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**RUSSIA:
ARMS CONTROL, DISARMAMENT AND
INTERNATIONAL SECURITY**

IMEMO SUPPLEMENT
TO THE RUSSIAN EDITION
OF THE SIPRI YEARBOOK 2017

Preface by Alexander Dynkin

Editors
Alexey Arbatov and Sergey Oznobishchev

Assistant Editor
Tatiana Anichkina

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CONTENTS

PREFACE.....	7
<i>Alexander DYNKIN</i>	

ACRONYMS	9
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PART I. ANALYSES, FORECASTS, DISCUSSIONS

1. EROSION OF STRATEGIC STABILITY	15
<i>Alexey ARBATOV</i>	
Stability in the traditional sense	15
Ballistic missile defence confrontation	18
New arms and strategic concepts	24
Multilateral stability?.....	32
Stability renewed	34
2. PROBLEMS OF MULTILATERAL NUCLEAR DETERRENCE	38
<i>Vladimir DVORKIN</i>	
Increasing risk of nuclear weapons use	38
Approaches to reduce nuclear threat	44
3. 2018 US NUCLEAR POSTURE REVIEW: NEW ACCENTS IN THE DETERRENCE DOCTRINE.....	50
<i>Natalia BUBNOVA</i>	
Course on strengthening the role of nuclear weapons	51
Modernisation of the strategic triad.....	55
Low-yield nuclear warheads.....	59
Forward basing and non-strategic nuclear weapons	61
Focus on communication, command and control systems	64
Cyberattacks are fraught with nuclear response?	66

4 RUSSIA AND INTERNATIONAL SECURITY

4. NORTH KOREA'S NUCLEAR AND MISSILE POTENTIAL AND SECURITY IN NORTHEAST ASIA..... 70

Victor ESIN

North Korea's nuclear programme 71

North Korea's missile programme 73

Pyongyang's goals 77

Ways to overcome the crisis 79

5. ISSUES OF VERIFICATION OF THE FISSILE MATERIAL CUT-OFF TREATY..... 83

Anatoly DIAKOV

Baseline declaration requirements 85

The issue of including data on specific intended use of
weapon-usable nuclear material 87

Declaration completeness 89

Approaches to verification 90

Challenges associated with measurement uncertainty 92

6. BLUEPRINT FOR TRANSCENDING THE EUROPEAN SECURITY CRISIS 97

Andrey ZAGORSKY

Freedom of alliances and indivisibility of security 100

Arms race..... 105

Non-aligned states 112

PART II. EXPERT INSIGHTS

7. EVOLUTION OF THE SHANGHAI COOPERATION ORGANISATION 119

Alexander NIKITIN

The agenda of the SCO summits in Astana and Qingdao 120

Key initiatives of member states 124

Priorities of the SCO 129

8. RELATIONS IN THE STRATEGIC TRIANGLE OF CHINA, INDIA, AND PAKISTAN	134
<i>Petr TOPYCHKANOV</i>	
Cooperation between China and Pakistan	135
Nuclear and missile threats to India	141
Indian response to threats from its neighbours	145
9. MIDDLE EAST CONFLICTS AND PEACE SETTLEMENT IN SYRIA	149
<i>Stanislav IVANOV</i>	
Relocation of the US embassy to Jerusalem	150
Increased role of Islamist organisations	152
Key issues of the Syrian peace settlement	154
Situation in Lebanon, Iraq, and Yemen	160
Re-imposition of US sanctions against Iran	165
10. ADJUSTING RUSSIA'S STATE ARMAMENT PROGRAMME	168
<i>Lyudmila PANKOVA</i>	
Results of the modernisation of the Russian armed forces in 2008-2018	169
Priorities of the new State Armament Programme 2027	172
Innovative and digital development	175
Civilian production in DIC	177
Financial parameters of GPV-2027	179
PART III. DOCUMENTS AND REFERENCE MATERIALS	
11. KEY DOCUMENTS OF THE RUSSIAN FEDERATION ON NATIONAL SECURITY, DEFENCE, AND ARMS CONTROL (JANUARY–DECEMBER 2017)	187
<i>Sergey TSELITSKY</i>	
Legislative acts	187
Normative acts	191
ABOUT THE CONTRIBUTORS	199

PREFACE

2018 marks the 25th anniversary of the joint project between the Stockholm International Peace Research Institute (SIPRI) and the Primakov National Research Institute of World Economy and International Relations (IMEMO) of the Russian Academy of Sciences. From the outset the Russian edition of the *SIPRI Yearbook: Armaments, Disarmament and International Security* has included an important Special Supplement – *Russia: Arms Control, Disarmament and International Security* – that complements the analysis of the SIPRI Yearbook and represents the point of view of the IMEMO's leading experts on key issues of international security and arms control.

This year Special Supplement, as before, contains analytical chapters on the most acute global problems. Among them is the erosion of strategic stability, risks of multilateral nuclear deterrence, crisis of the European security system, situation in the Middle East region including the challenges of the Syrian settlement.

In other chapters Russian experts evaluate the 2018 US Nuclear Posture Review in the context of nuclear deterrence, nuclear and missile capabilities of North Korea, problems with verifying the Fissile Material Cut-off Treaty, evolution of the Shanghai Cooperation Organisation, strategic relations between China, India and Pakistan. Experts in defence economics may find interesting an analysis of the new Russian State Armament Programme. The last chapter traditionally contains an overview of the main documents of the Russian Federation on national security, defence and arms control (for the period from January to December 2017).

The Special Supplement is a result of a major collective effort. Alexey Arbatov, Vladimir Baranovsky and Sergey Oznobishchev carry out the overall supervision of the project. Marianna Evtodieva is responsible for coordinating the editing and publication of the Russian edition of the SIPRI Yearbook and its Special Supplement. The production of the English version of the *Russia: Arms Control, Disarmament and International Security* was managed by Tatiana Anichkina.

8 RUSSIA AND INTERNATIONAL SECURITY

I would like to express my gratitude to the authors of the Special Supplement – Alexey Arbatov, Natalia Bubnova, Anatoly Diakov, Vladimir Dvorkin, Victor Esin, Stanislav Ivanov, Alexander Nikitin, Lyudmila Pankova, Petr Topychkanov, and Andrey Zagorsky.

I also gratefully acknowledge the Swiss Federal Department of Defence, Civil Protection and Sport for its lasting support of the project.

Academician Alexander Dynkin,
President of the Primakov National
Research Institute of World Economy
and International Relations,
Russian Academy of Sciences,
July 2018

ACRONYMS

ABM Treaty	– 1972-2002 Anti-Ballistic Missile Treaty
AME	– armaments and military equipment
APEC	– Asia-Pacific Economic Cooperation
ASEAN	– Association of Southeast Asian Nations
ASF	– Aerospace Forces of the Russian Federation
BMD	– ballistic missile defence
BRICS	– Brazil, Russia, India, China, and South Africa
CD	– Conference on Disarmament
CFE	– 1990 Treaty on Conventional Armed Forces in Europe
CIS	– Commonwealth of Independent States
CM	– cruise missile
CPEC	– China–Pakistan Economic Corridor
CSTO	– Collective Security Treaty Organisation
CTBT	– 1996 Comprehensive Nuclear–Test–Ban Treaty
DCA	– dual capable aircraft
DIC	– defence-industrial complex
EAEU	– Eurasian Economic Union
ELWR	– experimental light water reactor
FC	– Federation Council of the Russian Federation
FMCT	– Fissile Material Cut-off Treaty
FTP	– federal target programme
GBI	– Ground Based Interceptor
GBMI	– Ground-Based Midcourse Interceptor
GBSD	– Ground-Based Strategic Deterrent
GLCM	– ground launched cruise missile
GPV	–Gosudarstvennaia programma vooruzheniia, State Armament Programme
HEU	– highly enriched uranium
IAEA	– International Atomic Energy Agency
ICBM	– intercontinental ballistic missile
INF Treaty	– 1987 Treaty on the Elimination of Intermediate- Range and Shorter-Range Missiles

10 RUSSIA AND INTERNATIONAL SECURITY

IRBM	– intermediate-range ballistic missile
IS	– Islamic State
JCPOA	– Joint Comprehensive Plan of Action
LEU	– low-enriched uranium
LRSO	– long-range stand-off missile
MIRV	– multiple independently targetable re-entry vehicle
MRBM	– medium-range ballistic missile
NATO	– North Atlantic Treaty Organisation
NDS	– National Defence Strategy
New START	– 2010 Treaty on Measures for the Further Reduction and Limitation of Strategic Offensive Arms
NIS	– Newly Independent States
NPR	– US Nuclear Posture Review
NPT	– 1968 Treaty on the Non-Proliferation of Nuclear Weapons
NRC	– NATO–Russia Council
NSS	– US National Security Strategy
OSCE	– Organisation for Security and Cooperation in Europe
PGS	– Prompt Global Strike
R&D	– research and development
RATS	– SCO Regional Anti-Terrorist Structure
SALT I	– 1972 Strategic Arms Limitation Talks
SALT II	– 1979 Strategic Arms Limitation Talks
SAM	– surface–to–air missile systems
SCO	– Shanghai Cooperation Organisation
SD	– State Duma of the Russian Federation
SDO	– state defence order
SLBM	– submarine-launched ballistic missile
SLCM	– submarine-launched cruise missile
SNF	– strategic nuclear forces
SORT	– 2002 Strategic Offensive Reductions Treaty
SRBM	– short-range ballistic missiles
SSBN	– nuclear-powered ballistic missile submarine
START I	– 1991 Strategic Arms Reduction Treaty
START II	– 1993 Strategic Arms Reduction Treaty

TMD	– theatre missile defence
UAV	– unmanned aerial vehicle
UN	– United Nations
WMD	– weapons of mass destruction
WTO	– World Trade Organisation

PART I. ANALYSES, FORECASTS, DISCUSSIONS

1. Erosion of strategic stability
2. Problems of multilateral nuclear deterrence
3. 2018 US Nuclear Posture Review: new accents in the deterrence doctrine
4. North Korea's nuclear and missile potential and security in Northeast Asia
5. Issues of verification of the Fissile Material Cut-off Treaty
6. Blueprint for transcending the European security crisis

1. EROSION OF STRATEGIC STABILITY¹

Alexey ARBATOV

In the recent three decades the United States and Russia have reduced their nuclear arsenals six to seven times in terms of the aggregate numbers of warheads and over 30 times in terms of their destructive power (megatons).² Today the strategic balance is as stable as ever, as far as its agreed criteria are concerned. However, paradoxical as it may seem, the two sides' understanding of strategic stability has diverged increasingly over the last few years. As a result, there is a real risk of arms race acceleration, the collapse of nuclear arms control and the increased possibility that nuclear weapons are used.

Stability in the traditional sense

The concept of strategic stability was formulated as a legal norm for the first time – and unfortunately for the last time, too – in June 1990 in the US–Russia Joint Statement.³ It was defined as strategic relations *'removing incentives for a nuclear first strike.'* This implied that

¹ The data in this volume is as of June 15, 2018.

² Calculated based on *SIPRI Yearbook 2016: Armaments, Disarmament and International Security* (Oxford University Press: Oxford, 2016), pp. 609-708.

³ George Bush: 'Soviet-United States Joint Statement on Future Negotiations on Nuclear and Space Arms and Further Enhancing Strategic Stability', The American Presidency Project, 1 June 1990 <<http://www.presidency.ucsb.edu/ws/?pid=18541>>.

16 ANALYSES, FORECASTS, DISCUSSIONS

strategic arms reductions treaties to be concluded were to envisage a number of mutually agreed elements:

- ‘*The relationship between strategic offensive and defensive arms*’ (so that the defences could not weaken retaliatory strike).
- ‘*Reducing the concentration of warheads on strategic delivery vehicles*’ (so that neither side could use one delivery vehicle carrying multiple warheads to destroy several operationally deployed delivery vehicles of the other side carrying greater number of warheads).
- ‘*Giving priority to highly survivable systems*’ (that cannot be destroyed by a pre-emptive strike prior to their launch).

Thanks to this historic intellectual breakthrough, Carl von Clausewitz’s classic formula, ‘War is a mere continuation of policy by other means,’⁴ no longer applied by default to strategic nuclear forces (SNF).⁵ As the 1990 Joint Statement implies, if neither party’s disarming strike enables it to significantly reduce the damage inflicted by the other party’s retaliatory strike, it has no incentive to mount the first strike in continuation of its policy, even in case of acute conflict of the states’ interests.

This logic bore its first fruit in 1972 when the ABM Treaty and the Interim Agreement on the limitation of strategic offensive arms (SALT I) were signed. Later on, in 1979, the second treaty, the Treaty on the Limitation of Strategic Offensive Arms (SALT II), was signed, yet at that moment the parties were guided by an ambiguous principle of ‘equality and equal security.’

The concept of strategic stability was agreed when the United States and Russia were negotiating the START I treaty that they signed in 1991. Its elaborate provisions and limitations reflected all the principles of this concept. Subsequently, these principles were integrated in a more or less detailed manner in the START II treaty (1993), START III framework agreement (1997), the agreement on ABM/TMD demarcation (1997), the 2002 Strategic Offensive

⁴ For the purposes of this article, the term SNF is used as a synonym of the term ‘strategic offensive arms,’ although in the future the two terms may no longer be interchangeable as non-nuclear strategic offensive arms are developed.

⁵ von Clausewitz, C., *On War* (Kegan Paul, Trench, Trubner and Co: London, 1908), book I, chapter I, section 24.

Reductions Treaty (SORT), and the current New START (2010, referred to as START III in Russia).

Thanks to these agreements today strategic balance appears immensely more stable (judging by criteria agreed upon in 1990) than it did on the eve of 1990s before the START I was signed. Strategic arms limit for warheads has reduced six-fold, while the limit for deployed delivery means has reduced almost three-fold. The warheads-to-delivery vehicles ratio has changed from 5:1 to 2:1. While highly survivable means⁶ had previously accounted for 30 to 40% of Russia's and US SNF, now their share has increased to 60-70%⁷.

Realistic models of hypothetical nuclear strikes exchange demonstrate that neither country's strike can destroy over 50% of the other country's forces. What is more, such strike would involve 20% more weapons than it would destroy.⁸ In other words, the aggressor would disarm themselves, as the force the attacked country would retain to mount a retaliatory strike at its discretion would exceed the remaining forces of the aggressor.

Until lately, Russian SNF modernisation programme under the State Armaments Programme until 2020 was rational and timely, as it envisaged massive decommissioning of weapon systems dating back to 1980s and 1990s. The US will follow Russia in upgrading most of their strategic triad within the next decade. With some minor exceptions, both countries' military modernisation programmes are in conformity with two of the three principles of strategic stability agreed in 1990: reducing the concentration of warheads on strategic delivery vehicles and giving priority to highly survivable means.

As for the first principle ('relations between the strategic

⁶ Highly survivable means refer to sea-based and ground-based mobile missile forces; strategic bombers are not included, as they are not kept on alert, have long flight time and cannot be guaranteed to penetrate the adversary's air defences.

⁷ Calculated based on *SIPRI Yearbook 2016: Armaments, Disarmament and International Security* (Oxford University Press: Oxford, 2016), pp. 609-708; *SIPRI Yearbook 1990: Armaments, Disarmament and International Security* (Oxford University Press: Oxford, 1991), pp. 14-16.

⁸ Dvorkin, V., Reduction of offensive weapons. In *Polycentric nuclear world: challenges and new possibilities*, ed. by A. Arbatov, V. Dvorkin (Carnegie Moscow Center: Moscow, 2017), pp. 67-68 [in Russian].

offensive and defensive arms'), the two sides' positions have diverged greatly, which deadlocked strategic offensive arms negotiations and boosted arms race.

Ballistic missile defence confrontation

The responsibility for the renewed disputes over ballistic missile defence rests with the United States. They withdrew from the ABM Treaty in 2002 and simultaneously signed the US–Russia Declaration providing for an obligation to jointly develop ballistic missile defence.⁹ However, in 2004, before the negotiations produced any result, they announced that they were deploying such system unilaterally in the US, Czech Republic, and Poland, and suggested that Russia should join it. Moscow opposed such approach, claiming that it should cooperate as equal and that its specific anti-ballistic missile defence interests should be taken into account (although it never specified what those were). Washington, in its turn, insistently advanced its programme taking advantage of the public shock after the 9/11 terrorist attacks.

In his address to the Federal Assembly on 1 March 2018, Russian President Vladimir Putin explained the importance of the ABM Treaty from which the United States withdrew in 2002 in the following way: 'The ABM Treaty... prevented either party from recklessly using nuclear weapons, which would have endangered humankind, because the limited number of ballistic missile defence systems made the potential aggressor vulnerable to a response strike.'¹⁰

Despite the acute disputes over ballistic missile defence between Russia and the United States, objective military and technical analysis has shown that neither the US missile defence programme, nor Russia's Air Space Defence programme can have any notable bearing

⁹ Joint Declaration by President George W. Bush and President Vladimir V. Putin on the New Strategic Relationship Between the United States of America and the Russian Federation, Moscow, 24 May 2002 <<http://www.presidency.ucsb.edu/ws/index.php?pid=73311>>.

¹⁰ Presidential Address to the Federal Assembly, Kremlin.ru, 1 Mar. 2018 <<http://www.en.kremlin.ru/events/president/news/56957>>.

on the other party's retaliatory strike capabilities.

The US strike capability comprises 44 strategic long-range GBMI (Ground-Based Midcourse Interceptor) systems deployed in Alaska and California (their number can increase to 64 as envisaged by the Donald Trump administration's programme). They are intended for intercepting intercontinental ballistic missiles (ICBMs). It should be reminded that the 1972 ABM Treaty initially allowed each party to have up to 200 strategic interceptors of any range carrying powerful nuclear warheads.

In addition, there are two sites where another class of systems is deployed – a total of 48 Aegis Ashore interceptors. Those are located in Romania and Poland (with the establishment of the third site in Japan contemplated). There are also 35 ships on which several hundreds of Aegis interceptors of different modifications are deployed. All Aegis complexes are intended for protecting the neighbouring parts of Europe and the Far East against intermediate-range ballistic missiles that Russia cannot have under the Intermediate-Range Nuclear Forces (INF) Treaty of 1987.

At the moment Russian strategic nuclear forces comprise 530 delivery vehicles and about 2,000 nuclear warheads for ballistic missiles and cruise missiles of heavy bombers. Their aggregate yield is 700 megatons,¹¹ that is about 40,000 bombs detonated in Hiroshima. In his address to the Federal Assembly on 1 March 2018 President Vladimir Putin said: '... Russia has developed, and works continuously to perfect, highly effective but modestly priced systems to overcome missile defence. They are installed on all of our intercontinental ballistic missile complexes.' This refers to both previous generation of ICBMs and the new ones, including Topol-M, Yars and Bulava-30 submarine-launched ballistic missiles (SLBM). This capability would be sufficient to cope with both the current US missile defences and any missile defence that the United States can realistically be forecasted to develop within the following 15-20 years.

¹¹ Sivkov, K., 'Disarmed and very dangerous', *Voенно-promyshlennyi kur'er*, 22-28 Mar. 2017 <<http://vpk-news.ru/articles/35718>> [in Russian].

Russia has been developing its ballistic missile defence as part of its Air Space Force under the Air Space Defence programme. This programme will receive about 20% of the budget envisaged by the State Armaments Programme of Russia through 2020, that is about 4,6 trillion rubles (\$150 billion in 2011 exchange rates). Along with the modernisation of the existing elements of the missile warning system and the development of new ones, including land-based radars and spacecraft, the programme envisages the deployment of 28 missile regiments of S-400 Triumph (SA-21 Growler) air-defence systems (about 1800 SAMs, surface-to-air missiles), and 38 battalions (about 1200 SAMs) armed with the next-generation S-500 Prometey systems. Under the programme, a new integrated fully automatic command-control system is to be established, and Moscow A-135 system (under the new name of A-235) is to be modernised to turn its missiles into non-nuclear interceptors.¹²

Unlike the United States who insists that its ballistic missile defence is not targeted against Russia, Russia implies that its Air Space Defence is intended for protection from the United States and NATO. During a visit to a SAM production facility in June 2013 President Putin stated: 'Effective air and space defence is the guarantee that will ensure our strategic deterrent forces remain effective and will protect our country's territory from air- and space-launched weapons.'¹³ It is clear that no other state except the US may possess such capability in the foreseeable future. However, the United States does not complain about Russia's air space defence programme. Washington is apparently confident that Russian system is unable to weaken the United States' nuclear deterrent.

¹² *Nezavisimoye voennoe obozrenie*, 25-31 Mar. 2011, no. 11, p. 3 [in Russian]; 'Every fifth ruble for aerospace defence. Air Space Defence forces are to receive the fifth part of all the money allocated to State Armaments Programme', *Voennopromyshlennyyi kur'er*, 21 Feb. 2012 <<http://vpk-news.ru/news/403>> [in Russian]; Karev, I., 'Vladimir Putin: Russia will enhance Air Space Defence capabilities', *Natsionalnaya oborona*, 2013, no. 7, p. 22 <<http://www.oborona.ru/includes/periodics/maintheme/2013/0705/193911209/detail.shtml>> [in Russian].

¹³ Karev, I., 'Vladimir Putin: Russia will enhance Air Space Defence capabilities'...

After the United States unilaterally withdrew from the ABM Treaty in 2002, and the two states' 2007-2011 negotiations on the joint development of ballistic missile defence failed,¹⁴ their strategic relations have been considerably destabilised. In his address on 1 March 2018, Vladimir Putin said: '... in light of the plans to build a global anti-ballistic missile system, which are still being carried out today, all agreements signed within the framework of New START are now gradually being devaluated, because while the number of carriers and weapons is being reduced, one of the parties, namely, the US, is permitting constant, uncontrolled growth of the number of anti-ballistic missiles, improving their quality, and creating new missile launching areas. If we do not do something, eventually this will result in the complete devaluation of Russia's nuclear potential.'¹⁵

In his address to the Federal Assembly, Russian President named six Russian advanced arms programmes and projects intended as a response to the US programme. The first one is a heavy Sarmat ICBM that has been openly developed for some years (its tests began in 2017) and is a new generation of a weapon system that has existed for over half a century. However, there are doubts as to the announced advantages of its capability to attack the United States from the Antarctic Circle (of which heavy ICBMs have been capable since 1970s). To move along such trajectory, a missile should reach Earth orbit, and then descend from it. In this case a missile would have a much longer flight time and apparently lower precision as compared to a missile launched through the Arctic Circle. The United States can intercept such missiles in neither case, as they carry multiple warheads and are equipped with ballistic missile defence (BMD) penetration means. Furthermore, unlike current Russian SNF modernisation programmes, the Sarmat system does not correspond to the two principles of strategic stability agreed upon in 1990: reducing the concentration of warheads on strategic delivery vehicles and giving

¹⁴ Statement in connection with the situation concerning the NATO countries' missile defence system in Europe, 23 Nov. 2011 <<http://www.en.kremlin.ru/events/president/news/13637>>.

¹⁵ Presidential Address to the Federal Assembly...

priority to highly survivable means (although this does not represent a violation of any treaty).

The second system mentioned in Vladimir Putin's address is Burevestnik, an unlimited-range nuclear-propelled nuclear cruise missile. If the missile in question is propelled by a real nuclear reactor, this is an impressive technical breakthrough. Yet a missile of such a range will have a flight time of many hours, with its precision uncertain. Hundreds of Russian both nuclear and conventional cruise missiles launched from heavy bombers and multipurpose nuclear submarines can reach their targets faster flying through northern seas (what is more, they would not be intercepted by the United States' missile defence systems).

The third project mentioned is a strategic hypersonic boost-glide vehicle. Its development started in the USSR back in 1980s in response to the US President Ronald Reagan's Strategic Defence Initiative (SDI). In recent years, the United States started testing a similar system as part of their Conventional Prompt Global Strike concept. Judging by the 1 March presidential address, Russia has quickly outstripped the United States in this area, and its Avangard hypersonic glide vehicle can become an option for arming Sarmat missiles.

Like the ballistic missiles, the launch of a glide vehicle's missile booster can be detected by satellites, yet having been launched, it enters stratosphere and travels along unpredictable trajectories. These weapons' trajectory lies mostly within the blind zone between radar horizons of the adversary's missile and air defences. They can be detected by the radars only 3-4 minutes before hitting their targets.¹⁶ Significant number of such weapons carrying nuclear warheads can pose threat of a disarming strike against adversary's protected sites like ICBM silo launchers and command and control centres. Therefore, one should be prepared to launch ICBMs after the signal of missile early

¹⁶ Acton, J., *Silver Bullet? Asking the Right Questions About Conventional Prompt Global Strike* (Carnegie Endowment for International Peace: Washington, 2013), pp. 33-63 <<http://carnegieendowment.org/2013/09/03/silver-bullet-asking-right-questions-about-conventional-prompt-global-strike>>.

warning systems, which would dramatically increase the risk of nuclear war as a result of false alarm or technical error.¹⁷

Armed with conventional warhead, Avangard could become a response to the United States Conventional Prompt Global Strike programme. However, neither the United States, nor Russia has clear ideas as to the missions such systems can complete, the targets they are to hit, their cost, and the number to be manufactured.

Finally, the fourth and the most astonishing armament system mentioned is a long-range nuclear-powered Poseidon super-torpedo running at great depth and carrying high-yield nuclear warhead (previously called Status-6 and intended for carrying 100Mt nuclear warheads¹⁸). This system was also conceived in early 1980s for mounting strikes from under the water surface and thus avoiding space-based SDI. However, today its relevance appears doubtful. Fifteen hundred nuclear warheads on Russian ballistic missiles can reliably destroy all the imaginable targets located both along the coast or inside the territory of any adversary within 30 minutes.

In general (although reservations should be made for the Sarmat system), the programmes and projects discussed in the presidential address do not contradict the principles of strategic stability as agreed in the 1990 Joint Statement. Neither of them is in violation of the existing nuclear arms limitation treaties. At the same time, before deciding on their manufacture and deployment one should closely examine their cost efficiency, especially taking into account the existing weapon systems and other defence needs. One should also examine possible response of the United States and other countries. Pentagon has already announced that it will accelerate its Prompt Global Strike hypersonic arms programme and scheduled tests for 2019.¹⁹

¹⁷ Former United States Defence Secretary William Perry describes a panic over false missile attack alarm that broke out when an officer on duty mistakenly ran a training programme on the computer. See: Perry, W., *My Journey at the Nuclear Brink* (Stanford University Studies: Stanford, 2015), pp. 52-53.

¹⁸ Sivkov, K., 'Disarmed and very dangerous'...

¹⁹ Tucker, P., 'The United States accelerating development of its own 'invisible' hypersonic weapons', *Defense One*, 2 Mar. 2018 <<https://www.defenseone.com/>>

New arms and strategic concepts

High-precision weapons and nuclear threshold

Long-range high-precision weaponry with conventional warheads, as well as unmanned aerial vehicles have changed the nature of local conflicts in late 20th and early 21st century (Iraq, Yugoslavia, Libya and Syria). This became possible due to new information and command systems (primarily space-based ones) that increase the high precision guidance of warheads up to several meters (circle of error probable). Eventually this started affecting strategic balance and stability.

Today, the United States has over 6000 Tomahawk sea-based cruise missiles (CMs)²⁰ (BGM-109) with a range of about 1800 km; the US Air Force possesses about 140 AGM-84 CMs armed with conventional warheads and has announced plans to put into service a new cruise missile of this class – AGM-158B JASSM-ER – with extended range.

Russia has also been building up its stockpile of similar weapons. It possesses air-launched AS-15 Kent-B and AS-15 Kent-C missiles, and sea-launched SS-N-27 Sizzler and SS-N-30A Kalibr-type cruise missiles of different modifications, in addition to which new air-launched Kh-101 cruise missiles are being deployed. By 2018, the number of high-precision cruise missiles had increased more than 30 times.²¹ The efficiency of these weapon systems was proven in Syria.

The existing non-nuclear-armed cruise missiles have a relatively limited range (up to 2000 km), subsonic velocity and long flight time (about two hours). Therefore, next generation of high-precision conventional weapons is being developed for the foreseeable future.

[technology/2018/03/united-states-accelerating-development-its-own-invincible-hypersonic-weapons/146355/>](https://www.bbc.com/news/technology-2018-03/united-states-accelerating-development-its-own-invincible-hypersonic-weapons/146355/>).

²⁰ Those are deployed on four modified strategic Ohio-class submarines, each carrying 154 missiles (with the total number reaching 616 missiles), 25 multi-purpose Virginia and Seawolf-class submarines (500 cruise missiles), and 22 Ticonderoga-class cruisers and 62 Arleigh Burke-class destroyers (4,560 CMs).

²¹ Presidential Address to the Federal Assembly...

These weapons are to have intercontinental range (over 5500 km) and relatively short flight time (up to 60 minutes).

In the United States, the AHW (Advanced Hypersonic Weapon) is the main weapon system developed under the aforementioned Conventional Prompt Global Strike Programme; it is designed to provide a range of up to 8000 km. It uses stages of decommissioned ICBMs to lift a hypersonic boost glide vehicle up into stratosphere and accelerate it to a speed of over Mach 5.²² Simultaneously with the PGS programme, yet outside its framework, the United States has been testing its X-51A Waverider hypersonic air-launched cruise missile with a range of 1800 km and a velocity of Mach 5 to be carried by heavy bombers.²³

Russia flight tested its hypersonic glide wing unit in 1991-1992 and in 2001-2004. That missile complex named Albatros (subsequently designated as Project 4202 or 'Yu-71') used RS-18 (or SS-19)-type ICBM as its launch vehicle. In future, Avangard hypersonic glide wing unit (announced by President Putin in his 2018 address) can also be armed with conventional warhead and installed on a new heavy Sarmat missile that is to enter service around 2020.²⁴

Beside two military super-powers, such weapon systems are also tested by China. Its hypersonic system is designated WU-14 and uses stages of old liquid-propellant DF-5 ICBMs. It may also be equipped with hypersonic glide vehicle to penetrate the US missile

²² Hypersonic speed commonly refers to a speed that exceeds five times or more the speed of sound, that is a speed of over 1.7 km per second. The speed of sound is equal to Mach 1 or 330 meters per second.

²³ 'The test of the second hypersonic glide vehicle failed in the United States', *Lenta.ru*, 12 Aug. 2011 <<https://lenta.ru/news/2011/08/12/htv2/>> [in Russian]; 'X-51 Scramjet Engine Demonstrator – WaveRider (SED-WR)', *GlobalSecurity.org* <<https://www.globalsecurity.org/military/systems/aircraft/x-51.htm>>.

²⁴ Raigorodetskii, A., 'Albatros ICBM project (USSR)', *Dogs of War*, 15 Aug. 2011 <<http://www.dogswar.ru/oryjeinaia-ekzotika/raketnoe-oryjie/4945-proekt-mbr-qalbatros.html>> [in Russian]. Ramm, A., Kornev, D., 'The Albatros of the world revolution. Part I', *Voenna-promyshlennyyi kur'er*, 21 Sep. 2015 <<http://www.vpk-news.ru/articles/27160>> [in Russian]; Ramm, A., Kornev, D., 'Hypersonic death approaches', *Voenna-promyshlennyyi kur'er*, 23 Mar. 2015 <<http://www.vpk-news.ru/articles/24407>> [in Russian].

defence. Furthermore, China has been testing DF-21C intermediate-range ballistic missile carrying high-precision conventional warheads intended for destroying United States' aircraft carriers.

Strategic effect of the long-range high-precision weapons can be generally regarded as destabilizing, although the assessments of its scale may vary. President Putin said at the Valdai Forum in 2015: 'We have already seen the appearance of the concept of the so-called disarming first strike, including one with the use of high-precision long-range non-nuclear weapons comparable in their effect to nuclear weapons.'²⁵ Vice-Prime Minister Dmitry Rogozin echoed the sentiment and said that the United States can destroy 90% of Russian strategic forces within hours without resorting to nuclear weapons.²⁶

Nevertheless, many experts, including those from the institutions of the Ministry of Defence, believe that the existing subsonic cruise missiles are inefficient for attacking protected underground facilities, such as ICBM silo launchers and command and control centres. It is not yet clear whether conventional hypersonic weapons can be used for a disarming strike. There remain doubts as to whether they are precise enough to destroy protected facilities (ICBM silo launchers and command and control centres). Furthermore, it remains unclear whether these expensive weapons will be deployed in quantities sufficient to threaten Russia's strategic deterrent (many hundreds).

Although the United States denies having any plans to use conventional high-precision systems to attack Russia's strategic forces, there can be no doubt that SNF non-protected facilities are vulnerable even to the current subsonic conventional cruise missiles. Such vulnerable facilities include ballistic missile early warning radars, missile defence and air defence systems, above-ground shelters of mobile ICBM launchers, missile submarines at bases, heavy bombers on airfields, space control centres, submarine control centres, and

²⁵ Meeting of the Valdai International Discussion Club, 22 Oct. 2015 <<http://en.kremlin.ru/events/president/news/50548>>.

