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# Russia's armed forces

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Reforms and challenges

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## IN-DEPTH ANALYSIS

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EPRS | European Parliamentary Research Service

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**Members' Research Service**

April 2015 — PE 554.213

EN

This paper describes the current state of the Russian armed forces, with a summary of the reforms undertaken to make them more effective and the remaining challenges. Data comparing Russia's military capabilities with those of its international competitors are also included.

PE 554.213

ISBN 978-92-823-7027-8

doi: 10.2861/75411

QA-01-15-339-EN-N

Original manuscript, in English, completed in April 2015.

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## EXECUTIVE SUMMARY

Russia is flexing its military muscles, with recent events putting the spotlight on the country's armed forces. However, the current military revival was preceded by a long period of decline. Following the break-up of the Soviet Union, the Russian armed forces failed to adapt to the new realities of a post-Cold War world. Severe spending cuts left them under-equipped, poorly trained and ill-prepared to respond to new challenges such as the Chechen insurgencies and a 2008 conflict with Georgia.

Successive military reforms to transform the military into a more professional and mobile force ran into entrenched resistance from the military establishment and made little headway until the appointment of Anatoliy Serdyukov as Defence Minister in 2007. The 'New Look' reforms he undertook were intended to address the weaknesses highlighted in the 2008 Georgian war, leading to a substantially restructured, streamlined and more combat-ready military. For the most part, these reforms have been kept in place by Serdyukov's successor Sergei Shoigu.

Despite the success of Serdyukov's reforms, many modernisation challenges remain. The armed forces are slowly reducing their reliance on compulsory military service by recruiting more professional soldiers; however, demographic and financial constraints mean that the goal of a fully professional military remains unrealistic. Even with continued conscription, the armed forces are still about one fifth understaffed. Quality is also an issue, with conscripts in particular lacking adequate training due to rapid turnover in their ranks.

In terms of military hardware, years of underspending have left the military with obsolete equipment, much of it dating from Soviet times. The armed forces are now in the middle of a major spending programme with a target to have the same level of modern weapons as NATO countries by 2020. There have already been major deliveries of new equipment to all the armed forces and these are set to continue over the next few years. However, there is still a lot of catching up to do. Given that funding and the defence industry's production capacity are limited, it is unlikely that the rearmament target will be met.

All of the above means that, despite recent improvements, Russian military personnel are less well trained and have inferior equipment compared to their NATO counterparts. Russia also lags behind in purely numerical terms, with for example, fewer tanks or battleships than the United States in particular; nuclear weapons are the only area where parity has been preserved.

While Russia cannot match NATO quantitatively or qualitatively in conventional terms, its adept use of hybrid warfare has enabled military successes in Ukraine; NATO, while condemning Russia for its alleged involvement in Donbass, has yet to respond effectively.

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### List of main acronyms used

<b>IISS:</b>	International Institute for Strategic Studies
<b>MoD:</b>	Ministry of Defence
<b>GDP:</b>	Gross domestic product
<b>SAP:</b>	State Armaments Programme
<b>US\$:</b>	United States dollars

## 1. Historical background

**1945-91:** The Soviet Union had the largest armed forces in the world, with some five million men in service, according to CIA estimates.<sup>1</sup> However, the arms race crippled the Soviet economy, with defence expenditure estimated to have peaked at 30% of GDP in the late 1980s.<sup>2</sup>

Defence expenditure eventually began to decline from this peak, with the easing of East-West tensions. Under Mikhail Gorbachev, armed forces personnel were cut to four million.<sup>3</sup>

**1991:** Gorbachev's successor Boris Yeltsin continued the downsizing process. However, spending and staffing cuts were not accompanied by effective modernisation, leaving the armed forces demoralised, underfunded and ineffective.<sup>4</sup>

**1991-94:** the first Chechen War, in which Russian soldiers failed to overcome insurgents despite overwhelming numerical superiority, highlighted the weakness of the armed forces.

**2000:** the start of Vladimir Putin's first presidency saw a reversal of the Yeltsin-era downwards trend in expenditure, against a background of renewed conflict in Chechnya (second Chechen War: 1999-2009).

**2008:** although Russia was victorious in the Georgian war, the conflict highlighted numerous weaknesses in its armed forces. Shortly afterwards, Anatoliy Serdyukov, who was appointed Defence Minister in 2007, announced his 'New Look' reforms leading to a radical overhaul of the Russian military.

**2010:** hand-in-hand with the New Look reforms, a new State Armaments Programme for 2011-2020 was launched, with the intention of modernising military equipment.

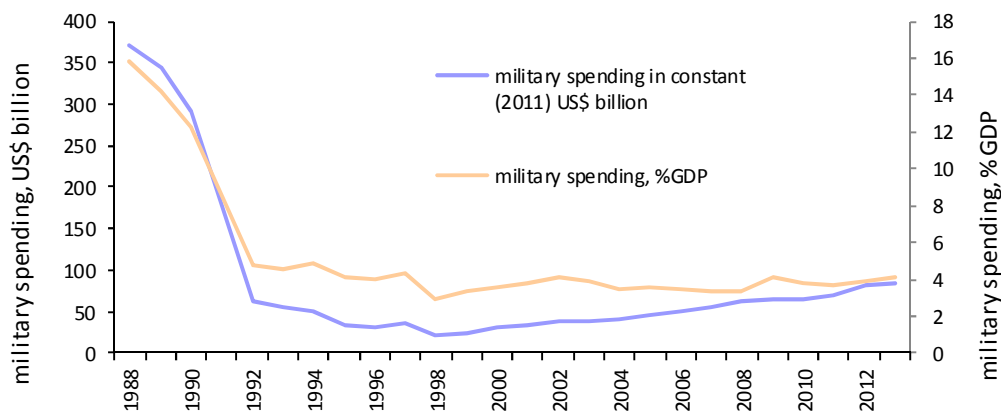
**2014:** Russian armed forces were involved in the annexation of Crimea. Since then, they are also allegedly involved in separatist rebellions in Eastern Ukraine.

<sup>1</sup> *Soviet Defense Spending: A History of CIA Estimates 1950-1990*, Firth N., Noren J., 1998.

<sup>2</sup> *The Economic Cost of Soviet Security and Empire*, Epstein D., in *The Impoverished Superpower: Perestroika and the Soviet Military Burden*, Eds. Rowen H., Wolf C., 1990.

<sup>3</sup> *Military Modernization and the Russian Ground Forces*, Thornton, R., in *Russian Military: Ground Force Modernization and Georgia War Lessons*, Ed. Guardano A., 2012.

<sup>4</sup> *ibid.*

**Figure 1: Historical military expenditure trends**

Data: [SIPRI](#).

*Yeltsin slashed military spending and personnel. Under Vladimir Putin, military spending has gradually increased both in absolute terms and as a percentage of GDP, although not to Soviet levels.*

## 2. Russian military reform, 2008-2012

### 2.1. Pre-reform: problems inherited from the Soviet armed forces

#### 2.1.1. Obsolete structures

During the Cold War, the Soviet military machine was commensurate in size with the country's status as a superpower, potentially capable of defeating the United States. In addition to five million men in active service, the armed forces had a further 20 million reserves,<sup>5</sup> which could be mobilised in the event of a global conflict. The military was structured so as to be able to integrate large numbers of reserves: for example, in 1991 only 20 of the army's 132 divisions were 70% staffed, the remainder being kept either at reduced strength (50% staffed) or skeleton strength (10-20% staffed),<sup>6</sup> to be completed with reserve staff should mass mobilisation become necessary. The disadvantage of this system was that only a small part of the armed forces was kept at operational strength and therefore capable of rapid deployment. The apparent assumption was that there would be enough time to integrate and prepare reserves during the slow build-up of tension preceding a global war.

After the end of the Cold War, the risk of a global conflict receded and was replaced by the new challenge of smaller scale, but more rapidly unfolding, regional conflicts, for example in Chechnya and Georgia. The mass mobilisation system inherited from Soviet times was now not only redundant, but actually hindered an effective response. In the first Chechen War, given the lack of battle-ready formations, many had to be cobbled together using troops from different parts of the country who had not previously trained together.<sup>7</sup> Several years later, at the beginning of the second Chechen War in

<sup>5</sup> *Soviet Defense Spending: A History of CIA Estimates 1950-1990*, Firth N., Noren J., 1998.

<sup>6</sup> *Reform of the Russian Army*, Gayday A., in [Russia's New Army](#), Ed. Barabanov M., 2011.

<sup>7</sup> *Reform of the Russian Army*, Gayday A., op. cit.

1999, just 55 000 of the armed forces' total manpower of 1.4 million were combat-ready, as Vladimir Putin recalled in a 2006 address<sup>8</sup> to the Russian Parliament.

The mass mobilisation system meant that central command structures were much larger than they would otherwise have needed to be, with entire directorates responsible for organising a potential mobilisation. As skeleton units were staffed largely by officers, in 2008 these accounted for 30% of total personnel<sup>9</sup> — a disproportionately high number. On top of this, a cumbersome network of warehouses was necessary, in order to store the equipment potentially needed by reserves.

In contrast to the disproportionately high number of senior officers, there was a severe shortage of non-commissioned officers, making it difficult to train and discipline troops.<sup>10</sup>

Conscription was another relic of the Soviet period. At that time, it had been the only realistic option to provide the vast manpower required by the active forces and generate the pool of former conscripts making up the reserve forces. However, in the new context, a large conscription-based military made less sense than a smaller, but better trained, professional one.

