency by reducing costs, pleasing the electoral population and "ensuring that the military did not act against him" (Herspring, 2006, p. 515). Consequently, Yeltsin's main efforts were limited to downsizing the huge military force created during the USSR period; this included ending the conscription system, and thus the mobilisation system, by fostering professional soldiers (*kontraktniki*); however, no attention was drawn to weaponry modernisation or to Command, Control and Communications⁵ (C3) system improvement.

Since the Soviet era, conscription and the mobilisation system have required a permanent and huge expenditure of resources, which situation has been heavily criticised by the population (Figure 2), especially due to the harassment existent in the barracks as well as the hard conditions of life and dangers to health (Russian Analytical Digest, 2012, p. 12). On the one hand, conscription provided the military with an inexpensive and continuous flow of personnel, but it deprived the economy of a young labour force and smart minds, especially needed during the first stages of the Russian Federation. On the other hand, the mobilisation system for the reserves, whose number was calculated at up to twenty million, was a complex structure of skeleton units, manned only by Officers and Warrant Officers (wo),⁶ responsible for keeping facilities and stockpiled weaponry operational and for organising and equipping the reserves, drained important funds on a permanent basis (Thornton, 2011, p. 4) yet contributed little to the defence/security of Russia. Hence, the justification of Yeltsin's policy was simple: the elimination of recruitment would eliminate the need for a mobilisation system, liberate funds and foster a smaller and more effective military force, using professional soldiers – all popular measures, promoting political stability.

⁵ Defined as "the facilities, equipment, communications, procedures, and personnel essential to a commander for planning, directing, and controlling operations of assigned and attached forces pursuant to the missions assigned" (US Department of Defense, 2010, p. 45) or as "an assembly of equipment, methods and procedures and, if necessary, personnel, that enables commanders and their staffs to exercise command and control (NATO, 2008, pp. 2c 9).

⁶ Warrant Officers (WO) are military personnel trained for specialist and technical tasks. wo corps is usually a rank cadre between Officers and Non-Commissioned Officers (NCO). Generally, Officers are designated by a commission and are in charge of leading troops; WOs are designated by a warrant and serve as technical advisors/operators, and NCOs are designated according to their training/seniority. In Russia, Army WOs (Praporshchik) and Navy WOs (Michman) were disbanded in 2009 as part of the 2008 RMR in favour of creating an nco corps to deal with discipline and tactical leadership of troops (Hedenskog & Vendil Pallin, 2013, p. 39). In February 2013, Defence Minister Shoigu announced a "plan to re-establish the institution of Warrant Officers" (Kommersant, 2013).

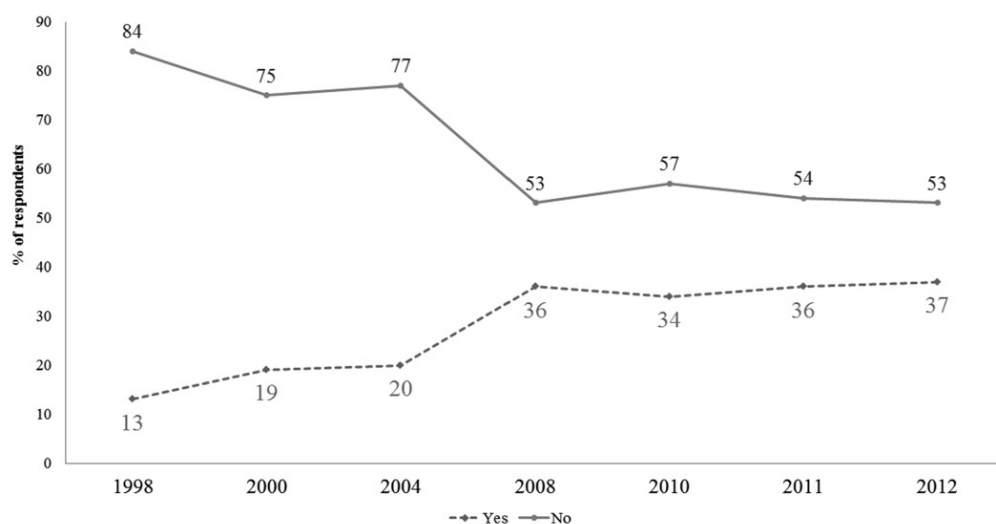


Figure 2. Russian public perception towards conscription (1998 – 2012)a.

Source: Prepared by the author on the basis of data in Russian Analytical Digest (2012, p. 11).

^a Research Question: Would you want your son, brother, or other close male relative to serve in the Armed Forces?

Opposition from the military to these initiatives was expected as the abolition of conscription and mobilisation in favour of a force of professional soldiers would bring about the elimination of thousands of posts for Officers, including those for Generals who “constituted one of the principal *siloviki* (power) structures in Russia” (Thornton, 2011, p. 5). However, this blocking capacity overwhelmed Yeltsin’s discourse as it initiated arguments, shared by some sectors of Russian society and top leaders, which still exist even to this day. These concerns included: firstly, the natural duty of each citizen to defend the motherland against its aggressors and thus, the necessity of being prepared to do it appropriately; secondly, the idea of the military as a social service that allows citizens to demonstrate their gratitude and loyalty to the homeland, in return for the recompense given; thirdly, the importance of the social task of the military in constructing a common national sense of respect and pride for Russia, despite the ethnic, religious, or social roots of the recruit; and fourthly, the illogicality of allocating funds to professionalise soldiers given that these funds were urgently required in other more important projects for Russia’s development (Weitz, 2010, pp. 14-16; Thornton, 2011, pp. 6-8).

Yeltsin’s reform began in 1992, aiming to simplify the Soviet-era organisation of the Forces of Army-Division-Regiment into a more flexible Corps-Brigade structure and to assure combat readiness in the troops. In addition, both the draft of the military doctrine, published in May 1992, and the Russian Federation military doctrine, ratified in November 1993, backed modernisation plans as they “seemed to be the start of a movement towards a more assertive confrontational Russian security policy, different from the defensive and peaceful tone of the last Soviet doctrine” (Blank, 2011a, p. 4). The objective was to allow a better chain of command among the units, reducing the response time to orders, and to eliminate one ranking echelon, signifying bu-

dgeting savings required to renovate and maintain the weapons inventory. Nevertheless, despite the official implementation of the reform, diverse and even contradictory results were obtained; many new brigades maintained the status of divisions and several units from disbanded divisions were gathered under new units, which, ultimately, were converted into divisions. In addition, the lack of political guidance and proper civil-military relations deprived the military of a comprehensive idea of what type of reforms should be implemented to fulfil its role within the state (Herspring, 2008a).

The First Chechen War, from 1994 to 1996, demonstrated how, despite the publicised achievement of the reform to the military, the disarray of decision-making had lessened the combat readiness, *esprit de corps*, and operational art of the Russian troops. The appalling results of the war, including the strikes inflicted on the Russian troops by Chechen separatists, showed the real status of the military. Hence, in 1997, a new plan was designed to resolve past errors, providing a framework for innovation.

The person responsible for this new attempt was Marshal Igor D. Sergeyev, Minister of Defence, appointed by President Yeltsin in May 1997. As argued by Parchomenko (1999, p. 99), Marshal Sergeyev undertook the actions required to make the military reform a reality and hence, accomplished key structural modifications in two years. First, there was a downsizing of MoD forces from almost 1.8 million in 1997 to about 1.2 million in 1999. Second, there was a reduction, from eight to six, of the Soviet-era military districts, granting territorial command and control of the troops and assets existent in the jurisdiction. Third, was the creation of a new branch of service, the Strategic Missile Troops, formed from the former Military Space Forces, the Strategic Rocket Forces and the Missile and Space Defence Forces.

Marshal Sergeyev focused the goals of the 1997 reform on favouring the Strategic Rocket Forces arm in which he served during his career. Hence, the theory of “optimisation under a nuclear shield” (Parchomenko, 1999, p. 100) was used, meaning that reliance was placed on nuclear deterrence instead of true combat readiness of the troops and units. As argued by Orr (2003, p. 6) “Sergeyev convinced Yeltsin that military reform could be achieved by relying on nuclear weapons to deter not only a world war but a range of lesser threats. Ground forces [Army⁷] would be required for peacekeeping operations and minor conflicts but otherwise significant economies could be made”.