²⁶ Transcript of Dmitry Rogozin's statement at the press conference in the Rossiyskaya Gazeta, *Rossiyskaya gazeta*, 28 June 2013 <<https://rg.ru/2013/06/28/doklad.html>> [in Russian].

strategic aircraft control centres. Economy and infrastructure facilities, such as power plants, oil refineries, transport hubs, and communication centres would even more likely become targets of high-precision conventional strikes.²⁷ Weapons and plans for such strikes form the basis of the non-nuclear (conventional) deterrence concept that has been part of the United States' military doctrine for a long time.

The Russian Military Doctrine names the United States' high-precision weapons the major national security threat, while 'ensuring air defence of the essential facilities of the Russian Federation and readiness to counter an air space attack' – a priority task.²⁸ Recent years have seen many expert publications on the subject.²⁹ To respond to this threat, Russia not only has been building a multi-tier air space defence system, but also has developed in recent years similar offensive capabilities intended for the purpose of 'conventional deterrence' in accordance with its Military Doctrine.³⁰

As long-range high-precision conventional weapons are deployed extensively and become interrelated with nuclear weapons and their missions, a conventional local conflict or even a military incident can instantly escalate to a nuclear war. The mentioned arms and scenarios of such escalation to a nuclear war in a way 'flank' the classical strategic stability model that excludes the first (disarming) nuclear strike of any of the two parties.

Limited nuclear war

The concept of a limited nuclear war, as well as many other strategic concepts and nuclear weapon systems, was born in the United States. Since late 1950s and throughout the Cold War this philosophy evolved

²⁷ Einhorn, R., Pifer, S., Meeting US Deterrence Requirements, Foreign Policy at Brookings, A Working Group Report, Sep. 2017, p. 20 <https://www.brookings.edu/wp-content/uploads/2017/09/fp_20170920_deterrence_report.pdf>.

²⁸ Military Doctrine of the Russian Federation, 2014 <<http://static.kremlin.ru/media/events/files/41d527556bec8deb3530.pdf>> [in Russian].

²⁹ Demin, A. et al., 'An appropriate response to a serious threat. The main area of armed conflict will be the air-space theatre', *Vozdushno-kosmicheskaya oborona*, 13 Aug. 2012, no. 4 <<http://www.vko.ru/strategiya/sereznoy-ugroze-adekvatnyy-otvet>> [in Russian].

³⁰ Military Doctrine of the Russian Federation, 2014...

stage by stage taking many different forms.³¹ Yet all that plans were dropped due to possible massive retaliatory nuclear strike of the USSR that categorically refuted any such ideas and enhanced the ‘devastating retaliation’ capability.³²

However, 2003 saw new ideas appear in the Russian Defence Ministry’s official documents, such as the idea of ‘de-escalation of aggression... through the threat of conventional and/or nuclear weapon strikes of different scale or the mounting of such strikes.’ A ‘dosed combat employment of some components of strategic deterrent forces’ was also envisaged.³³ No concepts of the kind have been mentioned in any subsequent military documents or versions of the Russian Military Doctrine. At the same time, this option is not excluded as such documents do not specify how Russia can ‘use nuclear weapons... in case of aggression against the Russian Federation with the use of conventional weapons when the very existence of the state is at stake.’³⁴

The concepts of selective nuclear strikes have been recently leaking through the writings of former and active-duty professional military experts.³⁵

This issue has become central in the 2018 US Nuclear Posture Review that says: ‘Recent Russian statements on this evolving nuclear weapons doctrine appear to lower the threshold for Moscow’s first-use of nuclear weapons. Russia demonstrates its perception of the advantage these systems provide through numerous exercises and

³¹ Enthoven, A.C., Smith, K.W., *How Much is Enough? Shaping the Defense Program 1961-1969* (Harper&Row Publishers, Inc.: New York, 1971), pp. 175, 207; *The New York Times*, 11 Jan. 1974, p. 6; *Newsweek*, 4 Feb. 1974, p. 23; Department of Defense Annual Report, FY 1975 (US Government Printing Office: Washington DC, 1974), pp. 38, 40-41.

³² Sokolov, V., *Military Strategy* (Voenizdat: Moscow, 1968), pp. 14-20 [in Russian]; Tolubko, V., *Missile Forces* (Obshchestvennye nauki: Moscow, 1977), p. 42 [in Russian].

³³ Pressing issues of the development of the Armed Forces of the Russian Federation, Russian Ministry of Defence, 2003, p. 42 [in Russian].

³⁴ Military Doctrine of the Russian Federation, 2014...

³⁵ Akhmerov, D., Akhmerov, E., Valeev, M., ‘Aerostat is a friend of Sarmat’, *Voenna-promyshlennyyi kur’er*, 12-18 Oct. 2016, no. 39(654), p. 6 [in Russian].

statements. Correcting this mistaken Russian perception is a strategic imperative. To address these types of challenges and preserve deterrence stability, the United States will enhance the flexibility and range of its tailored deterrence options.’³⁶

To develop a capability for limited nuclear strikes, the United States plans to arm a part of its Trident II SLBMs with low-yield warheads and to develop advanced nuclear long-range stand-off missiles (LRSO), variable yield guided nuclear bombs (B-61-12) for tactical and strategic aircraft and nuclear sea-launched cruise missiles.³⁷ In Russia, in addition to other tactical nuclear weapons, the new Sarmat ICBM equipped with nuclear hypersonic glide vehicle is discussed in this context.³⁸

No doubt, the concept and weapons for selective nuclear strikes, as well as conventional high-precision weapons, considerably lower the nuclear threshold. Plans and weapons for limited nuclear strikes being developed by the US and Russia pose a threat of any local (even accidental) armed confrontation between the two superpowers in Eastern Europe, Baltic or Black Seas, Arctic, or Syria instantly escalating to a global one. This is another real risk ensuing from ‘flanking’ strategic stability, which could not be foreseen two decades ago.

Outer space and cyberspace

Outer space acquired military significance as far back as in 1950s and 1960s, first for nuclear weapon tests and ballistic missile flights and then for their interception by missile defence systems. However, large-scale militarization of outer space has never began, apart from several series of experiments and anti-satellite warfare systems developed and later decommissioned by the United States and the USSR.³⁹ So far, space vehicles have merely provided information and command

³⁶ Nuclear Posture Review, Office of the Secretary of Defense, Feb. 2018, p. XII.

³⁷ Nuclear Posture Review..., p. XIV.

³⁸ Akhmerov, D., Akhmerov, E., Valeev, M., ‘Aerostat is a friend of Sarmat’...

³⁹ Dvorkin, V., Space Weapons Programmes. In *Outer Space: Weapons, Diplomacy, and Security*, ed. by A. Arbatov, V. Dvorkin (Carnegie Endowment for International Peace: Washington, 2010), pp. 30-45.

support of armed forces acting on land, at sea and in the air, as well as land-based and sea-based ballistic missiles and ballistic missile interceptors. Nevertheless, as outer space has been playing increasing military role, in the future it can become a new area of arms race and possible use of force.⁴⁰

The United States is presently working on a laser system based on the anti-missile and anti-satellite Airborne Laser (ABL) system. Modified Aegis anti-missile (anti-satellite) sea-based system using Standard Missile-3 is currently tested (it was used in 2008 in an experiment to destroy a retired US satellite). Besides, the development of reusable space manoeuvring vehicle is underway. This system is intended, inter alia, for anti-satellite missions.⁴¹

A Russian Ministry of Defence official presented a review of Russian anti-satellite systems that had been retired, yet could be re-fielded in future.⁴² Those include the IS-MU complex based on strategic ICBM at the Baikonur space centre; a system for destroying low-orbit space vehicles comprising a MiG-31 aircraft and an interceptor (Kontakt); technical groundwork on Naryad-VN and Naryad-VR space missile complexes based on SS-19 combat missiles; and currently developed airborne laser complex. The S-400 and S-500 surface-to-air missiles are provided with a capability to hit low-orbit space vehicles.⁴³ Recently a statement of a Defence Ministry official has leaked into the press that anti-satellite systems with codenames

⁴⁰ At the moment, about 1,420 space vehicles operate in terrestrial environment, of which 576 belong to the United States, 140 to Russia, 181 to the PRC, and 41 to India. Military satellites account for about 40% of the total amount of space vehicles orbiting the Earth. See: UCS Satellite Database, *Union of Concerned Scientists*, 11 Aug. 2016 <<http://www.ucsusa.org/nuclear-weapons/space-weapons/satellite-database#.WCHPuE2LSUk>>.

⁴¹ Dvorkin, V., *Space Weapons Programmes...*

⁴² 'Ministry of Defence: Russia is developing anti-satellite warfare', *RIA Novosti*, 5 Mar. 2009 (as quoted in: Khoroshikh, A., 'Space defence', *Astroforum*, 13 Dec. 2009 <<http://www.astronomy.ru/forum/index.php/topic,69231.msg1108417.html#msg1108417>> [in Russian]).

⁴³ Ibid.

Nudol and Rudolf are currently developed, however, no details have been disclosed.⁴⁴

China has tried to keep up with the leading powers in developing space weapons. This was vividly illustrated by an anti-satellite weapon test of 2007, when a medium-range missile hit Chinese meteorological satellite.

Space arms race, including deployment of weapons in outer space, is fraught with considerably destabilising strategic environment and increasing the threat of instant escalation of an armed conflict to a nuclear war. An attack against an early warning satellite would most likely be regarded by Russia and the United States as the beginning of a nuclear missile attack. Satellites of this class (Russian system of the Oko series and new vehicles of the Single Space System for detection and combat control⁴⁵ and the US satellites DSP and SBIRS) operate in geostationary or highly elliptical orbits. These satellites can also be in danger if longer-range anti-satellite weapons are deployed. Thus, the development of space weapons also poses a threat to strategic stability, although it is not mentioned in its classic formula of 1990.

As the topic of cyber-warfare is kept top-secret, it is hardly possible to make any specific conclusions on its influence on the possible use of nuclear weapons. It is most likely that being isolated, SNF command and control systems are almost invulnerable to cyber-attacks. At the same time, there are radio channels used for communication and control of space vehicles, and, more importantly

⁴⁴ According to available data, this missile is intended for non-nuclear (that is using conventional shrapnel) interception of a target (a warhead or a satellite) at altitudes of up to 750 km. See: Mardasov, A., 'A-235 Nudol: A killer of American ICBMs and satellites', *Svobodnaya pressa*, 30 May 2016 <<http://svpressa.ru/war21/article/174898/>> [in Russian]; Tuchkov, V., 'A-235 Nudol: a destroyer of American satellites', *Svobodnaya pressa*, 19 June 2017 <<http://svpressa.ru/war21/article/174898/>> [in Russian].

⁴⁵ Myasnikov, V., 'Single Space System will warn of a nuclear attack', *Nezavisimoye voyennoye obozreniye*, 17 Oct. 2014 <http://nvo.ng.ru/armament/2014-10-17/1_shojgu.html> [in Russian]; Gorina, T., 'Russia has lost its Oko. When a new space missile attack warning system will start working?', *Moskovsky komsomolets*, 11 Feb. 2015 <<http://www.mk.ru/politics/2015/02/11/rossiya-ostalas-bez-oka-kogda-zarabotaet-novaya-sistema-obnaruzheniya-raket.html>> [in Russian].

ballistic missile early warning satellites, all of which are much more vulnerable to this class of threats. Their deactivation or false alerts of a missile attack can become a cause of an accidental nuclear war, especially with countries maintaining their plans and hardware for a launch on warning using land-based ICBMs.

Multilateral stability?

In his statement at the National Research Nuclear University in January 2014, President Putin said: ‘... other nations aside from Russia have nuclear arms as well – and many of them – and they are not going to renounce this means of warfare. Such a step by the Russian Federation would be very strange in these conditions, and could lead to some fairly serious, grave consequences for our nation and our people.’⁴⁶ This idea has been repeatedly voiced at other fora.

US President Donald Trump, although in a less precise manner, echoed this opinion on the subject: ‘We are increasing arsenals of virtually every weapon... And, frankly, we have to do because others are doing it. If they stop, we will stop.’⁴⁷

Moscow has officially named expanding the nuclear disarmament format as a major condition for moving on to a next START treaty. According to the New START implementation data provided in February 2018, Russia has 1,440 warheads and the United States – 1,390 warheads on operationally deployed delivery vehicles.⁴⁸ The remaining seven states possessing nuclear weapons have the following arsenals: the United Kingdom – 215 warheads, France –

⁴⁶ Excerpts from transcript of meeting with National Research Nuclear University (MEPhI) students, 22 Jan. 2014 <<http://en.kremlin.ru/events/president/transcripts/20098>>.

⁴⁷ Morin, R., ‘Trump: US will cease building nuclear arsenal if other countries stop first’, *Politico.eu*, 12 Feb. 2018 <<https://www.politico.eu/article/trump-us-will-cease-building-nuclear-arsenal-if-other-countries-stop-first/>>.

⁴⁸ In reality the number of warheads is several hundred higher, because under the New START each of heavy bombers is counted as carrying only one warhead. Each side has about 60 bombers, each capable of carrying 12-16 long-range air-launched nuclear cruise missiles.

300 warheads, China – 280 warheads, India – 130-140 warheads, Pakistan – 140-150 warheads, Israel – 80 warheads, DPRK – 10-20 warheads.⁴⁹

Most of the third countries' nuclear weapons are tactical and are not covered by the New START, furthermore, a considerable share of these weapons is kept at storage facilities. Taking into account all the US and Russia's comparable weapons both on deployed strategic missiles and bombers, and stored as operational reserve for strategic and tactical nuclear weapon delivery vehicles,⁵⁰ the share of the third countries in the global nuclear arsenal has increased from 2-3% at the peak of the Cold War to 10-20% today. (As China provides no official information, and at the same time has enormous economic, scientific and technological capability, the assessments of its nuclear arsenal vary between 260 and 900 warheads.⁵¹) However, nuclear weapons of these seven countries so far have had no considerable influence on nuclear balance between Russia and the United States.

Besides, nuclear arsenals of each of the third states are tailored to its specific needs (to deter a nuclear or conventional attack, secure status and prestige, ensure a bargaining chip in negotiations, or consolidate power within the country). These nuclear arsenals often have no relation with the two superpowers' nuclear forces and with further US-Russian arms reductions. For instance, Pakistan's and India's concerns are in no way addressed by the reduction of the United States' and Russia's nuclear arsenals. Pakistan and India fear each other, and India is also concerned over China. Israel cares little about nuclear forces of any state except Pakistan. Russia's nuclear forces are not related in any way with India's and DPRK's nuclear capabilities.

⁴⁹ Kile, S.N., Kristensen, H.M., World nuclear forces. In *SIPRI Yearbook 2018: Armaments, Disarmament and International Security* (Oxford University Press: Oxford, 2018), p. 236.

⁵⁰ The approximate and varied nature of these assessments is due to the movements of batches of warheads between active and inactive reserves at storage facilities and dismantlement and disposal plants.

⁵¹ See: Esin, V., China's nuclear capability. In *Prospects of China's participation in nuclear arms limitations*, ed. by A. Arbatov, V. Dvorkin, S. Oznobishchev (IMEMO RAN: Moscow, 2012), pp. 27-35 [in Russian].

China's nuclear programme does not compete with that of France, the UK, Israel, Pakistan or DPRK.

Nevertheless, the third countries and terrorist organisations have already been significantly, albeit indirectly, destabilizing the US-Russian strategic relation. Russia perceives the United States' missile defence intended for protection against DPRK's and Iran's missiles as the major strategic threat that has compelled it to cease negotiations on strategic offensive arms and engage in a large-scale armament programme aimed against the US, to which the US will respond with its own weapon modernisation. To Moscow, the US' developing long-range high-precision conventional weapons (including hypersonic ones) to be used against hostile regimes and (by default) China, looks like a 'threat of air and space attack.' Russia responds to it by developing both its defence (Air Space Defence) and offensive arms, such as cruise missiles and nuclear and conventional hypersonic weapons. The 2018 US Nuclear Posture Review regards this as a new threat and provides for acceleration of the US military programmes in response. Concerned over third countries' medium-range nuclear missiles, Moscow started officially doubting the benefits of the INF Treaty.⁵² As a result, Russia and the United States have started accusing each other of violating the Treaty by possible covert deployment of intermediate-range land-based cruise missiles.

All these tendencies also undermine strategic stability, although they do not directly influence its principles agreed upon in 1990.

Stability renewed

Today, the world is facing a prospect of losing treaty-based control over nuclear weapons as soon as in the near future. The INF Treaty that can be denounced shortly has proven the weakest link in this context. The United States' and Russia's failure to engage in negotiations on a

⁵² Speech and the Following Discussion at the Munich Conference on Security Policy, 10 Feb. 2007 <<http://www.en.kremlin.ru/events/president/transcripts/24034>>; 'The INF Treaty cannot remain in force forever, Ivanov says', *RIA Novosti*, 21 June 2013 <http://ria.ru/defense_safety/20130621/945019919.html> [in Russian].

new strategic arms reduction treaty for seven years is another manifestation of this nuclear arms control crisis. After the New START expires in 2021, a vacuum will emerge in strategic arms control. The Comprehensive Nuclear Test-Ban Treaty (CTBT) has not been able to enter into force for twenty years through the fault of the United States. The 2015 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) was a fiasco. If the United States' withdrawal in May 2018 ruins the Joint Comprehensive Plan of Action on Iranian nuclear programme, the 2020 NPT Review Conference will have every possibility to fail. That will virtually mean the de-facto if not de-jure collapse of the NPT.

Although today's world is multipolar, in the nuclear weapon field the United States and Russia still play a leading role. Both powers must leave all their domestic and international policy differences aside and take urgent steps to remedy the situation.

As the first step, they should revitalize the INF Treaty. Instead of throwing accusations at each other, the two sides should jointly elaborate additional verification measures to alleviate mutual suspicions. Next, they should sign a follow-on START Treaty for the period after 2021. This should be linked with measures to strengthen transparency and predictability with regard to the development of their missile defences and agree upon criteria for the prohibition of weapons systems threatening strategical stability. In addition to counting bombers as carrying real number of air-launched cruise missiles (as was the case under the START I), it would be advisable to expand the scope of the next START treaty to apply to both nuclear and conventional strategic arms, including hypersonic weapon systems, intercontinental cruise missiles and underwater weapons. After that, step-by-step and selective transition to multilateral nuclear arms limitation and reduction could be possible.

It is also essential to update the agreed principles of strategic stability taking in consideration the developments of the last almost thirty years. First and foremost, the very definition of stability should be expanded to mean US-Russian strategic relations *removing not merely 'incentives for a nuclear first strike'* but *'incentives for any use of nuclear weapons.'* Conventional strike should be prevented through

general-purpose forces and hardware, or better through agreements like Treaty on Conventional Armed Forces in Europe (1990) and the Agreement on Adaptation of the CFE Treaty (1999). It would also be advisable to introduce other new elements:

- The parties should add to the provision on *‘reducing the concentration of warheads on strategic delivery vehicles’* and *‘giving priority to highly survivable systems’* mutual recognition that weapons threatening the survivability of strategic arms and their information and control systems are destabilizing and should be limited as a matter of priority.

- Weapons systems blurring the line between nuclear and conventional arms (dual-capable weapon systems) are destabilizing and should be subject to mutual limitations and confidence-building measures.

- Missile defences against the third countries and non-state actors should be included into mutually agreed *‘relationship between strategic offensive and defensive arms.’*

- Space weapons, most importantly special anti-satellite weapons, are destabilizing and should be subject to verifiable prohibitions.

- Cyber-warfare against strategic information and control systems of the two parties are destabilizing and should be subject to prohibition and confidence-building measures.

- The two parties should acknowledge that their nuclear doctrines and arms can pose threat of accidental nuclear war as a result of escalation of a crisis, despite their mutual desire to avoid this scenario, and this should become a topic of earnest and continuous dialogue between them.

- The two parties should recognize that each side’s military programmes affect the other one and can boost arms race, which should also entail regular exchange of opinions between the agencies concerned.

- Involving the third countries in nuclear arms limitations should be based on objective assessments of their forces and programmes and the sequence of such steps, their participants,

principles and methods used to verify their participation should be mutually agreed.

Every possible step should be made to address new threats to strategic stability and to preserve it as a cornerstone for stopping arms race and preventing nuclear war.

2. PROBLEMS OF MULTILATERAL NUCLEAR DETERRENCE

Vladimir DVORKIN

Increasing risk of nuclear weapons use

Not all rational people shared in the past or share today an axiomatic premise that the human civilisation could be saved from the inevitable catastrophe by mutual nuclear deterrence between the US and USSR/Russia. There are good reasons for this. For instance, George Lee Butler, a four-star US Air Force general and the commander of the US Strategic Command in 1992-1994, believes that nuclear deterrence which requires constant readiness for a massive nuclear strike leads to an unmitigated risk of a nuclear catastrophe. Deterrence, he said, was based on an endless tedious repetition of unwarranted assumptions, unprovable assertions and logical contradictions. He wrote: 'How is it that we subscribed to a strategy that required near perfect understanding of an enemy from whom we were deeply alienated and largely isolated? How could we pretend to understand the motivations and intentions of the Soviet leadership without any substantive personal association? Why did we imagine that a nation which had survived successive invasions and mind-numbing losses would accede to a strategy premised on fear of nuclear war? Deterrence in the Cold War setting was fatally flawed at the most fundamental level of human psychology... While we clung to the notion that nuclear war could be reliably deterred, Soviet leaders derived from their historical experience

the conviction that such a war might be thrust upon them and if so, must not be lost... Deterrence was a dialogue of the blind with the deaf.’¹

It should be noted that these are arguments of a sincere and convinced person who after the end of the Cold War directly supervised the main instrument of mutual nuclear deterrence between the United States and Russia.

He raised the same point in Moscow when after his resignation he visited the 4th Central Research Institute of the Russian Ministry of Defence. In the early period of the Cold War, top influential military leaders in the US and USSR were known to intent and demand to use nuclear weapons first in various conditions without waiting for an enemy attack. To a large extent, in the Soviet Union this was ‘22 June 1941 syndrome’, while in the US ‘7 December 1941 syndrome.’

Nevertheless, after experiencing decades of the Cold War without a global nuclear catastrophe, the notion of the decisive role of nuclear deterrence became quite popular. Skeptics were met with a ready answer paraphrasing the words of Winston Churchill – that was the worst way to prevent a catastrophe, except for all the others.

However, since then, there have been a lot of well-known changes. *The emergence of new nuclear states and changes in the leadership of the official nuclear weapons states who may not have fully inherited the nuclear philosophy of the Cold War* – a firm conviction that the nuclear weapons must never be used – *call for a re-examination of the issue.*

In this context, it makes sense to return to Lee Butler’s argument and ask a question of how well we can understand the psyche of modern leaders of the nuclear weapons states given their perception of historical experience, socioeconomic status, religious particularities, and the changing state of political relations.

If in relatively calm global and regional military and political conditions one can rely on the inertia of the positive record of nuclear deterrence, in situations of sharp aggravation the appropriate reaction

¹ Lee Butler, G., ‘A Voice of Reason’, *The Bulletin of the Atomic Scientists*, vol. 54, no. 3 (May/June 1998), p. 60.

of the modern nuclear weapons countries may not be guaranteed. This is true for the leaders of both P5 (USA, Russia, China, Great Britain, France) and Pakistan, India, Israel, and even more so the Democratic People's Republic of Korea (DPRK or North Korea).

Especially dangerous in critical situations is a very short time available for heads of state to make a decision about a nuclear strike. Moreover, given the increasing role of leaders in the decision-making process at expense of institutions – even in democracies, let alone authoritarian states. This is particularly the case for nuclear deterrence relations between the United States and Russia as only these two states are capable of delivering a counter-strike which allows only a few minutes to make a decision, but other nuclear countries can also adopt this dangerous concept of nuclear deterrence.

In the context of multilateral nuclear deterrence, it is more difficult to ensure the stability of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT). Repeated statements that Libya and Iraq would not have suffered what they did if these countries had had a minimum arsenal of nuclear weapons, as well as the debates in South Korea and Japan on the feasibility of having their own nuclear weapons rather than relying on the US extended deterrence, do not contribute to strengthening the NPT.

There is no point in speculating either on the decision-making process on the use of nuclear weapons in those countries that would withdraw from the NPT, nor on the increasing danger of weapon materials falling into the hands of terrorist organisations.

At the same time, even in the current situation the risk of terrorist organisations using various forms of nuclear attacks remains high. More than ten years ago, Graham Allison, former Deputy Secretary of Defense in the administration of Bill Clinton, said that he wondered why terrorists had not yet used nuclear weapons in big cities.

In his book *Nuclear Terrorism: The Ultimate Preventable Catastrophe*, Allison writes: 'Six months earlier [the attacks on the World Trade Center in New York and the Pentagon in Washington on September 11, 2001] the CIA's Counterterrorism Center had picked up chatter in Al Qaeda channels about an 'American Hiroshima'. The CIA knew that Osama bin Laden's fascination with nuclear weapons went

back at least to 1992, when he attempted to buy highly enriched uranium from South Africa... The CIA's special task force on Al Qaeda had noted the terrorist group's emphasis on thorough planning, intensive training, and repetition of successful tactics. The task also highlighted Al Qaeda's strong preference for symbolic targets and spectacular attacks.²

In a big city, the simplest nuclear charge made by terrorists could kill tens of thousands of people if the terrorists acquired, for example, weapon-grade uranium. No less dangerous are various types of a dirty bomb, or the destruction of a nuclear power plant or research reactor. While it is difficult to destroy a nuclear reactor – due to a high level of engineering protection – by crushing into it a hijacked airplane or unmanned vehicle, it is quite easy to hit an unprotected target on the territory of a nuclear power plant such as a storage building with fuel rods immersed in water tanks.

In his book, Allison mentions the 2002 *The New York Times* interview with General Eugene Habiger who in 1996-1998 served as Commander in Chief of the US Strategic Command. In the interview summarizing his ten-year experience of daily dealing with such threats, General Habiger made a categorical conclusion concerning the possibility of nuclear terrorism: 'It is not a matter of if; it is a matter of *when*.'³

The above crisis is aggravated by the volatility of the indefinite Intermediate-Range Nuclear Forces Treaty (INF Treaty) and for the time being no prospects of extension of the New Strategic Arms Reduction Treaty (New START) for five more years after 2021 or conclusion of a follow-on treaty.

The Russian leadership consider the following issues to present obstacles for further negotiations: the absence of multilateral treaty relations with all nuclear states on reducing their nuclear arsenals, destabilizing influence of global and European missile defence, disarming potential of strategic non-nuclear precision weapons including the Prompt Global Strike, absence of a ban on space-

² Allison, G., *Nuclear Terrorism: The Ultimate Preventable Catastrophe* (New York, 2004), p. 3.

³ Op. cit., p. 6.

ground-, air- and sea-based weapon systems to destroy targets in and from the outer space, nuclear weapons of third countries.

In February 2012, Vladimir Putin, then the Russian prime-minister, said: ‘As for further steps with regard to nuclear weapons, further steps should be comprehensive and all nuclear powers should participate in this process. We cannot indefinitely disarm while some other nuclear powers arm themselves.’⁴

In January 2016, Washington put forward a proposal on further reduction of strategic offensive arms which could be prompted, among others, by the appeal of internationally renowned politicians and scientists adopted at the joint conference of the International Luxembourg Forum on Preventing Nuclear Catastrophe and the Nuclear Threat Reduction Initiative in Washington in early December 2015.

Washington suggested that the United States and Russia should reduce their strategic offensive arms of by one-third below the New START levels. In response Moscow stated that after the terms of the New START were met, the possibilities for bilateral nuclear weapons reductions would be exhausted. Therefore, the Russian leadership deemed it necessary that the rest of nuclear weapon countries were involved in the disarmament process.

The long-standing position of official representatives and experts of third nuclear states is based on the fact that multilateral agreements on nuclear weapons will be possible only when the levels of these weapons in the US and Russia become comparable – as a result of further reductions – to those of other nuclear states. These levels, clearly, should account for the actual number of US and Russian warheads on heavy bombers as well as their non-strategic nuclear weapons.

Such conditions are unlikely to be achieved in the foreseeable future. Even if the US and Russia overcome existing obstacles and disagreements and start negotiations on further nuclear weapons cuts, one cannot expect more than the reduction of their strategic offensive

⁴ ‘Russia will not disarm unilaterally, said Putin’, *RIA Novosti*, 24 Feb. 2012 <https://ria.ru/defense_safety/20120224/574042339.html> [in Russian].

weapons to approximately 1,000 warheads each. At the same time, considerable uncertainty remains regarding the prospects for limiting and verifying the non-strategic nuclear weapons of the two states. It is pertinent to note that even if there is a theoretical possibility of levelling up the number of nuclear arms of the US, Russia and other nuclear states, multilateral nuclear arms control agreements will face insurmountable difficulties in achieving verifiable limitations on the whole set of non-strategic and strategic weapons, since all the historic experience in strategic arms control is completely useless for non-strategic nuclear weapons.

With the exception of the INF Treaty, the US and USSR/Russia have always been negotiating strategic arms reductions and have never embarked on talks to limit non-strategic nuclear weapons because of extremely difficult verification of such weapons. This is due to the fact that carriers of non-strategic nuclear weapons have a dual use capability, various designs, and a large number of deployment areas.

At the same time, all other nuclear states (except Great Britain) have both strategic and non-strategic nuclear weapons, so it is almost impossible to agree and implement a system of mutual control. Anyone with a knowledge of the system of inspections that operates within the New START can confirm the impossibility of coordinating such multilateral control.

However, a step-by-step progress towards consultations on measures for limitation and transparency of nuclear weapons initially with the United Kingdom and France and subsequently involving China seems feasible.

These considerations demonstrate that the prospects of manageable multilateral negotiations on the reduction of nuclear weapons are illusory.

Thus, under the current conditions of mutual and multilateral nuclear deterrence which leaves no room for common strong principles on the role and forms of nuclear deterrence in all nuclear states, the likelihood of intentional or accidental use of nuclear weapons increases as do the opportunities for international terrorist organisations to carry out nuclear attacks of various kinds. All this makes it imperative to

devise more effective measures to ensure strategic and regional stability and counter threats to nuclear attacks with disastrous consequences.

Approaches to reduce nuclear threat

Despite the significant changes in the world's nuclear landscape after the end of the Cold War, as briefly noted above, there are ample grounds to assert that it is still largely determined by the relations between the United States and Russia. For example, the 2010 NPT Review Conference was allegedly fairly successful primarily because of the signing of the New START Treaty by the US and Russian presidents earlier in Prague. Whereas the 2015 NPT Review Conference failed to produce any meaningful results (despite the terms of the New START Treaty were being successfully met) amidst a crisis and stagnation unprecedented for almost half a century (since the late 1960s) of practical negotiations on the limitation of strategic weapons. And the longer the crisis continues, the more often high-ranking officials of the US and Russia, as well as of other countries, use nuclear language in public statements.

At the same time, strategic stability in its original sense is primarily ensured within the framework of strategic nuclear weapons treaties between the United States and Russia. The treaties facilitate maintaining a stable nuclear balance between the parties at reasonable budgetary costs and access to detailed information on the status and short-term plans of modernisation of the composition and key properties of strategic offensive arms through dozens of annual on-site inspections and exchange of numerous verifiable notifications of the status and movements of weapons, commission of new types of weapons and removal of obsolete ones, and of telemetry data from missile launches. For instance, each year under the New START the parties exchange detailed notifications and 18 inspections with detailed examination and verification of silo and mobile launchers, missile submarines, and heavy bombers.

Historical record shows that the absence of such exchange naturally and inevitably leads to misperception of the opponent's

strength and capabilities and, as a result, to quantitative and qualitative build-up of the party's own arsenal at a significant additional cost. In system theory, it refers to positive feedback which tends to cause system instability. In other words, the nuclear arms race.

In the absence of data exchange under a treaty regime, some information can be obtained using national space reconnaissance instruments but this information is utterly insufficient. For example, it is impossible to determine the actual number of warheads for which ICBMs and SLBMs have been designed and tested. According to the New START, an SLBM Trident-2 is equipped with four warheads but can carry eight higher yield warheads or twelve low yield ones. If all ICBMs Minuteman-3 is equipped with three – the maximum capacity – warheads each, it will more than double the US nuclear potential. Some measures in this direction can also be taken in the strategic nuclear forces of Russia.

All this points to the urgent need for immediate consultations and negotiations between the United States and Russia first and foremost on the extension of the New START and conclusion of the follow-up agreement and to resolve the differences over the INF Treaty.

In the interests of the United States and Russia, it would be advisable to reduce their strategic offensive arms down to 1,000-1,200 warheads and 500-550 deployed delivery vehicles on each side, which will help to maintain a stable strategic balance with significant cost savings compared with the expenditures required to maintain the levels of the New START. It is even more beneficial for Russia as the next treaty – similarly to the previous START I and the current New START – would essentially reduce only the US nuclear forces while allowing Russia to cut the costs of maintaining its arsenal as well as of developing and modernising new missiles.

To reduce the risk of inadvertent use of nuclear weapons, it is necessary to increase the time available to leaders to make decision on missile launches and to abandon the plans of launching missiles based on information from space- and ground-based early warning systems. This has been repeatedly recommended by reputable scientists and statesmen.

The decision to launch on warning in order to save the country's nuclear missiles before they get destroyed is taken on the basis of information from the national early warning systems in the US and Russia. Time for such a decision is measured in minutes. Therefore, the launch on warning posture is extremely risky since any provocation, error or failure can cause a global catastrophe.