### 2.1.2. Obsolete weaponry

The above problems inherited from the Soviet past were compounded by chronic post-Soviet underspending on military hardware, leaving all the armed forces severely under-equipped. While the overall defence budget increased under Vladimir Putin, the share of this allocated to new weapons, particularly conventional weapons, remained low. For example, between 2000 and 2004 only 15 tanks out of a total 23 000<sup>11</sup> were replaced, while for its part the air force did not acquire any new aircraft between 1995 and 2008.<sup>12</sup> Although the State Armaments Programme for 2007-2015 set a target of modernising weapons systems by 2025, only 2%<sup>13</sup> of equipment was replaced under this programme per year, meaning that weapons were becoming obsolete faster than they could be replaced. According to a 2006 estimate, only 20% of Russian military hardware was 'modern', compared to over 70% in NATO armed forces.<sup>14</sup>

Weapons were not only aged, but also poorly maintained — in 2008 the tail fins of two MiG-29 fighters were so corroded that they disintegrated in mid-flight, causing the planes to crash.<sup>15</sup>

### 2.1.3. Hazing

A tradition of hazing (abusive and sometimes even lethal<sup>16</sup> initiation practices) goes back to Tsarist times, but was first reported to have become widespread after 1967. During that year, a change to the length of military service meant that two groups of

<sup>8</sup> Annual [address](#) to the Federal Assembly, 10 May 2006.

<sup>9</sup> *Military Modernization and the Russian Ground Forces*, Thornton, R., in *Russian Military: Ground Force Modernization and Georgia War Lessons*, Ed. Guardano A., 2012.

<sup>10</sup> *A 'new look' of the Russian armed forces?* Klein M., in *The Russian Armed Forces in Transition*, Eds. McDermott R., Nygren B., Vendil Pallin C., 2012.

<sup>11</sup> [Russia's Military Reforms: Victory after Twenty Years of Failure?](#), de Haas M., 2011.

<sup>12</sup> *Reform of the Russian Air Force*, Lavrov A., in [Russia's New Army](#), Ed. Barabanov M., 2011.

<sup>13</sup> *Russia's Military Reforms: Victory after Twenty Years of Failure?*, op.cit.

<sup>14</sup> *Russia's Military Reforms: Victory after Twenty Years of Failure?*, op. cit.

<sup>15</sup> *Reform of the Russian Air Force*, Lavrov A., op. cit.

<sup>16</sup> For example, [Hazing Trial Bares a Dark Side of Russia's Military](#), New York Times, 2006.



conscripts under the previous three-year term and the new two-year term were temporarily serving at the same time. In the same year, conscripts with a criminal record were included in the draft for the first time to compensate for a demographic dip. These two changes, together with a lack of junior officers who could impose discipline, have been blamed<sup>17</sup> for the spread of hazing, typically perpetrated on novices by conscripts in their second year of service. The scale of hazing was such that, according to a 2010 survey<sup>18</sup> by government-funded pollsters Russian Public Opinion Research Centre (WCIOM), it was perceived as by far the armed forces' biggest problem.

#### 2.1.4. Inadequate human resources

With military service such an unattractive option, large numbers of men — around half of the potential intake, according to a 2010 estimate<sup>19</sup> — chose to avoid conscription, many of them paying bribes for exemption on the grounds of alleged health problems. Conversely, with the armed forces keen to take on as many conscripts as possible, those with genuine health problems, but unable to afford bribes, were pushed through the medical — activists from Russian NGO Union of Committees of Soldiers' Mothers of Russia even joked that the only way for a man to be counted unfit would be to turn up carrying his own head.<sup>20</sup> As a result, as many as one-third subsequently had to be released from service for health reasons.<sup>21</sup> Nor was a criminal record or alcoholism a bar to conscription — one 2008 survey<sup>22</sup> suggested that over 10% of conscripts were affected by one or both issues.

The quality of professional soldiers was not much better. Poor pay and conditions — a starting salary less than half the national average,<sup>23</sup> senior officers often paid less than bus drivers,<sup>24</sup> inadequate housing<sup>25</sup> — made it difficult to attract recruits. Some conscripts were allegedly bullied into staying on.<sup>26</sup> Many of these new recruits were of such poor quality that they were subsequently dismissed, while of those who completed their initial three-year contract, just 30% chose to renew their engagement.<sup>27</sup>

Training could do little to compensate for such poor-quality raw material, with a general lack of funding and equipment for this purpose. Many conscripts had to be trained by other conscripts, given the lack of junior officers. Professionals also lacked adequate training: in the air force, there were not enough operational aircraft for pilots

<sup>17</sup> *The Collapse of the Soviet Military*, Odom W, Yale University Press, 1998.

<sup>18</sup> [Волнуют ли Вас проблемы нашей армии, и если да, то какие прежде всего?](#) (Are you worried by our army's problems, and if so, what are you most worried about?), WCIOM, 13 February 2010 (in Russian only).

<sup>19</sup> Cited in [Russian Military Concerned With Evasion As Army Draft Begins](#), Radio Free Europe, 2010.

<sup>20</sup> [The Russian Soldier Today](#), Journal of International Affairs, 17 April 2010.

<sup>21</sup> According to a 2012 Union of Committees of Soldiers' Mothers of Russia report, cited by *Jane's Sentinel Security Assessment - Russian Federation — Armed Forces*, op. cit.

<sup>22</sup> Cited in [The Russian Soldier Today](#), op. cit.

<sup>23</sup> [Russia wants more contract soldiers on the ground](#), Russia Beyond the Headlines, 19 April 2013.

<sup>24</sup> [Resurgent Russia? A Still-Faltering Military](#), Zoltan Barany, Hoover Institution Policy Review, 29 January 2008.

<sup>25</sup> *Civil-Military Relations and Modernization*, Renz B., in *The Russian Armed Forces in Transition*, Eds. McDermott R., Nygren B., Vendil Pallin C., 2012.

<sup>26</sup> [Resurgent Russia? A Still-Faltering Military](#), op. cit.

<sup>27</sup> [Jane's Sentinel Security Assessment – Russian Federation — Armed Forces](#), IHS Jane's, 2014.



to clock up flying time, or to participate in complex military drills involving large numbers of aircraft.<sup>28</sup> In the ground forces, Army Commander Alexei Maslov criticised contract-service soldiers, who 'in some respects ... are no better prepared than the corresponding units of conscripts'.<sup>29</sup>

## 2.2. The 2008 Georgian War highlights Russian military weakness

Many of the above problems were highlighted by poor Russian military performance in successive conflicts — the first Chechen War, resulting in a humiliating defeat; the second Chechen War, in which Russian troops eventually succeeded in subduing the region, but only after years of fighting and heavy casualties; and then the 2008 Georgian War. Although Russia was victorious in the latter conflict thanks to overwhelming numerical superiority, numerous problems suggested that it would have had difficulties defeating a larger adversary.

The Russian military was hampered in Georgia by a lack of modern equipment, for example:

**Army:** in Georgia, Russian armoured vehicles provided inadequate protection from enemy fire. Reliability was also an issue, with numerous vehicles breaking down and blocking troop movements. Troops lacked night vision capacity and even adequate individual protective equipment; Russian soldiers are reported to have looted body armour and helmets from dead Georgians.<sup>30</sup>

**Air force:** in Georgia, the Russian air force lacked not only modern aircraft and adequately trained pilots, but also precision-guided missiles, making it difficult to hit targets, including Georgian air defences, which as a result succeeded in downing an estimated seven or eight Russian planes.<sup>31</sup> This problem was exacerbated by the absence of satellite navigation support, with access to the United States' GPS blocked and Russia's own GLONASS system not yet operational.

Moreover, coordination between the army and air force was hampered by a lack of interoperable radio equipment; Russian commanders even had to resort to mobile phones for communication, incredibly using Georgian networks.

**Navy:** while the Russian navy was only involved in the Georgian war to a limited extent, a lack of adequate landing platforms caused serious problems in deploying troops on the Georgian coast, despite meeting little resistance on this front.

**Command structures** also proved deficient, with a lengthy command chain preventing orders from reaching the front line quickly enough.<sup>32</sup> A lack of coordination between the armed forces — exacerbated by the above-mentioned communication difficulties — resulted in the air force failing to provide adequate support for the ground forces.<sup>33</sup>

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<sup>28</sup> *Reform of the Russian Air Force*, Lavrov A., op. cit.

<sup>29</sup> [The Army Needs Professionals](#), Krasnaya Zvezda (official Defence Ministry newspaper), 11 September 2007 (in Russian).

<sup>30</sup> *The Russian Military and the Georgian War: Lessons and Implications*, Cohen A., Hamilton R., in *Russian Military: Ground Force Modernization and Georgia War Lessons*, Ed. Guardano A., 2012.

<sup>31</sup> *Military Modernization and the Russian Ground Forces*, Thornton, R., in *Russian Military: Ground Force Modernization and Georgia War Lessons*, Ed. Guardano A., 2012.

<sup>32</sup> *Reform of the Russian Army*, Gayday A., in [Russia's New Army](#), Ed. Barabanov M., 2011.

<sup>33</sup> [Russia's Military Reforms: Victory after Twenty Years of Failure?](#), de Haas M., 2011.

Meanwhile, due to a shortage of combat-ready professional troops, 30% of the soldiers fighting in the Georgian War were relatively inexperienced conscripts, in violation of official Russian policy.<sup>34</sup>

## 2.3. 'New Look' reforms

### 2.3.1. Previous reform efforts

Over the years, several attempts were made to deal with these long-standing problems and adapt the Russian military to post-Soviet realities. The first major round of reforms was carried out in 1993, leading to significant downsizing. Three years later, President Boris Yeltsin set a target to end conscription by 2000. Further reforms were adopted in 2003. However, none of these reform efforts achieved more than partial results, leaving the obsolete mass mobilisation structures inherited from the Soviet Union more or less intact.

One major change was that in 2006 the government decided to halve the length of compulsory military service to one year, with effect from 2008. However, conscription could not be scrapped altogether for various reasons: entrenched resistance from the military establishment, which remained attached to the idea of military service as a cornerstone of the Russian armed forces since Tsarist times;<sup>35</sup> demographic and financial constraints, making it impossible to attract sufficient numbers of professionals to replace conscripts; the role of conscription in training the country's reserve forces.<sup>36</sup>

### 2.3.2. Anatoliy Serdyukov's reform drive

After years of only very limited modernisation, the reform process finally took off after the appointment in 2007 of economist Anatoliy Serdyukov as Minister of Defence. Over the next few years, Serdyukov succeeded in creating a 'New Look' military.