Consequently, a major part of the budget was assigned for land-based Intercontinental Ballistic Missiles (ICBM) SS-27 Topol-M to reinforce Russia’s nuclear shield and to maintain nuclear inventories while training, materiel, personnel and facilities for other services (Army, Navy, and Air Force) received minimum funding (Orr, 1998, pp. 2-4). In addition, controversial decisions were made to lessen the powers of other services, in particular, those of the Army – the largest and perhaps most influential service – which suffered the disbandment of its headquarters, in 1997.

⁷ Despite the existence of the Navy and the Air Force, historically, the most important and largest of the armed services, both in the Soviet Union and in Russia, has been the ground forces that are comparable to the Army in Western militaries. As explained by Orr (2003, p. 1) “the Russian word *armiya* can equally well translate the English words army and armed services” and “it is only comparatively recently that Russians have begun to use the terms *vooruzhenyye sily* (armed forces) and *sukhoputnyye voyska* (ground forces) to distinguish the two concepts”. The duality of this concept is the origin of confusion in debates on the topic as it affects the correct assessment of force strength and its organisation.

In 1999, the outbreak of the Second Chechen War proved Moscow's strategies for military modernisation to be wrong. The use of nuclear weapons was not possible and the Army lacked adequate organisation, training, materiel, personnel, and leadership to handle the situation properly. The military had low combat readiness and poor joint-operations capabilities and experience; consequently, the lack of an efficient C3 and the absence of technological reconnaissance and intelligence triggered bombing campaigns and ground strikes that affected its own troops and the civilian population, violated human rights, and contributed to a worsening of the image of the military (Pain, 2000; Orr, 2000; BBC, 2006).

The action of the Chechen separatist movement, classified by Moscow as simple terrorists and fundamentalists (Russell, 2005), but capable of shooting down a significant number of aircraft and inflicting several deadly strikes on Russian troops refocused the discussion on the preparedness of the military to defend the motherland from domestic and external aggressions (Orr, 2003, p. 7). A new strategy was required to renovate the military and to stop the death toll of up to 160,000 combatants and civilians killed in both Chechen wars (The New York Times, 2005).

As Vladimir V. Putin became president of the Russian Federation in May 2000, a new hope for the military appeared; Putin's background as a Lieutenant Colonel in the KGB (replaced now by the FSB) and strong nationalist agenda provided a sense of security and companionship within the high-ranking officers and troops. Putin understood that the mobilisation concept, inherited as a continuous preparation for a large conventional war, was siphoning valuable assets, whereas new threats and challenges such as terrorism and the proliferation of weapons of mass destruction were not being answered. None of these "would involve a prior build up of tension that would allow time for mobilisation of reservists" (Thornton, 2011, p. 11). In addition, the lack of rapid-deployment capabilities and combat readiness of the mobilisation system did not provide Russia with power-projection possibilities into a region with geopolitical interest for Russia, and especially into the post-Soviet space. For instance, the USSR showed neither the capability to perform the type of successful operations such as the British in the Falklands Islands or the United States in Panama or Grenada (Thornton, 2011, p. 11), nor did the Russian Federation have adequate technical capabilities to deal with the sinking of the submarine Kursk, in 2000, during a major naval exercise in the Barents Sea.

President Putin knew that regardless of the augmentation of funds for the military, there was still the possibility of opposition to a new military reform, as Thornton suggests "Putin's power base lay with the domestic security service (the FSB) and not with FSB's rival for institutional power, the military" (2011, p. 12); hence, he decided to appoint a former Colonel General from the FSB —Sergei B. Ivanov— as Minister of Defence. The appointment of Ivanov as Minister of Defence in March 2001 was seen as a political decision signifying a consolidation of Putin's power over the military as it set in motion a reform process to make the Russian MoD more like its Western counterparts, where Defence Ministers are civilians (Vendil Pallin, 2008, p. 140; Galeotti, 2013, p. 45). Ivanov was neither a civilian nor technically speaking a military man; he was a figure with a blended background, experienced enough to carry out military reform.

In October 2003, with the release of a policy document, *Urgent Tasks for the Development of the Armed Forces of the Russian Federation*, President Putin and Defence Minister Ivanov launched a new military reform. This document echoed the long-term reform plan, drawn up in April

2003, aimed at creating a “fundamentally new image of the Armed Forces” (Russian Federation Ministry of Defence, 2003, p. 1) by turning the Russian military into a competent force, able to handle a wide variety of missions, including defence/security challenges, counter-terrorism, peacekeeping operations and crisis management.

This reform had similarities to others in the past in regard to some of its objectives, e.g. downsizing of units, the improvement of combat readiness, and a reduction in conscription, in favour of professional soldiers (Liaropoulos, 2008, p. 43). However, it also incorporated new ideas such as the improvement of budget management, political supervision of the spending, the creation of a Non Commissioned Officer corps, changes to the military educational system, and the possibility for women to serve in combat roles within the military. In addition to this, the Chief of the General Staff was positioned under the Minister of Defence, operational issues were moved to become the responsibility of the MoD and not of the General Staff, and an opportunity was granted to citizens of the Community of Independent States (CIS) to serve in the military, in exchange for being awarded Russian citizenship (Herspring, 2005, p. 147).

Perhaps one of the most important components of this reform is the appearance of the so-called Ivanov doctrine that redefined the threat posed by NATO, pointing out new threats and challenges such as terrorism and smaller-scale conflicts (Bouldin, 2004, p. 619; Liaropoulos, 2008, p. 44). A modern military was required to handle these new threats to Russia, however, the fear of losing predominance in the international arena returned to the high-ranking officers of the military and a campaign of opposition and procrastination was unleashed.

As described by Herspring (2005, pp. 151-152) and Thornton (2011, pp. 13-14), the opposition to the reform began to increase from its early beginnings. For instance, the cost presented to the government by the General Staff for the professional soldiers’ programme began to increase disproportionately. The cost of the professionalisation of each Army Division in December 2001 was 500 million roubles, yet in March 2002, it was 1 billion roubles, and in May 2002, it was 2.5 billion roubles. Similarly, the professional soldiers’ corps was planned to increase from 22,000 in 2003 to 148,000 in 2008, however, the General Staff decreased this number to 125,000 in 2004 and later, in January 2008, announced that the plan was successfully completed with just 100,000 soldiers.

Minister Ivanov’s tenure lasted for almost seven years and finished in 2007, when he was appointed First Deputy Prime Minister of the Russian Federation. For some analysts (Sololev & Khodarenok, as cited in Vendil Pallin, 2008; The Moscow Times, 2011; Jensen, 2011), Ivanov was ousted due to the lack of progress on the reform, the continuing corruption, the increase of harassment in the barracks (Mereu, 2006) and the failure of the professional soldiers’ programme. However, for some others (Herspring, 2008b; Vendil Pallin, 2008; Galeotti, 2013), Ivanov was promoted because he had completed the task he had been appointed to deliver. Ivanov increased the defence budget, raised salaries, decreased conscription from 24 months to 18 months in 2006, and then to 12 months in 2008 (Kamenev, 2009), and prepared the military for the shift to a civilian defence minister, with no ties to the armed forces. Anatoly E. Serdyukov, head of the Federal Tax Service of Russia, was appointed; a civilian without major political aspirations but with “experience of dealing with bureaucracies and nose for the corrupt practices in which many senior Officers were engaging” (Thornton, 2011, p. 14) and capable of defending the reform from opposition as well as taking the required measures.

Looking for a new image for the Russian military

The attempts at reforming the Russian military in 1992, 1997 and 2003 shared common goals of improving its effectiveness and combat readiness but failed to design an adequate scheme for modernisation, leading to erratic decisions and unfinished plans. As argued by Pallin (2008, p. 6) “Russia’s military reform record has been dismal and the future seems to hold few promises of radical improvement”. Nevertheless, with the appointment of Anatoly E. Serdyukov as Minister of Defence in February 2007, the Kremlin expected to correct the errors of the past and achieve a new image for the Russian military. Minister Serdyukov’s background, without links to the military, and his advisory staff, brought from the Federal Tax Service, were considered the ideal combination to combat corruption, put the finances on a firm footing, and continue Ivanov’s reform towards 2020.