The Pentagon's leadership periodically states that the role of launch on warning in the US nuclear policy is minimal and that it considers retaliatory strike the main deterrent which allows enough time to analyze the situation before making an informed decision. This makes it possible to exclude errors in data analysis. While the probability of such errors in the US and Russian information systems and computer networks after decades of operation has been reduced to a minimum level but not negligible. Hence, in theory, one cannot completely rule out the possibility of a mistake with catastrophic consequences.

Neither the USSR, nor Russia has referred to its reliance on retaliatory strike. However, both in the past and today the countries have deployed many of the ground nuclear forces in mobile version and increased the survivability of missile submarines which indicates that they have been creating conditions for a secure retaliatory strike.

One should understand that the Russian space-based BMD echelon up until now could only detect the launch point of missiles and approximate scale of the nuclear attack, but could not provide any information on the exact targets. This information can be provided by the second BMD echelon consisting of radar stations located along the perimeter of the country. Recently, the Russian ground-based echelon has been enhanced with new pre-engineered radars such as *Voronezh*. Some of these radars which operate quite steadily have already begun full combat duty, while others are on trial combat duty. The decision on a possible missile launch is based solely on the data from these radars as they can determine the real scale of the attack and the target of the incoming missiles by calculating the trajectory of the warheads. According to the available information, the Unified Space System being developed in Russia will be able to address some challenges of preliminary calculation of the attacking missiles' trajectories but

nevertheless will the key data will have to come from ground-based radars.

It is on the basis of this data that the state leadership can take a decision – depending on the scale of the missile attack – on the response including immediate launch on warning i.e. before the nuclear warheads explode in the attacked territory.

In general, no sensible head of state is expected to order an immediate launch on warning upon receiving information about a single- or group-missile attack. However, as noted above, both the United States and Russia retain the concept of such a launch in response to a massive nuclear attack, along with the respective planning. Thus, no matter how small, the risk of an erroneous decisions still remains.

It is important to emphasize that the risk generated by a decision to respond with a launch on warning based on data from early warning systems is particularly great in a time of crisis and aggravation of military and political situation that is currently taking place. It is rather difficult to predict how long this situation will continue.

In addition, it is possible to count on the leadership's sanity – when it comes to taking a decision to launch on warning – in a peaceful environment, for example, when conducting strategic exercises. But when such decisions have to be taken within minutes in a stressful situation at the height of the politico-military aggravation and militarism, one can only partially count on a rational response.

Therefore, it would be expedient for the presidents of the United States and Russia to simultaneously take concerted decisions to abandon the concept of launch on warning based on information from early warning systems, and not to conduct strategic nuclear forces exercises on launching such strikes.

Such decisions will not affect the nuclear deterrence potential of the parties, since both the United States and Russia have elements in their nuclear triads that are highly survivable and capable of delivering a guaranteed retaliatory strike.

At this stage, such decisions cannot be verified but this would not reduce their importance as a means of maintaining strategic stability and, possibly, of sending positive signals in preparation of the

NPT Review Conference. Equally important would be non-verifiable decisions not to target combat duty missiles if the parties have no doubt in their implementation.

Later on, as the relations between the United States and Russia recover, Washington and Moscow will be able to move to a phased coordinated demonstration of institutional and technical measures to ensure reliable verification of the decisions taken within the framework of the New START on strategic offensive arms. These measures will be based on detailed methods of phasing down the readiness of strategic nuclear forces which allows more time for decision-making.⁵

* * *

Thus, in the current military and political situation in which the principles of mutual nuclear deterrence between the United States and Russia – let alone nuclear deterrence among states at the regional level – cannot be considered sufficiently stable, in order to reduce the risk of using nuclear weapons it is necessary:

1. To promptly commence practical consultations and negotiations between the United States and Russia on preserving treaty-based relations in the sphere of strategic offensive arms, ensure the viability of the indefinite INF Treaty, and resume the joint efforts of nuclear scientists from both countries to eliminate excess nuclear weapons materials.

2. Recognizing the increased risks of the use of nuclear weapons in conditions of constant aggravation of military and political situation, to take concrete political and military steps to normalize relations between states particularly at the regional level – in the Asia-Pacific and Middle East where the parties should save the Joint Comprehensive Plan of Action (JCPOA)⁶ on the Iranian nuclear problem, despite the

⁵ Cartwright, J.E., Dvorkin, V., ‘How to Avert a Nuclear War’, *The New York Times*, 19 Apr. 2015.

⁶ The JCPOA is an agreement aimed to settle the problem of Iran’s nuclear weapons program. This 159-page document was concluded on 14 July 2015 by Iran and P5+1 – five permanent members of the UN Security Council and Germany.

decision of the US president Donald Trump to withdraw from the JCPOA.

3. To significantly reduce the scope of military exercises in the border areas in Europe and on the Korean peninsula, and admit that the recurrent demonstration of real and potential technological military achievements contributes to expanding militarization of public opinion which, in turn, influences the state policy.

3. 2018 US NUCLEAR POSTURE REVIEW: NEW ACCENTS IN THE DETERRENCE DOCTRINE

Natalia BUBNOVA

In February 2018, the Donald Trump administration released the new Nuclear Posture Review (NPR) also known as the US nuclear doctrine. A month earlier – even before it was approved by the White House – an intermediate version of the document leaked to the press. The leaked version had several significant differences compared to the final one – which perhaps reflected the divergences in perceptions between the Pentagon and the White House.

The NPR is put together by the Defence Department and is submitted on behalf of the president to the Congress. It is one of the three basic strategic documents of the American administration. The other two, the National Security Strategy (NSS) and the National Defence Strategy (NDS), were adopted in December 2017 and January 2018, accordingly. These three documents set the foundation for the US military and political strategy. They analyse the current situation and the international development prospects, explain the US leadership's view on the key threats facing the United States, stipulate the role of the nuclear weapons, and set priorities for weapons development programmes. The NPR provides guidelines for the Defence Department and the Energy Department in establishing the requirements for the

nuclear weapons, their numbers, and the nuclear forces development and modernisation trends, as well as in defining the targeting options¹.

This NPR is the fourth such document released after the end of the Cold War. The previous one was issued in 2010 under Barack Obama. The new nuclear doctrine, as stipulated in its preface signed by Defence Secretary James Mattis, comes at a critical moment in the US history, ‘for America confronts an international security situation that is more complex and demanding than any since the end of the Cold War’²: in the conditions of drastic deterioration of relations with Russia, increased competition from China, tensions around North Korean nuclear problem, simmering conflict in Ukraine and continued war in Syria – where the United States and Russia increasingly find themselves on the opposing sides of military conflict – as well as the exacerbated danger of cyberattacks and recurring terrorist acts in various countries.

Course on strengthening the role of nuclear weapons

Throughout the entire period after the end of the Cold War, the US leadership considered primarily its conventional weapons – where US supposedly retains superiority – as its key military policy instrument. Whereas nowadays, one witnesses a renewed focus on the nuclear weapons.

While in the previous NPR, the chapter dedicated to the nuclear weapons was titled ‘Reducing the Role of US Nuclear Weapons,’ the newly published document has an entirely different title for this chapter: ‘The Value of US Nuclear Capabilities.’ In the former version of the nuclear doctrine, this part of the document came third after the one dedicated to preventing nuclear proliferation and nuclear terrorism

¹ Perkovich, G., Nuclear weapons and national security – a new strategy, Carnegie Endowment for International Peace, 7 Apr. 2010 <<https://carnegieendowment.org/2010/04/07/nuclear-weapons-and-national-security-new-strategy-pub-40526>>.

² Nuclear Posture Review 2018, Office of the Secretary of Defense, Department of Defense, Feb. 2018, p. III <<https://media.defense.gov/2018/Feb/02/2001872886/-1/-1/1/2018-NUCLEAR-POSTURE->>.

– which were then considered a more immediate task than maintaining the American nuclear potential. While currently, the section on the importance of nuclear weapons runs second – immediately after the analysis of the international situation.

As noted in the NPR, the US nuclear weapons stockpile has drawn down by more than 85% from its Cold War high, and the United States has deployed no new nuclear capabilities for over two decades. At the same time, the NPR emphasises that Russia and China have been actively pursuing their nuclear programmes.³

The United States plans to spend 1.2 trillion dollars on nuclear weapons throughout the 30-year period which started in 2017.⁴ It is important to additionally mention that the Trump administration managed to get rid of the limitations imposed several years ago by Congress on the increase of military expenditures when running a budget deficit (Budget Control Act of 2011). The NPR states that in addition to approximately 3% of the defence budget previously spent for maintenance of the existing nuclear forces, there will be a supplementary funding of another 3 to 4%, for over more than a decade, to replace the aging systems (which will in total amount to 6.4% of the annual defence budget).

Despite the evident intensification of the military build-up in the United States, one should not, however, overestimate the scale of the American nuclear programmes. Even with the \$716 billion approved for the 2019 military budget, in fixed prices it will not significantly exceed the one for 2011 (after which it went down for a number of years), and even the highest of these projections place the peak of the future cost at less than 1% of the overall federal budget. To compare, when in 1983 Ronald Reagan administration took the decision to

³ It is noteworthy that the NPR generally names the two countries, Russia and China, in precisely this order, whereas the NSC and the NDS list China first and then Russia – which probably reflects the fact that in the nuclear sphere Russia is still perceived as the most potent rival to the United States.

⁴ Approaches for managing the costs of US nuclear forces, 2017 to 2046, Congressional Budget Office, 31 Oct. 2017, p. 5 <<https://www.cbo.gov/system/files/115th-congress-2017-2018/reports/53211-nuclearforces.pdf>>.

modernise the American nuclear capabilities, this required almost 3.7% of the federal budget.

Gary Samore, who was Barack Obama's top nuclear adviser, observed that the new NPR repeats the 'essential elements of Obama declaratory policy word for word'⁵ – including the declaration that the United States would 'only consider the use of nuclear weapons in extreme circumstances to defend the vital interests of the United States or its allies and partners.'⁶

It seems hard, however, to agree with the statement that the document introduces little new compared to Barack Obama's course. Thus, NPR's above-mentioned key pronouncement is followed by a lengthy explanation of what is meant under the 'extreme circumstances,' which, according to the text, 'could include significant non-nuclear strategic attacks.' This detailisation was absent from the previous edition of the nuclear doctrine. The NPR goes on to explain further that 'significant non-nuclear strategic attacks include, but are not limited to, attacks on the US, allied, or partner civilian population or infrastructure, and attacks on US or allied nuclear forces, their command and control, or warning and attack assessment capabilities,'⁷ including the acts of nuclear terrorism. Since it does not establish which attacks against civilians could justify the use of nuclear weapons and what an 'attack against command and control' means – it blurs the conditions under which a nuclear strike could be initiated.

While the NSS issued in 2010 stated that the sole purpose of the nuclear weapons was deterrence, and the NPR of the same year renounced the nuclear weapons as the main instrument of deterrence, the new nuclear doctrine contains no such clauses. To the contrary, in the introduction to the document, and then repeatedly throughout the text, it is claimed that the nuclear weapons should allow to achieve victory in a war 'if deterrence fails.'

The NPR states that the United States extends deterrence to over 30 countries. The document underscores Washington's

⁵ Sanger, D.E., Broadjan, W.J., 'Pentagon suggests countering devastating cyberattacks with nuclear arms', *The New York Times*, 16 Jan. 2018.

⁶ Ibidem.

⁷ Nuclear Posture Review..., p. 21.

commitment to the North Atlantic Treaty Organisation and confirms the American nuclear guarantees to the NATO allies and partners (the so-called ‘nuclear umbrella’). It also specifies that, similar to deterrence policy, there is no ‘one size fits all’ strategy for assurance and that the assurance strategies will be tailored to the differing requirements of each region, various security environments, as well as the particular views about the threats among respective partner countries.

Similar to the NSS of 2010 which extended ‘a negative security assurance not to use or threaten to use nuclear weapons against those non-nuclear nations that are in compliance with the NPT and their nuclear non-proliferation obligations,’⁸ the new US nuclear doctrine also stipulates this self-limitation. Yet the NPT underscores that the United States never officially adopted a ‘no first use’ policy and in current conditions still does not intend to do this, so as ‘to retain some ambiguity regarding the precise circumstances that might lead to a US nuclear response.’⁹ Yet it is worth noting in this regard that the allegations of certain Russian political scientists that the United States is supposedly interested in war and is seriously preparing for one¹⁰ do not stand criticism because they run counter to the US nuclear doctrine and other basic strategic documents. To the contrary, with the time, the American perception of ‘acceptable damage’ has dramatically narrowed, and at present, even one nuclear warhead hitting a US city is considered unacceptable. To quote the words of US Army Chief of Staff, General Mark A. Milley, used as an epigraph to one of the NPR’s chapters, ‘What we want to do is to deter. Nobody wants to have a war.’¹¹

⁸ National Security Strategy 2010, NSS Archive, May 2010, p. 23 <<http://nssarchive.us/NSSR/2010.pdf>>.

⁹ Nuclear Posture Review..., p. 22.

¹⁰ Dmitry Evstafiev in ‘Evening with Vladimir Soloviev’, *Rossyia-1*, 21 Feb. 2018 [in Russian].

¹¹ Nuclear Posture Review..., p. 51.

Modernisation of the strategic triad

The NPR confirms the plans to modernise all three legs of the strategic triad and the non-strategic nuclear forces which were set under Barack Obama who, during the time of his presidency, gradually moved away from his earlier outright negative attitude towards nuclear weapons. On his part, Donald Trump, a wholehearted proponent of American strength and might, throughout his presidential campaign never shied away from advocating the need to strengthen the US nuclear capabilities. In this, his approach was akin to the interests of the Pentagon where the Nuclear Posture Review was developed.

The NPR blames the previous administration for failing to conduct a timely modernisation of the US nuclear arsenal because of the latter's mistaken belief that the world was moving towards greater understanding among great powers. The NPR underscores time and again that it is precisely the Russia's 'destabilising' accelerated activities that force Washington to implement new weapons programmes so as not to allow to 'reduce the survivability and flexibility of US nuclear capabilities and challenge our ability to maintain rough parity with Russian strategic deployments, even at the reduced levels set by New START.'¹²

While some analysts claim that Donald Trump's wish, as manifested by the NPR, is to increase American nuclear warheads tenfold, other experts find that the new NPR, in their opinion, demonstrates 'restraint.' The NPR itself juxtaposes 'the dramatic deterioration of the strategic environment' to 'only modest supplements'¹³ which it outlays to enhance the flexibility and responsiveness of the US nuclear force. Senior fellow of the Foreign Policy Research Institute and professor at Yale University Paul Bracken writes that the NPR just 'ensures we stay in the game, so Russia and China do not get any one-sided advantages, military or

¹² Nuclear Posture Review..., p. 50.

¹³ Nuclear Posture Review..., p. 52.

political, from their investment.’¹⁴ Simultaneously, in his view, ‘not mentioning technological improvements signals that the United States does not seek an arms race – even in a competition it is likely to win’.¹⁵

Yet in reality the NPR does indeed include a whole list of specific weapons programmes. Both the ones that were announced under the previous administration (strategic submarines – SSBNs, ICBMs, and heavy bombers), as well as others that come as a novelty. The latter include low-yield nuclear warheads for submarine-launched ballistic missiles (SLBMs) and sea-launched nuclear cruise missiles (SLCMs). Although, fair enough, the NPR does not announce any ‘breakthrough’ technologies, does not foresee a quantitative increase in strategic carriers, and the prospective strategic triad systems are intended to replace the outdated ones still on duty. In particular, the currently deployed Ohio SSBNs have served eight years longer than originally planned; the Minuteman missiles have outlived their life cycle by a record 40 years; and the B-52H bombers’ service has been extended several times (they have flown 25 years beyond their expected service life).

The NPR envisages the replacement of 14 Ohio-class SSBNs by 12 Columbia-class SSBNs¹⁶. The document coins the sea leg of the strategic triad the most ‘survivable’ and ‘virtually undetectable.’¹⁷ The SLBMs carried by submarines, as noted in the NPR, possess intercontinental range which ‘allows them to hold targets at risk throughout Eurasia from their launch areas in the Atlantic and Pacific oceans.’¹⁸ As indicated, they can also, ‘if necessary,’ promptly upload additional warheads.

Within the framework of the Ground-Based Strategic Deterrent (GBSD) programme, the 400 single-warhead Minuteman-3 ICBMs will

¹⁴ Bracken, P., The 2018 Nuclear Posture Review: signaling restraint with stipulations, *FPRI*, 1 Feb. 2018 <<https://www.fpri.org/article/2018/02/2018-nuclear-posture-review-signaling-restraint-stipulations/>>.

¹⁵ *Ibidem*.

¹⁶ Nuclear Posture Review..., p. X.

¹⁷ Nuclear Posture Review..., p. 45.

¹⁸ Nuclear Posture Review..., p. X.

be replaced starting from 2029. To field these 400 new ICBMs, the GBSDB programme will also modernise 450 ICBM launch facilities.

The existing state of constant readiness of the US ICBMs will not change. It was George W. Bush who in 2000 first intended to reduce it. Followed then by Barack Obama who during his first presidential campaign called keeping nuclear weapons ready to launch on a moment's notice 'a dangerous relic of the Cold War.'¹⁹ Meanwhile, the NPR calls it a mistake to say that the ICBMs are currently on a 'hair-trigger alert.' It refers to the bi-partisan 2009 Perry–Schlesinger Commission report which stated that the 'hair trigger alert ...is simply an erroneous characterisation of the issue.'²⁰ That bi-partisan Commission, tasked with strategic positioning, came to a conclusion that the alert postures of both the United States and the Russian Federation were 'in fact highly stable' and 'subject to multiple layers of control, ensuring clear civilian and indeed presidential decision-making.'²¹ Many experts are convinced, however, that the current state of readiness of the ICBMs creates the danger of a launch upon an erroneous signal of attack, and that these risks are becoming ever more real with the growing possibility of unexpected incidents due to the exacerbated tensions and the increased proximity of the military deployments on both sides.

In order to ensure the implementation of the GBSDB programme by 2030, the completion of the programme to replace nuclear warheads W78 on Minuteman-3 missiles has been moved to an earlier date in 2019. The NPR also indicates that part of the ICBMs may be equipped with additional warheads if the conditions so require. The NPR goes on to explain that the future ballistic missile warhead requirements will be explored 'based on the threats and vulnerabilities of potential adversaries.'²²

The US strategic aircraft, currently comprising 46 B-52H bombers equipped with cruise missiles and 20 B-2A 'stealth' bombers

¹⁹ 2008 Presidential Q&A: President-elect Barack Obama, *Arms Control Today*, 1 Dec. 2008 <<https://www.armscontrol.org/2008election>>.

²⁰ Nuclear Posture Review..., p. 16.

²¹ Ibidem.

²² Nuclear Posture Review..., p. XV.

with gravitation bombs, will be reinforced by developing and deploying new generation bombers B-21 Raider, which from the beginning of the next decade will first supplement and then completely replace the currently deployed B-1, B-2 and B-52s. From 2020, the US Air Force will also start receiving new self-guided aviation bombs. At the moment, the B-2A 'stealth' bombers are the only system in the US Air Force that possess the capability to penetrate modern anti-aircraft defences.

In addition to those, AGM-86 cruise missiles (on board B-52 bombers, since 1982) allow to conduct an attack from outside the zone protected by anti-aircraft defences. Although they have already exceeded their initial term by 25 years, they will also remain on duty for the time being due to life-extension programmes, until new generation Long Range Standoff (LRSO) cruise missiles come to replace them, possessing increased capability to penetrate the modern anti-aircraft defences and a high accuracy. With regard to strategic aircraft, similarly to ICBMs and SLBMs, the NPR also underscores their ability, if need be, to be fitted with an additional number of nuclear bombs and cruise missiles.

The NPR emphasises the need to explore the options to store the dismantled warheads and weapons systems components (upload potential), as well as the importance of retaining a significant non-deployed inventory of weapons 'needed to address changes in the threat environment.'²³ In this respect, it is worthwhile remembering the doubts expressed by a whole number of Russian experts as to whether the United States duly observes the INF and START I and the New START treaties: when it keeps in storage, yet fails to destroy, the dismantled delivery systems and warheads. The new US nuclear doctrine implies the extension of dubious practices to other potential 'grey areas' as well, such as ensuring the possibility of a prompt deployment of additional nuclear delivery systems, 'alternative basing modes,' etc.

The ballistic missile defence (BMD) – which, along with the high-precision non-nuclear Prompt Global Strike (PGS) systems,

²³ Nuclear Posture Review..., p. 39.

constitutes an issue of special concern for the Russian side – is mentioned only a couple of times and in most general terms (the PGS weapons are not mentioned at all). In the majority of cases, the US BMD is cited with a reference to its ‘regional contingency role.’ In addition, BMD is mentioned three times either as a system possessed by certain unidentified ‘adversaries,’ or with regard to Russia and China, once for each (in both cases, in the context of ‘exceeding efforts’ of these countries to build up their respective missile defence systems). The need for US anti-missile systems is also justified by ‘Iran’s development of increasingly accurate and sophisticated ballistic missiles’ which Washington intends to preclude by a combination of defensive and offensive systems.²⁴

Low-yield nuclear warheads

The NPR’s announcement of the low-yield nuclear warheads for SLBMs has been of special concern for its critics. The NPR alleges that since Russia possesses tactical advantage due to its wider variety of nuclear weapons and especially its ‘limited nuclear strike’ capability, Moscow may decide in case of a military conflict to play out the ‘limited nuclear escalation’ scenario (so-called ‘escalation for de-escalation’): i.e. to venture out for an early use of nuclear weapons to end the conflict on Russian terms. The NPR suggests that arming US SLBMs with low-yield nuclear warheads would help prevent this course of action. Though the NPR refers to Moscow’s alleged adherence to the ‘escalation for de-escalation’ in multiple places, this concept was mentioned in Russia’s Ministry of Defence publication only once – back in 2003 and was never cited afterwards either in the two consequent editions of the Russian Military Doctrine or in any other official materials or statements.

²⁴ It is not specified, however, whether only the US non-nuclear offensive systems are implied. It is thus worth noting in this respect that previously representatives of the US military establishment were much clearer on the notion that the American nuclear offensive weapons cannot be a factor in the Iranian equation. See: Perkovich, G., ‘Nuclear weapons and national security...’.

The NPR envisages that as a first step the low-yield nuclear warheads will be created as ‘a comparatively low-cost and near-term modification to an existing capability’²⁵ on a small number of SLBMs, followed by entirely new low-yield warheads developed for SLBMs. Although it is not exactly clear from the NPR’s text whether the low-yield nuclear warheads will be developed for SLBMs alone or for SLCMs as well, some experts have interpreted its meaning as to imply both. The NPR asserts, however, that the modified warheads and the newly created ones will not increase the number of deployed US ballistic missile warheads, as the low-yield weapons will be replacing higher-yield weapons currently deployed.

The NPR underscores that the low-yield nuclear warheads do not enable ‘nuclear war-fighting,’ nor are they intended to enable it.²⁶ Yet many of its critics point to the danger presented by this programme which makes nuclear war ‘more acceptable.’ This was the theme of the entire special issue of *The Bulletin of Atomic Scientists*. Of this view are also the president of the Ploughshares Fund Joseph Cirincione, Hampshire College professor Michael T. Klare, and co-director of the Global Security Programme of the Union of Concerned Scientists Lisbeth Gronlund. In her statement, published on the Union’s web-site, Gronlund contends that the US new nuclear doctrine ‘intentionally lowers the threshold for the use of nuclear weapons by calling for the development of several new types of more ‘usable’ nuclear weapons, including one that could be deployed on submarines in the near future.’²⁷

Some experts also express doubt about the military relevance and effectiveness of such systems. Senior political scientist of the RAND Corporation Austin Long writes, for instance, that the so-called ‘identification problem’ makes it impossible to distinguish between the launch of an SLBM with a low-yield warhead and a massive nuclear

²⁵ Nuclear Posture Review..., p. XII.

²⁶ Nuclear Posture Review..., p. 54.

²⁷ Leaked Nuclear Posture Review lays out policy changes that would increase risk of nuclear war, Statement by Lisbeth Gronlund, *Union of Concerned Scientists*, 12 Jan. 2018 <<https://www.ucsusa.org/press/2018/leaked-nuclear-posture-review-lays-out-policy-changes-would-increase-risk-nuclear-war>>.

strike with several warheads. Not to mention the fact that the launch of even one single SLBM with a small charge compromises the location of the submarine which fired it²⁸ and thus induces further escalation in order to launch missiles before the submarine itself faces a counterattack.

On the whole, although the low-yield nuclear warhead programme for SLBMs is a genuinely novel element at this stage of American military policy, such an initiative is hardly without precedent. As the NPR itself mentions, ‘for decades the United States has deployed low-yield nuclear options to strengthen deterrence and assurance.’²⁹ And indeed, ever since the nuclear weapons were invented, the world has been consistently witnessing efforts to develop systems intended to make them more practically usable for specific military purposes. Suffice it to recall the Cold War period with its concepts of ‘limited nuclear war,’ ‘acceptable damage,’ Schlesinger Doctrine of ‘selective targeting’ which in mid-1970s officially attempted to rehabilitate the nuclear weapons as a means of warfare, as well as such systems as low-yield nuclear projectiles for Davy Crockett artillery guns in the 1950s, portable nuclear charges for infantry and low-yield Falcon missiles for fighters in the 1960s, the warhead miniaturisation programmes of the 1970s, the neutron bombs in the 1980s, etc. Yet similar to those weapons, the new systems provoking the illusion of a higher ‘acceptability’ of nuclear weapons create a danger of unleashing an actual nuclear war.

Forward basing and non-strategic nuclear weapons

The NPR mentions forward basing in the context of both the European and Asia-Pacific regions. The document recalls that the United States at one time possessed quite a number of non-strategic nuclear assets, yet

²⁸ Long, A., ‘Location, location, location: evaluating risks to submarines from low-yield warhead and submarine missile launch detection’, *Lawfare*, 11 Mar. 2018 <<https://lawfareblog.com/location-location-location-evaluating-risks-submarines-low-yield-warhead-and-submarine-missile#>>.

²⁹ Nuclear Posture Review..., p. 54.

later took off duty all tactical and theatre nuclear weapons except for the gravitation bombs.

The US non-strategic nuclear weapons, currently counting several hundred B-61 bombs on F-15E and dual capable aircraft (DCA), will be reinforced by placing nuclear weapons on multi-purpose F-35s. While the development of ‘stealth’ F-35 proved to be the most expensive programme in the entire history of the US armed forces – and the final decision on these multi-purpose aircraft was not taken until the very end of the Obama administration, – the NPR’s executive summary which precedes the main text, mentions these aircraft three times and explicitly confirms the commitment to ‘upgrading the DCA with the nuclear-capable F-35 aircraft.’³⁰ Along these lines, the NPR stresses the role of these multi-purpose fighters in providing security in Europe and Washington’s readiness to strengthen cooperation with NATO allies. (F-35 will be simultaneously replacing nuclear- as well as conventionally-armed aircraft.)

Additionally, the NPR envisages a ‘rapid development’ of nuclear cruise missiles on submarines. While the 2010 NPR declared the retirement of the previously deployed nuclear-armed SLCMs, the new nuclear doctrine has announced the decision to restore this capability by doing an analysis of alternatives for their prompt creation, or rather re-creation. It emphasises, meanwhile, that they are a US response to Moscow’s ‘continuing violation’ of the INF Treaty. This allegation is repeatedly cited in the document, and there is even a special part dedicated to such accusations, which was added by the White House to the initial document put together by the Pentagon. At the same time, the NPR claims that the programme to develop new nuclear SLCMs will serve as a powerful instrument to convince the Russia ‘to return to compliance with the Treaty.’ In such case, it is noted, ‘the United States may reconsider the pursuit of a SLCM.’³¹

The NPR also sets the task of ensuring deterrence in the Asia region where China presents ‘a major challenge’ to the United States. The nuclear doctrine asserts that the United States stands ready ‘to

³⁰ Nuclear Posture Review..., p. XII.

³¹ Nuclear Posture Review..., p. 55.

respond decisively to Chinese non-nuclear or nuclear aggression.³² This preparedness, according to the text, is demonstrated by the US drills in the Asia-Pacific region, as well as by the range of graduated nuclear response options available to the president that are to be further increased. The latter most likely include those very low-yield warheads that the United States plans to mount on SLBMs. However, the NPR simultaneously emphasises Washington's interest in developing significant dialogue with Beijing and pursuing cooperation to maintain peace, as well as its unwillingness to engage in an arms race with China or Russia, and the aspiration to develop regional arms control measures with both countries.

In particular, Washington calls out primarily China, but also Russia, to assist in putting pressure on North Korea. The NPR repeatedly states that the US long-standing objective remains 'a complete, verifiable and irreversible nuclear-free Korean peninsula.'³³ Any North Korean nuclear strike against the United States or its allies and partners, as noted in the NPR, is unacceptable and will result in the end of Kim Jong-un's regime. (It is not specified, however, how the United States would respond to North Korea's hypothetical attack with the use of conventional weapons.) Furthermore, the NPR underscores that Pyongyang would be held accountable for whatever actions to transfer nuclear weapons technology, material or expertise to a state or non-state actor.

On the positive side, it is worth noting that the document does not contain any reference to the notorious idea of deploying US nuclear missiles in Europe which has been floating for a while, although largely at the rhetoric level, among US expert and political community.³⁴ US

³² Nuclear Posture Review..., p. 32.

³³ Nuclear Posture Review..., p. 12, 32.

³⁴ Burns, R., 'The Obama Administration is getting impatient with Russia', *Business Insider*, 4 June 2015 <<http://www.businessinsider.com/the-obama-administration-is-getting-impatient-with-russia-2015-6>>; Akulov, A., 'INF threatened: back to worst days of Cold War?', *Strategic Culture Foundation*, 11 June 2015 <<https://www.strategic-culture.org/pview/2015/06/11/inf-threatened-back-to-worst-days-of-cold-war.html>>; 'US weighs missiles in Europe to counter Russia', *Defense News*, 7 June 2015 <<http://www.defensenews.com/story/defense/international/europe/2015/06/07/us-weighs-missiles-europe-counter-russia/28646435/>>.

officials (in particular, Douglas Lute, then US special representative to NATO), in their turn, have declared on a number of occasions that the United States would not be stationing additional nuclear systems in Europe – and the new American nuclear doctrine confirms this.

Focus on communication, command and control systems

Besides weapons, the NPR devotes special attention to the communication, command and control systems. It sets the task to reinforce the relevant infrastructure including warning satellites and radars; communications satellites, aircraft and ground stations; fixed and mobile command posts and control centres for nuclear systems. The NPR makes a point of stating that all software for their needs should be solely US-produced.

The NPR recalls that this infrastructure was created back in the Cold War period, more than a half of its elements are over forty years old and its last complex modernisation took place three decades ago. Moreover, one fourth of its components date back to the years of the Manhattan Project. Meanwhile, as reflected in the US expert literature, the United States, Russia and China in the recent years have reviewed their strategies to incorporate the understanding that if a conflict starts, it would begin with an immediate strike against orbital satellites and communication systems. Of special concern to Pentagon is Russia's ongoing development of laser systems designed to hit satellites from earth. While the Chinese military argue for including into their national strategic planning the option of attacking satellites in a conventional conflict – a possibility also raised by Russian military experts.

As mentioned earlier, the NPR underscores that the United States could consider using nuclear weapons in the case of non-nuclear strikes against US or allied nuclear forces' 'command and control, or warning and attack assessment capabilities.' Senior fellow of the Carnegie Endowment for International Peace James Acton believes, however, that a threat of a nuclear response to a conventional attack on communication and control systems would be a momentous and ill-conceived departure from the previously declared American policy.

‘...The United States has never before explicitly threatened a nuclear response to non-nuclear attacks on command, control and warning capabilities – and with good reason. Such a response would be utterly disproportionate. The Nuclear Posture Review’s threat to carry it out, therefore, lacks credibility and could prove both ineffective and damaging to US interests.’³⁵

The NPR also focuses on the ‘integration of nuclear and non-nuclear planning’ and other integration activities. The word ‘integration’ is used in the text almost as often (24 times) as the word ‘flexibility’. The NPR states that ‘Combatant Commands and Service components will be organised and resourced for this mission, and will plan, train and exercise to integrate US nuclear and non-nuclear forces to operate in the face of adversary nuclear threats and employment.’³⁶ Relevant ‘integration activities’ are to be coordinated with those of the US allies who are also ‘facing nuclear threats.’

Yet this emphasis on ‘integration’ of nuclear and non-nuclear planning centres and command and communications centres has raised criticisms among many American experts who see it as yet another step towards blurring the line between a conventional conflict and a nuclear war.

According to Acton, ‘instead, the United States should focus on building a much more redundant command, control and warning architecture, something that current plans appear unlikely to achieve.’³⁷ He refers to the opinion of the Commander of US Strategic Commandment, General John E. Hyten, who, as Acton points out, believes that the current plans to modernise the American space-based early warning systems foresee in essence just a reproduction of the existing infrastructure, with the addition of a number of satellites. While what is actually needed, according to Hyten, is a reorientation

³⁵ Acton, J.M., ‘Command and Control in the Nuclear Posture Review: Right Problem, Wrong Solution’, *War on the Rocks*. 5 Feb. 2018 <<https://warontherocks.com/2018/02/command-and-control-in-the-nuclear-posture-review-right-problem-wrong-solution/>>.