Compared to his predecessors, who all came from the military or security forces, Serdyukov's civilian background may paradoxically have been an advantage in pushing through the reform agenda, in that he was less susceptible to military establishment influence.<sup>37</sup> His position was strengthened by a 2007 purge of military leaders.<sup>38</sup> This was followed by the above-mentioned problems in Georgia, which were a wake-up call for the armed forces, and which Serdyukov's reforms, announced shortly after the end of the war, were designed to address.

Serdyukov's main reforms were as follows:

**End of the Soviet-era mass mobilisation system:** 'skeleton units' were disbanded and, as part of a radical restructuring, their personnel transferred to fully staffed formations. These were to be capable of rapid deployment in the event of conflict, in line with the target, set by then-President Dimitri Medvedev, of all formations being in a state of 'permanent combat readiness' by 2020.<sup>39</sup>

<sup>34</sup> *The Russian Military and the Georgian War: Lessons and Implications*, Cohen A., Hamilton R., in *Russian Military: Ground Force Modernization and Georgia War Lessons*, Ed. Guardano A., 2012.

<sup>35</sup> *Military Modernization and the Russian Ground Forces*, Thornton, R, op. cit.

<sup>36</sup> [Russia wants more contract soldiers on the ground](#), Russia Beyond the Headlines, 19 April 2013.

<sup>37</sup> *Civil-Military Relations and Modernization*, Renz B., in *The Russian Armed Forces in Transition*, Eds. McDermott R., Nygren B., Vendil Pallin C., 2012.

<sup>38</sup> *Serdyukov Cleans Up the Arbat*, Pukhov R., Moscow Defense Brief, 2008.

<sup>39</sup> [Medvedev's New Doctrine](#), Moscow Times, 2008.

**Smaller formations:** mirroring post-Cold War military reforms in Western countries enabling a faster and more flexible response to small-scale regional conflicts, army divisions comprising around 10 000 men each were split into autonomous brigades about one-third the size. The air force was also restructured.

**Streamlined command structures:** now that these were no longer required to have the capacity to organise mass mobilisation, several departments in the General Staff and the Main Commands of the individual armed forces were axed or downsized.<sup>40</sup> Many of the warehouses formerly needed to store equipment for the reserve forces were also closed.

**Fewer senior officers:** the scrapping of skeleton units and the above-mentioned warehouse facilities enabled a large number of officers to be laid off, from half a million in 2008 to 220 000 in 2011 (Serdyukov's initial target was 150 000). At the same time as slashing the number of senior officers, Serdyukov set a target at junior officer level of 200 000 non-commissioned officers, to improve discipline and training.<sup>41</sup>

**A shorter command chain, more effective coordination:** the six Soviet-era military districts were replaced by four regional joint strategic commands (in December 2014 a fifth Arctic Joint Strategic Command was added). Each of these has a control centre directing ground, air and navy forces in their region, enabling closer coordination and a shorter command chain, in which orders no longer have to pass through Moscow — the number of links has been reduced from sixteen to a theoretical minimum of three.<sup>42</sup>

**Substantially increased procurement:** a new State Armaments Programme for 2011-2020 was adopted in 2010, with substantially increased funding and a target of raising the percentage of modern military equipment from 20% to 70%, in line with NATO armed forces, by 2020. The previous programme for 2007-2015 had envisaged reaching this target in 2025.

### 2.3.3. Anatoliy Serdyukov's legacy

Despite his achievements as a military reformer, Serdyukov was forced to step down over a corruption scandal in 2012. Since then, a few of his reforms have been wholly or partially reversed by successor Sergei Shoigu: a few divisions have been re-constituted in the army alongside the new brigades, and the new air force structures ('air bases') have been abandoned altogether, after proving ineffective.<sup>43</sup>

However, most of the 'New Look' agenda remains firmly in place under Shoigu. Despite increasingly tense Russia-NATO relations over Ukraine, the armed forces remain geared to regional rather than global conflicts. For example, Russia's Military Doctrine<sup>44</sup> (a strategy document outlining the country's overall military policy and situation, last updated in December 2014) foresees 'a diminishing probability of large-scale attacks on Russia', and refers instead to 'unresolved regional conflicts'. In view of this, a return to the Soviet-era mass mobilisation system scrapped by Serdyukov seems unlikely.

<sup>40</sup> *Reform of the Russian Army*, Gayday A., in [Russia's New Army](#), Ed. Barabanov M., 2011.

<sup>41</sup> *A 'new look' of the Russian armed forces?* Klein M., in in *The Russian Armed Forces in Transition*, Eds. McDermott R., Nygren B., Vendil Pallin C., 2012.

<sup>42</sup> [Jane's Sentinel Security Assessment - Russian Federation — Armed Forces](#), IHS Jane's, 2014.

<sup>43</sup> [The Military Balance 2015](#), International Institute for Strategic Studies (IISS), 2015.

<sup>44</sup> [Military Doctrine of the Russian Federation](#), President of the Russian Federation, 2014 (in Russian only).

Serdyukov's emphasis on combat readiness continues under Shoigu, and has even been stepped up. Since 2013, regular snap inspections have been held to test readiness, and changes, such as improved training, carried out based on the results.<sup>45</sup> A recent example was a large-scale drill involving 80 000 troops in March 2015.<sup>46</sup>

### 3. Post-reform: continuing modernisation challenges

Thanks to the reforms described in the preceding section, the Russian armed forces are more streamlined, capable of a rapid response, and closely coordinated than previously. Evidence for these improvements was the smooth action by Russian troops in March 2014 to secure control of Crimea,<sup>47</sup> despite the logistical challenge posed by the absence of a land bridge. However, the significance of this achievement should not be exaggerated, given that Crimean operations involved a relatively small number of well-prepared elite troops led by *Spetsnaz* special operations groups, and do not therefore necessarily reflect on the military as a whole.

Despite the success of Serdyukov's reforms, further modernisation is still needed in many areas. The following sections explain the main issues in relation to personnel and equipment.

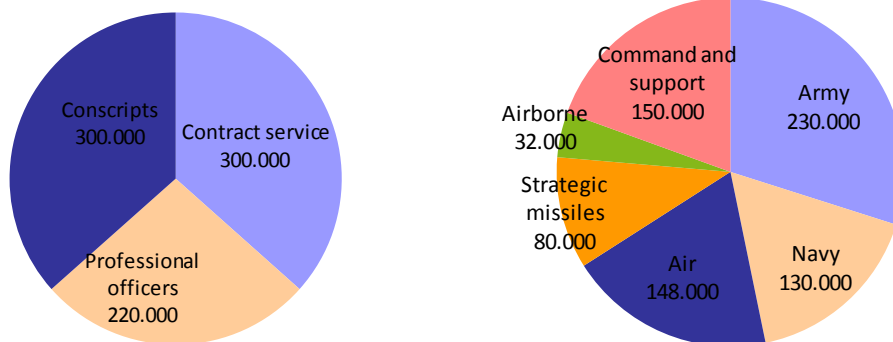
#### 3.1. Personnel challenges

**Figure 2: Armed forces personnel**

**Armed Forces – active: 771 000<sup>48</sup> (target: 921 500<sup>49</sup>); reserves: 2 million**

**Recruitment shortfall: 150 500 (16%)**

**Armed forces, by category/by service**



Data: by category — [IHS Jane's](#); by service — [IISS](#)<sup>50</sup>

<sup>45</sup> *The Military Balance 2015*, op. cit.

<sup>46</sup> [Arctic snap check involves 80,000 servicemen — Russia's General Staff](#), TASS, 19 March 2015.

<sup>47</sup> [Russia's military delivers a striking lesson in Crimea](#), Washington Post, 18 March 2014.

<sup>48</sup> *The Military Balance 2015*, op. cit.

<sup>49</sup> 2011 Defence Ministry figure, cited by [Russia's Military Reforms: Victory after Twenty Years of Failure?](#), op. cit. No date has been mentioned for achieving this target.

<sup>50</sup> While these two sources differ substantially as to the total numbers and must be seen as rough estimates, the data for individual categories/armed forces gives an idea of the breakdown between them. Neither source mentions a date for these figures, which are presumably the most recently available in March 2015.

### 3.1.1. Recruitment difficulties

There are two categories of professional soldiers: 1) officers and 2) ordinary contract-service personnel ('*kontraktniki*'), including non-commissioned officers, on three-year renewable contracts. The officer corps is estimated at 220 000,<sup>51</sup> while the number of *kontraktniki* has reached 300 000.<sup>52</sup> The two categories combined represent about two-thirds of total personnel.

Efforts are being made to further increase this proportion, with a target of 350 000 contract-service soldiers by the end of 2015.<sup>53</sup> In 2012, the starting salary more than doubled to 20 000 roubles a month (US\$350 at current exchange rates),<sup>54</sup> with various additional allowances, as well as privileged access to higher education, and housing subsidies in the form of contributions to rent or mortgage payments. In the same year, foreign nationals became eligible to serve<sup>55</sup> (although not as officers), and two-year paid contracts are now being offered as an alternative to conscription.<sup>56</sup> As a result, the armed forces succeeded in recruiting 80-90 000 *kontraktniki* per year during the 2013-2014 period<sup>57</sup> (however, it is not known how many left the military during these two years). In 2014, it was claimed<sup>58</sup> that, for the first time, numbers in this category exceeded those of conscripts.

Even so, the goal of a fully professional military remains unrealistic. There are demographic constraints, due to shrinkage of the relevant age group (the result of the birth rate halving in the early 1990s). Since they were raised in 2012, military salaries have been eroded by inflation.<sup>59</sup> the starting salary is now just two-thirds of the national average, and may not be sufficiently competitive to attract educated personnel in a labour market which remains tight, despite the economic downturn.

These problems are likely to continue for the foreseeable future; based on the current age pyramid, the number of 18-year olds will only start to grow significantly in 2020.<sup>60</sup> As for salaries, in the current difficult economic context substantial improvements are unlikely; planned indexation of 5.5% for military salaries this year<sup>61</sup> has been suspended as part of a general pay freeze for government employees.<sup>62</sup>

<sup>51</sup> [Jane's Sentinel Security Assessment – Russian Federation — Armed Forces](#), IHS Jane's, 2014

<sup>52</sup> According to Jane's Sentinel Security Assessment – Russian Federation — Armed Forces, op. cit., and to Interfax: [Defence Ministry announces increased number of contract-service personnel](#), 3 April 2015 (in Russian only).