The 2008 RMR was announced in October of that year, seeking to modernise the Russian military and to provide Russia with an armed apparatus capable of supporting its political and strategic ambitions. This new reform surprised the military and some spheres of Russian society, not only because of the drastic concept of change planned (Figure 3) but for the fast pace set for its implementation (Yegorov, 2008; Barabanov, Makienko & Pukhov, 2012, p. 3). Moreover, the top leaders considered that Russia’s military was prepared to handle any defence/security challenge, the most recent proof of which was the victory over Georgia.

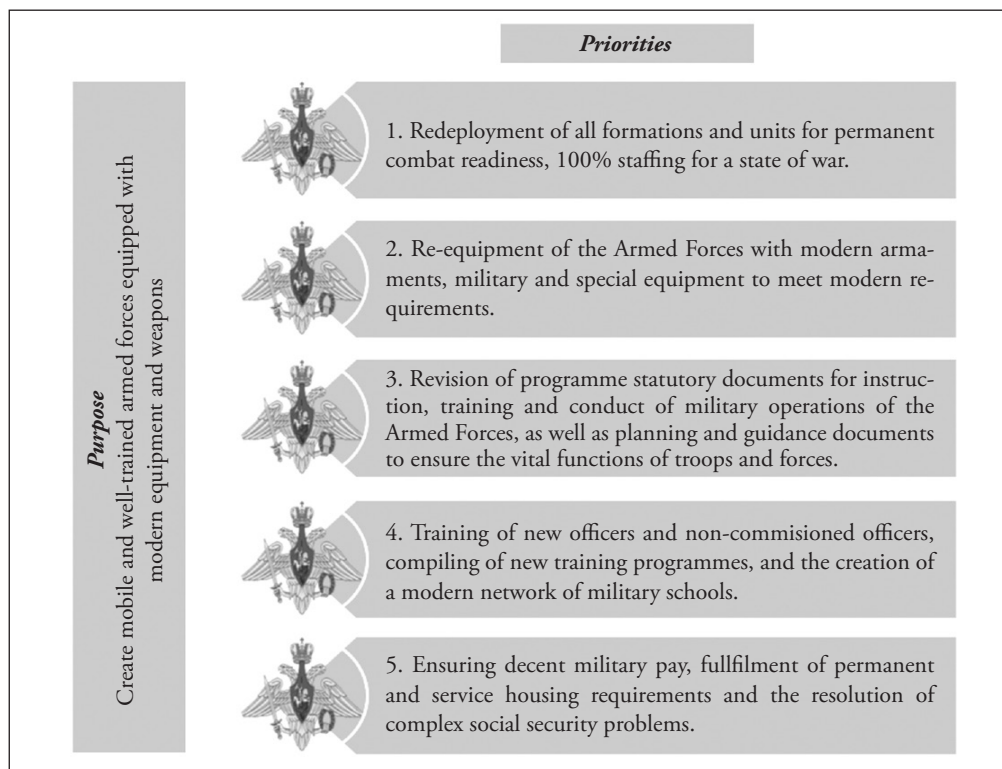


Figure 3. 2008 Russian Military Reform —Purpose and Priorities.

Source: Prepared by the author on the basis of data in Barabanov, Makienko & Pukhov (2012, p. 16).

Despite the victory of Russia in the war against Georgia, in August 2008, there is a consensus among scholars and experts on the poor performance of the military and its lack of preparedness for this war (Bartles, 2011; Lannon, 2011; Nichol, 2011; Thornton, 2011; de Haas in Russian Analytical Digest, 2012; Vendil Pallin, 2012; Hedenskog & Vendil Pallin, 2013; Kumar, 2013). For instance, the lack of an efficient C3 structure prevented operational details from reaching the Minister of Defence for ten hours before further decisions could be made; similarly, the head of the Main Operations Directorate (responsible for battle operations) had been dismissed one month earlier and his replacement had not yet been appointed (Thornton, 2011, pp. 18-19). Moreover, the non-existence of a C4ISR⁸ network and the failure of the Russian Navigational System (GLONASS), prevented adequate Identification of Friend or Foe (IFF) capability, proper target designation and disabling of Georgian air defence capabilities, provoking both the shooting down of several Russian aircraft and the ambush of Russian tanks, with outdated protection systems, against Georgian anti-tank warheads (Herspring & McDermott, 2010, pp. 296-297). In addition, the incomprehensible decision, in 2003, of subordinating Army Aviation to the Air Force, thereby preventing adequate tactical air support for ground troops and medical evacuations (Ria Novosti, 2010).

Given the above points, the 2008 RMR was expected to use innovative approaches to radically transform the military, however, surprisingly, it was planned using the same script as that of its predecessors: implying a modernisation of weaponry, reductions in force size, the end of conscription in favour of professional soldiers and an increase in the salaries of service members (Bartles, 2011, p. 55). The outcome of past reforms or their limitations, in terms of scope and methods, was not taken into account and neither procedures for proper defence/security decision-making nor detailed responsibilities were defined. Hence, a lack of adequate leadership and an absence of proper judgment and planning for the needs of the Russian military returned it to the foundations of the reform, affecting its design and methods.

For instance, main projects that affected combat readiness, *esprit de corps* and operational matters were made without adequate analysis of lessons learnt or assistance or advice from the military. This included, to name a few, the disbandment of the WO corps without having an NCO corps; the reassignment of 5,000 Officers (lieutenants), who had graduated during 2009 and 2010, to serve as NCOs; and the increasing demand for professional soldiers without improving their conditions and recruitment issues or having the necessary funds (Nichol, 2011, p. 17). In addition, the absence of an up-to-date military doctrine, in concordance with the purpose and priorities of the reform, suggested a possible disconnection between the Kremlin and MoD policies.

A great deal of opposition against the reform began to grow, especially within the military who thought that “the plans implemented by Serdyukov do not solve the problem of [Russia’s] military” (Yegorov, 2008) and were “destroying Russia’s military capability” (Eckel, 2008). Nevertheless, the political support given to the reform, the autocratic leadership style of Serdyukov, the undeniable necessity of the reform and the results of the technical assessments, including the results of the war against Georgia, weakened the arguments made by the opponents.

⁸ C4ISR refers to a C3 system that encompasses communication technology and electronic warfare to designate military targets using intelligence, surveillance, and reconnaissance, while denying information to the enemy.

One of the fundamentals to consider when analysing the 2008 RMR is to determine Russia's intentions of the transformation. This means establishing if the reform is planned to remodel the Russian strategic view, and security/defence decision-making and military thinking to meet contemporary threats and challenges, or if it is designed just to recreate a Soviet-era scheme, in search of global warfare capabilities. Hence, the derived question may be to ascertain if the reform aims to transform the armed forces effectively into a compact and professional modern force to fight terrorism and protect the homeland, or if it will be a set of superficial amendments that will make cosmetic adjustments to its actual conditions.

The literature to date suggests that there is not an accord on the topic among researchers and experts. On the one hand, some scholars (Renz, 2010; Dimitrakopoulou & Liaropoulos, 2010; Lannon, 2011; Bartles, 2011; Bryce-Rogers, 2013; Gorenburg, 2013; Klein & Pester, 2014) argue that Russia, although with some minor errors, has already shifted to a contemporary vision, seeking to respond to local and domestic challenges and therefore, the reforms applied have drastically improved the potential of the Russian military. On the other hand, some others (Herspring & McDermott, 2010; Nichol, 2011; Barabanov, Makienko & Pukhov, 2012; Russian Analytical Digest, 2012; Makarychev & Sergunin, 2013; Oxenstierna & Westerlund, 2013) maintain that Russia is still struggling with the scope of the reforms and consequently, several reforms to date have not improved the capabilities of the armed forces.

Based on recent first-hand facts such as the new look of Russian troops, in terms of advanced digital camouflage uniforms and new weaponry, and its rapid-deployment capabilities, demonstrated during recent military exercises such as *Cobalt* and *Zapad*, and the Crimea crisis in February–April 2014 (Taylor, 2014; Loiko, 2014; Golts, 2014), it may be worth acknowledging the new capabilities of the military. However, several other factors such as the reversing of several of Serdyukov reforms by the new Defence Minister Shoigu, the low technology of the MIC and the continued high level of corruption (Sergunin, 2012; Gorenburg, 2013; Makarychev and Sergunin, 2013), may provide a different perspective.