³⁶ Nuclear Posture Review..., p. VIII.

³⁷ Acton, J.M., ‘Command and Control in the Nuclear Posture Review’...

towards launching a significantly increased number of low-cost and less vulnerable small satellites.³⁸

Cyberattacks are fraught with nuclear response?

Many analysts and media representatives from both sides of the Atlantic have written that the new US nuclear doctrine foresees the possibility of an American nuclear response to a cyberattack conducted against critical US infrastructure.³⁹ After an early version of the NPR leaked to the press, and even before the release of the official document, *The New York Times* published an article with a telling title: ‘Pentagon Suggests Countering Devastating Cyberattacks With Nuclear Arms.’⁴⁰ In reality, however, the NPR itself does not specify any such option. In this respect, on the one hand, it is worth remembering that ever since the last years of the Obama administration, the possibility of a nuclear response to a cyberattack was discussed in many political debates, as well as in media. And the NATO summit in Warsaw in July 2016 even carried a decision that a cyberattack against a member-state resulting in serious consequences including human losses could give ground to enact Article 5 of the Washington Treaty. On the other hand, those who affirm that the new US nuclear doctrine, for the first time, presents cyberattacks as a cause for nuclear attack have in mind first and foremost the already mentioned NPR’s pronouncement that the ‘extreme circumstances’ leading to the decision to use nuclear weapons could include ‘significant non-nuclear strategic attacks’ against the country’s broad infrastructure. And this passage is quite far from a

³⁸ Erwin, S., Hyten: ‘To keep edge in space, military needs cheaper launch costs, faster satellite development’, *SpaceNews*, 21 Mar. 2018 <<https://www.spacenews.com/hyten-to-keep-edge-in-space-military-needs-cheaper-launch-costs-faster-satellite-development/>>.

³⁹ Klare, M.T., ‘The new Cold War is here – and now 3 major powers are involved’, *The Nation*, 8 Mar. 2018 <<https://www.thenation.com/article/the-new-cold-war-is-here-and-now-three-major-powers-are-involved/>>.

⁴⁰ Sanger, D.E., Broadjan, W.J., ‘Pentagon suggests countering devastating cyberattacks with nuclear arms’...

‘direct’ indication of a possibility to conduct a first nuclear strike in retaliation to a cyberattack.

It is obvious that the US leadership wants to remain opaque as to what situation would induce it to take a decision on a nuclear strike – and the NPR clearly states so. Yet it appears that such an approach could contribute to raising the danger of a nuclear conflict because cyberweapons are hard to detect and hard to limit, not to mention the difficulty of attribution or even the mere fact of cyberweapons use. In this respect, the president of the Council on Foreign Relations Richard Haass, author of the acclaimed book ‘A World in Disarray’, said that the cyberweapons present an even bigger problem than nuclear.⁴¹ While the uproar in the United States around the alleged Russian interference in the US 2016 election has made the risks related to cyberspace ever more evident.

* * *

Unlike the policies of every US president since the end of the Cold War, which declared the course towards the reduction of the role of nuclear weapons and conducted measures to cut the number and the variety of these most dangerous weapons, the current US nuclear doctrine declares a course intended to strengthen the nuclear arsenal – although not on such a wide scale as witnessed in times of the previous bipolar confrontation. This new approach reflects the changes occurred since the adoption of the previous 2010 Nuclear Posture Review, figuratively speaking from the time of overcoming the consequences of the Georgia conflict, enacting the reset and signing the New START Treaty – to the aftermath of Crimea, Ukraine, Syria, allegations of ‘cyberinterference in the US elections’ and a new wave of massive anti-Russian sanctions implemented by the United States.

The US strategy has shifted towards an increased reliance on nuclear weapons and the modernisation of the nuclear triad, as well as

⁴¹ Wither the US-Russia Relationship?, *Carnegie Moscow Center*, 17 Jan. 2018 <<http://carnegie.ru/2018/01/17/whither-u.s.-russia-relationship-event-5792>>/.

dual-capable aircraft, while at the same time strengthening its related command, control and communications systems. The NPR goes even further to increase the list of the US potential adversaries and possible risks. Due to the high volatility of the international situation and the lack of clarity regarding its future development, it foresees various measures allegedly intended to counter the geopolitical and technological risks by creating, in particular, reserve nuclear warheads, nuclear sea-launched cruise missiles and low-yield nuclear missiles for SLBMs. All these may create an illusion of the possibility of using them without escalating to an all-out nuclear war – while in reality for this particular reason they actually lower the nuclear threshold. Simultaneously, the United States steps up measures to counter cyberattacks, with the presumed, though not clearly articulated, assumption regarding the possibility of the use of nuclear weapons in response to a cyberattack conducted against the US critical infrastructure.

However, no matter how risk-prone and destabilising these programmes may be, they alone do not bring about a drastic change in the strategic balance of forces. Washington does not bet on a quantitative increase of the strategic delivery systems and does not set as a goal achieving strategic parity with Russia in tactical nuclear weapons. To the contrary, it confirms its adherence to the Nuclear Non-Proliferation Treaty, does not intend to resume nuclear tests and boasts the due-time implementation of its obligations under the New START Treaty, while indicating interest in further ‘verifiable and enforceable’ arms control measures, although, in the NPR wording, ‘with prudence.’

As shown above, the Russian weapons programmes and the statements about their potential use cause real concern and provoke countermeasures on the other side of the Atlantic, while at the same time come handy for certain US political experts and policy makers who refer to them to promote their own domestic agendas and new options for ‘responses,’ as well as for the American military who uses them as the justification for its own requests for new budgets and new weapons systems.

Washington gives special attention to countering what it believes to be Russia’s adherence to the ‘escalation for de-escalation’

concept – what is perceived to be an alleged Moscow’s belief in the possibility of early use of nuclear weapons in a conventional conflict to end it on its terms. However misperceived this assumption may be, it remains a stated US strategic priority to block actions which could result from this concept. The United States intends to do so through its weapon modernisation programmes, as well as through introducing ‘flexibility’ and taking deliberately ‘undefined’ steps to avert potential future risks.

Such views and the course for confrontation which they promote whip up the arms race and undermine global stability. The threats to international community thus continue to grow, as well as for the United States’ own national security, while the pursuit of the much needed normalisation of international relations becomes ever more uncertain.

4. NORTH KOREA'S NUCLEAR AND MISSILE POTENTIAL AND SECURITY IN NORTHEAST ASIA

Victor ESIN

In 2017, North Korea (Democratic People's Republic of Korea, DPRK) rapidly stepped up its nuclear and missile programmes. To culminate those efforts, North Korea conducted its sixth nuclear test on September 3, 2017 detonating the most powerful nuclear charge in the country's history¹ and a series of test launches of the newest North Korean long-range ballistic missiles potentially capable of carrying nuclear warheads. These events have had a destabilizing effect on security in Northeast Asia giving rise to an extremely tense situation that could lead to a large-scale military conflict between the DPRK and the United States, Republic of Korea and Japan with unpredictable consequences.

The acute confrontation was mitigated thanks to the agreement reached in January 2018 between the leaders of North Korea and South Korea, Kim Jong-un and Moon Jae-in, on the participation of North Korean athletes and a delegation led by the head of the country's parliament Kim Yong-nam in the Winter Olympics which were held

¹ According to estimates, the nuclear device blown up during the test had the yield between 70 to 100 kt. See: Korostikov, M., Dzhordzhevich, A., Yusin, M., '100 kilotons of Juche ideas: The DPRK tests its most powerful bomb in history', *Kommersant*, 4 Sep. 2017 [in Russian].

from 9 to 25 February 2018 in South Korean Pyeongchang.² On April 27, 2018, Kim Jong-un and Moon Jae-in held an inter-Korean summit after which they announced plans to sign a peace treaty and denuclearize the Korean peninsula. In May 2018, amidst disagreements over 'Max Thunder,' the US-South Korean military exercises,³ the leaders of the DPRK and the Republic of Korea held another meeting where they discussed measures to reduce confrontation, along with the possibility of holding a US–DPRK summit.

It is not yet clear what the current warming in the relations between the two Koreas will bring about. In any case, the decisive role in resolving the North Korean issue will obviously belong to the United States, a key ally of South Korea.⁴

Therefore, there is a need to assess North Korea's nuclear and missile capabilities, analyze what Pyongyang strives to achieve, and propose a number of measures to eliminate the current tensions on the Korean Peninsula and thereby contribute to strengthening the security system in Northeast Asia.

North Korea's nuclear programme

Today, it can be argued that the DPRK has developed a full-fledged research, experimental and production base for the development,

² Speaking on February 17, 2018, in the Main Press Center of the Olympic Games in Pyeongchang, President of the Republic of Korea Moon Jae-in said: 'We were able to lower some of the tensions that were becoming very heightened on the Korean Peninsula. As a result, I believe we were able to host a very safe Winter Olympic Games.' See: 'South Korean president says Olympics have lowered tensions with North', *The Washington Post*, 17 Feb. 2018 <https://www.washingtonpost.com/sports/olympics/south-korean-president-says-olympics-have-lowered-tensions-with-north/2018/02/17/9ce01a9a-13bc-11e8-8ea1-c1d91fcec3fe_story.html?utm_term=.648b7861bdcc>.

³ 'North Korea warns US as it suspends South Korea talks over military drills', *CNN Politics*, 16 May 2018 < <https://edition.cnn.com/2018/05/15/politics/north-korea-suspends-south-korea-talks-us-military-drills/index.html>>.

⁴ Glazunova, L., 'Oh, Brave New Kim!', *Moskovsky komsomolets*, 26 Feb. 2018 [in Russian].

testing, and production of nuclear warheads. The main North Korean nuclear facilities include the Kilju nuclear test site (North Hamgyong province) and Nuclear Scientific Research Centre in Yongbyon (86 km north of Pyongyang), which include:

- a gas-graphite reactor with an electric capacity of 5 MW (thermal power – 25 MW), used for producing weapons-grade plutonium;⁵
- a radiochemical laboratory for separating plutonium from irradiated nuclear fuel (INF);
- a plant for the isotopic enrichment of uranium through the centrifugal process;⁶
- a nuclear fuel plant, the raw material for which is produced by two uranium enrichment plants with a total production capacity of 150 tons of uranium concentrate per year.⁷

A nuclear power plant with an experimental light water reactor (ELWR) of North Korean design has been under construction in Yongbyon since 2010. It is estimated that its electrical capacity will be 25-30 MW (with a thermal output of more than 100 MW). It could potentially churn out up to 20 kg of weapons-grade plutonium per year.⁸ This reactor is expected to be brought into operation in late 2018.

As of late 2017, the North Korean nuclear weapons complex was estimated to have accumulated a total of 48 to 56 kg of weapons-grade plutonium and 350 to 480 kg of highly enriched uranium (HEU),

⁵ In 2015, the reactor was modernised and is now operating at full capacity. It is estimated that it can produce between 6 and 8 kg of weapons-grade plutonium. See: Sychev, V., 'Pyongyang builds the H-bomb: How North Korea has succeeded with its nuclear program', *Meduza Project*, <<http://meduza.io/feature/2015/12/13/phenyan-sozdaet-vodorodnuyu-bombu>> [in Russian].

⁶ Now, according to estimates, the plant's production capacity is up to 80 kg of weapon-grade uranium per year.

⁷ These uranium enrichment plants are located near Pakchon and Pongsan (70 km north and 95 km southeast of Pyongyang respectively). See: Esin, V., North Korea's nuclear weapons and missile ambitions. In *Russia: arms control, disarmament and international security. IMEMO supplement to the Russian edition of the SIPRI Yearbook 2015* (IMEMO: Moscow, 2016), p. 45.

⁸ Esin, V., op. cit., p. 45.

also of weapons-grade quality.⁹ It is supposedly enough to make 30 to 35 nuclear warheads. They can be used in air bombs to be delivered to their targets by Chinese-made H-5 frontline bombers or in re-entry vehicles of ballistic missiles (from 2016 onwards).

According to Siegfried Hecker, former Director of the Los Alamos National Laboratory, now a professor at the Stanford University in California, North Korea is currently capable of producing seven nuclear warheads per year.¹⁰ With the commissioning of the above-mentioned ELWR nuclear reactor, the production may increase to ten nuclear warheads per year.

North Korea's missile programme

The present day North Korean missile arsenal is based on mobile short- (up to 500 km), shorter- (more than 500 km, but less than 1000 km) and medium- (more 1000 km, but less than 5500 km) range ballistic missiles. North Korea's Strategic Missile Forces include:

- Hwasong-3, Hwasong-5, and Hwasong-11 short-range ballistic missiles;¹¹
- Hwasong-6 short-range ballistic missiles;¹²

⁹ This estimate does not include weapons-grade nuclear materials used to build nuclear weapons that were blown up in six nuclear tests conducted at the Kilju nuclear test site in 2006, 2009, 2013, 2016, and 2017.

¹⁰ Evans, S., 'The alarming progress of a nuclear North Korea', *BBC News*, 14 Sep. 2016 <<https://www.bbc.com/news/world-asia-37353956>>.

¹¹ Hwasong-3 (Luna-M) single-stage solid fuel tactical missile has a gross lift-off weight of 2.3 tons, is fitted with a non-detachable 450 kg warhead and has a range of 65 km. Hwasong-5 (Scud-B) single-stage liquid fuel short-range missile has a gross lift-off weight of 6.4 tons, is fitted with a non-detachable warhead with a mass of 1000 kg and has a range of 300 km. Hwasong-11 (KN-02) single-stage solid fuel short-range missile has a gross lift-off weight of 2 tons, is fitted with a non-detachable warhead of approximately 480 kg and has a range of 140 km. See: Esin, V., op. cit., pp. 49-50.

¹² Hwasong-6 (Scud-S) shorter range missile is a modernised version of Hwasong-5 and has an extended range up to 550 km achieved by lengthening the fuel tanks and decreasing the warhead's mass from 1000 to 700 kg. See: Esin V., op. cit., p. 49.

– Hwasong-7, Hwasong-9, Hwasong-10,¹³ and Hwasong-12¹⁴ medium-range ballistic missiles (MRBM).

According to the available information,¹⁵ Hwasong-3, Hwasong-5, Hwasong-6, and Hwasong-11 are equipped with conventional warheads (high-explosive and cluster ones), while Hwasong-7, Hwasong-9, Hwasong-10 and Hwasong-12 can be equipped with both conventional and nuclear warheads. North Korea's Strategic Missile Forces have no other ballistic missiles in service.

At the same time, the DPRK is carrying out active and large-scale research and development efforts to create and test new ballistic missiles of both medium- and intercontinental (over 5,500 km) range. Since 2012, at the military parades Pyongyang has been demonstrating Hwasong-13 (KN-08) ballistic missile, and since 2015 – its upgraded version – Hwasong-14 (KN-20). Both these missiles are two-stage liquid fuel missiles, transported on an eight-axle wheeled launcher equipped with a lifting mechanism to erect the missile vertically.

So far, no flight tests for Hwasong-13 missile have been detected; it is therefore not yet possible to assess its design. As for the Hwasong-14, it underwent two successful flight tests in July 2017. Both missiles were fired in a steep lofted trajectory and fell along with the detached warheads into the Sea of Japan. According to North Korean data, which are in line with Japanese data, during the first test the missile reached an altitude of 2802 km and travelled 933 km,

¹³ Hwasong-7 (Nodong-1) single-stage liquid fuel IRBM has a gross lift-off weight of 16 tons, is fitted with a detachable warhead of a mass of 1000 kg and has a range of 1000 km. By reducing the weight of its warhead to 700 kg, it can reach a range of 1300 km. Hwasong-9 (Nodong-1M) IRBM is a modification of Hwasong-7 IRBM, it has shorter fuel tanks compared to its baseline model and can be fitted with a 500 kg warhead. Its range can reach 1300-1500 km. Hwasong-10 (Musudan) single-stage liquid fuel IRBM has an estimated range of over 3,000 km with a warhead of a mass of up to 650 kg. See: Esin, V., op. cit., p. 50.

¹⁴ Hwasong-12 (KN-17) single-stage liquid fuel is apparently a further modification of its predecessor Hwasong-10. In its most recent test flight on September 15, 2017, it reached the range of over 3,700 km. See: 'The UN Security Council condemned the new launch of the DPRK missile', *Kommersant*, 16 Sep. 2017 <<http://www.kommersant.ru/doc/3413850>> [in Russian].

¹⁵ See, inter alia: Gorynov, V., 'Nuclear and missile programs of the DPRK', *Zarubezhnoye voyennoye obozreniye*, 2017, no. 7, pp. 19-22 [in Russian].

whereas during the second test – 3725 km and 998 km respectively.¹⁶ The renowned US scientists Theodore Postol, Markus Schiller and Robert Shmucker calculated the maximum range of these missiles to be between 7500 and 9000 km.¹⁷ However, in their calculation the weight of the missiles' payload was left out of the equation, so it is not yet possible to reliably estimate the maximum range of Hwasong-14. One can only state with certainty that this missile fits the definition of an intercontinental ballistic missile (ICBM).

On November 29, 2017, North Korea flight tested more powerful Hwasong-15 (KN-22), a two-stage liquid fuel ballistic missile.¹⁸ This missile was also fired in a steep lofted trajectory with its stages and detached warhead falling into the Sea of Japan. According to North Korean data, the missile flew 950 km and reached the maximum altitude of 4475 km.¹⁹ According to some estimates, with the optimal flight trajectory this missile could deliver its payload at a distance of about 12,000 km. Thus, it belongs to the ICBM class.

That said, it would still be premature to assert that the DPRK already possesses ICBMs, though North Korean and foreign media claim this to be the case. The Hwasong-14 and Hwasong-15 launches were just tests, and as the history of missile engineering suggests, it will take at least three years before they will be able to enter service.

North Korea has acquired a new focus of its missile build-up in developing a diesel submarine with ballistic missiles (SLBM). Such a

¹⁶ Dvorkin, V., 'The consequences of the North Korean nuclear missile potential for the world', *Nezavisimoye voyennoye obozreniye*, 8 Sep. 2017 [in Russian].

¹⁷ Postol, T., Schiller, M., Schmucker, R., 'North Korea's 'not quite' ICBM can't hit the lower 48 states', *Bulletin of the Atomic Scientists*, 11 Aug. 2017, <[http://thebulletin.org/north-korea's-not-quite-icbm-can't-hit-lower-48-states11012](http://thebulletin.org/north-korea's-not-quite-icbm-can-t-hit-lower-48-states11012)>.

¹⁸ This missile was first shown at a military parade held on February 8, 2018 in Pyongyang. It was transported on a nine-axle wheeled launcher equipped with a lifting gear to elevate the missile in a vertical position. See: 'A military parade is taking place in Pyongyang', *Kommersant*, 8 Feb. 2018 <<https://www.kommersant.ru/doc/3542063>> [in Russian].

¹⁹ 'North Korea announced the completion of nuclear weapons development programme', *Kommersant*, 29 Nov. 2017 <<https://www.kommersant.ru/doc/3481397>> [in Russian].

submarine, designated Sinpo in the Western media, has already been finished and is undergoing sea trials. With a maximum displacement of 3,000 tons, length of 67 m and width of 6.7 m, this submarine has two SLBM launch silos in the central part of its conning part.²⁰

To arm the Sinpo submarine, North Korea is developing Pukkuksong-1 (KN-11), a two-stage solid-fueled SLBM²¹. Its flight tests from a submerged test barge started in May 2015. In August 2016, an experimental model of this SLBM had its first successful flight test (the missile flew about 310 miles towards Japan).²² In 2017, North Korea conducted at least four test launches of Pukkuksong-1.²³ As there was no information on these launches in the North Korean media, one can be fairly certain that their results did not impress Kim Jong-un. Otherwise, he would have been lauded the tests, like it happened, for example, after the first test launch of Hwasong-15 ICBM. It is an indirect indication of the problems facing the development of this missile.

North Korea uses Pukkuksong-1 as a basis for development of a medium-range ground-based Pukkuksong-2 (KN-15) to be placed on a caterpillar track launcher. Two successful launches of this missile in the first half of 2017 led to Kim Jong-un's order 'proceed as quickly as possible to its large-scale production to equip the army.'²⁴ If it happens, as it seems, already in 2018, it will become a landmark event for the DPRK, as the North Korean armed forces will have a missile with a range of up to 1,200-1,300 km, ready to launch within 10-15 minutes after receiving the order. North Korean liquid fuel missiles do not have this ability, their pre-launch preparation takes 1,5-2 hours.

²⁰ Lodkin, V., '“Underwater Fist” of Pyongyang', *Nezavisimoye voyennoye obozreniye*, 2 June 2017 [in Russian].

²¹ Pukkuksong-1 SLBM measures up to 1.4 m in diameter and is stored in a transporter-launcher container. Its estimated range is of **Error! Bookmark not defined.** 1,200-1,250 km. See: Lodkin, V., op. cit.

²² Lodkin, V., op. cit.

²³ 'Another missile from Kim', *Gazeta.ru*, 1 Aug. 2017 <https://www.gazeta.ru/politics/2017/08/01_a_10813345.shtml> [in Russian].

²⁴ See: Naka, K., 'The leader of North Korea ordered to equip the army with Pukkuksong-2 missiles', *RIA Novosti*, 22 May 2017 <<https://ria.ru/world/20170522/1494764139.html>> [in Russian].

The above assessment of the implementation of the North Korean missile program shows that in recent years it has achieved impressive results in missile engineering, despite the fact that the country is under very harsh international sanctions. The degree reliability of North Korean missile systems both under development and in service remains low as indicated by the large number of failed launches. But over time the situation will improve, and the long-range ballistic missile projects that are being carried out allow us to assert that in the near future the DPRK will have almost a full range of ballistic missiles of various types – from short to intercontinental range.

Pyongyang's goals

Pyongyang believes that if it does not have sufficient nuclear and missile capabilities, the United States will not only refuse to engage in a bilateral dialogue but at the first opportunity will eliminate the North Korean regime by military means. Given the unprecedented military activity of the United States and South Korea on the Korean peninsula in late 2017, these fears of Pyongyang seemed more and more realistic.

The situation is aggravated by the extremely aggressive rhetoric of the current US administration regarding the ruling regime in the DPRK. Thus, speaking on September 19, 2017 at the plenary meeting of the UN General Assembly in New York, US President Donald Trump promised to completely destroy North Korea if it did not come to reason.²⁵ Pyongyang saw that threat as a declaration of war²⁶ which motivated it to accelerate the development of ballistic missiles capable of striking the continental US territory. In order to gain military potential to deter the United States from possible aggression, the

²⁵ 'If threatened, U.S. will 'totally destroy' North Korea, Trump vows', *Reuters*, 19 Sep. 2017 <<https://www.reuters.com/article/us-un-assembly-trump/if-threatened-u-s-will-totally-destroy-north-korea-trump-vows-idUSKCN1BU0B3>>.

²⁶ 'Kim Jong-un compared Trump's speech in the United Nations to the declaration of war to the DPRK', *TASS*, 22 Sep. 2017 <<https://tass.ru/mezhdunarodnaya-panorama/4583234>> [in Russian].

military-political leadership of the DPRK is now focused on pursuing two interrelated goals.

The first one is to establish reliable (with a high probability of success) indirect deterrence of the United States by creating a threat of nuclear missile attack against US military bases in the region and against such US regional allies as the Republic of Korea and Japan. If the DPRK continues to build up its nuclear and missile capabilities at the current pace, it is likely to achieve the first goal at the turn of 2018 and 2019.

The second goal is to ensure the ability to directly, albeit at a minimal level, deter the US through the threat of a nuclear missile attack against its large cities and other vital infrastructure on the continental territory of the country. It will take Pyongyang at least three to four years to achieve this. It has already taken the first steps along this path by starting flight testing Hwasong-14 and Hwasong-15.

For the United States, such developments would be unacceptable. Therefore, there is a real risk of Washington attempting to conduct a disarming military strike against the DPRK before Pyongyang can acquire nuclear ICBMs and its potential retaliatory (even nuclear) strike can only affect South Korea and Japan. The US, while having suffered acceptable losses, will be guaranteed to get rid of the North Korean nuclear threat. There can be no doubt that the Pentagon has already devised a military operation against the DPRK and is taking measures to prepare to carry it out.

In addition, it is necessary to take into account that if North Korea continues expanding its nuclear and missile potential, it can push Tokyo and Seoul to adopt a political decision to develop their own nuclear weapons²⁷ as a more reliable deterrence against North Korea's aggression than the nuclear umbrella of the United States. Calls for indigenous nuclear programmes are already heard among influential circles in the Japanese and South Korean establishment.

It can be concluded from the above that the build-up of DPRK's nuclear and missile arsenals destabilizes the security system in

²⁷ According to some estimates, if such a decision is taken, Japan and the Republic of Korea may acquire nuclear weapons in 12-18 months.

Northeast Asia. But Washington, along with its allies – Tokyo and Seoul – following a tough policy towards Pyongyang and threatening it with ‘fire and fury’ also disturbs the security architecture in Northeast Asia. At the same time, Washington continues to pursue an unrealistic goal – use its power to force the DPRK to abandon its nuclear missiles without changing its own aggressive policy towards North Korea. Thus, US Vice President Mike Pence at a meeting with South Korean President Moon Jae-in, held in Pyeongchang on February 7, 2018, just before the Winter Olympic Games, stated flatly: ‘We will continue to intensify this maximum pressure campaign on North Korea until it abandons its nuclear and ballistic missile programs once and for all.’ At the same time he announced the introduction in the near future of the most severe and aggressive round of economic sanctions against the DPRK.²⁸ After that, US President Donald Trump promised that if these sanctions did not work, then he was ready to resort to military measures that would be ‘very, very unfortunate for the world.’²⁹

The situation in Northeast Asia requires a rapid resolution, otherwise the regional security system will be completely destroyed which would raise the risk of a war, the consequences of which will be dire for the world community.

Ways to overcome the crisis

First of all, it is necessary to solve the urgent task of reducing the military and political tension on the Korean peninsula and around it in order to eliminate the possibility of a war by mistake. To this end, all the countries involved in the confrontation – the DPRK, United States, Republic of Korea and Japan – should take advantage of the ‘Olympic

²⁸ ‘Pence Counters South Korea’s Olympic Engagement Efforts with North Korea’, *VoA News*, 8 Feb. 2018 <<https://www.voanews.com/a/vice-president-pence-south-korea-north-korea-olympics/4244264.html>>.

²⁹ ‘Trump announces harsh new sanctions against North Korea’, *The New York Times*, 23 Feb. 2018 <<https://www.nytimes.com/2018/02/23/us/politics/trump-north-korea-sanctions.html>>.

truce' and maintain restraint, abandon provocative actions and belligerent rhetoric and demonstrate readiness for dialogue.

The first step could be the implementation of the Russian-Chinese initiative on the so-called 'double freeze' of the North Korean nuclear and missile development and large-scale joint military exercises of the United States and the Republic of Korea.³⁰

Some progress in this direction was made at the talks held on March 5-6, 2018 in Pyongyang between the delegations of the DPRK led by Kim Jong-un and of South Korea led by Chung Eui-yong, Director of the National Security Office for President Moon Jae-in. These talks resulted in agreements on measures to reduce military tension (including the establishment of a hotline between the leaders of two Koreas that should help reduce the likelihood of an unintentional conflict) and to hold a meeting between the leaders of two countries in April 2018 – the third inter-Korean summit.³¹ At the same time, the leader of the DPRK said that he was ready to meet with the US president to discuss denuclearization of the Korean peninsula. Shortly afterwards, US President Donald Trump confirmed his willingness to begin such talks.

At the inter-Korean summit held on April 27, 2018 the parties adopted a joint declaration which set out plans to sign a peace treaty and to achieve the denuclearization of the peninsula. In advance of the meeting the DPRK announced that it would stop nuclear and missile tests starting with April 21. After the meeting with Moon Jae-in in May, Kim Jong-un agreed to keep his promise to dismantle the Punggye-ri nuclear test site. In the presence of foreign journalists, three underground nuclear weapon test locations and all ground buildings were destroyed.³²

³⁰ See: Joint statement by the Russian and Chinese foreign ministries on the Korean Peninsula's problems, 4 July 2017 <http://www.mid.ru/ru/foreign_policy/news/-/asset_publisher/cKNonkJE02Bw/content/id/2807662?p_p_id=101_INSTANCE_cKNonkJE02Bw&_101_INSTANCE_cKNonkJE02Bw_languageId=en_GB>.

³¹ The first two inter-Korean summits were held in 2000 and 2007.

³² 'North Korea dismantled a nuclear test site', *Kommersant*, 24 May 2018 <<https://www.kommersant.ru/doc/3637763>> [in Russian].

The meeting between US President Donald Trump and North Korean Chairman Kim Jong-un took place on June 12, 2018 in Singapore. It was the first summit in the history of the US-North Korean relations between the current leaders of the two countries. The parties characterized the talks very positively and signed a joint statement and two more confidential documents.³³ In a joint statement, the US president 'committed to provide security guarantees to the DPRK,' and the North Korean leader 'reaffirmed... his commitment to complete denuclearization of the Korean Peninsula.'³⁴ However, the joint statement did not contain any specific steps to alter relations between the countries, advance nuclear disarmament or lift sanctions. At the same time, it was important that Donald Trump and Kim Jong-un exchanged invitations for the same year.³⁵ All this, along with the confidential documents which may contain certain specifics, allows to state that the summit held in Singapore was substantive. And the joint statement was fully consistent with the current level of relations between the two countries. Later, within the framework of bilateral negotiations, it may be possible to move to more concrete agreements on denuclearization and security guarantees.

This, in turn, may create favorable conditions to resume the six-party talks (with the participation of China, the United States, Russia, Japan and two Koreas) suspended in 2009. The parties should realize that Pyongyang will not agree to restart these talks if they are limited to the issue of denuclearization of the Korean peninsula. Any future negotiations should cover the entire range of security problems in Northeast Asia and bring together the views of all participants. The settlement of the North Korean nuclear and missile problem is possible only through step-by-step establishment on the Korean Peninsula and

³³ The parties have not yet disclosed the content of these documents.

³⁴ Joint Statement of President Donald J. Trump of the United States of America and Chairman Kim Jong Un of the Democratic People's Republic of Korea at the Singapore Summit, The White House, 12 June 2018 <<https://www.whitehouse.gov/briefings-statements/joint-statement-president-donald-j-trump-united-states-america-chairman-kim-jong-un-democratic-peoples-republic-korea-singapore-summit/>>.

³⁵ 'Donald Trump and Kim Jong-un agreed on an exchange of visits', *Kommersant*, 13 June 2018 <<https://www.kommersant.ru/doc/3656917>> [in Russian].

Northeast Asia as a whole of a mechanism to ensure peace and security and normalize relations between the states of the region.

It would be an unacceptable mistake to believe that it is possible to achieve a quick and simple solution to the North Korean threat. The return to the 2005 agreement, reached at the six-party talks when the DPRK in exchange for the promise of benefits agreed to end its nuclear weapons program, is excluded. At the initial stage, the only realistically achievable interim solution is if Pyongyang in exchange for security guarantees and significant easing of the sanctions suspends its nuclear and missile programmes for a certain period, for example 10 years. To do this, it will be necessary to conclude a legally binding agreement, similar to the Joint Comprehensive Plan of Action (JCPOA) on the Iranian nuclear programme, but tailored to North Korea.

If the ten year experience convinces Pyongyang that it benefits from the agreement and – most importantly – the security guarantees are respected and there is no threat to the existing government, it will be possible to return to the issue of denuclearization of the Korean peninsula. In order for Pyongyang to agree to nuclear disarmament, the other parties will have to not only conclusively affirm the security guarantees, but also provide the DPRK with certain benefits (their nature and scope is the subject of future negotiations) since it has spent immense resources on building its nuclear potential and its nuclear disarmament will require significant investments. The latter should not be regarded as a unilateral concession to Pyongyang. The benefits for the DPRK will prove insignificant in comparison with the importance of stability on the Korean peninsula for international security as a result of the above ‘deal.’

Only the normalization of relations between the DPRK and the US on a long-term legal basis, will allow the Korean Peninsula to acquire the status of a zone free of nuclear weapons. Hopefully, the US will understand it despite its extremely negative attitude towards the North Korean regime.

5. ISSUES OF VERIFICATION OF THE FISSILE MATERIAL CUT-OFF TREATY

Anatoly DIAKOV

Prohibition to produce nuclear fissile material for nuclear weapons or other explosive devices could significantly contribute to supporting nuclear weapons non-proliferation regime and provide an incentive for further nuclear disarmament. However, although the Fissile Material Cut-off Treaty (FMCT) enjoys broad international support, over twenty years' consultations and talks at the Conference on Disarmament (CD) in Geneva have produced no meaningful results. This lack of progress is mainly due to the differences between the states as to the scope of the treaty. The states diverge greatly on the issue of materials to which the treaty provisions should apply. Some of them insist that the treaty should embrace only future production of nuclear fissile materials, while others believe that it should also cover the past production of such materials, that is, nuclear fissile materials produced before the treaty has entered into force.¹

Countries opposing the inclusion of previously accumulated materials in the treaty argue that this would run counter to the so-called

¹ United Nations, General Assembly, Group of Governmental Experts to make recommendations on possible aspects that could contribute to but not negotiate a treaty banning the production of fissile material for nuclear weapons or other nuclear explosive devices, A/70/81, 7 May 2015, paras 6 and 7 <[https://www.unog.ch/80256EDD006B8954/\(httpAssets\)/D19612093ED869EFC1257EC40033A6B3/\\$file/A7081.pdf](https://www.unog.ch/80256EDD006B8954/(httpAssets)/D19612093ED869EFC1257EC40033A6B3/$file/A7081.pdf)>.