<sup>53</sup> *The Military Balance 2015*, op. cit.

<sup>54</sup> [Contract service, social guarantees](#), Russian Ministry of Defence (in Russian only).

<sup>55</sup> [Russian Army Attracts Tajikistan's Unemployed](#), Moscow Times, 17 March 2015.

<sup>56</sup> [The Military Balance 2015](#), International Institute for Strategic Studies (IISS), 2015.

<sup>57</sup> [Defence Ministry announces increased number of contract-service personnel](#), Interfax, 3 April 2015 (in Russian only).

<sup>58</sup> [Contract soldiers outnumber conscripts in Russian military – Defense Minister](#), RT, 29 October 2014.

<sup>59</sup> [Defence Ministry decides not to cut military salaries](#), <http://www.voen-pravo.ru> (portal on legal matters for Russian officers).

<sup>60</sup> 2010 Russian [census](#), cited by Demographics Institute, Higher School of Economics — National Research University, 2015 (in Russian only).

<sup>61</sup> [Salaries to rise](#), Rosiiskaya Gazeta, 23 November 2014 (in Russian only)

<sup>62</sup> [Benefits lagging behind inflation](#), Kommersant, 20 March 2015

### 3.1.2. Meanwhile, the number of conscripts is falling

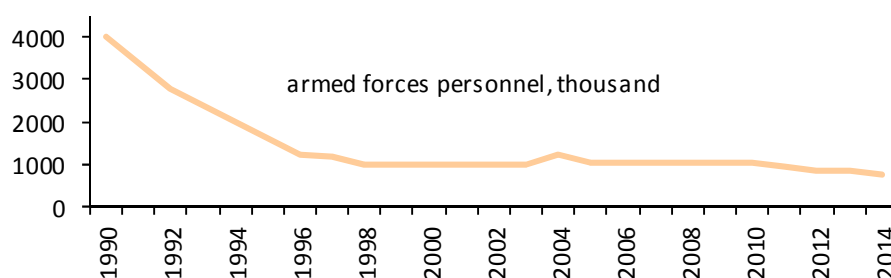
In the absence of sufficient professionals, the armed forces continue to rely on conscripts to make up the numbers. However, here too there are difficulties getting enough manpower. Conscription is of course subject to the same demographic constraints as recruitment. Moreover, now that military service lasts one year instead of two, there are only half as many conscripts serving at a given moment. Draft dodging remains a problem, not least due to the persistent problem of hazing, mentioned above. Although shortening the length of military service to one year has helped by removing the main perpetrators, the second-year conscripts, there are still occasional reports of incidents.<sup>63</sup>

It is true that strong public support for Russian intervention in Ukraine appears to have made military service a more attractive option: a February 2015 survey by independent pollsters Levada Centre shows that the percentage of respondents who would be in favour of a family member avoiding conscription (28%) is at its lowest level in a decade,<sup>64</sup> correlating with a reported 20% drop of draft evasion in 2014, compared to the previous year.<sup>65</sup> However, this may be only a temporary phenomenon, as another recent Levada poll<sup>66</sup> shows that, notwithstanding such support, the number opposing or strongly opposing 'open war between Russia and Ukraine' has tripled over the last 12 months, from 13% to 39%.

The shortage of conscripts, combined with difficulties in recruiting professionals, translates into a total shortfall of over 150 500, nearly one-fifth of the 2011 Defence Ministry target of 921 000<sup>67</sup> for the combined armed forces. In fact, the armed forces are now the smallest they have been in living memory.

Given the long-term nature of the problems described above — demographic shrinkage of the relevant age group, insufficiently attractive pay and conditions, and endemic corruption enabling widespread draft evasion, the armed forces will almost certainly remain understaffed for the foreseeable future.

**Figure 3: Armed forces total personnel, historical trend**



Data: [IISS](#)

<sup>63</sup> [Russian family alleges 'suicide' conscript tortured to death](#), Telegraph, 21 September 2011

<sup>64</sup> [Military Service and Threats](#), Levada Centre, 21 February 2015 (in Russian only)

<sup>65</sup> *The Military Balance 2015*, op. cit.

<sup>66</sup> [Ukrainian crisis: Russian involvement and expectations](#), Levada Centre, March 2015 (in Russian only)

<sup>67</sup> [Russia's Military Reforms: Victory after Twenty Years of Failure?](#), de Haas M., 2011.



# The Russian armed forces in Eurasia and the world

**Central and Eastern Europe:** In 1997, NATO pledged not to deploy nuclear weapons in the new Member States (NATO-Russia Founding Act). However, Russia remains nervous about NATO activity. The Military Doctrine<sup>1</sup> mentions 'NATO member state military infrastructure moving closer to Russian borders, including through further expansion of the block' as a major military threat.

**Kaliningrad enclave:** as part of increased activity on Russia's western borders, nuclear-capable Iskander missiles have recently moved here. With a range of 500 km, these could be used to hit targets in several NATO neighbours.<sup>7</sup>

**Baltic/Scandinavia:** the Russian military has been increasingly active on the country's Western borders: in 2014, three times as many intrusions into NATO airspace compared to 2013, mostly over the Baltic<sup>8</sup>; recent military exercises near Estonian/Latvian borders; Russian submarines have also been sighted off Sweden. At a recent meeting, Nordic defence ministers described Russia's conduct as 'the biggest challenge to European security'.<sup>9</sup>

**Arctic:** Acknowledging the strategic importance of the Arctic region and its vast natural resources, Russia's new Military Doctrine mentions the region for the first time. A new Joint Strategic Command Centre was set up in 2014 near Murmansk, and the number of airfields in the region is being trebled from four to 14. A new Arctic Commission will coordinate Russian military and other activities.<sup>10</sup>

**China:** Russia is careful to avoid identifying China as a potential adversary, describing it as a partner country in the Military Doctrine. However, the relationship between the two countries remains ambivalent; although China was not mentioned by name in Russia's Vostok 2010 military drill in the Far East, the purpose of this large-scale exercise appeared to be preparation for a potential Chinese attack.<sup>11</sup> Recently, in the context of Russian isolation from the West, there has been a certain rapprochement, with for example Russia participating in the largest ever military drill staged by the Shanghai Cooperation Organisation<sup>10</sup> (of which it is a member, together with China and four Central Asian countries), despite previous Russian reticence about such joint exercises with its larger neighbour.

**East Ukraine:** Russian troops (12 000, according to US military) and weapons are alleged to have been involved in the fighting in Eastern Ukraine. A further 50 000 Russian troops are stationed just over the border<sup>2</sup>.

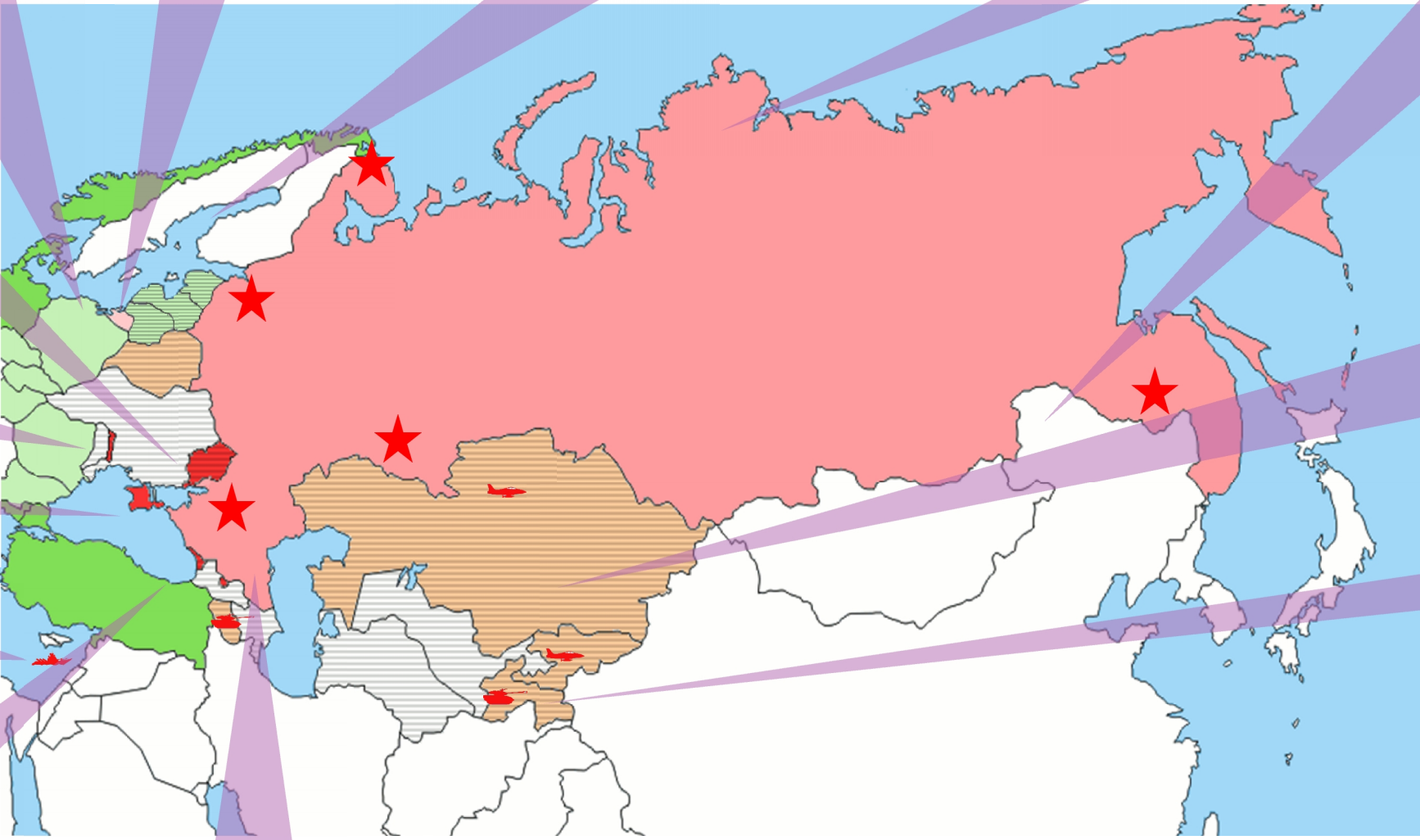
**Transnistria:** Russian 'peacekeeping' troops have been deployed in Transnistria since 1992.<sup>3</sup>