Nonetheless, and as suggested by Nichol (2011, p.2) (2011, p.2), despite the real intentions of Russia, for both approaches exist “major economic, technological, demographical and other impediments” that undermine “Russia's ability to recreate *superpower* armed forces ready to carry out strategic land, sea and air battle in the East and West and to its efforts to create modern armed forces”.

Russia's Security and Defence Policy and its perceptions of threats and dangers are of paramount importance as they undoubtedly shape foreign and domestic policy and the military approach to be used to reach state goals.

Russia's National Security and Defence Policy

Russia's fundamental views on security/defence policy and military doctrine and thinking can be principally found in the National Security Strategy of Russia until the year 2020 (released in May 2009), and both in the 2010 and 2014 military doctrine. The latter may have a more comprehensive vision as it takes into account the Concept for the Long-Term Socioeconomic Development of the Russian Federation for the Period up to 2020, the National Security Strategy of Russia until

the year 2020, the 2008 Russian Federation Foreign Policy Concept and the Russian Federation Maritime Doctrine for the period up to 2020 (Bender, 2015; Adamowski, 2015).

These documents include descriptions of what Russia considers as a military threat and a military danger, and hence, how to react to each one. Both military threats and dangers refer to “a state of interstate or intrastate relations” (Russian Federation Ministry of Defence, 2010, p. 2), however, the difference between the former and the latter is the probability of the eruption of a military conflict. A military threat is characterised “by the real possibility of the outbreak of a military conflict between opposing sides and by a high degree of readiness on the part of a given state (group of states) or separatist (terrorist) organizations to utilize military force (armed violence)”. Similarly, a military danger is characterised “by an aggregation of factors capable in certain conditions of leading to the emergence of a military threat” (Russian Federation Ministry of Defence, 2010, p. 2).

A closer reading of those policy pieces reveals a mixture of both conservatism and progressive views on Russia's security/defence approaches, which, to some extent, may be contradictory. On the one hand, the National Security Strategy of Russia criticises the role of NATO as an outdated local security apparatus but emphasises the importance of the Collective Security Treaty Organisation (CSTO) as the “main interstate instrument for responding to regional threats and challenges of a military-political or military-strategic nature” (Russian Federation Security Council, 2009, p. 3). In the same way, the 2014 military doctrine emphasises Russia's interest on expanding its influence beyond its borders, and specifically its presence in the Arctic, and the importance of enhanced relations with emerging countries like India, Brazil and China.

On the other hand, the 2014 Military Doctrine states the adherence of the Russian Federation to the norms and principles of international law yet it considers it legitimate to utilise its armed forces to ensure the protection of its citizens, located beyond the borders of the Russian Federation; and specifically defines NATO's expansion in the region as Russia's main peripheral threat. This document defends the legitimacy of building joint missile defence systems by Russia and allied nations in order to defend its interests.

The 2010 Military Doctrine accepts the “decline of the likelihood of a large-scale war involving the use of conventional means of attack and nuclear weapons being unleashed against the Russian Federation”, it still considers as a military danger “territorial claims against the Russian Federation and its allies and interference in their international affairs” (2010, p. 4). However, even though it urges the modernisation of the armed forces and emphasises the features of contemporary warfare, it still orders the enhancement of mobilisation capabilities and instructs the acquisition of up-to-date conventional armaments but at the same time highlights the necessity of a restructured nuclear force (2010, p. 19).

A major ambiguity in the 2010 and 2014 Military Doctrine is the absence of major explanations on the desired organisation of the troops. Whereas a military doctrine is generally a clear statement of the shape that armed forces will have, including their structure and equipment, both the 2010 and 2014 Military Doctrine lack any account of the new structure and C3 planned for times of war and those of peace; for instance, there is no description of the structures that will be at the forefront of the Russian military: the Unified (Joint) Strategic

Command (USC)⁹, the Army Brigades (AB), and the Air Force and Air Defence Commands (AFADC) and Air Bases.

Nevertheless, the Strategic Missile Forces and the Aerospace Defence Forces will continue to be commanded centrally from Moscow (Thornton, 2011, p. 26); the Ministry of Interior Affairs has announced that its forces will remain under its sole command; and there have been few developments on a common inter-service doctrine and C3 (Hedenskog and Vendil Pallin, 2013, p. 24). Consequently, AB responsible for the ground manoeuvres of the USCs, have no defined channel of communication and coordination with organisations that should support its operations such as the AFADC, which control Army Aviation. In sum, there is no joint operations capability.

Contemporary Military Thinking

Armed forces do not exist in a vacuum. As natural law-formed organisations, they respond to state goals and the needs of national security strategy and defence/military doctrine. In the present world, armed forces and the raw product of their main operations – war – cannot be solely attached to the traditional concept of an “act of force to compel our opponent to fulfil our will” (Clausewitz, 2008, p. 75). Instead, the military should be understood as a participatory element of contemporary societies, intended to protect and maintain peace rather than to provoke or prolong war.

As a result of the global processes of democratisation, modern armed forces are now striving to be seen as a structure for progress, capable of dealing with global threats and challenges of the current world in multiple scenarios, rather than as a simple repressive tool of governments. This implies that they should now be permanent and fundamental actors in peacekeeping and crisis management operations so that “citizens can live in peace and the government’s programs can achieve their desired goals” (Rolon and Fernandez, 2013, p. 40) while maintaining the capacity of using measured force to uphold domestic and international law.

Improving the capabilities of the military has been a priority of contemporary governments, as professional and highly capable forces favour a rational and measured use of force, back the authority and legitimacy of a state, and create an atmosphere of democratic openness so that they could be more accountable to society. Additionally, this would drastically reduce spending on military assets and rationalise the military policy of states.

In the same way, the defence/military doctrine has also been transformed accordingly to provide adequate support to the military operations. Military doctrine is the result of combining history and theoretical work with the practical results in the field and learning its lessons; all seen under the legal order of the State. As it describes how armed forces will contribute to achieve State goals through the most adequate usage of its capabilities, including the use of legitimate force, military doctrine is usually considered to be a crucial part of any military reform.

⁹ The USC—which are termed Military Districts (MD) in peacetime—are responsible for commanding joint inter-service operations with all forces from the MoD and from other ministries such as the Ministry of Interior Affairs, the Ministry of Emergency Situations and the Border Guards (Nichol, 2011, p. 14).

In modern military doctrine, the concept of large mass mobilisation forces, with outsized stockpiles of weapons, supported mainly by conscription and prepared for a large-scale conventional war, has been replaced. The emergence of new global threats and challenges such as the proliferation of weapons of mass destruction, international terrorism, transnational organised crime and the enhancement of interethnic and interfaith tensions, along with the decline of the probability of large-scale conventional wars, has forced states to adjust their armed forces and their doctrine to answer those new challenges.

Contemporary military thinking has shifted to a more effective conception of smaller forces, equipped and trained to high standards, under a fully professional scheme and prepared to develop various military lethal and non-lethal actions and to provide essential governmental services, emergency infrastructure reconstruction, and humanitarian relief.

Consequently, the motivation of reforms to the military has been to innovate, reorganise, and prioritise their assets, converting them into professional and rapidly deployable organisations, fully capable of supporting states' defence and security policies while aligning their military doctrines into what have been called *Full Spectrum Operations* (FSO).

FSO is a military concept developed mainly by the US Army during the past decade as a holistic response to the adequate employment of the force in relation to the security challenges posed in the twenty-first century (US Army, 2008, pp.49–71; NATO, 2003, pp. 14-24). The FSO concept is widely used by contemporary armed forces such as the North Atlantic Treaty Organization (NATO) and the Organization for Security and Co-operation in Europe (OSCE), as it signifies a “balanced usage of combat power through simultaneous and continuous combinations of four elements: Offense, Defence, Stability, and Civil Support. The Army must defeat enemies and simultaneously shape the civil situation through stability or civil support operations” (US Army, 2009, p.1).

Through offensive and defensive operations, armed forces engage and defeat their adversaries, and through stability and civil support operations, armed forces act together with civil authorities and the population to sustain peaceful environments (Figures 4 and 5). The use of the FSO concept permits a wiser deployment of existing assets and force capabilities to obtain the desired effects on the security and stability of a region, and to support domestic and foreign policy.