Shannon Mandate (the mandate contained in UN General Assembly Resolution 48.75L and CD Document CD/1299) as interpreted strictly, and hence, the treaty should apply only to materials produced after its entry into force.² Some of them also believe that if the stockpiles already accumulated are included in the FMCT scope, the treaty would not receive sufficient support, especially from the nuclear-weapons states, and that effective verification of the Treaty would be hampered.

On the other hand, there are states that believe that in addition to prohibiting the production of fissile material the treaty should also apply to the past production of fissile materials. Although this group of countries lacks consensus as to the reasons for including the accumulated stockpiles in the treaty, many of them think that the FMCT should aim mainly at reducing and eliminating the existing stockpiles of nuclear materials and thus depriving nuclear-weapon states of possibility to use these stockpiles for the purposes of nuclear weapons. They contend that without measures applying to accumulated stockpiles, the treaty will not be able to effectively and irreversibly promote nuclear disarmament and provide states with incentives to accede to it.³

The mandate for negotiating FMCT of 24 March 1995 (CD/1299) agreed by the CD calls for the conclusion of ‘non-discriminatory, multilateral and internationally and effectively

² Conference on Disarmament, Report of Ambassador Gerald E. Shannon of Canada on consultations on the most appropriate arrangement to negotiate a treaty banning the production of fissile material for nuclear weapons or other nuclear explosive devices, CD/1299, 24 Mar. 1995 <<https://digitallibrary.un.org/record/188862?ln=en>>.

³ Final Document of the 2000 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT/CONF.2000/28, parts 1 and 2) insists on practical steps in order to ensure ‘increased transparency by the nuclear-weapon states with regard to the nuclear weapons capabilities... as a voluntary confidence-building measure to support further progress on nuclear disarmament.’ In the Final Document of the 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT/CONF.2010/50, Vol. I) ‘all the nuclear-weapon states are encouraged to agree as soon as possible on a standard reporting form and to determine appropriate reporting intervals for the purpose of voluntarily providing standard information without prejudice to national security.’ See: <<https://www.un.org/disarmament/wmd/nuclear/npt2000/official-documents>>; <<http://www.un.org/en/conf/npt/2010/>>.

verifiable treaty.’⁴ Effective verification of the Treaty plays an essential role in this context.

Verification can be defined as a set of different measures aimed at auditing the countries’ compliance with their obligations under the treaty. Naturally, the set of verification measures and procedures would to a great extent depend on the scope and definitions of the treaty agreed by the parties to the treaty. If the FMCT prohibits solely future production of nuclear fissile materials for nuclear weapons and other nuclear explosive devices, it can be expected that the treaty verification system will be based on the International Atomic Energy Agency’s (IAEA) practice and the experience of NPT Treaty verification.

If the scope of FMCT includes the countries’ accumulated stockpiles, the treaty will virtually turn into a nuclear arms control treaty. In this case a new treaty verification system will have to be developed, as the IAEA has no experience of control over nuclear fissile materials of states that possess nuclear weapons. It appears that as one of the essential elements of such system and the first step towards its implementation, nuclear states should declare their stockpiles of materials in question. At a later stage, to provide credible assurances of non-diversion of the materials for nuclear weapons, the states should agree to the application of verification measures and procedures to their declared stockpiles. Therefore, declarations of stockpiles would be a part of the implementation of the treaty verification mechanism, or, in other words, the declarations and verification would complement each other.

Baseline declaration requirements

As it has already been noted above, if an agreement is reached to apply FMCT to previous production of nuclear fissile material, each state party to the treaty will be obliged to declare the quantity of its stockpiles that can be used for nuclear weapons. Initial statement of the

⁴ Conference on Disarmament...

quantity of relevant materials is usually referred to as a baseline declaration. It will serve as a reference point for verification process.

To serve the purpose of the treaty, the baseline declarations should meet two essential criteria: correctness and completeness.

A correct declaration means a declaration that contains accurate data on the stockpiles of relevant materials the country possesses as of the declaration date, including their quantity, storage locations, isotopic composition, as well as physical and chemical properties. Baseline declarations should contribute to verification of their completeness, that is, to ensure certainty that a state has no additional undeclared nuclear materials in quantities significant for the purposes of the treaty. The process of preparation of baseline declarations of the quantity of available nuclear fissile materials is extremely important, and should enable the verification of their correctness and completeness in the future.

The contents of baseline declarations

Baseline declarations should include such materials as highly enriched uranium (HEU), uranium-233 (U-233), and plutonium which are defined as weapon-usable nuclear material for the purposes of nuclear arms non-proliferation and control.

This data should be exhaustive so that its subsequent specification and detalisation during verification lead to the reduction of the uncertainty, rather than exacerbate it. Therefore, baseline declarations should include information not only on the weapon-usable nuclear materials the country possesses, but also of their complete (historical) production and use.

The information on the quantity of weapon-usable nuclear material in possession of each state party as of the date of entry into force of the agreement will be of most interest to states parties. However, if such declarations contain only data on the stockpiles of HEU, U-233 and plutonium, that would be insufficient to ensure certainty as to the declarations' completeness. In addition to the data on the available stockpiles, the baseline declaration should also comprise the fullest possible information on general production and use of this material throughout the duration of nuclear programme. In other words,

such treaty terms should be elaborated and agreed under which both the *correctness* of data on the existing stockpiles should be verified and the data on the production of nuclear materials in general should be checked for the consistency with the data on the available stockpiles, in order to reach conclusions on the *completeness* of declaration. To make the quantity of the available stockpiles agree with the total quantity produced, the baseline declaration should also contain information on the quantity of the used and lost material, that is, on all alterations in the inventories of each material.

In accordance with the nuclear material accountancy principles, the available quantity of nuclear material should represent the total amount produced after all the recorded alterations (use, production losses, losses as a result of decay, transfers for other purposes, etc.). Any considerable discrepancy found during accounting or verification will be subject to examination. Thus, *a declaration stating that a state possesses certain quantity of weapon-usable nuclear material will be verifiable*, if it provides a total amount of specific material produced throughout the duration of the programme, including the data on the production at certain facilities, production methods and specifics, the total amount of the material used for tests, technological losses, and the quantity of the material used for non-weapon purposes, and all errors and uncertainties pertaining to such data.

Certainly, only a clear and detailed declaration accompanied by the supporting information and documents can provide sufficient basis and conditions for verification.

The issue of including data on specific intended use of weapon-usable nuclear material

There is another set of issues pertaining to the contents of baseline declarations: should such declarations include information on specific use of the weapon-usable material produced and should they specify the quantity of the material in these categories? It appears advisable that all weapon-usable or potentially weapon-usable materials should

be declared and subsequently duly verified, irrespective of the purposes and place where they are used.

Nuclear materials in nuclear weapons

Declaring the quantity of nuclear-weapon-usable materials used in the nuclear weapons the countries possess will be the most challenging task. There are many reasons for states possessing nuclear weapons to oppose including such information in their declarations. Protecting information on the design of nuclear warheads is the main reason. At the same time, it is clear that excluding the total amount of nuclear material used for nuclear weapons from the declaration would create considerable uncertainty due to the risk of intentional concealment of part of material from the control regime. This would also render declarations incomplete as regards the material most significant for the purposes of the treaty, and thus undermine from the outset the idea and value of baseline declarations.

Weapon-grade material for nuclear marine propulsion

Most nuclear-powered submarines and other ships use HEU with various enrichment levels for fuel. As the quantity of HEU reserved for this purpose is relatively large, safeguards against the diversion of this HEU to nuclear weapons are required. Therefore, this material has to be included in baseline declarations and subjected to subsequent verification.

The United States have reserved 128 tons of HEU of their stockpile of weapon-grade materials for the production of fuel for marine nuclear reactors.⁵ Assuming that the Russian Federation has also reserved a comparable amount of HEU for these purposes, the combined quantity of this material intended for marine nuclear reactors can reach 200-250 tons. This quantity would be sufficient to produce 10 thousand nuclear warheads which is roughly equivalent to the current total world stockpile of nuclear warheads. Thus, the stockpile of HEU for marine nuclear reactors is one of the most important

⁵ Global Fissile Material Report 2008: Scope and Verification of a Fissile Material (Cutoff) Treaty, p. 8 <<http://fissilematerials.org/library/gfmr08.pdf>>.

categories of weapon-grade nuclear material and consequently should be declared and verified.

Like warheads designs, the specification of fuel of marine nuclear reactors are kept top secret by states. In principle, this should not impede declaring stockpiles and/or production of HEU for these purposes, however, the development and implementation of verification measures would be a difficult task and would require considerable effort on the part of experts.

Weapon-grade nuclear material intended for civilian use

Weapon-grade nuclear materials are also used for civilian purposes, for example, as fuel for nuclear power and research reactors, and for the production of medical isotopes. It would be important to include this material in the declaration for at least two reasons:

- this would allow to elaborate and implement measures to exclude the availability of this material for use in nuclear weapons;
- if this material comes from dual-use facilities (enterprises), this would make it possible to obtain information on and register the flow of the material through these facilities.

In some countries weapon-grade nuclear materials in civilian use are adequately controlled by the IAEA. Certainly, the procedures used by the IAEA would also be sufficient to verify this type of material under the FMCT. To ensure the completeness of information, all these materials should also be included in the baseline declarations.

Declaration completeness

As it has already been noted above, it is pivotal that baseline declaration should be complete, that is all the available or potentially available weapon-usable weapon-grade nuclear material should be declared and timely placed under control in due manner. To ensure this, the declarations should include exhaustive information on the quantity of materials produced and of their uses. However, for a number of reasons, ensuring completeness of data included in the declarations would represent a major issue even for the very declaring states.

One of these reasons is the long duration of the nuclear-weapon states' nuclear weapons programmes; in the United States and the USSR/Russian Federation they exceed 60 years. During these years, nuclear materials production technologies and accounting methods have changed numerous times. It should also be taken into account that accurate recording of the production processes has not always been a priority for operators, and the accounting methods has not always been perfect. This is especially true of the initial stages of these programmes. It is not clear whether detailed production reports of uranium enrichment plants, plutonium production reactors and irradiated uranium reprocessing facilities have been kept. All of these reasons may prompt the states possessing nuclear weapons to oppose the idea of declaring the amounts of nuclear material produced, especially at early stages of negotiations.

However, these challenges can be addressed if state parties to the treaty are prepared to adopt a stage-by-stage approach and agree to less detailed declarations at initial stages. At first, each state could declare only the stockpile of weapon-grade nuclear material it possesses as of the date of declaration. While such minimalist declaration is important for ensuring transparency, it has limited value for verification purposes. It can be expected that over time states will gain experience and then the initial baseline declarations will be followed by further declarations updating and correcting the data presented in the baseline declarations and providing more extensive and detailed information. Consequently, rather than applying to all state's material obligatorily, verification procedures could at first stage cover only less sensitive material and consequently be gradually extended depending on the progress made and agreements reached.

Approaches to verification

There is shared understanding that the FMCT should envisage effective international control and that verification should be an integral part of the treaty. This implies that if the past production is included in the treaty scope, nuclear-weapon states would have, in addition to

declaring their stockpiles of weapon-grade material, to consent to the application of international verification measures to the declared materials intended for nuclear weapons. As in the case with declarations, in practice verification of nuclear material for nuclear-weapons programmes would become an extremely difficult and challenging task due to such reasons as the duration of military programmes, their scale and complexity, national security concerns and difference of the states' nuclear material accounting practices. This is especially true of verifying the past production of nuclear fissile materials.

Challenges of developing a verification mechanism

An effectively verifiable FMCT should provide assurances that no state party conceals significant stockpiles of weapon-grade nuclear material.

For the purposes of the IAEA safeguards, the main objective of verification is to check the correctness and completeness of data provided in the states' declarations and the supporting documents. It is evident that FMCT verification system should be based on the same principles.

Correctness is the exact matching of the declaration to the verified data on the declared nuclear material, including on its quantity, storage locations, physical and chemical form and isotopic composition. Conceptually, correctness verification is a relatively simple task, as the accuracy of the declaration is confirmed through direct measurements, and the collection and analysis of samples of materials included in the declaration and provided for inspection by the state.

To verify the declaration completeness, it should be confirmed that all the material the state must declare, have been included in the declaration, that is, that the state has no undeclared material kept in violation of the agreement.

To assess the declaration completeness, one should analyze the history of the state's nuclear programme and to answer the following questions:

- Does the history of material production described in the declaration match the current situation observed by the inspectors?

- How thoroughly can the documents pertaining to past production can be examined?

- Can the discrepancies between the data on stockpiles presented in the declaration and the examination results imply that the state has concealed material from verification?

- Can the state have undeclared material?

The United States' and Russia's nuclear programmes have many decades' production histories that are extremely complex. What is more, obtaining initial production and operating documents, including the records in the facility operation registers will become increasingly difficult over time. In case of HEU production, these records provide information on enrichment technologies, cascade assemblies, their separation work, operating temperatures and pressures, the quantity and type of raw materials and waste, and the enrichment of end-product. To estimate plutonium production, one will need information on reactor type and design, as well as data from production reactors operation register on the type of coolant and moderator, the composition of the core, including loading configuration and type of fuel, water coolant consumption and its inlet/outlet temperature, and fuel burnup of the fuel extracted. One also needs information on the spent fuel reprocessing methods, the patterns and lists of reagents used at each stage of the process, the quantity and type of the input materials, including the design of the fuel, the origin of the lot, the composition of waste, and total weight and isotopic composition of the separated plutonium.

This extensive list of necessary data hampers reaching the required completeness of verification of the fissile material production history.

Challenges associated with measurement uncertainty

Even if all the records of material production are kept, they contain uncertainties due to difficulties encountered during practical measurements, possible measurement errors and errors in nuclear

materials accounting during their processing. Nuclear material accounting and control system is based on the following elements:

- recording the measured weight of the available material from the moment of its production to its subsequent use, alteration or loss;
- tracking and measuring the incoming and outgoing nuclear material at the relevant facilities;
- periodic measurement of the available quantity of the material and its composition;
- checking the records of the materials while transferring the materials during transactions, and checking the registry of available materials against their actual quantity.

Challenges the states will face while preparing baseline declarations, would be similar to those encountered while checking such declarations, as both baseline declarations and their verification based on recovered records of nuclear material production, would contain uncertainties. Due to varying methods and practices used for nuclear material record-keeping and control, the accuracy of such verification may vary from country to country. Even if uncertainties could be brought to a low percentage rate of a total amount of material produced, such uncertainties would be extremely significant in absolute terms. For example, an uncertainty of declarations estimating HEU produced by the United States or Russia of about only 1% would physically amount to 8 and 12 tons of HEU for the United States and Russia, respectively.⁶ This quantity of nuclear material would be sufficient to produce 400-600 nuclear weapons.

To increase the accuracy of data on the quantity of nuclear materials produced obtained through the production records and presented in the declarations, both the declaring state and the inspectors verifying the declarations could use nuclear archaeology methods.⁷

⁶ Russia has produced about 1200 tons, and the US about 800 tons of HEU. See: International Panel on Fissile Materials, Global Fissile Material Report 2010: Balancing the Books: Production and Stocks, 2010 <<http://ipfmlibrary.org/gfmr10.pdf>>.

⁷ Fetter, S., 'Nuclear Archaeology: Verifying Declarations of Fissile-Material Production', *Science & Global Security*, 1993, vol. 3, pp. 237-259.

Physical methods to estimate plutonium production at plutonium production reactor over its operating life rely on the fact that neutrons absorbed in the moderator and permanent structural components of the reactor core change the isotopic composition of those. In case of uranium-graphite production reactor, with the data on isotopic composition of the samples collected, information on the physics of the reactor and records from the operation registry, one can estimate the total quantity of the plutonium produced over the operating life of the reactor with an uncertainty below 2%. The accuracy of estimations of end plutonium production taking into account the uncertainties resulting from irradiated fuel reprocessing loss can be expected to reach 3-7%.⁸ Unfortunately, no proven methods for estimating the quantity of material produced in heavy-water-moderated reactors have been developed so far. Furthermore, by now some of the production reactors that operated in the past, have been dismantled.

Verifying HEU production at enrichment facilities will also necessitate access to the records on the quantity of incoming uranium raw material, the records on every shipment of end product, including the quantity of the material and its enrichment level, and the records on the quantity and the enrichment level of waste for the whole operating life of the facility. Verifying the correctness of these records would be complicated by such factors as the variety of enrichment technologies used (diffusion and/or centrifuge), the enrichment of recycled uranium, low-enriched uranium (LEU) production to supply fuel for nuclear power reactors, enrichment of residues, and widely varying U-235 concentration in the enriched material and residues. As a result, the records pertaining to the quantity and concentration of input and output material for different operations are far from perfect. This may bring about considerable discrepancies between the declared HEU production and the results obtained during the verification of records of HEU production for the long history of the enrichment programmes. For the United States and Russia, whose HEU production was considerably

⁸ Wood, T.W., Reid, B.D., Smoot, J.L., Fuller, J.L., 'Establishing Confident Accounting for Russian Weapons Plutonium', *The Nonproliferation Review*, 2002, vol. 9:2, pp. 126-137.

higher than those of other nuclear-weapon states, this discrepancy can be especially significant.

In general, the United States National Academy of Sciences concluded that increasing the accuracy of the estimations of nuclear materials produced and used throughout the production history, additional efforts of international experts will be necessary in order to develop a method for accurate estimation of HEU production based on physical measurements for the benefit of both the declaring state and the inspectors.⁹

* * *

Assuming that the nuclear-weapon states consent to the inclusion of past production of weapon-grade nuclear materials in the scope of FMCT, and taking in consideration the above, three conclusions can be made.

1. States possessing nuclear weapons would hardly be prepared to declare all the details pertaining to their available stockpiles of weapon-grade nuclear materials from the very start. This is explained by the reasons of national security and the long period of time needed to study and assess their nuclear materials production history in order to prepare their baseline declarations. Because of political and technical issues, it would be advisable to agree on a stage-by-stage approach to the declaring process. The baseline declaration could be followed by subsequent declarations containing extended and more detailed data. It can be expected that specific nature of declarations will evolve over time as the experience is acquired and the confidence in the verification process is strengthened.

2. International scientific cooperation is necessary in order to resolve all technical and political issues associated with the elaboration of methods for accounting, exchange of information on the available stockpiles of the materials, as well as of detailed provisions governing

⁹ National Academy of Sciences, *Monitoring Nuclear Weapons and Nuclear-Explosive Materials* (National Academies Press, 2005).

the verification of stockpiles, especially the stockpiles of materials in sensitive forms. Collaboration on verification procedures and technical methods should be supplemented by continuous dialogue of international experts on practical approaches aimed at achieving effective baseline declarations and verification mechanisms.

3. One should not expect that verification procedures will ensure absolute credibility of the declarations presented. The reasons for that include the long history of military programmes, their scale and complexity, the absence of rigid accountancy practices during the early periods of production, the loss of information and the presence of contradictory records in operating registers, as well as questions pertaining to the reliability and accuracy of quantitative measurements and the related uncertainties. It is evident that verification will never be able to fully address the lack of certainty.

Yet ensuring confidence in the adequacy of the provided data on a state's stockpile of weapon-usable fissile materials will eventually depend on political decision. In addition to technical analysis and verification results, it will depend on the general level of the mutual trust among the FMCT states parties, and their perception of benefits of the proposed treaty.

6. BLUEPRINT FOR TRANSCENDING THE EUROPEAN SECURITY CRISIS

Andrey ZAGORSKY

The assertion that the European security order now finds itself in a protracted *crisis* is a common place. But this crisis distinguishes itself from those of 1999 (NATO air campaign against Yugoslavia) and 2008 (short war in Georgia): for the first time since the end of the Cold War it has taken the form of a standoff between Russia and the West reminiscent of the bipolar Cold War time confrontation. It should not surprise, therefore, that, against this background, all sides turn to proven methods of mutual deterrence practiced in the previous epoch.

Assessments of the causes and origins of the current standoff diverge sharply.¹ The West accuses Russia of having broken fundamental principles of international law by violating the territorial integrity of Ukraine (incorporation of the Crimea, full support of the self-proclaimed Donetsk and Luhansk Peoples Republics in the Eastern Ukraine). Moscow, in its turn, insists that the Ukraine crisis was not the

¹ See, for instance: Back to Diplomacy: Final Report and Recommendations of the Panel of Eminent Persons on European Security as a Common Project, Nov. 2015, pp. 21-29; Frear, T., Kulesa, L., *Competing Western and Russian narratives on the European order: Is there common ground?* Conference Report (European Leadership Network: London, Russian International Affairs Council: Moscow, 2016); *Managing Differences on European Security in 2015. US, Russian and European Perspectives* (Atlantic Council: Washington, European Leadership Network: London, Russian International Affairs Council: Moscow, 2015); *Security Narratives in Europe. A wide Range of Views*, ed. by W. Zellner (Nomos: Baden-Baden, 2017).

cause but the consequence and the culmination of problems that were accumulating in Russia–West relations for a longer period of time. Nevertheless, unlike in 1999 or 2008, the relations between Russia and the West are now again at the core of the European security debate alongside with many other issues (such as the migration challenge to the members of the European Union, Brexit, international terrorism and other forms of transnational organised crime, political populism spreading in Europe against the background of the migration crisis, China’s impact on global and regional affairs, etc.).²

Another common place in contemporary literature is the assertion of *inadequacy* of the European security architecture as it was formed after the end of the Cold War. This assertion is correct since European security organisations have failed to prevent the Ukraine crisis, as they failed to prevent the 1999 and 2008 crises. However, it is only partially correct. The European security architecture evolved after the end of the Cold War on the basis of a different threat assessment. In the 1990s, it concentrated on the prevention and resolution of inter-ethnic conflicts. In the 2000s, major security threats to European countries were believed to generate far from the continent first of all by transnational operations of non-state actors, including terrorist ones. It was primarily this threats assessment that informed the transformation and adjustment of multilateral European security institutions to the new landscape. Respectively, the European architecture was not prepared to the most recent recidivism of ‘bipolarity’, or to the regulation of crises that directly or indirectly involve major global or regional powers.

Still, and again, the assertion of inefficiency of contemporary European security architecture is correct only to some extent. Despite the obvious fact that it has failed to prevent the Ukraine crisis, it did not allow it to grow out and to degenerate into a direct military confrontation between Russia and the West (Russia and NATO) over Ukraine. It was first and foremost the OSCE that played a remarkable role in reducing the damage from the current crisis.

² Zellner, W., et al., *European Security – Challenges at the Societal Level* (OSCE Network of Think Tanks and Academic Institutions: Hamburg, 2016).

Apart from the primary importance of settling the conflict around Ukraine, the contemporary crisis urges to introduce appropriate *correctives in the European security architecture* taking into account the explicit ‘bipolar moment’ of the crisis. However, relevant correctives are not yet discussed in official formats. The settlement of the crisis in the Eastern Ukraine on the basis of the 2015 Minsk accords is a precondition put forward by Western countries. It is unlikely that this position will be reconsidered in the short run given the requirement of consensus within the EU and NATO. In both organisations, the positions of member states on this issue, as well as on lifting sanctions against Russia remain controversial. In addition to this, the Russia–West standoff in Europe is now further complicated by new episodes and themes which are no longer related to the Ukraine crisis. The settlement of the latter increasingly becomes hostage to the general Russia–West standoff.

Nevertheless, discussing the main avenues of adjusting the existing European security architecture is one of the most important prerequisites for getting out of the current deadlock in Russia–West relations. It appears that the within the dialogue that should begin sooner or later special attention should be paid to the following issues (apart from the Ukraine crisis and many other issues that are on the agenda).

Firstly, whether the diverging Russian and Western views on principled issues of the European security order can be reconciled? This could be eventually done by resolving the central controversy in the contemporary debate, that of the interrelationship between the *freedom of alliances* which lies at the core of the Western policy and is regularly overemphasized in the West, and the requirement to consider legitimate security concerns of other states while exercising this freedom (*indivisible security principle*) which lies at the core of the Russian policy.

Secondly, the *beginning arms race in Europe should be arrested, if not reversed*, and the possibility of inadvertent escalation of dangerous military incidents along the NATO–Russia contact lines at land and sea in the Baltic and the Black Sea areas should be properly managed.

Thirdly, appropriate security guarantees should be agreed to address concerns of countries that find themselves sandwiched between NATO and Russia and are members of neither the alliance, nor of the Collective Security Treaty Organisation (CSTO), in order to make the *maintenance of the status of non-aligned countries* more appealing to them than the desire to join any of the alliances.

Fourthly, Russia and the EU should agree on the means of making the association with the European Union for the countries of Eastern Europe (for now, these include Georgia, Moldova, and Ukraine) compatible with the maintenance and expansion of their economic cooperation with Russia and other members of the Eurasian Economic Union (EAEU) in order not to deprive them from the benefits of the economic cooperation with both the West and the East.

This chapter sketches the contours of possible responses to the questions above. Those questions should be explored in greater detail when Russia and the West embark on the path of cooperatively transcending the current crisis in their relations.

Freedom of alliances and indivisibility of security

Against the background of the debate over the ineffectiveness of the contemporary European security architecture, some Russian experts raise the question of abandoning the principles of inter-state relations enshrined in the 1975 Helsinki Final Act (although they do not specify which particular CSCE/OSCE principles should be abandoned by Russia – those of sovereign equality, territorial integrity, inviolability of frontiers, non-intervention in internal affairs, respect for human rights, self-determination of peoples or any other). They suggest to return either to the Yalta-type order that was based on the division of Europe into spheres of influence, or to some sort of ‘concert’ of European major powers complemented by China in order to balance the influence of Western powers.³ Policy scenarios which are considered

³ Karaganov, S., ‘There are no easy solutions. On the prospects for Russo-European relations’, *Mezhdunarodnaya zhizn*, 2015, no. 9, pp. 24-25 [in Russian]; Yakunin, V.,

suggest a 'resolute pivot' of Russia to China and Eurasia and ultimately imply Russia's self-isolation in Europe.⁴

The voices of those in the West who advocate a policy of isolating Russia also got stronger against the background of the Ukraine crisis with their public resonance further increasing as the crisis keeps deepening. At the same time, suggestions to establish a 'new Yalta' order or a new 'concert' of major powers do not find open ears or trigger enthusiasm among European policy-makers and experts.⁵

From our point of view, any adjustment of the European security order should avoid abandoning the Helsinki principles. Instead, it should build upon a reconfirmation of those principles alongside with other CSCE/OSCE commitments. At the same time, it should concentrate on achieving a more cohesive interpretation of those principles, as well as of their interrelationship. Specific measures should be agreed in order to improve compliance with those principles and give them greater effect. Apparently, both Russia and the West generally move in that direction. Russian diplomacy anticipates the need to reconfirm all Helsinki principles and to agree on 'their uniform interpretation and practical implementation by all [OSCE] participating

'Yalta – Potsdam – Helsinki – lessons from history for the contemporary agenda', *Mezhdunarodnaya zhizn'*, 2016, no. 1, pp. 66-72 [in Russian].

⁴ Bordachev, T.V., Russia and the European Union in the Berlin–Washington European order. In *New international relations: Main trends and challenges to Russia*, ed. by A.V. Lukin (Mezhdunarodnye otnosheniya: Moscow, 2018), pp. 320-339 [in Russian].

⁵ See: Krumm, R., *Multipolar or Multilateral? A choice of models for the security order 2.0: Congress of Vienna, Yalta, Helsinki* (FES Regional Office for Cooperation and Peace in Europe: Vienna, 2018). See also the 2017 discussion in the 'Osteuropa' Journal [in German]: Voigt, K.D., „Verhalten ändern, Vertrauen bilden. Moskau, der Frieden und die Sicherheit in Europa“, *Osteuropa*, 2017, vol. 67, no. 3-4, pp. 97-101; Heinemann-Grüder, A., „Wider den Sonderfrieden. Eine Replik auf das Konzept vom „Pluralen Frieden““, *Osteuropa*, 2017, vol. 67, no. 3-4, pp. 103-108; Eberle, J., Handl, V., „Völkerrecht statt Einflusszonen! Der „Plurale Frieden“ fällt in altes Denken zurück“, *Osteuropa*, 2017, vol. 67, no. 3-4, pp. 121-127; Meister, S., „Wasser auf Putins Mühlen. „Pluraler Frieden“ – russlandfixierte Ostpolitik“, *Osteuropa*, 2017, vol. 67, no. 3-4, pp. 129-131; Behrends, J.C., „Ostpolitik ist europäische Sicherheitspolitik. Eine Erwiderung auf Dembinski&Spanger“, *Osteuropa*, 2017, vol. 67, no. 3-4, pp. 135-142.

states under contemporary conditions.’⁶ A similar approach can be observed in the West. Alexander Vershbow, a senior American diplomat and former Assistant Secretary General of NATO acknowledges, for instance: ‘The Helsinki accords are good accords, we should not abandon them. However, we should complement them by something new in order to build mutual confidence.’⁷

Russian and Western perspectives on which principles should be further elaborated in order to give them greater effect are most likely to differ significantly, whenever the issue becomes subject to dialogue. Although no final official position of Moscow has yet been formulated, Russian diplomats have repeatedly highlighted what issues may be put on the agenda. These may concern the clarification of the interrelation of the principles of territorial integrity of states and the right to self-determination of peoples; further elaboration of the principle on non-intervention in internal affairs and, in particular, a confirmation of impermissibility of subversive actions or of support for any unconstitutional change of government and for extremist forces; recognition of states’ right to maintain special ties with compatriots abroad and to protect their rights.⁸ The need to give proper effect to the principle of equal (indivisible) security and to the commitment not to pursue national security interests at the expense of others enjoys special attention in Russian approaches.

At the official level Western countries do not raise the need to further elaborate on and clarify European security principles – not least because they prefer not to discuss it as long as the Ukraine crisis is not settled, – though it is subject to experts’ deliberations.⁹ It is obvious,

⁶ Meshkov, A., ‘Russia – Europe: What next?’, *Mezhdunarodnaya zhizn*, 2015, no. 9, p. 14 [in Russian].

⁷ ‘Our guest: Alexander Vershbow, former US Ambassador to Russia, ex-Assistant Secretary General of NATO’, *Echo Moskvy*, 14 Feb. 2018 <<https://echo.msk.ru/programs/beseda/2147290-echo/>> [in Russian].

⁸ Kelin, A., ‘A retrospective view and the security of the world order today’, *Mezhdunarodnaya zhizn*, 2015, no. 9, pp. 64-65 [in Russian]; Meshkov, A., op. cit., p. 14.

⁹ See, for instance: Kaim, M., Maull, H.W., Westphal, K., *Die gesamteuropäische Ordnung vor einer Zäsur – drei Leitlinien für einen Neubeginn*, SWP-Aktuell, 2015, no. 14 [in German].

however, that the freedom of alliances, being an indispensable part of the principle of sovereign equality of states, enjoys the centrality in Western approaches. This was repeatedly emphasized during the debates over the Medvedev proposal for a European Security Treaty.¹⁰ It is emphasized in contemporary discussions, too.¹¹

Therefore, it seems plausible that any dialogue on further elaboration of the principles of European security within the OSCE framework would have to concentrate on the interrelation of the concepts of *equal, or indivisible security* (which is at the heart of Russia's policy) and that of the freedom of alliances (which lies at the heart of the Western policy). Any contemporary clarification of the interrelationship between these two principles should build upon the CSCE/OSCE documents which explicitly bring together the states' 'sovereign right to belong or not to belong to international organisations,' including the right 'to be or not to be a party to bilateral or multilateral treaties, including treaties of alliance,' on the one hand, and the need to bear 'in mind the legitimate security concerns of other states' when exercising this right, on the other hand. This linkage is explicitly spelled out, in particular, in the 1994 OSCE Code of Conduct on Politico-Military Aspects of Security.¹²

Many CSCE/OSCE documents adopted in the 1990s (the Charter of Paris for a New Europe, the 1992 Helsinki Document, the 1994 and 1996 Budapest and Lisbon Documents, the 1999 European Security Charter, a series of decisions of the OSCE Forum for Security Cooperation) elaborate in greater detail on how the participating states understand indivisibility of security and the commitment not to pursue

¹⁰ Biden, J.R. Jr., 'Advancing Europe's Security', *The New York Times*, 6 May 2010 <http://www.nytimes.com/2010/05/06/opinion/06iht-edbiden.html?_r=1&page_wanted=1>; Javier Solana: We tend to believe that security inside Europe is largely 'completed', Dr. Javier Solana Madariaga, High Representative for the Common Foreign and Security Policy of European Union, Speech at the 45th Munich Security Conference, Feb. 2009 <<http://eurodialogue.org/osce/39>>.