**Crimea** annexed by Russia, March 2014; 29 000 troops stationed there.<sup>3</sup>

**Tartus** naval base in Syria is currently Russia's only military base outside the former territory of the USSR.

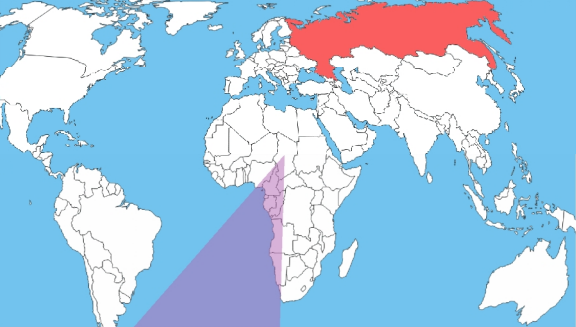
**Georgia:** attacked by Russia in 2008 after it tried to re-occupy the breakaway regions of Abkhazia and South Ossetia. Since then, Russian troops are stationed in both regions, which have also signed agreements for their armed forces to operate under a joint command with Russia. Military activity has been stepped up<sup>5</sup>.

**North Caucasus:** while the situation in Chechnya is calmer now, insurgency continues in other parts of the region, especially Dagestan. In 2014, there were 341 casualties in the North Caucasus, including 55 military and security personnel<sup>6</sup>.



**The Collective Security Treaty Organization (CSTO):** a military alliance between Russia and five ex-Soviet republics. The CSTO is not seen as a serious rival to NATO, which has described it in leaked cables as a 'waning organization'.<sup>13</sup> It has failed to develop an effective rapid reaction capacity or to respond to regional instability (e.g. riots in Kyrgyzstan). However, for Moscow the organisation is a useful means of maintaining its own military presence in the region and excluding potential rivals (China, US), thanks to a veto which the alliance gives it over foreign military bases in CSTO countries.

**Tajikistan:** citing concerns over the spread of Islamic militancy from Afghanistan, Russia is planning to double the number of troops stationed there (currently 5 900). Russian military specialists may also be involved in policing the border with Afghanistan.<sup>14</sup>



**Rest of the world:** nearly all of Russian military activities are confined to the country's neighbourhood. Activities outside this area are at a very modest level relative to Russia's size. For example, it is only the 72nd largest contributor of personnel (83, mostly military experts)<sup>15</sup> to UN peacekeeping operations (MONUSCO in DR Congo, MINURSO in Western Sahara, etc.). In terms of unilateral operations abroad, Russia is hampered by its lack of international bases: it only has Tartus in Syria outside the ex-Soviet region, although Russia is currently in negotiations with several countries including Cuba and Vietnam to establish bases further afield.

1 [Military Doctrine of the Russian Federation](#),  
2,4 [Some 12,000 Russian soldiers in Ukraine supporting rebels: U.S. commander](#), Reuters, 3 March 2015  
3 [Twenty Years of Russian "Peacekeeping" in Moldova](#), Eurasia Daily Monitor, 27 July 2012  
5 [Is Moscow Preparing for a New War Against Georgia?](#) Eurasia Daily Monitor, 24 March 2015  
6 [Chechnya only North Caucasian region with higher total casualties in 2014](#), Caucasian Knot, 1 January 2015 (in Russian)  
7 [Russia is putting state-of-the-art missiles in its westernmost Baltic enclave](#), Business Insider, 18 March 2015  
8 [Dangerous Brinkmanship: Close Military Encounters Between Russia and the West](#), European Leadership Network, 2014

9 [Nordic nations agree on defense cooperation against Russia](#), Reuters, 9 April 2015  
10 [Jane's Sentinel Security Assessment - Russian Federation — Air Force](#), IHS Jane's, 2014; [Russia's Arctic policy up for remake](#), Barents Observer, 18 March 2015  
11 [Introduction](#), McDermott R. et al, in *The Russian Armed Forces in Transition*, Eds. McDermott R., Nygren B., Vendil Pallin C., 2012  
12 [Big Shanghai Cooperation Organization Military Drills Held in China](#), Radio Free Europe, 25 August 2014  
13 [NATO SECRETARY GENERAL READY TO REACH OUT TO CSTO](#), Wikileaks, 10 September 2010  
14 [Why Russia Will Send More Troops to Central Asia](#), Stratfor Global Intelligence, 11 April 2015  
15 [Ranking of Military and Police Contributions to UN Operations](#), United Nations, 2014



### 3.1.3. Improved training

For conscripts, the quality of training has not been helped by cutting compulsory military service to one year: in 2010 it was claimed that this did not leave enough time for them to learn military skills such as how to use weapons<sup>68</sup>. For professionals, by contrast, there have been considerable improvements, for example in junior commander training and combat vehicle driving skills.<sup>69</sup> Pilots are now given considerably more flying time,<sup>70</sup> although they still lag behind their NATO counterparts in this respect.<sup>71</sup>

## 3.2. Equipment challenges

**30%:** percentage of modern military hardware in Russian armed forces (2015 target)

**70%:** percentage of modern military hardware in Russian armed forces (2020 target)

**Over 70%:** percentage of modern military hardware in NATO armed forces<sup>72</sup>

**US\$436.5 billion:** funding allocated to Russia's 2011-2020 State Armaments Programme<sup>73</sup>

### 3.2.1. New weapons: already delivered or in the pipeline

The current 2011-2020 State Armaments Programme (SAP-2020) sets a target for 30% modern equipment by 2015, and a more ambitious 70% by 2020, in line with NATO member states. In 2012, Vladimir Putin claimed that the share of modern equipment in Russia's conventional forces had already reached 28-30%,<sup>74</sup> meaning that the 2015 target will almost certainly be met. However, reaching the much higher target of 70% set for 2020 will be more of a challenge.

#### Army

**SAP 2020 target:** 2 300 new tanks  
30 000 assorted military vehicles<sup>75</sup>

The level of modern equipment in the ground forces is reported<sup>76</sup> to have reached 32% in 2015, with substantial deliveries of tanks (300) and military vehicles (5 000).

On top of these deliveries of existing models, a wide range of new designs are in the pipeline, such as the *Bumerang* armoured personnel carriers and the *Armata* modular platform, which will serve as the basis for several types of combat vehicles including tanks. Prototypes of some new vehicles will probably be on display at the traditional 9 May Victory Day parade in Moscow this year, although it could be a year or two

<sup>68</sup> [The Country Needs a Safe Army](#), Krasnaya Zvezda, 22 October 2010 (in Russian).

<sup>69</sup> *The Military Balance 2015*, op. cit.

<sup>70</sup> [Jane's Sentinel Security Assessment – Russian Federation – Air Force](#), IHS Jane's, 2014.

<sup>71</sup> [Russia: Dangers of isolation](#), Financial Times, 8 January 2015.

<sup>72</sup> *Russia's Military Reforms: Victory after Twenty Years of Failure?*, op. cit.

<sup>73</sup> *The Military Balance 2015*, op. cit.

<sup>74</sup> [Jane's Sentinel Security Assessment – Russian Federation – Procurement](#), IHS Jane's, 2014.

<sup>75</sup> *State of Play: SAP 2020: Russia's State Armaments Programme and Implications for Future Capabilities*, IHS Jane's, 2015.

<sup>76</sup> *State of Play: SAP 2020: Russia's State Armaments Programme and Implications for Future Capabilities*, op. cit.

before mass production begins. Until then, new deliveries will continue to use older designs, but with upgraded features (more effective armour and communications systems, night vision).

Other new army equipment includes *Iskander* tactical missiles, with enhanced range and accuracy, and *Ratnik* kits for infantry soldiers, with improved body armour, navigation and communication systems, etc., addressing various weaknesses highlighted in Georgia.

#### Navy

**SAP 2020 target:** 15 new nuclear submarines  
50 battleships<sup>77</sup>

The navy remains under-equipped. For example, it is estimated that only 30-60% of the Northern Fleet, the navy's largest fleet, is fully operational.<sup>78</sup> 'Blue-water' capability — the ability to operate further afield, away from Russian coastal waters — is a particular weakness, with few large ships currently operational.

To address these problems, it is planned to deliver 50 new large battleships (frigates, corvettes) during the 2011-2020 period. There are no immediate plans for new aircraft carriers, or even to refurbish the country's only currently operational carrier (compared to the ten which the United States currently operates); experts estimate that the earliest Russia could construct a new one is 2027.<sup>79</sup>

As mentioned above, Russia found it difficult to land assault troops from the sea during the Georgian War — potentially a significant factor in the event of an all-out attack on Ukraine. It was precisely to remedy this problem that Russia ordered two Mistral helicopter carriers from France in 2010; however, delivery of these was suspended in 2014, following annexation of Crimea.

More progress has been made in upgrading the nuclear submarine fleet, with 15 *Borey* and *Yasen* nuclear submarines planned for the 2011-2020 period; so far, three have been delivered.<sup>80</sup> The main weapon carried by *Borey* submarines is the *Bulava* ballistic missile, which is capable of delivering nuclear warheads; however, this is not yet ready, having repeatedly malfunctioned in tests.

#### Air force

**SAP 2020 target:** 850 new aeroplanes (of which 450 combat planes)  
1 120 helicopters (of which 350 combat helicopters)<sup>81</sup>

Over the past two years, the air force has received substantial amounts of new equipment, with 180 aircraft and helicopters in 2013 and around 200 planned for 2014.<sup>82</sup> Work is ongoing to develop Sukhoi T-50 state-of-the-art, fifth-generation stealth fighter planes, which are currently being tested; mass production is scheduled

<sup>77</sup> [The Military Balance 2015](#), International Institute for Strategic Studies (IISS), 2015.