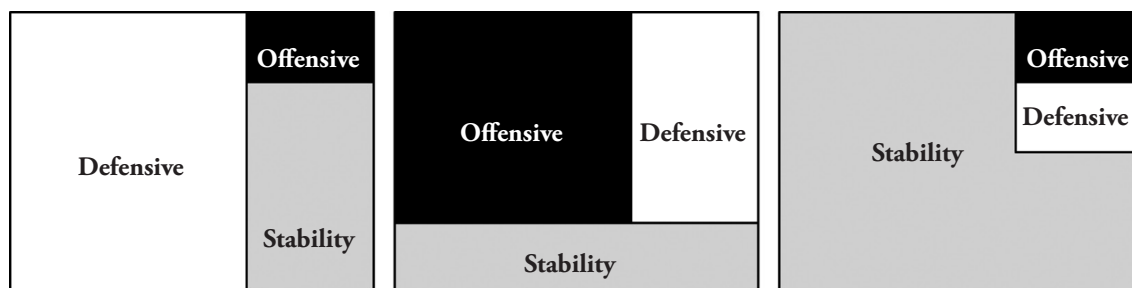


Figure 4. Full Spectrum Operations (FSO) conducted by a State outside its own territory.

Note: The mission determines the relative weight of effort among the elements.

Source: Prepared by the author on the basis of data in US Army (2008, p. 49); NATO (2003, pp. 35-40).



Figure 5. Full Spectrum Operations (FSO) conducted by a State within its own territory.

Note: The mission determines the relative weight of effort among the elements.

Source: Prepared by the author on the basis of data in US Army (2008, p. 49); NATO (2003, pp. 35-40).

The Russian military has not been excluded from using an FSO concept in its search for better-organised and more capable armed forces. Although the Russian military does not use the term FSO, there is evidence that leads to the conclusion that it uses the same theoretical concept. For instance, in the early 1990s, former Defence Minister, Pavel S. Grachev, acknowledged the end of the main threats of the cold war and summarised the new essence of the political aspect of the Russian military doctrine as two interrelated tasks – “to prevent war and to repulse the aggressor” (1992, p. 6).

General Grachev suggested that a large-scale conventional war was unfeasible due to the presence of strategic nuclear arms and identified local wars and military conflicts as a more probable threat (1992, p. 6). Nevertheless, and most importantly, he described the future of the Russian military in terms of “small strength action readiness forces... deployed to oppose effectively any external threat and to be able to repulse any local aggression. The mobile forces will be rapidly transferable, to carry out missions to support action readiness forces at the shortest time possible in any region of the country” (1992, pp. 6-7).

Besides, in 1996, the former President, Boris Yeltsin, issued an edict ordering the shift to fully volunteer forces by 2000 and the reduction and reorganisation of the units, aiming to give the military a fresh impetus toward the new millennium (Thornton, 2011, p. 7). In addition, the policy document *Urgent Tasks for the Development of the Armed Forces of the Russian Federation*, released in 2003, established the goals of the Russian military for the twenty-first century.

Similarly, President Medvedev’s opening address in 2008 at a meeting with Commanders of Military Districts pointed out that “[By 2020] we must have also achieved superiority in the air, in conducting high-precision strikes on land and sea targets, as well as the rapid transfer of troops”.

Moreover, former Defence Minister Serdyukov’s statements on the 2008 RMR emphasised that “the reforms were intended to switch from a mass mobilization army for vast land, sea, and air wars” to “a performance-capable, mobile, and maximally armed army and navy ready to participate in three regional and local conflicts, at a minimum” (Nichol, 2011, p. 5).

Finally, the 2010 Russian military doctrine emphasises the main tasks of the military, including: “to participate in international peacekeeping activity, including under the auspices of the United Nations and within the framework of interaction with international (regional) or-

ganizations”; and “to participate in the struggle against international terrorism” (2010, p. 9). In addition, it calls on the military “to participate in operations in the maintenance (restoration) of international peace and security”; “to combat piracy and ensure the safety of shipping”; and “to participate in the elimination of emergencies and the restoration of special-purpose facilities” (2010, p. 12).

In light of the above, it is feasible to conclude that Russia employs the concept of FSO, as it aims to have a modern military, highly capable of handling both internal and external threats and dangers in the form of regional domestic, regional or major-scale conventional wars, in addition to the cooperation with the international community on the international agenda, including the war against terrorism, the control of weapons of mass destruction (WMD), and performing peacekeeping operations.

Russia’s threat assessment requires the capacity to deal both with local and regional conflicts on Russia’s boundaries and in the post-Soviet space, in addition to domestic menaces of terrorism and civil conflict. The employment of the FSO concept has signified a modernisation of Russia’s warfare concept providing an adequate framework to cope with potential conflicts in the Caucasus or a war with China or NATO, without the use of nuclear weapons. In addition, the FSO has provided Russia with the foundations to modernise the MIC and counterbalance the technology of its possible adversaries.

Conclusion

This paper has provided an analysis on the modernisation process of the Russian military and its usage of the FSO concept; however, it did not aspire to cover in detail every aspect of the 2008 RMR because of its vastness and complexity. Due to the relevance of the topic and the constant changes in the reform, the findings of this paper can and need to be taken further envisioning at least four reasons to undertake an extra study on the 2008 RMR.

Firstly, the 2008 RMR will have contentious implications for the foreign policy of the Russian Federation and thus, for the strategies of the international community to cope with Russia’s enhanced potential. On the one hand, the dismantling of the Soviet-era military and its mobilisation policy will decrease Russia’s capacity for large-scale conventional conflicts with the West (Suslov, 2014). In such a scenario, Russia will, most likely, rely on the deterrent power of its large nuclear weapons’ inventory and its permanent member’s chair on the United Nations’ Security Council. On the other hand, Russia’s new military capabilities will improve its capacity to protect its national interests and security environment within the post-Soviet space (Capezza, 2009, p. 3); consequently, Moscow may pursue a stronger policy in the Community of Independent States (CIS) to “reinforce Putin’s efforts to tie that region more closely to Russia” (Klein and Pester, 2014, p. 1).

Secondly, the results of this new RMR will not only influence the interests and goals of the Russian Federation but also the status and situation of the Russian military within the state and society. Armed forces are a fundamental part of the policymaking process of every state, as they support foreign and domestic strategies and defend the nation from external and internal threats; and in the case of Russia, they are rooted to almost all sectors: government, society, history,

economy, science, and technology. The 2008 RMR results will affect Russia's risk assessment, situation awareness, and policymaking process which, if successful, may lead to democratisation processes in Russia. This idea is shared by Nichol (2011, p. i) when stating that the success of the 2008 RMR may modify Russia's vulnerability perception and thus "it may participate more in international peacekeeping operations", encouraging democratisation, a stronger policy on human rights and a more active participation in global policies.

Thirdly, the 2008 RMR and its results will have security and institutional influences on the major parts of the international system, as Russia's challenges are shared by several states worldwide. The existence of a globally complex interdependence among states and the increase of government groups and multilateral international institutions indicate a common understanding of the positive and negative effects of globalisation and the vulnerability of states by transnational threats that can no longer be confronted individually. In today's world, it is difficult for sovereign states to protect their interests without cooperation with other states; hence, what affects one state and the measures taken have collateral effects on others and vice versa.

Fourthly, Russia's successes and failures in this field will probably be used as a reference point for other military reforms and will undoubtedly become a case study in the discipline of military sciences. Several academics (Bartles, 2011; Lannon, 2011; Barabanov, Makienko and Pukhov, 2012; Bryce-Rogers, 2013; Felgenhauer, 2013b; Makarychev & Sergunin, 2013) concur with the opinion that the 2008 RMR is one of the most important reforms to the Russian military since the Second World War. Besides, it is also believed it may be one of the most radical transformations to a military force since the end of the cold war. Hence, there are many expectations for its outcomes for both Russia and worldwide observers.