¹¹ Kaim, M., Maull, H.W., Westphal, K., op. cit.

¹² Code of Conduct on Politico-Military Aspects of Security, 3 Dec. 1994, IV.10-11 <<https://www.osce.org/fsc/41355?download=true>>.

national security interests at the expense of others.¹³ In a consolidated form, this understanding includes the following elements:

1. indiscriminate implementation, in good faith, of *all* OSCE commitments by *all* states;
2. further pursuit of arms control, disarmament and confidence- and security-building;
3. military restraint and sufficiency;
4. commitment not to pursue national security interests at the expense of others implying the renunciation of: *a*) the use or threat of force; *b*) military domination over any other participating state and of; *c*) spheres of influence;
5. freedom of alliances (to be or not to be a member of any) provided that the relevant security arrangements are in harmony with OSCE principles and commitments;
6. explicit host nation consent to the deployment of foreign troops on its territory.

In the current context, the interrelation between the concept of indivisible security and that of the freedom of alliances implies the need to take into account legitimate security concerns and interests of other countries and the commitment to pursue consultations with the states concerned in case of an eventual change of status of any country as regards its membership in alliances. Such a commitment does not give anyone (including Russia) a veto power over the exercise of a sovereign choice of any state. However, the discussion of the external aspects of the German unification in 1990, of the terms of NATO enlargement in the late 1990s, and of the eventual impact of the EU 2004 enlargement on EU–Russia relations can serve as examples of practicing the principle of indivisible security.

¹³ For a review of the relevant provisions of those documents see: Zagorsky, A.V., *Russia in the European security order* (IMEMO: Moscow, 2017), pp. 131-135 [in Russian].

Arms race

Against the background of the Ukraine crisis, first of as a consequence of the incorporation of the Crimea, as well as of the intensification of military activities in the European part of Russia (increase in number and size of military exercises conducted without prior notification and invitation of observers, more frequent snap exercises which do not fall under the OSCE provisions concerning prior notification and observation¹⁴) Moscow's policy is perceived by many in the West as a revisionist one.¹⁵ This has boosted fears, particularly in the Baltic and some other states in the region, that they can also become target of the Russian 'aggression' or domestic destabilization.¹⁶

As a result, beginning with 2014, the Alliance returned to the policy of deterring Russia at its eastern flank by intensifying military activities in the Baltic and Black Sea regions (constant air and sea patrolling, intensification of military exercises and reconnaissance flights conducted from 2015); designation of high readiness forces for the purposes of reinforcement to the eastern flank in case it needs to be defended; development of the necessary reinforcement infrastructure; deployment to the Baltic states and Poland of four multinational battle groups.

¹⁴ *Trends in Force Posture in Europe*, ed. by M. Terlikowski, PISM Strategic File, 2017, no 1, pp. 5-6.

¹⁵ Dembinski, M., Schmidt, H.-J., Spanger, H.-J., „Einhegung: Die Ukraine, Russland und die europäische Sicherheitsordnung“, HSKF-Report, 2014, no. 3 (Hessische Stiftung Friedens- und Konfliktforschung: Frankfurt a. M., 2014) [in German]; Ischinger, W., „Eine Aufgabe für Generationen. Der Westen muss gegenüber Russland auf eine neue Doppelstrategie setzen“, *Internationale Politik*, Jan./Feb. 2015, pp. 32-33 [in German].

¹⁶ Chairmanship Perception Paper (Intersessional Dialogue on Military Doctrines). In *Promoting military stability and security. Key findings and documents of the Intersessional Dialogue on Military Doctrines and the Breakout Workshops on CSBMs*. Austrian OSCE Chairmanship 2017 (Military Policy Division of the Federal Ministry of Defence and Sports of the Republic of Austria: Vienna, 2017), pp. 63-64; Vanaga, N., How to address new threats. In *Promoting military stability and security. Key findings and documents of the Intersessional Dialogue on Military Doctrines and the Breakout Workshops on CSBMs*, p. 31.

The intensification of military activities of both Russia and NATO along the line of their direct contact increases the risks of not only dangerous military incidents but, also, of misinterpretation of the activities of the other side which can lead to unintended or inadvertent escalation thus increasing the risk of military confrontation.¹⁷ Nevertheless, despite the intensification of military activities, both the Alliance and Moscow so far adhere to their mutual military restraint commitments of 1997-1999.

In the 1997 NATO–Russia Founding Act, the member States of the Alliance not only reiterated that they neither had an ‘intention, no plan and no reason to deploy nuclear weapons on the territory of new members,’ nor would they ‘foresee any future need to do so.’ They also reiterated that ‘in the current and foreseeable security environment, the Alliance will carry out its collective defence and other missions by ensuring the necessary interoperability, integration, and capability for reinforcement rather than by *additional permanent stationing of substantial combat forces* [emphasis added]. Accordingly, it will have to rely on adequate infrastructure commensurate with the above tasks. In this context, reinforcement may take place, when necessary, in the event of defence against a threat of aggression and missions in support of peace consistent with the United Nations Charter and the OSCE governing principles, as well as for exercises consistent with the adapted CFE Treaty, the provisions of the Vienna Document 1994 and mutually agreed transparency measures.’¹⁸

¹⁷ See for instance: Claesson, M., Common versus diverging threat assessments in the OSCE region. In *Promoting military stability and security. Key findings and documents of the Intersessional Dialogue on Military Doctrines and the Breakout Workshops on CSBMs*, p. 27; Braunstein, P., How to address new threats. In *Promoting military stability and security. Key findings and documents of the Intersessional Dialogue on Military Doctrines and the Breakout Workshops on CSBMs*, p. 46; Kühn, U., *Preventing Escalation in the Baltics. A NATO Playbook* (Carnegie Endowment for International Peace: Washington DC, 2018); Kulesa, Ł., Frear, T., Raynova, D., Managing Hazardous Incidents in the Euro-Atlantic Area: A New Plan of Action, European Leadership Network Policy Brief, Nov. 2016.

¹⁸ Founding Act on Mutual Relations, Cooperation and Security between NATO and the Russian Federation, 27 May 1997, <<http://www.nato.int/docu/basic/txt/fndact-a.htm>>.

Russia also committed itself to ‘exercise similar restraint in its conventional force deployments in Europe.’¹⁹ This general commitment was specified in a reciprocal way in 1999: ‘In the context of the political commitments and efforts of other States Parties to the Treaty on Conventional Armed Forces in Europe (CFE Treaty), in particular those aimed at further strengthening stability in Central Europe, the Russian Federation will show due restraint with regard to *ground TLE levels and deployments in the region which includes the Kaliningrad oblast and the Pskov oblast* [emphasis added]. In the present politico-military situation, it has no reasons, plans or intentions to *station substantial additional combat forces, whether air or ground forces, in that region on a permanent basis* [emphasis added]. If necessary, the Russian Federation will rely on the possibilities for operational reinforcement, including temporary deployments, in a manner compatible with the CFE Treaty mechanisms.’²⁰

Russia and NATO have not reached an agreement of the threshold separating ‘substantial’ combat forces from ‘non-substantial,’ although they repeatedly attempted to do so. However, in a 2009 draft Agreement Governing Relations Among NATO–Russia Council Member States, Moscow documented its understanding of permanent stationing of ‘substantial’ combat forces. ‘Permanent’ was proposed to mean longer than 42 days. ‘Substantial’ combat forces were defined as no more than one brigade, aviation wing and attack helicopter battalion stationed in all new member states of the Alliance together. Surpassing those limits would be allowed in exceptional cases of a threat to the security of one or more countries, however, it would require the consent of all parties.²¹

This definition of ‘substantial’ combat forces was always considered by NATO member states as minimalistic. Their understanding amounted to one brigade that could be stationed in each

¹⁹ Ibidem.

²⁰ Final Act of the Conference of the States-Parties to the Treaty on Conventional Armed Forces in Europe. In ‘Istanbul Document 1999’, OSCE, Istanbul Summit 1999, p. 243 <<https://www.osce.org/mc/39569?download=true>>.

²¹ Nopens, P., A New Security Architecture for Europe? Russian Proposals and Western Reactions, Egmont Institute Security Policy Brief, 2010, no. 10, pp. 2-3.

country, However, considering the 2016 decision to station the four battalion size battle groups in the Baltic States and Poland they proceeded on the basis of exactly the ‘minimalistic’ Russian definition in order to avoid controversies over whether the forward deployed troops exceeded the limit of substantial combat forces or not (the size of one brigade usually varies depending on the country and on the type of the brigade from 3.5 to 5 thousand troops and from three to eight battalions; a US armored brigade, for instance, has around 5 thousand troops).

Although, in 2016, some members of the Alliance proposed to no longer abide by the Founding Act provisions due to the changed security landscape in its eastern flank, other states linked their agreement to station multilateral battle groups to sticking to those provisions.²² The overall strength of the four multinational battle groups deployed in the Baltic States and Poland since 2017 does not exceed 4,500 troops. It thus fits into the Russian minimalistic definition of ‘substantial’ combat forces of 2009.

The Alliance still remains within this narrow understanding of military restraint. Despite continued debates over the expedience of further increasing its military forward presence in the East, in 2018, while preparing for the Brussels summit, NATO limited itself to strengthening its deployable reinforcement capabilities by increasing the level of readiness of some forces of its member states and to re-establishing, for that purpose, of the Atlantic command.²³ This is why we do not see any reason to assert that that the Alliance has already exceeded the military restraint commitments under the Founding Act.

Western analysts proceed on the basis of understanding that Russia, despite the rhetoric, so far also remains within its late 1990s commitment to exercise military restraint and does not station additional substantial combat forces in the Pskov and Kaliningrad

²² Erlanger, S., ‘Missile Bases Bolster NATO in New Stance with Russia’, *The New York Times*, 6 May 2016, p. 6.

²³ Press conference by NATO Secretary General Jens Stoltenberg following the meeting of the North Atlantic Council in Defence Ministers’ session, 7 Jun. 2018 <https://www.nato.int/cps/en/natohq/opinions_155264.htm>.

regions.²⁴ The recent deployments of Russian combat forces in the Western and Southern military districts²⁵ did not intend to strengthen the capabilities in the above regions. Verification measures conducted by NATO members within the frameworks of the OSCE Vienna Document on confidence- and security-building measures and the Open Skies Treaty have not registered here any increase in permanently stationed Russian forces or unusual military activities.²⁶

This is the reason why it is possible to assert that the problem is not the stationing of Russian or NATO forces in excess of the levels of military restraint they agreed upon later in the 1990s. The problems that require a cooperative solution if we want to avoid an arms race along the Russia–NATO line of contact are distinct. There are three of them.

Firstly, it is the prospect of further military build-up in the Baltics. Although, in 2018, NATO did not take any decisions leading to the stationing there of additional forward deployed forces, the debate on the issue within the Alliance is not yet over. At some point in time in the foreseeable future, NATO may exceed the Russian ‘minimalist’ definition of ‘substantial’ combat forces. This would jeopardize further implementation, by both sides, of the respective military restraint commitments under the Funding Act and, no doubt, would boost arms race in the region.

Secondly, it is not only the Alliance’s decisions that can make a difference for Russia, but also decisions made by its member states independently and, first of all, the prospect of the stationing of more

²⁴ *Intelligence Risk Assessment 2017. An assessment of developments abroad impacting on Danish security* (Danish Defence Intelligence Service: Copenhagen, 2017), p. 18.

²⁵ In 2015, the re-establishment of the 144th motor rifle division in Yelnya (Smolensk region) was announced, In 2016, units of the 28th motor rifle brigade arrived in Klinty (Bryansk region) from Ekaterinburg to form the basis for the formation of two motor rifle regiments to be stationed there. In 2015, the re-establishment of the 10th guards armored (tanks) division in Boguchar (Voronezh region), of a motor rifle brigade in Baluyki (Belgorod region), and, in 2016, the formation of the 150th motor rifle division in Novochoerkassk (Rostov region) were announced. See: Nikolskiy, A., ‘Not very fresh invasion’, *Vedomosti*, 19 Aug. 2016, p. 2 [in Russian].

²⁶ Richter, W., Sub-Regional Arms Control for the Baltics: What is Desirable? What is Feasible?, Deep Cuts Working Paper, July 2016, no. 8, p. 2.

substantial US combat forces in the region on the basis of bilateral agreements with individual states. This is why Russia pays particular attention to measures taken by the US ‘beyond’ those agreements that have been reached within the multilateral NATO framework: pre-storing major weapons systems and equipment for one mechanized brigade in the eastern flank (the personnel would be transferred to Europe if needed²⁷), the establishment of divisional headquarters in Poland.

Approaching the 2018 NATO summit which did not consider decisions to increase the Alliance’s forward presence in the Baltics, Poland was seeking the stationing of a US armored division on its territory on the basis of a bilateral agreement.²⁸ Such decision formally would not violate the Founding Act provisions. However, they would increase concerns within the Russian defence establishment.

Thirdly, although the development of the reinforcement infrastructure and the temporary deployment of forces (e.g., for the purposes of military exercises) is explicitly allowed by the Founding Act, the more frequent readiness checks and military exercises in the vicinity of the borders of the opposite side, the possibility to quickly deploy more substantial combat forces using the reinforcement infrastructure are perceived by defence experts as activities that can trigger unintended escalation under conditions when each side thinks in terms of worst case scenarios. For this reason, it is considered important to complement existing agreements concerning military

²⁷ Warsaw Summit Communiqué. Issued by the Heads of State and Government participating in the meeting of the North Atlantic Council in Warsaw 8-9 July 2016, 9 July 2016 <http://www.nato.int/cps/en/natohq/official_texts_133169.htm?selectedLocale=en>. See also: Erlanger, S., ‘Tested by the Russians, NATO Struggles to Maintain its Credibility’, *The New York Times*, 1 Jun. 2016, p. 4; Landler, M., Cooper, H., ‘U.S., in a Signal to Putin, Fortifies Eastern Europe’, *The New York Times*, 2 Feb. 2016, p. 6; ‘Pentagon to boost Europe funding in message to Moscow’, *The Financial Times*, 7 Dec. 2015, p. 4.

²⁸ Press conference by NATO Secretary General Jens Stoltenberg following the meeting of the North Atlantic Council in Defence Ministers’ session, 7 June 2018.

restraint by measures increasing stability and predictability of the military-political situation in ‘sensitive’ areas.²⁹

For the sake of preventing arms race and limiting the risks of unintended military escalation, it appears urgent that Russia and the NATO member states, building upon the Founding Act – the single still operative document limiting military activities of the Alliance in the vicinity of Russian borders – agree, as a point of departure, on the following principled issues.

Firstly, to confirm that so far both sides adhere to their military restraint commitments.

Secondly, to declare that they intend to further exercise military restraint on the basis of the Founding Act as the main instrument (alongside with the 2002 Rome Declaration) governing their relations.

Thirdly, to state that, for this purpose, Russia and NATO will begin discussing measures that would allow them to arrest the arms race beginning in the Baltic region and make further additional stationing of their forces exceeding their mutual military restraint commitments unnecessary.

Such measures may include agreements not to station additional forces in the sub-region; not to conduct military exercises in an area (subject to an agreement) on both sides of the line of contact of NATO and Russia; limit the size of military exercises and not to imply scenarios of offensive operations and the use of nuclear weapons; make prior notification and invitation of observers in an agreed area mandatory regardless of the size of military activities. Special arrangements would be required for addressing both sides’ military activities implying and training their reinforcement capabilities deployable in the region.

Military restraint should be discussed between Russia and NATO rather than on a bilateral basis. It is difficult to begin such negotiations on the platform of the NATO–Russia Council (NRC) due to the lack of consensus within the Alliance that would allow to resume military-political cooperation until the settlement of the Ukraine crisis.

²⁹ See: Promoting military stability and security. Key findings and documents of the Interessional Dialogue on Military Doctrines and the Breakout Workshops on CSBMs.

However, the relevant discussions could begin outside the formal NRC framework. In the initial phase, measures agreed upon in an informal dialogue format could be implemented unilaterally and be subsequently formalized in an official agreement.

It is also expedient to restore bilateral agreements on confidence- and security-building measures between Russia and the Baltic States, and to conclude a similar agreement with Poland.

Finally, Russia and NATO could begin elaborating measures to minimize the risks of unintended escalation of dangerous military incidents in the air and at sea. Such risks have significantly increased in the recent years due to the intensification of military activities particularly in the Baltic and the Black Sea regions. The existing bilateral agreements of preventing dangerous military incidents can serve as a point of departure.³⁰ Alongside with measures to increase the effectiveness of such bilateral mechanisms, it is expedient to agree on additional measures, for instance, by establishing a NATO–Russia joint threat reduction center.

Non-aligned states

In the contemporary context, one of the most difficult tasks is arguably that of providing a set of incentives making the neutral or non-aligned status more attractive for a nation than membership in an alliance. Discussions of that issue are yet at the very early stage.³¹ Achieving that objective would require developing a complex set of measures and, in particular, of viable security guarantees that non-aligned countries would not become a terrain for Russia–West confrontation. They

³⁰ Frear, T., *Lessons Learned? Success and Failure in Managing Russia-West Incidents 2014-2018*, European Leadership Network Euro-Atlantic Security Policy Brief, Apr. 2018; Kulesa, L., Frear T., Raynova, D., op. cit.

³¹ See, for instance: *Getting Out from 'In-Between'. Perspectives on the Regional Order in Post-Soviet Europe and Eurasia*, ed. by S. Charap, A. Demus and J. Shapiro (RAND Corporation: Santa Monica, 2018); Charap, S., Shapiro, J., Demus, A., *Rethinking the Regional Order for Post-Soviet Europe and Eurasia* (RAND Corporation: Santa Monica, 2018).

probably would also seek guarantees that they would not be included into the Russian (or Western) sphere of influence *against their will*. In return, non-aligned states would commit themselves not to allow permanent stationing of foreign combat forces on their territory, not to receive temporary deployments of foreign troops and not to permit other nations to use their military infrastructure. They also should guarantee that their territory would not be used for intelligence operations or other hostile activities against neighbouring states. The guarantor states would also commit themselves not to station combat forces of the territory of non-aligned countries, and not to use their territory for intelligence operations or other hostile activities against other parties of multilateral guarantees. Such an arrangement should be reinforced by a robust mechanism of consultations that would allow all parties to cooperatively discuss all eventual questions concerning compliance (or non-compliance) with respective obligations.

Multilateral security guarantees should be supported by adequate and verifiable obligations not to concentrate substantial combat forces within an area subject to an agreement alongside the borders of non-aligned states and not to conduct large scale military exercises in that area. Any military activity below the agreed threshold should be conducted in a transparent and verifiable manner.

Taking into consideration contemporary concerns expressed with regard to eventual 'hybrid' hostile activities not outgrowing into open military confrontation, non-aligned states should also receive specific guarantees of non-intervention into their internal affairs. As a first step in that direction, an international panel of eminent lawyers could be established under the auspices of the OSCE with the mandate to provide recommendations on further elaboration of the non-intervention principle acknowledging the contemporary debate over the 'hybrid' warfare. A cooperative mechanism enabling states to raise attention to cases of alleged intervention in their internal affairs could be agreed upon within the OSCE.

Another aspect of the relevant arrangement would be to make deep and comprehensive free trade of neutral states with the EU compatible with further development of their cooperation with the EAEU countries. One option to obtain this goal would be to sign a free

trade agreement between the EU and the EAEU, although neither the EU, nor Russia (for different reasons) are now prepared to seriously consider such an agreement. This option is also complicated by the fact that Belarus is not yet a member of the World Trade Organisation. Another option would be for the countries associated with the EU to keep maintaining free trade with the EAEU members provided that the eventual trade policy issues are resolved in a cooperative manner. Apart from this, the EU and the EAEU could agree to develop compatible regulatory systems and administrative practices anticipating the development of a more homogeneous common economic space.

In order to cooperatively address concerns that may arise in the future in the context of eventual changes in the status of non-aligned countries, including their military-political status, the OSCE participating states should commit themselves to conduct early consultations on all related issues in order to appropriately address security concerns of other individual states. The establishment of a respective mechanism would give effect to and facilitate the implementation of both the freedom of alliances and the indivisibility of security taking into account their interrelation to be agreed upon.

* * *

Looking for ways out of the contemporary European security crisis, experts repeatedly turn to the legacy of the preparation of the pan-European conference on security and cooperation that took place in Helsinki in 1975.³² While doing so, they take note of the fact that the conference was intensively discussed at the end of the 1960s when the USSR found itself in international isolation following the military invasion of Czechoslovakia. They suggest that the experience gained at that time can help to transcend the contemporary crisis. A respective diplomatic process could lead to adopting by a high-level pan-European conference of a substantial document updating and modernising the Helsinki principles. During the negotiation of the Helsinki Final Act

³² Krumm, R., op. cit.

the main compromise was reached by agreeing on the principle of inviolability of frontiers while, at the same time, admitting the possibility of changing frontiers ‘by peaceful means and by agreement.’ In the contemporary context, the main compromise, apparently, will have to be sought in the definition of the interrelationship between the freedom of alliances and the indivisibility of security – a commitment to respect, while exercising the freedom of alliances, legitimate security interests of other states.

Pending progress in settling the Ukraine crisis, it is hard to identify policy makers in the West who would be ready to discuss such a deal with Russia, not to speak of considering the prospect of holding a new pan-European conference – ‘Helsinki-2’ or ‘Helsinki-3’ (provided that the ‘Helsinki-2’ pan-European summit conference, in fact, was held in Paris in 1990). However, in the late 1960s, too, when the consideration of the proposal for a pan-European conference intensified, several preconditions for beginning its diplomatic preparation were put forward. Those included the normalization of relations between the Federal Republic of Germany with its eastern neighbours, reaching a quadripartite agreement on Berlin, and the consent of Moscow to enter into negotiations on the limitation and reduction of armed forces and armaments in Central Europe (following the 1968 NATO proposal). By the end of 1971, these conditions were met. This paved the way for the beginning of formal preparations for the pan-European conference in 1972. However, the preconditions put forward by the West did not prevent the Warsaw Pact and NATO member states to begin, already in 1969, exchanging views on substantial questions concerning the agenda of the forthcoming conference, doing so in parallel with addressing other issues.³³

The unresolved Ukraine crisis and lack of progress of the Minsk process, certainly, represent a serious obstacle for launching a new ‘Helsinki process.’ It is hard to think of holding a pan-European summit meeting as long as this crisis remains unsettled, as it was hard to think of holding the CSCE unless relations of the Federal Republic

³³ On the CSCE history see: Zagorsky, A., *The Helsinki process: Negotiations within the framework of the Conference on Security and Co-operation in Europe 1972–1991* (Human Rights Publishers: Moscow, 2005) [in Russian].

of Germany with its eastern neighbours were normalized. However, preparing the ground for new arrangements both within the OSCE, as well as within the frameworks of Russia–NATO and Russia–EU relations could and should begin right now without waiting for the final settlement of the Ukraine crisis. Moving forward on parallel tracks would facilitate appropriate outcomes on all of them.

PART II. EXPERT INSIGHTS

7. Evolution of the Shanghai Cooperation Organisation
8. Relations in the strategic triangle of China, India, and Pakistan
9. Middle East conflicts and peace settlement in Syria
10. Adjusting Russia's State Armament Programme

7. EVOLUTION OF THE SHANGHAI COOPERATION ORGANISATION

Alexander NIKITIN

It is universally recognized that regional international (inter-governmental) organisations play increasing role in the modern world politics. Relatively new aspect is an ideologically colored distinction between 'Western' and 'non-Western' international organisations. Since the times of the League of Nations Western Europe and the United States have initiated formation of such interstate alliances and organisations of political, military, and economic nature as the European Union, North Atlantic Treaty Organisation, International Monetary Fund, World Bank, etc. And while it is difficult to call purely 'Western' the whole wider family of UN-related organisations (like the International Atomic Energy Agency, UNESCO, UNCTAD, etc.), still even they often demonstrate dominance or leadership of traditional powers representing the 'Western civilisation.'

The establishment after the World War II on different continents of such regional and sub-regional organisations as Organisation of African Unity (later renamed African Union), League of Arab States, Association of Southeast Asian Nations (ASEAN), etc., resulted in first alliances forming on non-Western civilisational grounds. Finally, during the last two decades a group of international structures consciously and consistently have been positioning themselves as new 'poles of influence' and of attraction in the international system alternative to the American-centric or Western-

centric world order. Such groups include the Shanghai Cooperation Organisation (SCO), Eurasian Economic Union (EAEU), Collective Security Treaty Organisation (CSTO), BRICS alignment and several others.

Russia, China, and recently India play an active role in shaping such organisations. As Rick Rowden, a British researcher from the Sheffield University, notices, ‘In recent years Russia and China have sought to bypass the major Western-led international organisations, such as the International Monetary Fund, the World Bank, the European Union, the United Nations, the North Atlantic Treaty Organisation and the World Trade Organisation, by developing a host of new Asian-led organisations, institutions and economic and military cooperation initiatives that promise to transform the Asian continent over the next few decades.’¹

Special place in this process belongs to the Shanghai Cooperation Organisation formed on the brink of the 2000s. Today, after India and Pakistan join it as full-fledged members, SCO encompasses up to 44% of the world’s population and account for up to 20% of the world’s GDP.

The agenda of the SCO summits in Astana and Qingdao

The summit meetings of the SCO heads of state took place on June 8-9, 2017, in Astana (Kazakhstan), and on June 10, 2018, in Qingdao (China). Composition of participants of SCO summits in recent years demonstrates truly global aspirations of the organisation. In 2018, the presidents of the six ‘original’ member states (China, Kazakhstan, Kyrgyzstan, Russia, Tajikistan, Uzbekistan) for first time were joined in full membership by leaders of India and Pakistan converting the ‘Group of Six’ into the ‘Group of Eight’ or even into the ‘Big Eight’ as it is called in some media. Moreover, the summit of ‘the Big Eight’

¹ Rowden, R., The Rise and Rise of the Shanghai Cooperation Organisation, Sheffield Political Economy Research Institute, Global Political Economy Brief, 2017, no. 11, p. 1 <<http://speri.dept.shef.ac.uk/wp-content/uploads/2018/04/SPERI-GPE-Brief-No.-11-The-rise-and-rise-of-the-Shanghai-Cooperation-Organisation.pdf>>.

almost coincided in time with the summit of the ‘old’ Group of Seven (G7) which inevitably caused comparisons and juxtaposing of two associations. As the Russian Ambassador at Large Mikhail Konarovsky pointed out in the article for the Russian Council on Foreign Affairs, ‘The intention [of the SCO] to contribute in every possible way to build a new type of international relations based on the principles of mutual respect, fairness, equality and mutually beneficial cooperation, stood out in sharp contrast to the trends of protectionism, hegemony and the search for unilateral advantages demonstrated at the G7 summit.’²

The SCO summits (per long-standing tradition) are attended by secretaries-general and heads of other key intergovernmental organisations of the Euro-Asian and Asia-Pacific regions – CSTO, Commonwealth of Independent States, EAEU, Conference on Interaction and Confidence-Building Measures in Asia, ASEAN, as well as representatives of the World Bank and International Monetary Fund and a first assistant secretary-general of the United Nations.³ The regular attendance of the executive management of influential international organisations makes annual SCO summits a kind of ‘coordinating sessions’ of the Euro-Asian region with an area of responsibility exceeding sixty million sq km of the combined territory of the SCO member states. It has been confirmed by the participation of the leaders of observer states and partner states such as Belarus, Mongolia, Iran, and Afghanistan.⁴

Comparative analysis of international organisations and alignments is usually based on such criteria (parameters of comparison) as *scope* (quantity and composition of member states), *scale* (combined territory and population), *infrastructural potential* (combined GDP and other economic parameters), *organisational activity* of the alignment,

² Konarovsky, M., Bonus for the ‘Big Eight’ in Qingdao: Some Thoughts on the SCO Summit, Russian Council of Foreign Affairs, 15 June 2018 <<http://russiancouncil.ru/en/analytics-and-comments/analytics/bonus-for-the-big-eight-in-qingdao-some-thoughts-on-the-sco-summit/>>.

³ Press release on the outcomes of the SCO Council of Heads of State meeting, Kremlin.ru, 10 June 2018 <<http://www.kremlin.ru/supplement/5316>> [in Russian].

⁴ It worth mentioning that previous SCO summits were attended by the president of Turkmenistan (which holds a neutral status), representatives of Sri Lanka and Turkey.

political *influence, effectiveness* of collective activities. Concerning the first three criteria, the SCO is clearly among the top international organisations, however as regards the last three parameters the SCO remains behind many ‘old’ international organisations.

The SCO positions itself as an organisation for ‘multifaceted’ and ‘full format’ cooperation while avoiding referring to ‘integration’ or ‘integration association.’ Integration suggests merging of infrastructures, creation of super-state mechanisms, partial delegation of sovereignty to collective organs. The SCO steers clear of all that and instead stresses inviolability of its members’ sovereignty and unacceptability of external pressure on internal political and economic processes. The Qingdao Declaration adopted at the 2018 summit specifically emphasizes ‘the right of nations to determine their future and to choose their political, socioeconomic and cultural path.’⁵ Development Strategy of the Shanghai Cooperation Organisation until 2025 postulates that the SCO is the regional organisation that is ‘not envisaged as a military and political block or economic integration association with supranational governance bodies.’⁶

SCO development is dominated by rather ‘realist’ understanding that the primary role belongs to ‘strong states,’ and all the manifestations of their cooperation and interaction should not be an obstacle for the leadership of member states to pursue sovereign policy and have it their specific way. In contrast to the dialogue that is common, for example, for the European Union, the SCO discourages its members from criticizing other countries’ policies, neither it welcomes any recommendations regarding changes in other countries’ internal or external policies. In his attempt to adjust to the principles of the so called ‘Shanghai spirit,’ the Indian leader, who attended an SCO summit for the first time, refrained from usual criticism of Pakistan and from calling it a ‘terrorist-supporting state’ which Indian analysts found

⁵ Qingdao Declaration of the Council of Heads of State of the Shanghai Cooperation Organisation, Shanghai Cooperation Organisation, 10 June 2018, p. 2 <eng.sectsco.org/load/443667/>.

⁶ Development Strategy of the Shanghai Cooperation Organisation until 2025, Shanghai Cooperation Organisation, 10 July 2015, p. 3 <eng.sectsco.org/load/200162/>.

quite unusual.⁷ The member states noted in the Qingdao Declaration that ‘the interference in the domestic affairs of other states under the pretence of combatting terrorism and extremism is unacceptable.’⁸

The SCO has produced wording (sometimes complementary, sometimes contradictory) aimed to describe the development goals and socio-political ideals of the organisation. In the early 2000s, one of the first such formulas was a commitment for a common fight against ‘three evils’ – terrorism, separatism, and extremism. In that period the SCO, which grew out of negotiations on borders, focused its attention on the area of security. In the same time, the Shanghai Charter outlined the definition of a distinctive ‘Shanghai spirit’ that united its members and set it apart from other organisations. The ‘Shanghai spirit’ embodied mutual trust, parity, shared benefits, equal rights, multilateral consultations, respect for multiculturalism, pursuit of cooperative development.

The Development Strategy stated a long-term objective of ‘turning the SCO region into a one of peace, sustainable development, economic growth and progress, mutual trust, good-neighbourliness, friendship and prosperity.’ Moreover, the Strategy postulated a goal of turning the SCO into an instrument of ‘regional level of global governance.’⁹

The 2018 Qingdao Declaration contains a commitment to ‘promoting the construction of *international relations of a new type* based on mutual respect, justice, equality, mutually beneficial cooperation.’ China introduced to the Declaration an idea of ‘building a community for the shared future of humankind.’ In 2017, it was approved by a decision of the 19th National Congress of the

⁷ As *Hindustan Times* Indian newspaper put it: ‘Modi did not single out Pakistan as a source of terrorism in his speech, which, experts said, could be dictated by the fact that both countries were new members of the SCO.’ See: Patranobis, S., ‘India refuses to endorse China’s Belt and Road Initiative in SCO summit statement’, *Hindustan Times*, 10 June 2018 <<https://www.hindustantimes.com/india-news/india-refuses-to-endorse-china-s-belt-and-road-initiative-in-sco-summit-statement/story-sk9cC8d1zD3Zwje6Rnh0uI.html>>.

⁸ Qingdao Declaration of the Council of Heads of State of the Shanghai Cooperation Organisation..., p. 3.

⁹ Development Strategy of the Shanghai Cooperation Organisation until 2025..., p. 2.

Communist Party of China. However, the Qingdao Declaration shifted the idea more towards the future with ‘the formation of a common vision of building a community for the shared future of humankind.’¹⁰ In other words, the Declaration admitted that the idea had not become common yet, not all the member states – let alone all the members of the international community – shared it.