<sup>78</sup> [Russian navy will become defensively focused](#), Oxford Analytica, 3 October 2014.

<sup>79</sup> *ibid.*

<sup>80</sup> [Jane's Sentinel Security Assessment - Russian Federation — Procurement](#), IHS Jane's, 2014

<sup>81</sup> [The Military Balance 2015](#), International Institute for Strategic Studies (IISS), 2015

<sup>82</sup> [Jane's Sentinel Security Assessment - Russian Federation — Air Force](#), IHS Jane's, 2014

to begin at the end of 2016.<sup>83</sup> This means that in a few years Russia will finally have fighter planes of a similar technological standard to the United States, whose own fifth-generation Lockheed Martin F-22 Raptors have already been in service for ten years.

Drones are another area of substantial investment; in 2009 Russia ordered a fleet of drones from Israel and since then has also developed domestic production. At present Russia only has lightweight reconnaissance drones, but plans to start producing heavier combat drones (up to 20 tonnes) in 2018.<sup>84</sup>

However, the shortage of precision-guided missiles, which hampered the Russian air force in Georgia, appears to continue.<sup>85</sup>

### 3.2.2. Can Russia meet its target for 70% of modern weapons by 2020?

The Russian armed forces have a poor track record of meeting procurement targets (for example, the 1996-2005 State Armaments Programme spent only 20% of its initially envisaged budget),<sup>86</sup> and it remains to be seen whether the current State Armaments Programme will be different.

The above summary shows that all Russian armed forces are making substantial investments in new military hardware. However, at the current rate of progress, these will not be enough to meet the 2020 target.

**Figure 4: Military procurement targets and actual deliveries**

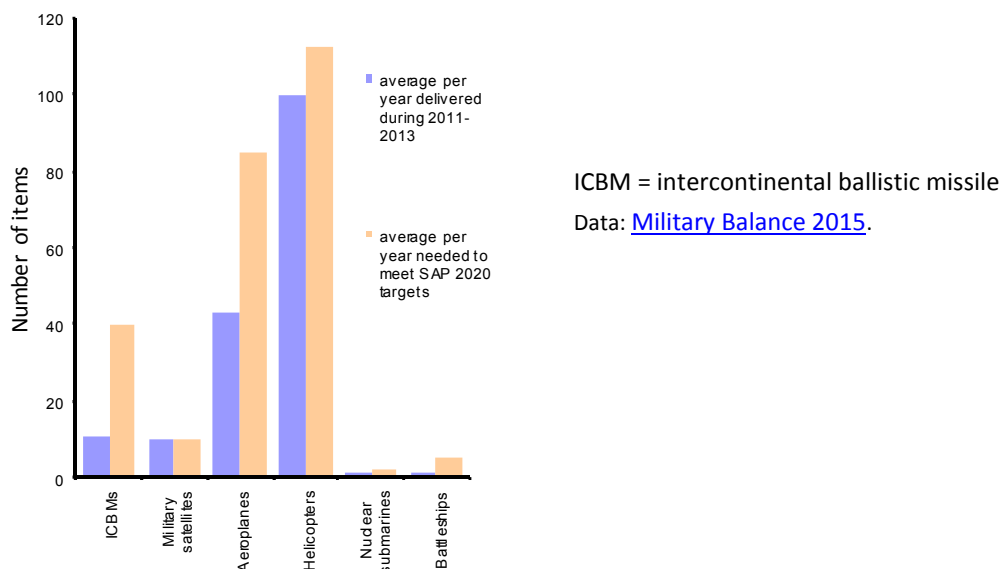


Figure 4 shows that in most categories of equipment, deliveries lag behind targets. Admittedly, these figures should be viewed with caution, as some are estimates, and in any case the pace of delivery is likely to step up once new designs are ready.

### 3.2.3. Reasons for slow progress towards the 70% target

**Financing:** the share of the defence budget spent on new equipment has increased, from 37% in 2013 to over half this year;<sup>87</sup> however, until the economy shows signs of

<sup>83</sup> [Jane's Sentinel Security Assessment - Russian Federation — Procurement](#), op. cit.

<sup>84</sup> [The Military Balance 2015](#), International Institute for Strategic Studies, op cit.

<sup>85</sup> [Jane's Sentinel Security Assessment - Russian Federation — Air Force](#), op. cit.

<sup>86</sup> [Russia's Military Reforms: Victory after Twenty Years of Failure?](#), de Haas M., 2011

<sup>87</sup> [Russian military doctrine will not improve NATO ties](#), Oxford Analytica, 5 January 2015.

recovery, any further increase, either in equipment expenditure or overall military spending, seems unlikely.

**Corruption:** even when funding is available, a large part of it is lost to corruption — as much as 40% of the procurement budget, according to a 2012 estimate.<sup>88</sup> Corruption pervades all levels of the armed forces and the defence industry — former Defence Minister Serdyukov is himself facing corruption charges.

**Limited production capacity:** the defence industry has a poor track record in meeting delivery deadlines — for example, the *Vikramaditya* aircraft carrier, delivered to India five years late in 2013. It may lack the capacity to produce the amount of equipment envisaged by the 2011-2020 State Armaments Programme at the same time as meeting heavy demand from foreign clients (US\$15 billion in 2014).<sup>89</sup>

**Quality** is also an issue. For example *Bulava* submarine-launched missiles, which took 18 years to develop, have repeatedly failed tests — according to the submarine designer, due to 'poor quality materials ... the lack of necessary equipment ... [and] inefficient quality control'.<sup>90</sup>

**Import restrictions:** although most Russian weapons have traditionally come from the domestic defence industry, some have been imported in the absence of satisfactory Russian-produced alternatives, as in the case of the Israeli drones mentioned above, or Italian armoured vehicles ordered in 2010.<sup>91</sup> In both these cases, some of the production was based in Russia, enabling acquisition not only of the equipment but also of the underlying technology.

However, arms imports are controversial, with pressure from the domestic arms industry to prefer Russian products. There was widespread criticism of the deal with France to acquire Mistral helicopter carriers,<sup>92</sup> and now that their delivery has been suspended, the danger of reliance on foreign suppliers is all too apparent.

In any case, the Ukraine crisis and Western sanctions have cut off many import options. Ukraine itself was a major supplier of the Russian defence industry, for example of helicopter engines and gas-turbine frigate engines. It is true that the arms embargo adopted by the EU, United States and other Western countries in July 2014 will have little direct impact on arms imports, given the very limited extent of defence industry cooperation between these countries and Russia. However, restrictive measures apply not only to weapons as such, but also to dual-use goods used in arms production, such as electronic components and precision machine tools, which Russia is unable to manufacture domestically. This means having to find alternative suppliers, which will take time — two-and-a half years in the case of items formerly imported from Ukraine, according to Deputy Prime Minister Dmitry Rogozin<sup>93</sup> — thus slowing down the process of acquiring new weapons.

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<sup>88</sup> [Jane's Sentinel Security Assessment – Russian Federation — Procurement](#), IHS Jane's, 2014.

<sup>89</sup> [Russia Sold Arms Worth \\$15 Billion in 2014 – Putin](#), Moscow Times, 27 January 2015.

<sup>90</sup> [Bulava missile designer blames industry for test failures](#), News.Az, 14 April 2010.

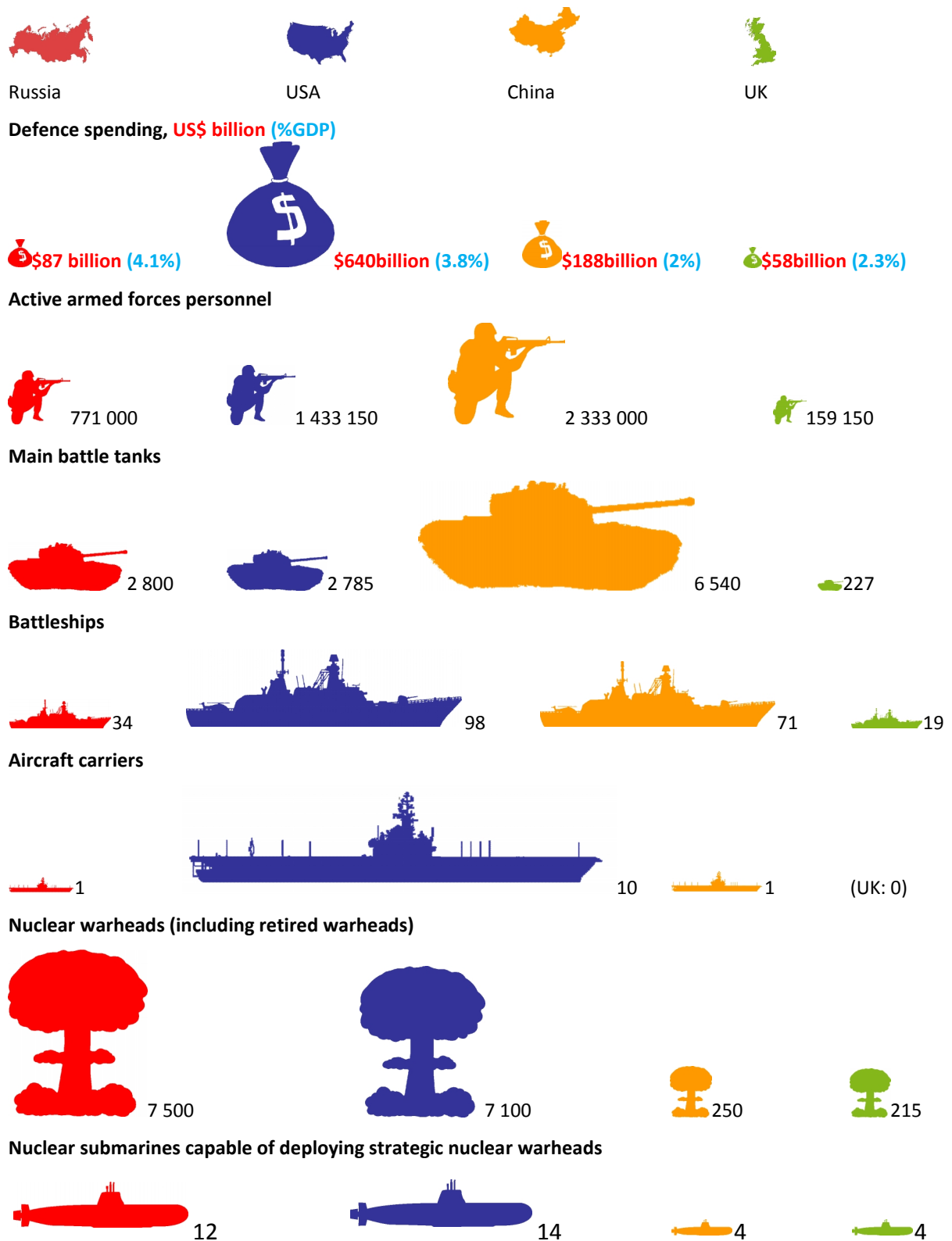
<sup>91</sup> [Italian Rys: Russia Buys Western Lynx MRAPs](#), Defense Industry Daily, 27 January 2013.