References

1. Adamowski, J. (2015). Russia Overhauls Military Doctrine. [online] Defense News. Available at: <<http://www.defensenews.com/story/defense/policy-budget/policy/2015/01/10/russia-military-doctrine-ukraine-putin/21441759/>>.
2. Andreyeva, S. (2012). What is behind the dismissal of Russian Defense Minister? [online] Available at: <http://voicofrussia.com/2012_11_06/What-is-behind-the-dismissal-of-Russian-Defense-Minister/> [Accessed 8 Apr. 2014].
3. Barabanov, M., Makienko, M. and Pukhov, R. (2012). Military Reform: Toward the New Look of the Russian Army. [online] Moscow: Valdai Discussion Club. Available at: <<http://valdaiclub.com/publication/46540.html>> [Accessed 30 Nov. 2013].
4. Bartles, C. (2011). Defense Reforms of Russian Defense Minister Anatolii Serdyukov. *The Journal of Slavic Military Studies* 24(1), pp. 55–80.
5. Barylski, R. (1998). *The Soldier in Russian Politics 1988–1996*. Piscataway, New Jersey: Transaction Publishers.
6. BBC (2006). Russia censured over Chechen man. BBC. [online] 27 Jul. Available at: <<http://news.bbc.co.uk/2/hi/europe/5219254.stm>> [Accessed 29 Apr. 2014].
7. Bender, J. (2015). Russia's New Military Doctrine Shows Putin's Geopolitical Ambitions. [online] Business Insider. Available at: <<http://www.businessinsider.com/russia-has-a-new-military-doctrine-2015-1>>.
8. Blank, S. ed. (2011a). Russian Military Politics and Russia's 2010 Defense Doctrine. Available at: <<http://www.strategicstudiesinstitute.army.mil/pubs/display.cfm?pubID=1050>> [Accessed 23 Mar. 2014].
9. Blank, S. (2011b). Russia's Geo-economic Future; The Security Implications of Russia's Political and Economic Structure. *The Journal of Slavic Military Studies* 24(3), pp.351–395.
10. Blank, S. (2012). Can Russia Reform? Economic, Political, and Military Perspectives. Available at: <<http://www.strategicstudiesinstitute.army.mil/pubs/display.cfm?pubID=1111>> [Accessed 1 Sep. 2013].

11. Bouldin, M. (2004). The Ivanov Doctrine and Military Reform: Reasserting Stability in Russia. *The Journal of Slavic Military Studies* 17(4), pp.619–641.
12. Brown, A. (1996). *The Gorbachev Factor*. Oxford: Oxford University Press.
13. Bryce-Rogers, A. (2013). Russian Military Reform in the Aftermath of the 2008 Russia-Georgia War. *Demokratizatsiya: The Journal of Post-Soviet Democratization* 21(3), pp.339–368.
14. Capezza, D. (2009). Translating Russia's Military Reform. *Small Wars Journal* [online] (4). Available at: <<http://smallwarsjournal.com/jrnl/art/translating-russias-military-reform>> [Accessed 25 Apr. 2014].
15. Cheloukhine, S. and Habermeld, M. (2011). *Russian Organized Corruption Networks and their International Trajectories*. New York: Springer.
16. Cimbala, S. (2013). *The Russian Military Into the 21st Century*. New York, NY: Routledge.
17. Clausewitz, C. von (2008). *On war*. Radford, VA: Wilder Publications.
18. Cohen, A. (2012). The Downfall of Russia's Defense Minister. The Foundry: Conservative Policy News from The Heritage Foundation. Available at: <<http://blog.heritage.org/2012/11/06/the-downfall-of-russias-defense-minister/>> [Accessed 7 Apr. 2014].
19. Cooper, J. (2012). Can Russia afford to modernize its military? [online] Available at: <http://www.sipri.org/research/armaments/milex/publications/unpubl_milex/Cooper%20Presentation%20SIPRI%202012.pdf> [Accessed 20 Dec. 2013].
20. Dimitrakopoulou, S. and Liapopoulos, A. (2010). Russia's National Security Strategy to 2020: A Great Power in the Making? *Caucasian Review of International Affairs* 4(1), pp.35–42.
21. Eckel, M. (2008). Opposition to Russian military reforms grows. [online] USA Today. Available at: <http://usatoday30.usatoday.com/news/world/2008-11-18-1994976891_x.htm> [Accessed 30 Jun. 2013].
22. Encyclopedia Britannica (2014). Military-industrial complex. [online] Encyclopedia Britannica. Available at: <<http://global.britannica.com/EBchecked/topic/382349/military-industrial-complex>> [Accessed 28 Mar. 2014].
23. Fater, Y. (2010). Israel signs \$400 million deal to sell spy drones to Russia. [online] Haaretz.com. Available at: <<http://www.haaretz.com/print-edition/business/israel-signs-400-million-deal-to-sell-spy-drones-to-russia-1.318972>> [Accessed 19 Apr. 2014].
24. Felgenhauer, P. (2013). Is Shoigu reversing Serdyukov's military reform? Russian Military Reform. Available at: <<http://russiamil.wordpress.com/2013/02/11/is-shoi-gu-reversing-serdyukovs-military-reform/>> [Accessed 29 Mar. 2014].
25. Finn, P. (2007). Russian Leader Expands Powers of a Possible Successor. The Washington Post. [online] 16 Feb. Available at: <http://www.washingtonpost.com/wp-dyn/content/article/2007/02/15/AR2007021501526_pf.html> [Accessed 30 Jun. 2013].
26. Fomin, A. (2013). History of Russia's MTC system. *Military Parade* 2, pp.10–12.
27. Galeotti, M. (2013). *The Politics of Security in Modern Russia*. Farnham; Burlington, VT: Ashgate Publishing, Ltd.
28. Golts, A. (2013). Difficult future conditions. *Ogonek* 1, 14 Jan., p.18.
29. Golts, A. (2014). Putin's Way of Reforming the Army. [online] The Moscow Times. Available at: <<http://www.themoscowtimes.com/opinion/article/putins-way-of-reforming-the-army/497256.html>> [Accessed 3 Apr. 2014].
30. Gorenburg, D. (2013). The Russian Military under Sergei Shoigu Will the Reform Continue?. Available at: <http://www.ponarseurasia.org/sites/default/files/policy-memos-pdf/Pepm_253_Gorenburg_June%202013_0.pdf> [Accessed 1 Sep. 2013].
31. Grachev, P. (1992). The defence policy of the Russian federation. *The Rusi Journal* 137(5), pp.5–7.
32. Gresh, J. (2011). The Realities of Russian Military Conscription. *The Journal of Slavic Military Studies* 24(2), pp.185–216.
33. De Hass, M. (2011). Russia's Military Reforms. Victory after Twenty Years of Failure? Clingendael Papers. [online] Netherlands Institute of International Relations. Available at: <http://www.clingendael.nl/sites/default/files/20111129_clingendaelpaper_mdhehaas.pdf> [Accessed 24 Jun. 2013].
34. Hedenskog, J. and Vendil Pallin, C. eds. (2013). Russian Military Capability in a Ten-Year Perspective-2013. Available at: <https://www.academia.edu/5407818/2013-Russian_Military_Capability_in_A_Ten-Year_Perspective> [Accessed 13 Dec. 2013].
35. Herspring, D. (2005). Vladimir Putin and Military Reform in Russia. *European Security* 14(1), pp.137–155.
36. Herspring, D. (2006). Undermining Combat Readiness in the Russian Military, 1992-2005. *Armed Forces & Society* 32(4), pp.513–531.
37. Herspring, D. (2008a). Russian Military Reform and Anatoly Serdyukov. [online] Available at: <http://web.mit.edu/ssp/seminars/wed_archives08fall/herspring.html> [Accessed 16 Nov. 2013].
38. Herspring, D. (2008b). Russian Military Reform and Anatoly Serdyukov. *Problems of Post-Communism* 55(6), pp.20–32.