The Qingdao Declaration also promoted ‘building a more equitable and balanced world order based on an equal, cooperative, indivisible, comprehensive and sustainable security.’ Such a world order should be based upon ‘ensuring the interests of each and every state in accordance with the norms and principles of international law.’¹¹

Key initiatives of member states

At the SCO summits in Astana and Qingdao almost every member state tried to promote some ambitious international public policy initiatives. The most prominent – due to its truly global scale – among them was China’s geopolitical mega-program ‘One Belt, One Road’ aimed at creating a extensive network of transport and trade roots in Asia and between Asia and Euro-Atlantic region.¹² However, Chinese diplomacy was not able to ensure the unanimous support for the project: while seven member states supported the concept of the project, India refused to sign the declaration of support. India’s refusal is due to the Chinese plans to build transport corridors through the territory of Kashmir which India consider to be ‘illegally occupied by Pakistan.’ As Indian experts stressed, ‘Prime Minister Narendra Modi said India supports connectivity projects that are inclusive, transparent and respect territorial sovereignty. India has long maintained that the China Pakistan Economic Corridor (CPEC) – a key part of the Belt and Road

¹⁰ Qingdao Declaration of the Council of Heads of State of the Shanghai Cooperation Organisation...

¹¹ Ibid.

¹² Previously used formula ‘Economic Belt of Silk Road’ has gradually transformed by global media into the acronym BRI – ‘Belt and Road Initiative.’

Initiative that passes through Pakistan-occupied Kashmir – violates its territorial integrity.’¹³ Indian Foreign Secretary Vijay Keshav Gokhale explained that his country’s position on that issue had been long and widely known, and while India refused to sign the declaration of support, it did not make it a subject of discussion at the SCO summit. On the contrary, Indian Prime Minister Narendra Modi reiterated in his speech that overall New Delhi supported the projects to increase transport connectivity in the region if they did not violate territorial integrity of states.

In its turn, India promoted at the Qingdao summit its own initiative – a concept of security for the SCO member states encapsulated in an acronym *SECURE*: ‘S’ for security for citizens, ‘E’ for economic development, ‘C’ for connectivity in the region, ‘U’ for unity, ‘R’ for respect of sovereignty, ‘E’ for environmental protection. The juxtaposition of the Indian initiative to the Chinese initiative did not turn out quite successful. What Narendra Modi called ‘a concept of security for the SCO’ in reality has remained only a verbal declaration consisted of vague slogans, while the Chinese Belt and Road Initiative already today represents a giant set of investments and specific transport, infrastructural, and economic projects.

At the same time, Indian diplomacy insisted on inclusion in the Qingdao Declaration and in other documents a reference to an old Indian initiative – the UN Comprehensive Convention on International Terrorism (its draft was submitted by India to the United Nations in the previous century and since then it has invariably been provoking ideological differences regarding interpreting and defining the notion of terrorism). Even before India entered the SCO, the Organisation had conducted significant work on adopting a regional anti-terrorist convention. Therefore, the Qingdao Declaration only included cautious wording on ‘reaching consensus on the issue of adopting the UN Comprehensive Convention on International Terrorism.’¹⁴

On the SCO platform Russia promotes the *Greater Eurasian Partnership* initiative. As a first step, the Partnership provides for

¹³ Patranobis, S., op. cit.

¹⁴ Qingdao Declaration of the Council of Heads of State of the Shanghai Cooperation Organisation...

establishing collaboration between the SCO, EAEU, ASEAN, and Asia-Pacific Economic Cooperation (APEC), and later – with the Belt and Road Initiative. The concept of the Greater Eurasian Partnership lacks details, but it demonstrates Russia's concern regarding potential clash of interests of the EAEU, on one side, and the Belt and Road Initiative, on the other side, as well as the absence of a macro-concept of cooperative development of Russia and China. While many Western analysts call the Shanghai Cooperation Organisation 'a child of both China and Russia', it is obvious that Beijing considers the SCO to be an object of its leadership (as it is the first international organisation initiated by China), while Russia is the unrivaled leader in the EAEU. Moscow splits its efforts and resources between the SCO, CSTO, and EAEU, among which there is significant overlap of membership (Russia, Kazakhstan, Kyrgyzstan, Tajikistan are members of all three organisations, Armenia is a member of the CSTO and EAEU). For Moscow it is important to find a common denominator that can tie these international bodies together. At the same time, in the face of deteriorating relations between Russia and the West, the 'turn to the East,' towards Asia takes on particular significance. A bid for the globalization of the SCO role, engagement of ASEAN and APEC, functional cooperation with the EAEU – all this compensates Western attempts to isolate Russia and creates an Asian counter-balancer to the European nexus of NATO–EU–Council of Europe–OSCE.

Kazakhstan, Tajikistan, and Uzbekistan also promote their own signature initiatives. Namely, Kazakhstan has presented the *Code of Conduct Towards Achieving a World Free of Terrorism*. The draft Code has been introduced to the United Nations, and Kazakhstan seeks support among the SCO member states to push it forward. The SCO has supported Kazakhstan efforts on conducting Astana-based negotiations on Syria as an important channel for peaceful settlement. Such support is particularly valuable given that certain Western states are trying to diminish the political importance of the Astana peace process (as well as to diminish the role and results of the Congress of Syrian National Dialogue held in Sochi, Russia). They insist on concentrating all the agreements around Syria on the Geneva track where they dominate.

Tajikistan initiated the International Decade for Action: Water for Sustainable Development 2018-2028,¹⁵ and as a first step suggested to convene a high level conference in June 2018 in Dushanbe.

Uzbekistan has promoted within the SCO a proposal to adopt a special resolution of the UN General Assembly 'Education and Religious Tolerance.' The issue of religious tolerance has uncomfortable overtones in the SCO context due to China's treatment of Muslim minorities in Xinjiang Uyghur Autonomous Region and to the presence of radical Islamist movements in Uzbekistan.

The development of the Shanghai Cooperation Organisation helps building closer ties among states-members in political, economic, trade, transport areas, fighting against terrorism, drug trafficking, and illegal cross-border migration, as well as in culture, education, and Internet regulation.

During the year interval between the Astana and Qingdao summits dozens of intergovernmental and interagency meetings and sessions took place, such as the 16th meeting of the Council of Heads of Government (Prime Ministers) (Sochi, November 30 – December 1, 2017), 13th meeting of Security Council Secretaries (Beijing, May 21-22, 2018), two meetings of the Council of Ministers of Foreign Affairs (New York, September 20, 2017; Beijing, April 24, 2018).

The SCO member countries held a meeting of the ministers of defence (Beijing, April 24, 2018), ministers of culture (Sanya, May 15, 2018), and the of heads of anti-narcotics agencies (Tianjin, May 17, 2018).

Dozens of specific practical issues of interaction between the SCO member states were discussed in course of sessions of the Council of National Coordinators (Yangzhou, Moscow, Beijing, August 2017 – June 2018) and Regional Anti-Terrorist Structure (Beijing, September 17, 2017; Tashkent, April 5, 2018).

Heads of national border control agencies met in Dalian on June 29, 2017, while heads of national disaster risk management agencies convened in Cholpon-Ata on August 24-25, 2017.

¹⁵ The International Decade for Action: Water for Sustainable Development initiative was proclaimed by the United Nations General Assembly Resolution 71/222 of 21 December 2016.

The vision of a joint (though not common) SCO legal space is gradually taking shape: various aspects of legal cooperation were discussed at the meetings of the justice ministers (Tashkent, October 20, 2017), supreme court chief justices (Tashkent, October 25-27, 2017; Beijing, May 25, 2018), and prosecutors general (Saint-Petersburg, November 29, 2017).

Issues relating to cooperation in economy, finance, science and technology were a subject for discussion at the meetings of the SCO foreign economy and trade ministers (Moscow, November 15, 2017), Council of the SCO Interbank Consortium (Beijing, June 5-7, 2018), Board of the SCO Business Council (Beijing, June 6, 2018), as well as of heads of science and technology ministries and agencies (Moscow, April 18-21, 2018).

At the SCO Forum (Astana, May 4-5, 2018), which represents a platform for a dialogue between analytical and scientific organisations and institutes of the member states, the participants debated consequences of the SCO enlargement and promising avenues of its development. On June 1, 2018, Beijing hosted the First Media Forum of the SCO Family countries which gathered journalists and radio and television personalities.

The heads of national tourism agencies discussed increasing flows of tourists between the SCO member states at the meeting on May 7-11, 2018, in Wuhan. The First SCO Women's Forum took place in Beijing on May 15-17, 2018. The organisation carried out other events at various levels.

On the one hand, the sheer number of sectoral meetings and meetings of line ministries and agencies is impressive. They help to gradually develop a critical mass of interconnectedness and facilitate personal contacts and interactions between policymakers and businessmen. On the other hand, observers point out that such sectoral meetings put in the SCO collaboration 'basket' projects and activities that exist outside of the SCO framework and are often executed not through the SCO structures but by states individually or bilaterally. In other words, most areas of cooperation lack common core, projects are not merged into interconnected and coordinated programmes, but are

rather unrelated with coordination boils down to exchanging information on each party's activities.

Priorities of the SCO

What are functional and thematic priorities of the SCO today? There are several areas where joint activities of ministries and agencies of the member states are relatively regular and coherent. First, these are areas of fighting against terrorism and drug trafficking. The Qingdao summit adopted a *Program of Cooperation between the SCO Member States in Opposing Terrorism, Separatism and Extremism for 2019-2021*. A special role in its implementation was assigned to the SCO Regional Anti-Terrorist Structure (RATS) located in Tashkent. Immediately prior the summit, in early May 2018, Dushanbe hosted a large international high-level conference on fighting terrorism and extremism.

The participation in counter-drug-trafficking activities is a relatively new responsibility for SCO RATS assigned to it by the SCO *Anti-Drug Strategy for 2018-2023* and the *Programme of Action for its implementation*. The SCO also adopted a *Concept to Prevent Abuse of Narcotic Drugs and Psychotropic Substances*.

At the same time the Council of Heads of State noted that not all member states yet adopted the 2017 SCO *Convention on Counteracting Extremism*. In contrast to the CSTO and CIS, which formed a Parliamentary Assembly and an Interparliamentary Assembly respectively, the absence of such an organ in the SCO slows down the interaction between its member states' legislative bodies (for example, regarding ratification of collective documents and conventions). This is due to significant difference in the SCO member states' legislatures. For instance, China does not have a permanent parliament. The National People's Congress convenes once a year for relatively short sessions and differs markedly in structure and functions from parliaments in Russia and the Central Asian countries. While legislative bodies of both India and Pakistan have inherited principles of British parliamentary democracy with its active parties and factions. Beijing

shows no support to establishing a regular legislative cooperation within the SCO, though some member states occasionally call for more active inter-parliamentary ties.

The cooperation between the SCO members in financial and banking spheres is stalled. The establishment of the SCO Development Bank and Development Fund (Special Account) initiated by Beijing remain ‘in continuation of search for common approaches.’¹⁶ Although, Beijing is willing to lend generously to SCO collective programmes, the development of long-term multilateral infrastructure projects involving all or most member states goes on very slowly, as the SCO bodies do not engage in managing such projects (due to the above unwillingness to create supranational organs). Businesses of the SCO countries (except China) are not capable of large infrastructural investments that – typically for infrastructural projects – on average start to pay off after 15 or more years.

One important area of cooperation among the SCO member states is settlement in Afghanistan and preventing the negative effects of internal instability in the country from spilling over to the neighbouring countries. The SCO–Afghanistan Contact Group has been operating within the organisation’s framework for many years, but it sees relatively little activity. So far, China is the only SCO country that is actively engaged in economic projects on the Afghan territory and has a serious business interest in economic and political stabilization there. Some experts are of opinion that accession of India and, particularly, Pakistan to the SCO was to a great extent motivated by the fact that comprehensive settlement and economic stabilization in Afghanistan would be impossible without their participation. The country plays a key role in the region’s energy connectivity with a high-voltage electric line going from Turkmenistan to Pakistan through Western Afghanistan; the TAPI natural gas pipeline going from Turkmenistan to Pakistan and India through Afghanistan; CASA-1000 electricity project on export of hydroelectricity from Kyrgyzstan and Tajikistan into Pakistan through Afghanistan, etc. Eventually, after the conclusion of the Pakistani Gwadar ‘mega-port’ (with the help of

¹⁶ Press release on the outcomes of the SCO Council of Heads of State meeting...

China) and Iranian Chabahar deep-sea port (with assistance of India) the Afghan territory will connect Central Asian states with the Indian ocean. Hence the special importance of stabilization in Afghanistan for many other SCO projects. Rowden takes his arguments regarding importance of Afghanistan as a missing element in SCO chain even further stating that ‘the SCO may collectively decide to add Afghanistan as a full member – and then have it request that the US and NATO forces leave, as did Uzbekistan in 2005 and Kyrgyzstan in 2014.’¹⁷ At the same time he believes that the SCO states ‘are increasingly aligning around the idea of a settlement that would support the return of the Taliban to power in Afghanistan and oust the current US-backed regime in Kabul.’¹⁸ It should be noted that such ‘guesses’ go against the official policy on Afghan settlement expressed in a number of statements by the SCO leadership and Contact Group on Afghanistan which encourage assistance to the Afghan government in reestablishing control over the territory of the country, and not its ousting.

Iran has moved from dialogue-partner country to observer state and actively participates in many forms of interaction within the SCO. Already in 2008, Iran expressed its intention to achieve full membership in the SCO. Lifting of sanctions as a result of the 2015 international agreements allowed Tehran to intensify its efforts in various international organisations. Russia has reiterated in different ways its support to Iran’s accession to the SCO.

Engagement with Turkey as a dialogue-partner country is another recent development of the SCO’s strategy. In 2005-2016, Turkey pursued policy aimed at joining the European Union, but in late 2016 Ankara abandoned the goal of EU membership and instead officially announced its intention to obtain full membership status in the SCO. Russia and China generally welcome the idea of granting the status to Turkey, though China expresses less enthusiasm regarding the ‘second wave’ of the SCO’s enlargement before the consequences of India’s and Pakistan’s accession are fully considered. As a test run the

¹⁷ Rowden, R., *op. cit.*, p. 8.

¹⁸ *Ibid.*

SCO leadership suggested that Turkey preside over the SCO Energy Club in 2017-2018. It was a unique offer as never before a non-member country was able to chair either the Energy Club or any other SCO entity.

The military dimension of the SCO cooperation has limited scope. Over the last two decades the task of overseeing the military integration between countries of Central Asia and Russia has shifted to the Collective Security Treaty Organisation, another regional structure. The Russian-Chinese military cooperation is essentially bilateral, though some of their activities are held within the SCO framework. An SCO 'dimension' was added to the Russian-Chinese desktop military exercises in December 2017 on computer simulation of missile launch detection and missile interception by theater ballistic missile defence systems. Both countries stressed that exercises demonstrated 'all-embracing character of their strategic partnership,' and not an intention to create a military alliance.

The SCO Peace Mission exercise is also multilateral (with the participation of Central Asian states), but its goal is to practice counter-terrorist operations rather than military to military cooperation per se. This exercise has highlighted some inter-organisational issues: during the Peace Mission-2007 Chinese troops on their march from Xinjiang to Chelyabinsk were forced to make a detour of more than 10,000 km as Kazakhstan failed to pass legislation in time to allow foreign military to cross its territory. In the Peace Mission-2012 Uzbekistan did not permit Kazakh troops to cross its territory on the way to northern Tajikistan.¹⁹

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It can generally be concluded that the development of the Shanghai Cooperation Organisation combines achievements that are unique for

¹⁹ de Haas, M., 'Relations of Central Asia with the Shanghai Cooperation Organization and the Collective Security Treaty Organization', *The Journal of Slavic Military Studies*, 2017, no. 30, p. 11 <<https://www.tandfonline.com/doi/pdf/10.1080/13518046.2017.1271642>>.

Asian regional organisations with problems that are typical for many international organisations. These problems are due mostly to an unusually broad agenda and diversity of member-states, which prevent the SCO from clearly specifying common political and economic priorities. The broadness and diversity have only increased as a result of accession of such large states with particular regional and somewhat global interests and ambitions as India and Pakistan. It has forced the SCO to slow down and lose some efficiency, however it has also led to unprecedented accumulation of resources (in terms of territory, population, natural and economic resources, interagency cooperation), by the organisation making it a new 'pole' of the international system. The SCO has yet to become a unified actor, but it already acts as an objective counterbalance to a unipolar Western-centric world.

8. RELATIONS IN THE STRATEGIC TRIANGLE OF CHINA, INDIA, AND PAKISTAN

Petr TOPYCHKANOV

In the late last century there was increased focus on the triangle of India, China and Pakistan due to nuclear tests conducted in India and Pakistan in 1998. It was the goal of nuclear deterrence of the two neighbouring states that Delhi proclaimed as a reason behind the development of its nuclear weapons. In letters sent to leaders of foreign states after the nuclear tests, Atal Bihari Vajpayee, the prime minister of India in 1998-2004, justified the need to acquire nuclear weapons due to a threat posed by India's neighbours: China was '...an overt nuclear weapons state on our borders, a state which committed armed aggression against India in 1962,' and Pakistan was a 'covert nuclear weapon state' that attacked India three times and continued to support terrorism in Kashmir.¹

India considers a threat the close interaction of Pakistan and China in various areas including nuclear technologies. Krishnaswamy Subrahmanyam, the first head of the Advisory Board under the National Security Council, wrote that by 1989 India had reliable information that China had helped Pakistan not only in the field of nuclear but also missile technologies. He was sure that in the 1980s there were no separate threats for India coming from either China or

¹ Cit. ex: Talbott, S., *Engaging India: Diplomacy, Democracy, and the Bomb* (Penguin Books: New Delhi, 2004), p. 53.

Pakistan. Instead, there was a single threat from China which proliferated nuclear weapons to Pakistan.² According to Chitrapu Uday Bhaskar, an honorary research fellow at the National Maritime Foundation, India is currently one of the sides of the nuclear triangle, the other two being China and Pakistan acting in cooperation with each other.³

Cooperation between China and Pakistan

In contrast to the Indian vision of relations with China and Pakistan, Islamabad and Beijing do not see these relations as a triangle. Official representatives of these states avoid calling India their potential common adversary or admitting that they unite efforts against India. Despite numerous evidences of cooperation between Pakistan and China in the field of military nuclear technologies,⁴ both countries publicly dismiss such a possibility.⁵ The official position of Islamabad and Beijing explains the lack of an open common strategy to contain India.

This does not exclude the possibility of Pakistan and China secretly developing joint action plans in the event of an armed conflict between India and one or both of these states. Evidence of this can be seen in a series of bilateral military exercises, for example, Shaheen air exercises (March 2011, September 2013, May 2014, September–October 2015, April 2016, and September 2017). As part of the exercises, which as a rule are of an anti-terrorist nature, the armed

² Subrahmanyam, K., Nuclear Deterrence in the Indian Context. Golden Jubilee Seminar on ‘The Role of Force in Strategic Affairs’ (National Defence College: New Delhi, 2010), pp. 60, 67.

³ Bhaskar, C.U., Comparing Nuclear Pledges and Practice: The View from India. In *The China-India Nuclear Crossroads*, ed. and transl. by L. Saalman (Carnegie Endowment for International Peace: Washington, 2012), p. 36.

⁴ The Pakistani Nuclear Programme, US State Department FOIA, 22 June 1983, p. 6 <<https://nsarchive2.gwu.edu/NSAEBB/NSAEBB114/chipak-11.pdf>>.

⁵ Arms Control and Disarmament, US Embassy in China Cable 17090 to State Department, 17 Dec.1982, p. 3-4 <<https://nsarchive2.gwu.edu/NSAEBB/NSAE BB114/chipak-8.pdf>>.

forces of Pakistan and China train coordination of actions. In addition, both states have reached a high level of engagement in military-technical cooperation. China ranks first among Pakistan's suppliers of arms and military equipment (AME). In the entire period (1950-2017) of observation of military-technical cooperation by Stockholm International Peace Research Institute (SIPRI), China supplied 40.8% of AME purchased by Pakistan, the USA – 23.3%, France – 11.6%, Great Britain – 6.1%.⁶ Pakistan plays a special role in the Chinese export of AME. In 1950-2017, it accounted for 27.9% of military exports from China.⁷

The list of items shipped to Pakistan by China or produced at joint ventures includes Anza-2 man-portable surface-to-air missiles, Baktar Shikan ATGM, Al-Khalid battle tank (jointly with Ukraine), Al-Hamza IFV, Zulfiqar-class frigates, anti-ship systems (for example, the C-802 anti-ship missile for the Jalalat-class missile boat), HQ-2B and HQ-9 surface-to-air missiles, the FN-6 man-portable air defence systems, the JF-17 multipurpose fighter, K-8 Karakorum training aircraft, Shaanxi ZDK-03 AEW&C aircraft, etc. There is also indirect evidence of the collaboration between Pakistan and China in the field of nuclear missiles.

To this moment the most extensive has been the cooperation between Pakistan and China in the field of aircraft construction. The key partner on behalf of the former is the Pakistan Aeronautical Complex Kamra (PACK). The cooperation of the two countries resulted in production of two aircraft – JF-17 Thunder and K-8 Karakorum. In 1998, Pakistan and China signed an agreement on the joint production of the JF-17 Thunder fighters (Chinese designation: FC-1 Xiaolong). The agreement provided for the licensed production of 50 multipurpose JF-17 fighters, including the production of separate units and components and assembly of aircraft at the PACK factories

⁶ TIV of Arms Exports to Pakistan, 1950–2017, Stockholm International Peace Research Institute, 6 June 2018 <http://armstrade.sipri.org/armstrade/html/export_values.php>.

⁷ TIV of Arms Exports from China, 1950–2017, Stockholm International Peace Research Institute, 6 June 2018 <http://armstrade.sipri.org/armstrade/html/export_values.php>.

(the overall production of fighters is equally divided between China and Pakistan). Of these 50 fighters, eight are designated for testing, the rest – for the Air Force. According to SIPRI, the contract price was around \$800 million,⁸ the first flight tests took place in 2003.⁹

This aircraft is equipped with a RD-93 turbojet engine which is produced at the Chernyshev Moscow Machine-Building Enterprise, a member of the United Engine Corporation. The first contract for the supply of 100 engines to China was signed in 2005 and was completed by 2010. The cost of the contract was \$238 million. According to Alexander Novikov, the former director of this enterprise, China planned to purchase at least 500 RD-93 engines,¹⁰ which indicates the intention of China and Pakistan to produce more aircraft not only for the needs of the Pakistani Air Force but also for other countries.

At the end of 2015, it Pakistan was reported to sign the first contract with ‘an Asian country’ for the supply of JF-17.¹¹ Pakistani officials did not name the country but in early 2016 Pakistan and Sri Lanka signed an agreement to supply eight fighters,¹² and later it became known that Nigeria also committed funds in its budget for the purchase of three fighters.¹³ There are also reports about Myanmar

⁸ Transfers of Major Conventional Weapons: Deals with Deliveries or Orders Made for Year Range 1950 to 2014, Stockholm International Peace Research Institute <http://armstrade.sipri.org/armstrade/page/trade_register.php>.

⁹ ‘About 300 JF-17 Thunders Expected to be Sold in the Next Decade’, *People’s Daily Online*, 18 June 2015 <<http://en.people.cn/n/2015/0618/c98649-8908441.html>>.

¹⁰ Russia shipped 100 RD-93 engines to China, United Engine Corporation <https://www.uecrus.com/rus/presscenter/smi/?ELEMENT_ID=849> [in Russian].

¹¹ ‘India Concerned after Pakistan’s JF-17 Export Order’, *The Express Tribune (Pakistan)*, 21 July 2015 <<http://tribune.com.pk/story/923754/india-concerned-after-pakistans-jf-17-export-order/>>.

¹² Ansari, U., ‘Pakistan Signs JF-17 Agreement with Sri Lanka’, *Asia Pacific*, 6 Jan. 2016 <<http://www.defensenews.com/story/defense/international/asia-pacific/2016/01/06/pakistan-signs-jf-17-agreement-sri-lanka/78361194/>>.

¹³ ‘Nigeria to Become First JF-17 Export Operator’, *Jane’s Defence Weekly*, 5 Jan. 2016 <<http://www.janes.com/article/57014/nigeria-to-become-first-jf-17-export-operator>>.

(which is negotiating licensed manufacturing)¹⁴ and a number of other countries plan to purchase JF-17s.

Cooperation with Chinese companies which has been rapidly developing since the 1970s, allows Pakistan to believe it has an advantage over the military-industrial complex of India, as confirmed by Pakistani Defence Minister Khawaja Asif Muhammad: 'In recent decades we have been actively developing our own aviation industry. We do not feel any gap or vulnerability. We are almost certain that we will be able to quite effectively counter the Indian military power.'¹⁵ Pakistan succeeds in maintaining this advantage at the cost of increasing dependence on external suppliers of military technologies, primarily China.

Naval shipbuilding is another area where Pakistan and China are rapidly developing their cooperation, the key Pakistani partner being the Karachi Shipyard and Engineering Works (KSEW). In 2004, China and Pakistan signed a contract for the supply of four Zulfiqar-class frigates (F-22P export version of the Chinese 053H3 frigate displacing 2,500 tons). The price of the contract amounted to \$750 million. It provided for the construction of three frigates by the Chinese Hudong Shipyard (commissioned in 2009-2010) and one – by the shipyard in Karachi (commissioned in 2013).¹⁶ This contract also involved the modernisation of KSEW. In 2010, China and Pakistan signed a contract for two Azmat-class missile boats (the Pakistani designation of the Chinese Type 037-II Houjian missile boat), one of

¹⁴ Gady, F-S., 'Pakistan's JF-17 Fighter Jet to Be Upgraded with Chinese Radar', *The Diplomat*, 2 Apr. 2018 <<https://thediplomat.com/2018/04/pakistans-jf-17-fighter-jet-to-be-upgraded-with-chinese-radar/>>; 'Myanmar in Advanced Negotiations to License-build JF-17 Fighter', *Jane's Defence Weekly*, 1 Feb. 2017 <<https://www.janes.com/article/67387/myanmar-in-advanced-negotiations-to-licence-build-jf-17-fighter>>.

¹⁵ 'We do not want to enter a nuclear arms race', *Eksport vooruzheniy*, 2014, no. 3, p. 59 [in Russian].

¹⁶ Barabanov, M.S., Kashin, V.B., Makienko, K.V., *Defense industry and arms trade of the PRC* (Center for Analysis of Strategies and Technologies; Russian Institute for Strategic Studies: Moscow, 2013), p. 250 [in Russian]; Kindamo, B., 'Strategic Partnership: The Future of Pakistan's Defence Industry Growth', *Military Technology*, Nov. 2012, p. 26.

which was built by the Chinese company Tianjin Xingang Shipbuilding Heavy Industry Company, and the second – by a shipyard in Karachi. In 2013 and 2014, China and Pakistan signed an agreement on construction of the third and fourth Azmat-class boats at KSEW with the help of China. The keel laying ceremony for the third boat was held in Karachi in the summer of 2015.¹⁷ Also in 2014, China agreed to supply Pakistan with six to eight diesel-electric submarines, presumably of the Yuan class.¹⁸ According to Pakistani experts, if each submarine costs not less than \$500 million,¹⁹ the total price of the contract may amount to more than \$4 billion. This will be the most expensive deal in the history of the bilateral military-industrial cooperation.

It should be added that Pakistan and China continue to develop a network of roads and other infrastructure connecting the two countries as part of the so-called China–Pakistan Economic Corridor (CPEC). The agreement on CPEC was signed by the two countries in 2015. In the early 2018, China was reported planning to create a military base in Jiwani, near a major port of Gwadar (which is a part of CPEC).²⁰ Beijing refuted this information and stated that there was no military component in CPEC.²¹

Despite the difficult economic situation in Pakistan, the country is increasing the expenditures on foreign AME. External aid and loans help Pakistan to pay for the imported military equipment. Military-

¹⁷ 'KSEW Shipyard Lays Keel for Pakistan's Third Azmat-Class Patrol Boat', *Jane's Defence Weekly*, 11 Aug. 2015 <<http://www.janes.com/article/53630/ksew-shipyard-lays-keel-for-pakistan-s-third-azmat-class-patrol-boat>>.

¹⁸ Syed, B.S., 'China to build four submarines in Karachi', *Dawn*, 7 Oct. 2015 <<http://www.dawn.com/news/1211363>>.

¹⁹ Bokhari, F., 'Pakistan in talks with China 'for eight submarines'', *Jane's Defence Weekly*, 31 Mar. 2015 <<http://www.janes.com/article/50368/pakistan-in-talks-with-china-for-eight-submarines>>.

²⁰ Gertz, B., 'China Building Military Base in Pakistan', *The Washington Times*, 3 Jan. 2018 <<https://www.washingtontimes.com/news/2018/jan/3/china-plans-pakistan-military-base-at-jiwani/>>.

²¹ 'China Rejects Speculations of Military Base in Gwadar', *The Express Tribune*, 10 Jan. 2018 <<https://tribune.com.pk/story/1604988/1-china-rejects-speculations-military-base-gwadar/>>.

technical cooperation with China is important for Pakistan because Beijing offers Islamabad not only AME which other countries cannot or do not want to offer (among other reasons, due to their relations with India), but also an opportunity to establish a licensed production in Pakistan and acceptable terms of payment for military goods.

Islamabad recognizes the high level of trust that has developed in the bilateral relations. Representatives of the legislative and executive branches of power, military, scientific, academic and expert communities characterize relations between Islamabad and Beijing as all-weather ones. However, at the unofficial level the challenges of the Sino-Pakistani relations are also recognized. For example, the representatives of business circles in private conversations point out that the way Chinese companies do business in Pakistan is one of the reasons behind rampant corruption in the country. They also complain that China uses bilateral cooperation to increase employment of its citizens, being less enthusiastic about drawing on Pakistani work force.

At the same time Pakistan does not totally depend on China in trade, economic, and military areas. The EU, USA and Japan are also among the main donors and creditors of the country. As for military-technical cooperation, Pakistan has several major sources of AME and military technology – China, the United States, and France. At the same time, according to retired Lieutenant General Talat Masood, the former federal secretary at the Pakistani ministry of defence production, '[US] is still Pakistan's No 1 source for military hardware.'²² However, recently there has been some 'rollback' in US–Pakistan defence cooperation. One of the most significant developments was the decision taken by the US administration in the early 2018 to suspend the provision of military assistance to Pakistan (worth \$2 billion) on the pretext of Islamabad's support of terrorist groups like Lashkar-e-Tayyiba (also known as Jamaat-ud-Dawa).

Pakistani officials do not disclose their plans in the event of a possible escalation of tensions between Beijing and New Delhi or Beijing and Washington. Since Pakistan finds itself vulnerable in the

²² 'Pakistan Buys 55% of China's Arms Exports', *Hindustan Times*, 19 Mar. 2013 <<http://www.hindustantimes.com/world-news/pakistan-buys-55-of-china-s-arms-exports/article1-1028561.aspx>>.

face of the armed forces of India and the US, it will likely try to avoid being involved in potential conflicts between China and these countries. The same applies to Japan, which provides significant financial assistance to Pakistan. Officially supporting Beijing in Taiwan and Tibet issues,²³ Islamabad avoids voicing its position on the territorial disputes between China and Japan.

Nuclear and missile threats to India

Although it is unlikely that Beijing and Islamabad are considering the possibility of a joint or coordinated nuclear attack on India, the threat of a nuclear war with both China and Pakistan is seen in Delhi as highly probable. Immediately after gaining independence India was drawn into armed conflicts of various scale with Pakistan – in 1947-1948, twice in 1965, in 1971, and 1999, and a war with China – on 22 October–22 November 1962. The conflicts, territorial disputes, and the development of nuclear missile capabilities in Pakistan and China – all this explains the fact that India considers the two states the major threat. Only some of the wide array of China's and Pakistan's nuclear and non-nuclear missiles – about 500 and over 60 respectively – pose a nuclear missile threat to India.²⁴

China. In theory, this country can launch a nuclear strike on the territory of India using all classes of missiles with the exception of short-range ballistic missiles (SRBMs) which are likely to target Taiwan. However, Beijing's actual ability to use intercontinental ballistic missiles (ICBMs), medium-range ballistic missiles (MRBMs), submarine-launched ballistic missiles (SLBMs), and ground-launched cruise missiles (GLCMs) against India is limited. China would not plan to use its ICBMs and MRBMs solely against India the United States, Taiwan, and Japan are of the greatest concern, particularly US nuclear

²³ 'Pakistan, China Defence Ministers Discuss Bilateral Cooperation', *Business Recorder*, 27 Feb. 2014 <www.brecorder.com/top-news/108-pakistan-top-news/159981-pakistan-china-defence-ministers-discuss-bilateral-cooperation.html>.

²⁴ *The Military Balance* (International Institute for Strategic Studies: London, 2018), pp. 250, 291.

submarines and aircraft in the western Pacific, and missile defence in Japan.²⁵ As of now the marine component of China's nuclear forces can hardly be regarded as a threat to India, if only in the long term, since the development of the Chinese nuclear submarine fleet is at its initial stage.²⁶

At present, China can launch a limited nuclear attack on India with Dongfeng (DF)-5A, DF-31A, DF-31, and DF-4 ICBMs that can reach any part of the country, and with DF-16, DF-21 and DF-26 MRBMs and their modifications which can hit targets anywhere in India except for the extreme south.