<sup>92</sup> *Military procurement in Russia*, Cooper J., in *The Russian Armed Forces in Transition*, Eds. McDermott R., Nygren B., Vendil Pallin C., 2012.

<sup>93</sup> [Russian military will suffer from Ukraine embargo](#), Oxford Analytica, 20 August 2014.

## 4. Military capability — comparison with other military powers

Figure 5: Comparative defence statistics



2014 figures

Data: [IISS Military Balance 2015](#), [SIPRI Military Expenditure Database](#), [Federation of American Scientists](#).

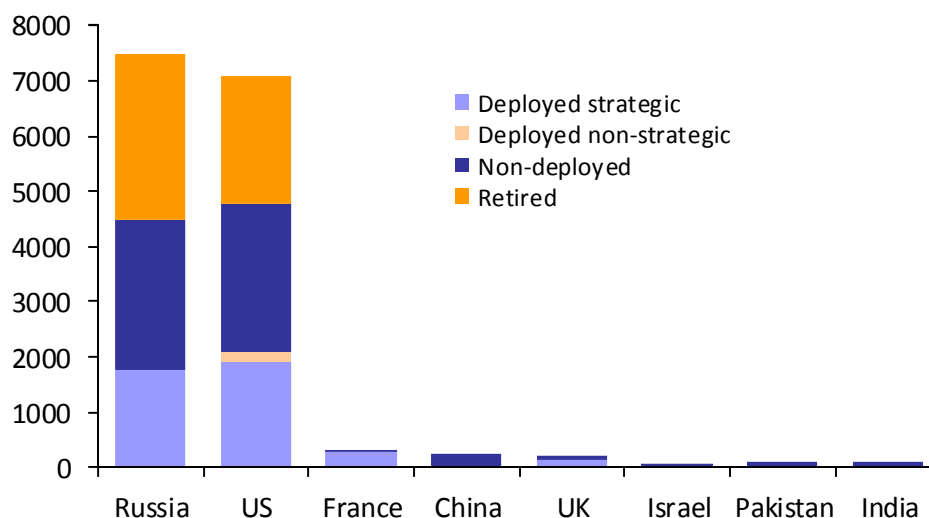
## 4.1. Conventional capability

Russia's armed forces are larger than those of all its ex-Soviet neighbours combined. However, the above data show that compared to China and the United States in particular (Russia's largest potential adversary if a regional conflict were to escalate); they come a distant third in most areas, with significantly fewer tanks, battleships and bombers. Clearly, with just one-eighth of the United States' GDP (one-quarter of China's), and half of its population (one-tenth of China's), Russia simply does not have the economic and demographic resources to compete with either country in terms of military spending or personnel.

Of course, capability is not just about numbers. In modern warfare (for example, the 2003 US and British invasion of Iraq), a smaller number of well trained and equipped soldiers can easily defeat a numerically superior adversary. However, in this respect too, comparisons are not in Russia's favour. Although substantial efforts are being made to recruit more professionals and upgrade equipment, the Russian armed forces will lag behind in terms of training and equipment for many years to come.

## 4.2. Nuclear capability

Figure 6: Nuclear weapons: Russia and the world



Data: [Federation of American Scientists](#), 2015.

Nuclear weapons are the one area in which Russia, which inherited the entire Soviet nuclear arsenal, has maintained parity with the United States. Russia's 7 500 nuclear weapons fall into three categories:

- **1 780 deployed strategic warheads**, the most dangerous category, available for immediate use. Under the Strategic Arms Reduction Treaty (START, 1991) and its successor (New START, 2011), Russia and the US are committed to reducing stocks to under 1 550; both countries are slightly over this target;
- **2 720 non-deployed strategic/non-strategic warheads**, in storage or under maintenance — not limited by New START (non-strategic warheads are slightly smaller than strategic warheads and designed for use on the battlefield rather than against civilian targets, but are still considerably more powerful than the bombs dropped on Hiroshima and Nagasaki);

- **3 000 retired**, but largely intact warheads awaiting dismantlement.<sup>94</sup>

The United States has slightly more deployed strategic warheads (1 900), but its total nuclear arsenal is smaller (7 100: 180 deployed non-strategic; 2 680 non-deployed; 2 340 retired).<sup>95</sup> Altogether, Russia has just under half of the world's nuclear weapons.

The United States has the upper hand in terms of launching capacity, with a total 794 delivery vehicles (intercontinental ballistic/submarine-launched missiles and strategic bombers) compared to Russia's 528.<sup>96</sup> Russian delivery systems are also often of inferior quality, some of them dating back to Soviet times. To address this shortcoming, the 2011-20 State Armaments Programme is investing heavily in new nuclear-capable planes, submarines and missiles, but development of these is taking time: the next generation of intercontinental ballistic missiles launched from land-based silos is not likely to be ready till 2020,<sup>97</sup> while the new submarine-launched *Bulava* missile has repeatedly failed practice launches.

In its Military Doctrine,<sup>98</sup> Russia 'reserves the right to utilise nuclear weapons ... [including] in the event of aggression against the Russian Federation involving the use of conventional weapons when the very existence of the state is under threat'. However, a recent statement by Vladimir Putin that a nuclear alert had been considered during the Crimean crisis,<sup>99</sup> suggests that the threshold for a Russian nuclear response could be lower. There have also been veiled threats in the context of the current crisis — for example, if the United States decides to supply lethal arms to Ukraine, for use against 'Russia ... a country which has nuclear weapons', this would lead to 'an uncontrolled and extremely dangerous course of events', according to parliamentary Foreign Affairs Committee Chair Alexei Pushkov.<sup>100</sup> Similarly, Russia's ambassador to Denmark, Mikhail Vanin, has warned that Danish battleships could become 'targets for Russian nuclear missiles' if the country joins NATO's missile defence system.<sup>101</sup> While it is uncertain that Russia would ever follow through on such threats, they are a useful psychological weapon and part of its hybrid approach to Ukraine and potential NATO allies (see following chapter).

## 5. Hybrid warfare

### 5.1. Russia's sophisticated use of hybrid warfare in Ukraine

Should the Ukraine conflict escalate further and NATO become directly involved, the Russian armed forces would find themselves by far the weaker party in terms of conventional capability. Nor could they count on any outside support, now that countries such as Belarus and Kazakhstan — Russia's allies in the Collective Security Treaty Organisation (CSTO) — have distanced themselves from Russia; for example

<sup>94</sup> Estimates; [Status of World Nuclear Forces](#), Federation of American Scientists.

<sup>95</sup> *ibid.*

<sup>96</sup> [Nuclear force remains central to Russia's defence](#), Oxford Analytica, 15 January 2015.

<sup>97</sup> [The Military Balance 2015](#), International Institute for Strategic Studies (IISS), 2015.

<sup>98</sup> [Military Doctrine of the Russian Federation](#), December 2014 (in Russian only).

<sup>99</sup> [Ukraine conflict: Putin 'was ready for nuclear alert'](#), BBC News, 15 March 2015.

<sup>100</sup> [Moscow will not stay indifferent to U.S. decision on lethal arms supplies to Kiev](#), Russia Beyond the Headlines, 24 March 2015.

<sup>101</sup> [Russia warns Denmark its warships could become nuclear targets](#), Telegraph, 21 March 2015.



Belarussian President Alexander Lukashenko has criticised Russia's annexation of Crimea as a 'bad precedent'<sup>102</sup> and vetoed Russia's proposal for Eurasian Economic Union countries to ban Ukrainian imports.

However, Russian military operations are only part of an increasingly sophisticated hybrid campaign, described in the Military Doctrine<sup>103</sup> as 'a complex mixture of military force with political, economic, information and other non-military means'. The importance of this hybrid approach has been acknowledged by Russian Chief of Staff General Valery Gerasimov: 'in many cases, [non-military tools] have exceeded the power of force of weapons in their effectiveness'.<sup>104</sup> Accordingly, the recently established National Command and Control Centre for State Defence brings together representatives of 49 government bodies, enabling coordinated action across a wide range of fields, from food imports to media.<sup>105</sup>

In Ukraine, conventional military operations — conducted using non-uniformed 'little green men' in Crimea and Donbass — are combined with a wide range of instruments, including:

**Economic measures:** Russia's refusal to renegotiate debts owed to it by Ukraine could jeopardise an IMF bail-out for the country.<sup>106</sup> Piling on the pressure, it has also banned successive categories of Ukrainian imports and raised gas prices. For the time being, Russia's ability to cut off vital gas supplies altogether is limited by its dependence on Ukraine as a transit country for supplies to South-East Europe. That dependence would have ended with the planned South Stream pipeline bypassing Ukraine. Now that this project has been abandoned, an alternative route via Turkey is currently under negotiation.<sup>107</sup> If completed, such a pipeline would give Russia even greater leverage over Ukraine's fragile economy.