39. Herspring, D. and McDermott, R. (2010). Serdyukov Promotes Systemic Russian Military Reform. *Orbis* 54(2), pp.284-301.
40. Isachenkov, V. (2012). Anatoly Serdyukov, Russia Defense Minister, Dismissed. [online] Huffington Post. Available at: <http://www.huffingtonpost.com/2012/11/06/anatoly-serdyukov-dismissed_n_2080992.html> [Accessed 8 Apr. 2014].
41. Jensen, D. (2011). Sergei Ivanov Returns to Center Stage. [online] Institute of Modern Russia. Available at: <<http://imrussia.org/politics/427-sergei-ivanov-returns-to-center-stage>> [Accessed 30 Apr. 2014].
42. Kamenev, M. (2009). How to Dodge the Draft in Russia. Time. [online] 30 Mar. Available at: <<http://content.time.com/time/world/article/0,8599,1888238,00.html>> [Accessed 21 Apr. 2014].
43. Karavayev, A. (2012). Baku, Vilnius, Tbilisi. [online] Vestnik Kavkaza. Available at: <<http://vestnikkavkaza.net/analysis/politics/22339.html>> [Accessed 10 Jan. 2014].
44. Klein, M. and Pester, K. (2014). Russia's Armed Forces on Modernisation Course Progress and Perspectives of Military Reform. SWP Comments. [online] Berlin: German Institute for International and Security Affairs. Available at: <http://www.swp-berlin.org/fileadmin/contents/products/comments/2014C09_kle_pst.pdf> [Accessed 9 Apr. 2014].
45. Kommersant (2013). New Annals of Military Organizational Development. Kommersant. [online] 9 Feb. Available at: <<http://www.kommersant.ru/doc/2269069>> [Accessed 27 Apr. 2014].
46. Kosals, L. and Izyumov, A. (2011). The Russian Defence Industry Confronts the Market: Findings of a Longitudinal Study. *Europe-Asia Studies* 63(5), pp.733-756.
47. Krainova, N. and Oliphant, R. (2012). Putin Fires Defense Minister Amid Scandal. [online] The Moscow Times. Available at: <<http://www.themoscowtimes.com/news/article/putin-fires-defense-minister-amid-scandal/471013.html>> [Accessed 8 Apr. 2014].
48. Kramer, A. (2012). Putin Fires Defense Minister Linked to Real Estate Investigation. The New York Times. [online] 6 Nov. Available at: <<http://www.nytimes.com/2012/11/07/world/europe/putin-dismisses-russian-defense-minister.html>> [Accessed 8 Apr. 2014].
49. Kramer, A. (2013). Russia Charges Ex-Defense Minister Over a Road Project. The New York Times. [online] 28 Nov. Available at: <<http://www.nytimes.com/2013/11/29/world/europe/russian-investigators-charge-former-putin-ally.html>> [Accessed 7 Apr. 2014].
50. Kumar, A. (2013). Russian Military Reforms: An Evaluation. IDSA Issue Brief. [online] Available at: <http://www.idsa.in/system/files/IB_RussianMilitaryReforms-AmitK.pdf> [Accessed 10 Dec. 2013].
51. Lannon, G. (2011). Russia's New Look Army Reforms and Russian Foreign Policy. *The Journal of Slavic Military Studies* 24(1), pp.26-54.
52. Liaropoulos, A. (2008). The Russian Defense reform and its limitations. *Caucasian Review of International Affairs* 2(1), pp.42-49.
53. Loiko, S. (2014). Some 'local' forces in Crimea look a lot like Russian military. Los Angeles Times. [online] 4 Mar. Available at: <<http://articles.latimes.com/2014/mar/04/world/la-fg-wn-local-forces-crimea-russian-military-20140304>> [Accessed 6 Apr. 2014].
54. Makarychev, A. and Sergunin, A. (2013). Russian military reform: institutional, political and security implications. *Defense & Security Analysis* 29(4), pp.356-364.
55. McDermott, R. (2011a). The Bear, the Abacus and Impossible Defense Computations. *Eurasia Daily Monitor* 8(56). Available at: <http://www.jamestown.org/programs/edm/single/?tx_ttnews%5Btt_news%5D=37679&tx_ttnews%5BbackPid%5D=512&no_cache=1> [Accessed 16 Mar. 2014].
56. McDermott, R. (2011b). *The Brain of the Russian Army: Futuristic Visions Tethered by the Past*. [online] Fort Leavenworth, Kansas: The Foreign Military Studies Office. Available at: <<http://fms.leavenworth.army.mil/documents/futuristic-visions.pdf>> [Accessed 1 Dec. 2013].
57. McDermott, R. (2013). Shoigu Kicks Serdyukov Reform into Long Grass. [online] Refworld. Available at: <<http://www.refworld.org/docid/519c7bc04.html>> [Accessed 17 Mar. 2014].
58. Medvedev, D. (2008). Opening Address at a Meeting with Commanders of Military Districts. [online] President of Russia. Available at: <http://archive.kremlin.ru/eng/speeches/2008/09/26/2019_type82912type84779_206970.shtml> [Accessed 12 Dec. 2013].
59. Mereu, F. (2006). Commanders Urged to Report Incidents. [online] The Moscow Times. Available at: <<http://www.themoscowtimes.com/news/article/commanders-urged-to-report-incidents/206653.html>> [Accessed 30 Apr. 2014].
60. Merriam-Webster Dictionary (2014a). esprit de corps. [online] Merriam-Webster Dictionary. Available at: <<http://www.merriam-webster.com/dictionary/esprit%20de%20corps>> [Accessed 10 Jan. 2014].
61. Merriam-Webster Dictionary (2014b). military-industrial complex. [online] Merriam-Webster Dictionary. Available at: <<http://www.merriam-webster.com/dictionary/military-industrial%20complex>> [Accessed 10 Jan. 2014].
62. NATO (2003). Urban Operations in the Year 2020. Available at: <<https://www.cso.nato.int/pubs/rdp.asp?RD=DP=RTO-TR-071>> [Accessed 16 Nov. 2013].

63. NATO (2008). AAP-6 Glossary of Terms and Definitions. [online] Brussels: North Atlantic Treaty Organization Standardization Agency. Available at: <<http://www.fas.org/irp/doddir/other/nato2008.pdf>> [Accessed 16 Nov. 2013].
64. Nichol, J. (2011). Russian Military Reform and Defense Policy. CRS Report for Congress. [online] Congressional Research Service. Available at: <<http://www.fas.org/sgp/crs/row/R42006.pdf>> [Accessed 16 Nov. 2013].
65. Norton-Taylor, R. (2014). Russia spends more of its wealth on arms than US in 2013. *The Guardian*. [online] 14 Apr. Available at: <<http://www.theguardian.com/world/2014/apr/14/russia-spends-more-wealth-arms-us-2013>> [Accessed 14 Apr. 2014].
66. Orr, M. (1998). The Russian Armed Forces as a factor in Regional Stability. Available at: <https://www.google.ru/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&cad=rja&uact=8&ved=0CCwQFjAB&url=http%3A%2F%2Fda.mod.uk%2FCSRC%2Fdocuments%2FRussian%2FD67&ei=3_k6U6uMJvHV4QS1IYDYAw&usg=AFQjCNE3JAwAte0_6fFrJoiDoRp8l83xoA> [Accessed 16 Nov. 2013].
67. Orr, M. (2000). Better or Just not so Bad? An Evaluation of Russian Combat Effectiveness in the Second Chechen War. Available at: <https://www.google.ru/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&cad=rja&uact=8&ved=0CCwQFjAB&url=http%3A%2F%2Fda.mod.uk%2FCSRC%2Fdocuments%2FRussian%2FD67&ei=3_k6U6uMJvHV4QS1IYDYAw&usg=AFQjCNE3JAwAte0_6fFrJoiDoRp8l83xoA> [Accessed 16 Nov. 2013].
68. Orr, M. (2003). The Russian Ground Forces & Reform 1992-2002. Available at: <https://www.google.ru/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&cad=rja&uact=8&ved=0CCwQFjAB&url=http%3A%2F%2Fda.mod.uk%2FCSRC%2Fdocuments%2FRussian%2FD67&ei=3_k6U6uMJvHV4QS1IYDYAw&usg=AFQjCNE3JAwAte0_6fFrJoiDoRp8l83xoA> [Accessed 16 Nov. 2013].
69. Orttung, R. & Latta, A. (2013). *Russia's Battle with Crime, Corruption and Terrorism*. New York, NY: Routledge.
70. Oxenstierna, S. and Westerlund, F. (2013). Arms Procurement and the Russian Defense Industry: Challenges Up to 2020. *The Journal of Slavic Military Studies* 26(1), pp.1-24.
71. Pain, E. (2000). The Second Chechen War: The Information Component. *Military Review* [online] (July-August). Available at: <<http://fmso.leavenworth.army.mil/documents/secchech/secchech.htm>> [Accessed 9 May 2013].
72. Parchomenko, W. (1999). The State of Russia's Armed Forces and Military Reform. *Parameters* (Winter 1999-2000), pp.98-110.
73. Renz, B. (2010). Russian Military Reform. *The Rusi Journal* 155(1), pp.58-62.
74. Reuters (2014). Russia grants amnesty to former defence minister Anatoly Serdyukov. [online] Reuters. Available at: <<http://uk.reuters.com/article/2014/03/06/uk-russia-amnesty-serdyukov-idUKBREA250GY20140306>> [Accessed 10 Apr. 2014].
75. RIA Novosti (2009). Reform of the Russian Armed Forces. [online] RIA Novosti. Available at: <<http://en.ria.ru/infographics/20091204/157098191.html>> [Accessed 15 Apr. 2014].
76. RIA Novosti (2010). Army aviation to remain part of Russian Air Force. [online] RIA Novosti. Available at: <http://en.ria.ru/military_news/20101201/161580517.html> [Accessed 1 May 2014].
77. RIA Novosti (2012). Russian Military Faces Major Reshuffle. [online] RIA Novosti. Available at: <http://en.ria.ru/military_news/20121109/177337098.html> [Accessed 25 Apr. 2014].
78. RIA Novosti (2013). Russian Ex Chief of Staff Gets Defense Minister Aide Job. [online] RIA Novosti. Available at: <http://en.ria.ru/military_news/20130304/179804307/Russian-Ex-Chief-of-Staff-Gets-Defense-Minister-Aide-Job.html> [Accessed 9 Apr. 2014].
79. Roffey, R. (2013). Russian Science and Technology is Still Having Problems—Implications for Defense Research. *The Journal of Slavic Military Studies* 26(2), pp.162-188.
80. Rolon, C. and Fernandez, A. (2013). The Challenge of Combat Search and Rescue for Colombian National Army Aviation. *Combating Terrorism Exchange (CTX)* 3(4), pp.40-49.
81. Rosenberg, S. (2012). Putin dismisses defence minister. [online] BBC News. Available at: <<http://www.bbc.co.uk/news/world-europe-201218216>> [Accessed 8 Apr. 2014].
82. Rostec (2012). Company History. [online] Rostec. Available at: <<http://rostec.ru/en/about/article/626>> [Accessed 10 Jan. 2013].
83. Rotberg, R. (2009). *Corruption, Global Security, and World Order*. Cambridge, Mass.: Brookings Institution Press.
84. RT (2014). Former Defense Minister Serdyukov given amnesty in power abuse case. [online] RT. Available at: <<http://rt.com/politics/minister-defense-russia-amnesty-142/>> [Accessed 10 Apr. 2014].
85. Rusmilitary (2013). Russian Military Higher Educational Institutions – Reverse Reform. *rusmilitary*. Available at: <<http://rusmilitary.wordpress.com/2013/10/17/russian-military-higher-educational-institutions-reverse-reform/>> [Accessed 9 Apr. 2014].

86. Russell, J. (2005). Terrorists, Bandits, Spooks and Thieves: Russian Demonisation of the Chechens before and since 9/11. *Third World Quarterly* 26(1), pp.101-116.
87. Russian Analytical Digest (2012). Military Reform in Russia. [online] Bremen: The Russian Analytical Digest. Available at: <<http://www.isn.ethz.ch/Digital-Library/Publications/Detail?ots591=0c54e3b3-1e9c-be1e-2c24-a6a8c7060233&lng=en&id=146477>> [Accessed 10 Nov. 2013].
88. Russian Federation Ministry of Defence (2003). Urgent Tasks for the Development of the Armed Forces of the Russian Federation. Available at: <<http://red-stars.org/doctrine.pdf>> [Accessed 20 Jan. 2014].
89. Russian Federation Ministry of Defence (2010). The Military Doctrine of the Russian Federation. Available at: <http://carnegieendowment.org/files/2010russia_military_doctrine.pdf> [Accessed 14 Mar. 2013].
90. Russian Federation Security Council (2009). Russian Federation National Security Strategy through 2020. Available at: <<http://www.isn.ethz.ch/Digital-Library/Publications/Detail?id=154915>> [Accessed 16 Nov. 2013].
91. Saradzhyan, S. (2008). Armed Forces Chief Shown the Door. [online] The Moscow Times. Available at: <<http://www.themoscowtimes.com/news/article/armed-forces-chief-shown-the-door/367984.html>> [Accessed 25 Apr. 2014].
92. Sergunin, A. (2012). On the Russian Military Reform: A Rejoinder. *The Journal of Slavic Military Studies* 25(2), pp.251-256.
93. Smirnov, S. (2013). Shoigu will have to 'fight' on two fronts. [online] Gazeta. Available at: <http://www.gazeta.ru/politics/2012/12/29_a_4911809.shtml> [Accessed 20 Nov. 2013].
94. Sukhov, O. (2013). Investigators Open Negligence Case Against Serdyukov | News. [online] The Moscow Times. Available at: <<http://www.themoscowtimes.com/news/article/investigators-open-negligence-case-against-serdyukov/490502.html>> [Accessed 7 Apr. 2014].
95. Suslov, D. (2014). 2008 Russian Military Reform. Available at: <<https://pod51036.outlook.com/owa/>> [Accessed 26 Apr. 2014].
96. Taylor, A. (2014). Putin says Crimea showcased 'new capabilities' of Russian military. Washington Post. Available at: <<http://www.washingtonpost.com/blogs/worldviews/wp/2014/03/28/putin-says-crimea-showcased-new-capabilities-of-russian-military/>> [Accessed 6 Apr. 2014].
97. The Moscow Times (2011). Sergei Ivanov. [online] The Moscow Times. Available at: <<http://www.themoscowtimes.com/people/article/sergei-ivanov/433915.html>> [Accessed 30 Apr. 2014].
98. The New York Times (2005). Chechen official puts death toll for 2 wars at up to 160,000. [online] *The New York Times*. Available at: <http://www.nytimes.com/2005/08/15/world/europe/15iht-check.html?_r=0> [Accessed 29 Apr. 2014].
99. Thornton, R. (2011). *Military modernization and the Russian ground forces*. [online] Carlisle, PA: Strategic Studies Institute, U.S. Army War College. Available at: <<http://www.strategicstudiesinstitute.army.mil/pubs/display.cfm?pubID=1071>> [Accessed 30 Dec. 2012].
100. Titoff, D. (2011). The New Russian Army, by Mikhail Barabanov (ed.). *The Journal of Slavic Military Studies* 24(3), pp.558-562.
101. U.S. Army (2008). *FM 3-0 Operations*. [online] Washington, DC: Headquarters Department of the Army. Available at: <<http://www.us.army.mil>> [Accessed 16 Nov. 2013].
102. U.S. Army (2009). Full Spectrum Operations in Army Capstone Doctrine (FM 3-0). Available at: <http://www.army.mil/aps/09/information_papers/full_spectrum_operations.html> [Accessed 16 Nov. 2014].
103. U.S. Department of Defense (2010). JP 1-02 Department of Defense Dictionary of Military and Associated Terms. [online] Washington, D.C.: U.S. Department of Defense. Available at: <http://www.dtic.mil/doctrine/dod_dictionary/> [Accessed 30 May 2013].
104. Vendil Pallin, C. (2008). *Russian Military Reform: A Failed Exercise in Defence Decision Making*. New York, NY: Taylor & Francis US.
105. Vendil Pallin, C. ed. (2012). *Russian Military Capability in a Ten-Year Perspective- 2011. FOI-R*. Stockholm: Swedish Defence Research Agency.
106. Wegren, S. and Herspring, D. eds. (2009). *After Putin's Russia: Past Imperfect, Future Uncertain* (4th ed.) Plymouth: Rowman & Littlefield Publishers.
107. Weir, F. (2013). Circling the wagons? Putin urges 'drastic upgrade' to Russia's military. Christian Science Monitor. [online] 28 Feb. Available at: <<http://www.csmonitor.com/World/Europe/2013/0228/Circling-the-wagons-Putin-urges-drastic-upgrade-to-Russia-s-military>> [Accessed 9 Apr. 2014].
108. Weitz, R. (2010). *Global Security Watch Russia: A Reference Handbook*. Santa Barbara, Calif.: ABC-CLIO.
109. Wengle, S. (2012). Engineers versus managers: experts, market-making and state-building in Putin's Russia. *Economy and Society* 41(3), pp.435-467.
110. Yegorov, I. (2008). Serdyukov's radical reform. [online] Russia Beyond The Headlines. Available at: <http://rbth.ru/articles/2008/12/18/181208_reform.html> [Accessed 1 May 2014].