**Cyber-attacks:** US intelligence agencies list cyber-aggression as the top threat to national security, and Russia as the number one source of such threats.<sup>108</sup> In Ukraine, computers in the Prime Minister's office and several of the country's embassies have been hit by the virulent 'Snake' malware,<sup>109</sup> believed to have originated from Russia, which had already proved its capability in this field by disabling numerous Estonian websites in 2007.

**Information war:** Russia has launched a sophisticated propaganda campaign, both for domestic and international consumption. The country's domestic media deftly combine propaganda with entertainment,<sup>110</sup> in selling a narrative according to which patriotic volunteers are protecting ethnic Russian minorities against a 'fratricidal war' waged by a corrupt and aggressive Ukrainian regime.

Admittedly, such propaganda has its limitations. Russians remain reserved about stepping up the country's military involvement in Ukraine: as mentioned above, a

<sup>102</sup> [Belarus Says Russia's Annexation of Crimea Sets a 'Bad Precedent'](#), Moscow Times, 24 March 2014.

<sup>103</sup> [Military Doctrine of the Russian Federation](#), op. cit.

<sup>104</sup> [Top Russian General Lays Bare Putin's Plan for Ukraine](#), World Post, 11 February 2014.

<sup>105</sup> [Jane's Sentinel Security Assessment – Russian Federation — Armed Forces](#), IHS Jane's, 2014.

<sup>106</sup> [Ukraine's Russia debt threatens IMF rescue](#), Yahoo News, 26 March 2015.

<sup>107</sup> [Russia Presses Ahead With Plan for Gas Pipeline to Turkey](#), New York Times, 21 January 2015.

<sup>108</sup> [Russia expanding cyber arsenal, US assessment says](#), Boston Globe, 27 February 2015.

<sup>109</sup> [Ukraine PM's office hit by cyber attack linked to Russia](#), Financial Times, 7 August 2014.

<sup>110</sup> [Inside Putin's Information War](#), Politico Magazine, 4 January 2015.

recent Levada Centre poll<sup>111</sup> shows strongly increased opposition to open military aggression in Ukraine, which could augment further if the reportedly large number of Russian casualties in Ukraine continues to grow.<sup>112</sup>

Russia's propaganda machine has scored some successes in neighbouring countries — for example, in Latvia where according to a Latvian government-commissioned poll more than twice as many ethnic Russians (who are able to watch Russian domestic channels) support Russia as Ukraine in the conflict between the two countries.<sup>113</sup>

Meanwhile, the slick Russia Today news channel reaches out to a wider international audience, with broadcasts in English, Russian, Arabic and Spanish. During just one month in 2015, its YouTube channel scored some 40 million views.<sup>114</sup> Coverage will be expanded in 2015, thanks to a 40% budget increase and the addition of French and German. Russia has also successfully harnessed new media, with an army of pro-Kremlin 'trolls' posting on news sites and social media.<sup>115</sup>

**Psychological pressure:** the above-mentioned threats referring to Russia's nuclear arsenal, together with recent military drills held close to the Ukrainian, Georgian<sup>116</sup> and Estonian borders, and frequent incursions into the airspace and territorial waters of neighbouring countries, seem designed to intimidate Ukraine and deter its potential NATO allies from becoming involved. Terrorist attacks in Kyiv, Kharkiv and other Ukrainian cities, allegedly coordinated by Russian special forces,<sup>117</sup> could also be part of this general strategy.

## 5.2. Advantages of a hybrid approach to military conflict

In Ukraine, coordinated actions in different fields have achieved a mutually reinforcing destabilising effect. This hybrid approach also has the advantage of remaining below the threshold likely to trigger a military response by NATO, which despite not having a Treaty obligation to defend Ukraine, has committed itself to providing support.<sup>118</sup> Furthermore, such actions can be denied by the Russian government: military operations can be attributed to volunteers and cyber-attacks to 'patriotic hackers'; meanwhile, successive embargoes on Ukrainian food imports are allegedly motivated by hygiene concerns.<sup>119</sup>

Such denials have of course lost credibility with NATO intelligence, which suggests there could be as many as 12 000 Russian troops in Eastern Ukraine.<sup>120</sup> The claim that cyber-attacks come from private hackers is equally dubious, given the sophisticated

<sup>111</sup> [Ukrainian crisis: Russian involvement and expectations](#), Levada Centre, March 2015 (in Russian only).

<sup>112</sup> [Russian soldiers 'dying in large numbers' in Ukraine - Nato](#), BBC News, 5 March 2015.

<sup>113</sup> [Baltic States Compete With Russia in TV Battle for Hearts and Minds](#), Moscow Times, 13 February 2015.

<sup>114</sup> [The EU and NATO Are Gearing Up to Fight Russia — On the Internet](#), Vice News, 24 March 2015.

<sup>115</sup> [Pro-Russia trolling below the line on Ukraine stories](#), Guardian, 4 May 2014.

<sup>116</sup> [Is Moscow Preparing for a New War Against Georgia?](#) Eurasia Daily Monitor, 24 March 2015.

<sup>117</sup> [All terrorist attacks in Ukraine coordinated by Russian special forces — Nalyvaichenko](#), Interfax-Ukraine, 1 April 2015.

<sup>118</sup> [NATO leaders pledge support to Ukraine at Wales Summit](#), NATO, 4 September 2014.

<sup>119</sup> [Russia Bans More Ukrainian Products](#), Moscow Times, 13 November 2014.

<sup>120</sup> [Some 12,000 Russian soldiers in Ukraine supporting rebels: U.S. commander](#), Reuters, 3 March 2015.

and coordinated nature of such attacks, or the fact that much of their activity is during normal office hours in Russia's European time zones.<sup>121</sup>

And yet, Russia's persistent claims and counter-claims have played their part in slowing down an effective response, by spreading doubts and undermining Western unity, with for example the German government apparently distancing itself at one point from NATO claims of widespread Russian aggression.<sup>122</sup>

### 5.3. How is NATO responding to Russian hybrid warfare?

Compared to NATO, Russia has inferior conventional capability, but its sophisticated hybrid campaign has given it the upper hand in Ukraine for the time being. What are NATO and other Western actors, such as the EU, doing in response?

In addition to conventional responses, such as providing the Ukrainian armed forces with more training and equipment, NATO is also strengthening its cyber defence capability. Cyber defence has now been recognised as 'part of NATO's core task of collective defence',<sup>123</sup> meaning that a Russian cyber attack on a NATO country could potentially trigger a military response. To test capability in this field, NATO recently carried out its largest ever cyber defence exercise.<sup>124</sup>

In the information war, NATO's newly established Strategic Communications Centre of Excellence may have a role to play in coordinating the response. The EU will also be involved in this, following a call<sup>125</sup> by the March 2015 European Council to 'challenge Russia's ongoing disinformation campaigns', requesting EU High Representative Federica Mogherini 'to prepare by June an action plan on strategic communication'.

To provide Russian speakers in the Baltic States and elsewhere with an alternative to Kremlin propaganda, Latvia is considering developing a Russian-language TV channel, possibly in cooperation with other EU countries.<sup>126</sup> Meanwhile, on social media, the United States has launched a UnitedForUkraine campaign on Facebook and Twitter (hijacked at one point by Russian 'trolls');<sup>127</sup> US-funded Radio Free Europe/Radio Liberty is setting up a new Digital Media Department to produce Russian-language content.<sup>128</sup> For its part, the British army is setting up a special force of 'Facebook warriors'.<sup>129</sup> It remains to be seen how effectively these and other initiatives will counter Russian hybrid warfare in Ukraine and elsewhere.

### 5.4. Russia vs. NATO: how much of a threat are the Russian armed forces?

Russia's armed forces are quantitatively and qualitatively inferior in conventional capability to those of the United States and NATO as a whole. It is true that recent reforms have improved their effectiveness and that substantial equipment upgrades

<sup>121</sup> [Russian cyber espionage to become more aggressive](#), Oxford Analytica, 16 December 2014.

<sup>122</sup> [Breedlove's Bellicosity: Berlin Alarmed by Aggressive NATO Stance on Ukraine](#), Spiegel, 6 March 2015.

<sup>123</sup> [NATO Summit Declaration](#), 5 September 2014

<sup>124</sup> [Largest ever NATO cyber defence exercise gets underway](#), NATO, 18 November 2014.

<sup>125</sup> [European Council conclusions, 19-20 March 2015](#)

<sup>126</sup> [Latvia proposes 'alternative' to Russian TV propaganda](#), EurActiv, 8 January 2015.

<sup>127</sup> [Hashtag Hijacked: Russia Trolls U.S. Twitter Campaign In Ukraine Crisis](#), Radio Free Europe/Radio Liberty, 25 April 2014.

<sup>128</sup> [US unleashes cyber-troops on Russian social networks](#), Izvestia, 14 April 2015 (in Russian only).

<sup>129</sup> [British army creates team of Facebook warriors](#), Guardian, 31 January 2015.

are ongoing. However, this will not fundamentally change the balance between the two sides, meaning that Russia is unlikely to want to tackle NATO head-on.

On the other hand, Russia's military is more than adequate to present a serious threat to Ukraine, and potentially to other non-NATO, ex-Soviet countries. Its adept use of hybrid warfare has enabled it to substantially destabilise Ukraine, in defiance of international condemnation. NATO, as an alliance conceived with conventional threats in mind, is struggling to respond effectively.

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After a long period of neglect and decline, the Russian armed forces have once again taken centre stage. On top of their alleged involvement in Ukraine, incursions into the airspace and territorial waters of neighbouring countries are becoming more frequent, and large-scale military drills have been held throughout the country. The traditional Victory Day parade through Moscow on 9 May celebrates Russian military prowess.

In line with their increasingly active role, the Russian armed forces are undergoing a modernisation process with sweeping reforms and a major rearmament programme. In the context of rising tensions with NATO and a potentially escalating conflict in Ukraine, the crucial question is whether the country now has a modern fighting machine capable of taking on a more substantial adversary.

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This is a publication of the  
**Members' Research Service**

*Directorate-General for Parliamentary Research Services,  
European Parliament*



PE 554.213  
ISBN 978-92-823-7027-8  
doi: 10.2861/75411