According to some sources, India falls in the zone of responsibility of the 53rd and 56th missile bases in Kunming (Yunnan province) and Xining (Qinghai province).²⁷ Of the missiles that could be used in a nuclear strike on India, the DF-4 ICBMs and DF-21 MRBMs are deployed on these bases.²⁸

The example of DF-21, which has a flight time of 15-20 minutes²⁹ depending on its trajectory (or, according to other estimates, 10-12 minutes³⁰), shows that India will have limited time to detect a nuclear missile threat and make a decision on how to respond. The mountainous terrain in the region separating Chinese missile bases from the territory of India reduces this time further.

²⁵ Saalman, L., *China & the U.S. Nuclear Posture Review*, The Carnegie Papers (Carnegie Endowment for International Peace: Washington, 2011), p. 15.

²⁶ *SIPRI Yearbook 2011: Armaments, Disarmament and International Security*, ed. by B. Gill (Oxford University Press: New York, 2011), p. 341.

²⁷ Kumar, A., Vannoni, M., *Ballistic Missile Proliferation in Southern Asia: Options for Stabilization* (Sandia National Laboratories: Albuquerque, 2004), p. 36.

²⁸ Syroezhkin, K., *China: Military security* (Kazakhstan Institute for Strategic Studies under the President of the Republic of Kazakhstan: Almaty, 2008), p. 136 [in Russian]; China and Weapons of Mass Destruction: Implications for the United States, National Intelligence Council, 5 Nov. 1999 <http://www.dni.gov/nic/conf/reports_chinawmd.html>.

²⁹ Hagt, E., Durnin, M. 'China's Antiship Ballistic Missile', *Naval War College Review*, 2009, vol. 62, no. 4, p. 109.

³⁰ Wright, D., Kulacki, G., 'Exaggerated Claims About China's Missile', *All Things Nuclear: Insights on Science and Security*, 8 Jan. 2011 <<http://allthingsnuclear.org/post/2652859551/exaggerated-claims-about-chinas-missiles>>.

Presumably, China views the possibility of a nuclear strike on India's administrative and industrial centers as a retaliation for the use of nuclear weapons by India first.³¹ This indicates a paradoxical situation, as both Beijing and New Delhi have committed themselves to no-first-use. Unlike New Delhi, which has reserved the right to a nuclear response in the event of an attack on India or its armed forces with chemical or biological weapons,³² Beijing has pledged neither to use nuclear weapons first under any circumstances, nor to use it against non-nuclear states or nuclear-weapon-free zones.³³

According to the official nuclear doctrines of China and India, these countries can inflict only a retaliatory nuclear missile attack on each other. However, the desire of Beijing and New Delhi to secure reliable nuclear retaliatory strike capabilities means that they both doubt the strict adherence of the other party to no-first-strike.

Pakistan. Unlike China and India, Pakistan has retained the right to carry out a nuclear attack first. All of its missiles represent a threat to India. Out of about 60 missiles, most can be equipped with nuclear warheads. All of Pakistan's missiles can be equipped with either conventional or nuclear warheads, however, according to some reports, the country's leadership has decided to use only conventional warheads on their Hatf-2/Abdali missiles (just as India has decided to use conventional warheads on their Prithvi-1 and Prithvi-2 SRBMs).³⁴ In the absence of confidence-building measures between India and Pakistan regarding their choice to equip missiles with either nuclear or conventional warheads, one party's launch of a missile with a conventional warhead could be mistakenly identified as a nuclear attack and cause a nuclear retaliation by the other party.

³¹ Swaine, M.D., Runyon, L.H., 'Ballistic Missiles and Missile Defense in Asia', *NBR Analysis*, 2002, vol. 13, no. 3, p. 48.

³² The Cabinet Committee on Security Reviews operationalization of India's Nuclear Doctrine, Ministry of External Affairs, Government of India, 4 Jan. 2003 <<http://www.mea.gov.in/press-releases.htm?dtl/20131/>>.

³³ China's National Defense in 2006. National Defense Policy, Information Office of the State Council of the People's Republic of China, Dec. 2006 <[http://english.people-daily.com.cn/whitepaper/defense2006/defense2006\(2\).html](http://english.people-daily.com.cn/whitepaper/defense2006/defense2006(2).html)>.

³⁴ Kumar, A., Vannoni, M., *Ballistic Missile Proliferation in Southern Asia...* p. 42.

In peacetime, when both India and Pakistan maintain their nuclear forces in reduced combat readiness, such a scenario seems unlikely, since the amount of time it takes one side to move its nuclear forces to full combat readiness is sufficient for the other side to estimate a probability of a missile attack. But in a conflict, when the sides may raise the level of combat readiness of their nuclear forces, such a scenario becomes more dangerous.

Of the missiles already in service, only Hatf-5/Ghauri-2 MRBMs, of which there are about 30, can hit targets throughout India. The range of other missiles also allows Pakistan to threaten important military and industrial centers on the part of the Indian territory including the capital. For example, the distance from the Pakistani Mushaf air base in Sargodha (Punjab state) where, according to some sources, Hatf-6/Shaheen-2 and Hatf-3/Ghaznavi are deployed³⁵ to New Delhi is 581 km. According to rough estimates, the total flight time of a ballistic missile from the Pakistani air base to the Indian capital is eight minutes. In the event of a missile attack on Mumbai, the financial capital of India (Maharashtra state), the flight time from the Mushaf air base is eleven minutes (over a distance of 553 km), while in the event of a strike on the Indian naval base in Thiruvananthapuram (Kerala state) the flight time is thirteen minutes (over a distance of 645 km).³⁶

Unlike China, which apparently targets its missiles only at India's administrative and industrial centers, Pakistan also plans attacks on the Indian armed forces, including within its own territory in the event of an invasion.³⁷ This is a reason why a number of SRBMs, including Hatf-9/Nasr are currently under development. According to official data, this missile with a range of 60 km and increased accuracy

³⁵ Kristensen, H., Concern Over Pakistan's Nuclear Weapons, FAS Strategic Security Blog, 25 Apr. 2009 <<http://www.fas.org/blog/ssp/2009/04/pakistannukes.php>>.

³⁶ Mian, Z., Rajaraman, R., Ramana, M.V., 'Early Warning in South Asia – Constraints and Implications', *Science and Global Security*, 2003, vol. 2, p. 115.

³⁷ This opinion has been expressed to an author in 2010 in an interview by a representative of a Pakistani government who preferred to remain anonymous.

will be launched from a multi-tube launcher which allows to alternate firing positions.³⁸

Indian response to threats from its neighbours

India's answer to threats at different levels is the concept of 'three rings' developed by the strategic community of the country. According to this concept, the objectives of Indian politics are distributed among the three rings: 1) in the first ring, which encompasses India's immediate neighbours, it strives to achieve superiority and gain ability to prevent third countries from interfering; 2) in the second ring, which includes the countries of the extended neighbourhood and the Indian Ocean, new Delhi seeks to balance the influence of other states and to prevent infringement of its interests; 3) in the third ring, which comprises the rest of the world, India aspires to achieve the status of a great power. Indian officials state at the negotiations with their partners that these goals can be reconciled with the strategic goals of other world powers.

The former Director General of the Indian Defence Research and Development Organisation (DRDO) Avinash Chander listed the key areas for the development of India's missile weapons in the coming years. According to him, the priority projects include developing MIRV technology for ballistic missiles, surface-to-air and air-to-air missiles, medium- and longer-range ground-, air- and sea-based cruise missiles. In these areas India cooperates only with two states – Russia (BrahMos project) and Israel (long-range and medium-range surface-to-air missiles – LRSAM and MRSAM).

According to Indian observers, a common issue for Indian developers is to significantly increase warheads' accuracy. In fact, BrahMos can be considered India's only high-precision weapon. This country intends to develop high-precision warheads for shorter-range ballistic missiles (Prithvi-2 and Prahaar), cruise missiles of medium and

³⁸ Press Release no. PR94/2011-ISPR, Inter Services Public Relations, 19 Apr. 2011 <http://www.ispr.gov.pk/front/main.asp?o=t-press_release&id=1721>.

longer range (Nirbhay), air-to-air missiles (Astra). The Indian armed forces will receive these systems primarily in conventional variants. The combat missions given to the units equipped with these systems will include attacks not only against military facilities of Pakistan and China, but also against terrorist camps and shelters in the territory of other states. This is attested to by the fact that following the terrorist attack on Mumbai in November 2008, which was planned in the territory of Pakistan, India has intensified its efforts in developing precision weapons.

Another priority project is the development of ballistic missile defence (BMD) and the modernisation of air defence. The BMD system, work on which began in 1998 or 1999, will consist of two elements – Prithvi Air Defence (PAD) for intercepting targets outside the atmosphere (50-80 km) and Advanced Air Defence (AAD) to intercept targets after they enter the atmosphere (15-30 km). Unlike the PAD system which uses the Prithvi missile technology, AAD is developed by India from scratch. PAD is a two-stage missile with the first liquid-fuel and the second solid fuel stages. It is intended to intercept ballistic missiles with a range of 300-2000 km. AAD has one solid-fuel stage. The tests have shown that it can intercept ballistic missiles with a range of up to 1500 km.

The first flight tests of PAD that hit a target at an altitude of 48 km were successfully conducted on November 27, 2006. The second successful test on March 6, 2009 used a PAD-2 modification which destroyed the target at an altitude of 75 km. On December 6, 2007, India conducted the first successful test of the AAD system, which intercepted the target at an altitude of 15 km. In 2010-2018, India conducted a series of tests of various regimes of PAD and AAD most of which were deemed successful.

DRDO has also announced the development of two new high-speed interceptor missiles – AD-1 and AD-2 – with better interception altitude and range. In 2009, it was reported that India's new Prithvi Defence Vehicle (PDV) interceptor which is to replace ADP. It has two solid-fuel stages. To date, PDV has been tested three times – in 2010, 2014, and 2017 out of which it intercepted the target twice.

Development of naval systems is another priority area. First indications of India's ambition to create a nuclear-powered submarine go back as far as the 1970s. Back then, a team of 20 Indian navy engineers was sent at the Bhabha Atomic Research Centre (BARC) to work on a project of a nuclear-powered missile submarine. The official inauguration of the project known as the Advanced Technology Vessel took place only in 2009 when the dry dock where the submarine named Arihant was built, was filled with water. India has conducted multiple navy test launches from an underwater platform, including tests of K-15 ballistic missile with a range of 750 km and a payload of up to one ton, according to various estimates. India is also developing a K-4 submarine-launched ballistic missile with a range of up to 3500 km and a payload of about one ton. These missiles can be deployed on the Arihant nuclear submarine. Central to the implementation of these projects is the valuable experience that India gains from the lease of the Russian Nerpa (Chakra) multipurpose nuclear submarine which joined the Indian navy in 2012. It is used to train the navy personnel who will later serve on the Indian submarine.

Despite some successes in the development of the air and sea components of its nuclear triad, India's nuclear potential is still largely based on ground-launched nuclear missiles. The latter seem to maintain its significance for the foreseeable future. India's missile stockpile is estimated to include 42 Prithvi-2 and 12 Agni-1 short-range missiles, and 12 Agni-2 medium-range missiles (66 in total).³⁹ All these systems are ground-based. On April 19, 2012 India conducted a test of Agni-5 which was declared an intercontinental missile. In reality it probably falls into medium-range category. As of 2018, Agni-5 tests are continuing.⁴⁰

³⁹ *The Military Balance*... p. 261. The author believes the number of missiles which entered into service to be underestimated.

⁴⁰ 'The media report that India has conducted a test of a missile which can carry a nuclear warhead', *RIA Novosti*, 3 June 2018 <<https://ria.ru/world/20180603/1521955619.html>> [in Russian].

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The above findings indicate high conflict potential imbedded in the relations within the India–China–Pakistan triangle. Political dialogue and trade and economic ties between these countries do not guarantee against conflict escalation fraught with further escalation to a nuclear war. There are no conventional or nuclear arms control regimes or verifiable confidence-building measures between these states.

Though the accession of India and Pakistan to the Shanghai Cooperation Organisation (SCO) in 2017 could not serve as panacea to avoid conflicts between the three states, it created prerequisites for preventing negative scenarios through bilateral or multilateral tracks within the framework of this security organisation. Even though in general the SCO is not designed to settle territorial disputes or terminate relations of nuclear deterrence between its members.

Despite the accession of India and Pakistan to the SCO, territorial disputes between the members of the organisation will continue to exist for a long time. Russia and China settled their border dispute only in 2005, Tajikistan and China – in 2011. In Central Asia border controversies remain unsettled between Kyrgyzstan, Tajikistan and Uzbekistan, although they are not publicized.

The issue of Kashmir is different from the above disputes due to the high level of tension. But these frictions did not obstruct a dialogue within the SCO and did not appear on the agenda of the organisation's meetings in 2017 and 2018. It is possible that the Kashmir issue will have a minimum impact on the participation of India and Pakistan in the activities of the SCO. Unique features of the SCO allow it to play the role of the only effective platform for the dialogue between India, China, and Pakistan in order to prevent conflicts between them before settling territorial disputes.

9. MIDDLE EAST CONFLICTS AND PEACE SETTLEMENT IN SYRIA

Stanislav IVANOV

The Middle East region, with its strategic sea, land and air routes, rich hydrocarbon deposits, and a major market for weapons, continues to be a scene for intense competition, tough confrontation and conflict of interests among leading regional and world centers of power.¹ Internal political instability, armed conflicts, violent and chaotic conditions, unemployment in a number of Arab countries generate new waves of legal and illegal migrants and refugees to the Balkans and further to Europe. There is a direct link between the migration from the Middle East, Islamization of Western countries, and growing terrorist threat in Europe. Political problems in the region are exacerbated by the world's highest level of social and economic inequality. For example, in 2016, in the countries of the Middle East the wealthiest 10% of population (the top income decile) hold 61% of national income, while in Europe this figure is 37%.²

The main sources of tension in the region, in addition to the Palestinian problem and the Arab-Israeli confrontation, are inter-Arab and confessional conflicts and the unresolved Kurdish issue. The Shia–

¹ The region comprises 22 countries: Morocco, Algeria, Tunisia, Libya, Egypt, Sudan, Israel, Palestine, Jordan, Lebanon, Syria, Yemen, Saudi Arabia, Oman, UAE, Bahrain, Qatar, Kuwait, Iraq, Iran, Cyprus, Turkey.

² Manuylova, A., 'The price of world inequality goes up', *Kommersant*, 14 Dec. 2017 [in Russian].

Sunni wars in Iraq, Syria, and Yemen, and the fight of Turkish, Syrian, Iraqi, and Iranian Kurds for their national rights and freedoms are particularly severe. The large-scale interference of external forces in the internal affairs of the Arab states, as well as the growing confrontation between the regional powers such as Israel, Turkey and Saudi Arabia on the one hand and Iran on the other, further aggravating the situation in the region. The UN efforts to settle conflicts in Syria, Yemen, Libya and other regional hotspots are impeded by the lack of consensus among the permanent members of the UN Security Council on the means to stop the bloodshed and put an end of the Middle Eastern crises as quickly as possible. Speaking to the members of the UN General Assembly on January 17, 2018, UN Secretary-General António Guterres noted the growing number of conflicts in the world and called the situation in the Middle East a ‘Gordian knot’ with many intertwined problems among them the conflicts in Syria and Yemen, instability in Iraq and the Israeli-Palestinian issue. The Secretary-General expresses his concern over the signs of ‘weakening’ support for the settlement of the Israeli-Palestinian conflict on the basis of co-existence of two states. He stressed that there was no alternative to the two-state solution.³

Relocation of the US embassy to Jerusalem

The December 6, 2017 decision by US President Donald Trump to recognize Jerusalem the capital of Israel and to move the US Embassy from Tel Aviv to Jerusalem⁴ attracted renewed world attention to the Palestinian problem. In recent years, inert negotiations on the Middle East settlement have reached a deadlock with many regional and

³ Secretary-General’s remarks at informal meeting of the General Assembly, United Nations Secretary-General, 16 Jan. 2018 <<https://www.un.org/sg/en/content/sg/statement/2018-01-16/secretary-generals-remarks-informal-meeting-general-assembly>>.

⁴ ‘Trump recognizes Jerusalem as Israel’s capital and orders US embassy to move’, *The New York Times*, 5 Dec. 2017 <<https://www.nytimes.com/2017/12/06/world/middleeast/trump-jerusalem-israel-capital.html>>.

international players satisfied with the ‘no war, no peace’ situation. Egypt and Jordan previously concluded peace agreements and established diplomatic relations with Israel. The leadership of these countries tried to mediate disagreements between the Palestinians of the Gaza Strip (Hamas group) and the ones of the West Bank (Fatah movement). These efforts resulted in an agreement on the return of the Gaza Strip under the control of the Palestinian National Authority (PNA) in December 2017 and on the preparation for general elections in the Palestinian territories. This agreement created favourable environment for creating a joint Palestinian delegation to negotiate with Israel and search for a peaceful settlement.

Other Arab states formally continued to boycott Israel at the diplomatic and other levels but abstained from the earlier hostile rhetoric towards Tel Aviv. During his Middle East tour in May 2017, President Trump tried to rally around the United States all anti-Iranian regional forces including Israel, Saudi Arabia and other Arab and Muslim countries. Such a scenario seemed to satisfy Washington and there was no need to provoke a new Arab-Israeli conflict. However, under the pretext of implementing his election promises and in part because of his pro-Israeli views President Trump decided to move the US embassy to Jerusalem. On December 21, 2017 the UN General Assembly voted against the recognition of Jerusalem as the capital of Israel. Following the vote, 128 countries called on the United States to revoke its decision to move the embassy to Jerusalem, 35 countries abstained, and nine supported the move.⁵ The sharpest criticism came from the Palestinians, Arab and Muslim countries (Iran, Turkey, Pakistan, and others). It was understandable: Muslims consider Jerusalem a sacred city as it hosts Al-Aqsa – the third most important mosque in Islam. The Palestinians and their supporters still hope for East Jerusalem to be recognized as the capital of a Palestinian state.

The Trump administration’s decision caused large-scale spontaneous rallies and protests in the Palestinian territories and in Israel with participants calling for a new *intifada* (uprising). Missiles

⁵ ‘UN votes resoundingly to reject Trump’s recognition of Jerusalem as capital’, *The Guardian*, 21 Dec. 2017 <<https://www.theguardian.com/world/2017/dec/21/united-nations-un-vote-donald-trump-jerusalem-israel>>.

were fired from the Gaza Strip against Israel, clashes between protesters and the Israeli police and army left dozens of Palestinians dead and hundreds more wounded. The US decision to move its embassy in Israel is likely to stall the Middle East settlement indefinitely and at the same time lead to increased activity of radical Islamist groups in the Middle East.

Apparently, the US regional allies – the monarchies of the Persian Gulf countries and the leaders of other Muslim states – will have to take into account the opinion of the ‘Arab street’ and the Islamic Ummah in their further cooperation with the United States. One of the first countries to discontinue its cooperation with Israel and sharply condemn the use of military force against Palestinians was Turkey. Teheran’s sharp criticism of the actions of Washington and Tel Aviv was also to be expected.

Increased role of Islamist organisations

The Middle East region continues to suffer from the effects of the tragic events of the 2011 Arab Spring which to some extent affected virtually all countries of the Arab East, significantly destabilized the military and political situation in a number of Arab states, led to the change of some elites and ruling regimes, provoked protracted armed conflicts. These conflicts involved not only internal opposing forces, but also foreign states and non-state actors. On January 17, 2017, Egyptian President Abdel Fattah al-Sisi said that the total cost of the Arab Spring for the Middle Eastern countries amounted to \$900 billion, and in the course of the following conflicts about 1.5 million people were killed and over 15 million people became refugees.⁶

Amid the dissolution of statehood and the resulting vacuum of power and ideology, both Sunni and Shia Islamist extremist organisations became more active in a number of Arab countries. They professed the radical Islam of the extreme Sunni type (Salafism,

⁶ ‘Bloody results of the Arab Spring: 1.4 mln people killed, 900 bln dollars lost’, *Russkaya vesna*, 18 Jan. 2018 <<http://rusvesna.su/news/1516253286>> [in Russian].

Wahhabism, Takfirism, Jihadism), on the one hand, and Iranian Shia fundamentalism, on the other hand. Regional political forces have increasingly used these two factions of Islam to retain or change power or spread their influence over other countries. In fact, in the Middle East the world witnesses local governments and opposition as well as external forces in their struggle for power, influence, and resources rely not only on traditional Muslim institutions, but often engage various groups of radical Islamists who, as a result, become powerful political and military forces.

For example, in Turkey the Islamist Justice and Development Party (AKP) – which has been the ruling party for years – departs from the policy of the Turkish Republic's founder Kemal Ataturk to develop a secular nation and supports foreign radical Islamist groups. Classified documents of the German Ministry of the Interior obtained by German media confirm that Turkey supports terrorists and Islamists. In particular, Berlin suspects the Turkish president Recep Tayyip Erdogan in supporting the Egyptian Muslim Brotherhood and Palestinian Hamas movement, as well as armed Islamist opposition groups in Syria.⁷

In 2011-2012, the Muslim Brotherhood won in the parliamentary and presidential elections in Egypt. As the social and economic conditions worsened and the regime pursued the policy of forcible Islamization of the country, the leadership of the Egyptian armed forces carried out a military coup on July 4, 2013. The overthrown president Mohamed Morsi and the leaders of the Muslim Brotherhood were brought to trial, the military ensured the adoption of a new constitution and democratic elections.

The Lebanese Shiite group Hezbollah declared a terrorist organisation by the Arab League, the United States, the EU, Israel and many other countries⁸ has effectively become a state within a state, its members sit in the country's parliament and government, it has its own

⁷ 'Erdogan's ties to Islamists: is it not a hindrance for relations between Russia and Turkey?', *Deutsche Welle*, 17 Aug. 2016 <<https://www.dw.com/ru/связи-эрдогана-с-исламистами-для-отношений-рф-и-турции-не-помеха/a-19480911>> [in Russian].

⁸ 'Arab League declared 'Hezbollah', Russia's partner in Syria, a terrorist organisation', *Golos Islama*, 14 Mar. 2016 <<https://golosislama.com/news.php?id=29343>> [in Russian].

security services and armed forces. About 10,000 Hezbollah fighters on a rotational basis are permanently deployed in Syria where they protect the government of Bashar al-Assad.

In 2014, Islamist jihadists proclaimed the creation of a quasi-state of Islamic Caliphate in the vast territories of Syria and Iraq. For several years they not only threatened to seize Damascus and Baghdad but also tried to spread its influence and wage *jihad* (war against the infidels) worldwide. With the help of advanced information technologies, the recruiters of the Islamic State have attracted thousands of citizens from Europe and elsewhere and carried out dozens of brutal terrorist attacks around the world.

Key issues of the Syrian peace settlement

For the seventh year in a row Syria has remained the epicenter of regional instability with the main opposing sides being the government of Bashar al-Assad and the armed opposition. For a while both sides had to fight with militants of radical Islamist groups primarily with the Islamic State. At the beginning of the civil war, al-Assad relied on the Arab-Alawite minority and Shiite communities (which constitute up to 15% of the population of the country), the leadership of the Baath Party, and law enforcement agencies. Among the outside forces supported Damascus was Iran, the Lebanese Hezbollah, and the so-called Shia foreign legions (Shia militias from Afghanistan, Pakistan, Iraq, Yemen). Since 2015, the Russian armed forces have assisted the government of al-Assad with fighting against the Islamic State and other terrorist groups, de-mining of liberated territories, dealing with humanitarian problems. The Russian diplomacy helped created the conditions for a ceasefire and the start of an intra-Syrian dialogue. In 2017, Russia facilitated peace talks in Astana and Sochi aimed at ensuring transition to the restoration of the Syrian state.

The Syrian armed opposition relied on the Arab-Sunni majority of the country (about 65% of the population) including radical Muslim groups such as the Muslim Brotherhood. A significant part of Sunni military, law enforcement agents and state officials has taken the side

of the opposition. Turkey, Jordan, the monarchies of the Persian Gulf led by Saudi Arabia, and the United States have provided external aid to the Syrian opposition (finances, material, weapons, training of military personnel, etc.).

The Kurdish minority (12% of the country's population) initially maintained neutrality in the civil war. Abandoned by the government in 2012, the Kurds were able to create quite effective self-governing bodies and militia units to protect their territories from invasions of the Islamic State and Turkish army. Kurds played an important role in defeating the radical Islamists in Syria and gained control of about 800 km of the Syrian-Turkish border. The most fierce battle was fought for the city of Kobani and the surrounding areas when Islamist militants armed with heavy weapons and military equipment suffered a heavy defeat. Later the Kurdish militia supported by the US armed forces liberated Raqqa – the capital of the 'Islamic Caliphate' – and the entire eastern bank of Euphrates river. They established close cooperation with local Sunni Arabs and Christians. During the most violent confrontation with the Islamic State, the Iraqi Kurds of the Peshmerga and the Kurdish volunteers from Iran and Turkey came to the aid of the Syrian Kurds.

Kurds have expressed their readiness to participate in the negotiations on the peaceful settlement in the country and the adoption of a new constitution. Their demands to Damascus and the opposition center on preserving the autonomous status of the Kurdish regions and providing equal rights to the Arabs and Kurds in the new constitution. However, so far neither al-Assad nor representatives of the opposition invited a Kurdish delegation to the negotiations in Astana, Sochi, and Geneva, not they guarantee status of the Kurds in the new Syria.

Ankara and Tehran also oppose the participation of Kurdish representatives in the peace talks. The Turkish authorities consider the Democratic Union Party (PYD) – the leading political force of the Syrian Kurds – a terrorist organisation affiliated with the Kurdistan Workers' Party (PKK), and do not hide their intentions to conduct operations to 'pacify' Kurds of Syria. Teheran fears the growth of separatist sentiments among Iranian Kurds if the Kurdish areas in Syria

obtain a status of an autonomy or federal entity, as it has happened in Iraq.

Despite the defeat of the Islamic State, the largest terrorist group of radical Islamists, and the agreement reached on a ceasefire between the government forces and armed opposition forces, the peace talks in Geneva and Astana with the mediation of the UN, Russia, Turkey, and Iran mostly languish and so far give no tangible results.

The parties to the Syrian conflict impose on each other unacceptable conditions. For example, the opposition demands the resignation of al-Assad, while Syrian government insists on the disarmament of the opposition forces. Negotiators avoid direct contacts and prefer to communicate through foreign intermediaries. Many external and internal opposition groups continue to ignore the negotiation process and refuse to participate in the formation of the country's new constitution and coalition government. There are also so-called hawks or supporters of a fight to the finish in al-Assad's inner circle.

The rather fragile 'no war, no peace' state is occasionally broken by attacks and shelling from both sides of the conflict or by provocations of the remaining jihadist groups. At the end of 2017, Russia's Khmeimim airbase in Syria underwent mortar bombardments and a massive attack by unmanned aerial vehicles (UAVs) from the Idlib province. This attack was believed to be a response to the offensive of government troops in the province.

Despite all the declarations about preserving 'united and indivisible Syrian Arab Republic,' the country de facto continues to be divided into several enclaves. Most of the country is controlled by government troops and foreign allies of the regime (Shia foreign legions). At the same time, the Astana agreement on truce and ceasefire has led to the separation of the government and opposition forces and creation of four so-called de-escalation zones. Russian military police, in coordination with Jordan and other countries, provides security around those areas. The Idlib province is considered to be the largest de-escalation zone with the greatest number of armed opposition forces. Turkish troops have set up truce monitoring points in the province.

An autonomous region commonly known as Rojava was established under the control of PYD on the Syrian border with Turkey. In early 2018 one of the its three self-governing regions – Afrin was occupied by Turkish troops. On June 4, 2018, Washington and Ankara reached an agreement on the withdrawal of Kurdish self-defence militia from Manbij and the establishment of joint US-Turkish control over this strategic point.⁹ This agreement consolidated the partition of the northern part of Syria into the US and Turkish areas of influence.

After the defeat of the Islamic State, militias from Syrian Democratic Forces (SDF) which was created with the help of the US and which included Kurds, Sunni Arabs and Christians took under control the north-eastern regions of the country (along the borders with Turkey and Iraq and the eastern bank of the Euphrates River). Washington plans to form troops on the basis of these militia units to protect the borders of Syria with Turkey and Iraq in order to prevent the resurgence of the Islamic State.

As early as in August 2016, on the pretext of combating the Islamic State the Turkish Army invaded Syria and seized a border area up to 100 km wide (between the towns of Jarabulus and Azaz) and up to 50 km deep. Despite Turkish propaganda claiming that Ankara's intentions were to do away with terrorists in Syria, Erdogan made it clear that for him the main Syrian terrorists were Kurds and al-Assad. 'There will be no peace with al-Assad in Syria,' said the Turkish president during his visit to Tunis on December 27, 2017. According to Erdogan, the Syrian state had no future if its current leader remained in office. 'He is guilty of the death of a million Syrian citizens ... He has fomented state terrorism,' said Erdogan.¹⁰ This statement did not surprise the world community, but questioned the success of joint efforts by Russia, Turkey and Iran to resolve the Syrian crisis. As noted above, in late January 2018, after a series of missile and bomb attacks

⁹ 'Syrian Kurds offer Damascus to start negotiations', *EurAsia Daily*, 6 June 2018 <<https://eadaily.com/ru/news/2018/06/06/siriyskie-kurdy-predlagayut-damasku-nachat-peregovory>> [in Russian].

¹⁰ 'Erdogan's shocking statement: there will be no peace in Syria', *Moskovsky komsomolets*, 27 Dec. 2017 <<http://www.mk.ru/politics/2017/12/27/shokiruyushhee-zayavlenie-erdogana-mira-v-sirii-ne-budet.html>> [in Russian].

and artillery and mortar shelling of Syrian territory, the Turkish mechanized troops invaded Afrin district and occupied the area under the pretense of fighting Kurdish militias. Nearly a thousand militiamen and local residents died, tens of thousands of Kurdish families were forced to seek refuge in neighbouring provinces.

Damascus regards the Turkish invasion as a violation of Syria's sovereignty and an act of aggression. Al-Assad has not yet taken an active military response, since the Syrian army is not in a position to take control of the country's northern provinces and to secure its border with Turkey. Damascus's attempts to regain control of Afrin with the help of Shia mercenaries failed. The Turkish forces launched a massive attack on the Shia fighters and forced them to turn back.

In addition to the rather large Turkish force in Syria, there are also US special forces and Army aircraft in the country (according to the Pentagon, 1,720 American military personnel are in Syria) deployed mainly on temporary bases in the northern Kurdish regions and in the northeast areas controlled by the SDF.¹¹

Under the agreement with the Syrian government, Russia maintains there military forces (at the Hmeimim air base and Tartus naval facility in the Mediterranean Sea) which overall and operationally deployed numbers were reduced in late 2017. After the Islamic State was defeated, the main goals of the Russian troops included monitoring the truce and ceasefire between the de-escalation zones and government troops and providing humanitarian assistance to the population affected by the civil war and the actions of jihadi militants in Syria.

With the consent of Damascus, there are military contingents of other foreign nations in Syria: Iran's Islamic Revolutionary Guards Corps (IRGC) military units and advisers (about 8,000), Lebanese Shia Hezbollah fighters (up to 10,000 on a rotational basis), four units of Shia mercenaries and volunteers from Afghanistan, Pakistan, Yemen, and Iraq (total of up to 20,000-25,000). The number and combat strength of the foreign Shia fighters (40,000-45,000) significantly supplement the regular Syrian army greatly weakened by the years of

¹¹ 'Thousands more US military service members in Iraq and Syria than believed', *ABC News*, 27 Nov. 2017 <<http://tass.ru/mezhdunarodnaya-panorama/4763679>>.

civil war (it is estimated that currently there are 70,000-80,000 military personnel left in the Syrian Armed Forces). Tehran finances and supplies both al-Assad's army and the local militia (about 30,000) loyal to Damascus and the foreign Shia units in order to maintain military superiority of the friendly Syrian regime over the opposition. In all, the Syrian government and the Iranian military in Syria control about 150,000 troops and militias with varying degrees of loyalty and combat capability.¹²

The Israeli leadership closely follows the developments in Syria and makes no secret of its concern over the deployment of Iranian troops near its border and the transfer of advanced weapons – primarily small- and medium-range missiles – from Iranians to Lebanese Hezbollah. As a preventive measure, the Israeli military identifies potentially dangerous Hezbollah fighters, warehouses and vehicles with weapons and ammunition and destroy them with missile and bomb strikes. The Israeli leadership makes it clear to its partners in the US, EU and Russia that it will not tolerate the transformation of Syria into a military bridgehead for Iran and non-state Shia actors such as Hezbollah.

The leadership of Turkey, Jordan, the monarchies of the Persian Gulf and other member countries of the Arab League have a very negative view of the Iranian military presence and the groups Tehran supports in Syria. On November 12, 2011 amid escalating violence in the country Syria's membership in the Arab League was suspended. Most Arab countries agreed that responsibility for the bloodshed lied with Damascus, so it did not deserve the right to represent its people in the organisation. In March 2013, the Arab League invited representatives of the Syrian opposition to take Syria's place.¹³ Almost all the member states (with the exception of Iraq, Lebanon and, to some

¹² Semenov, K., 'Syrian armed forces in seven years of war: from the regular army to the volunteer corps', Russian International Affairs Council, 28 Apr. 2017

<<http://russiancouncil.ru/analytics-and-comments/analytics/vooruzhennye-sily-sirii-na-sedmyy-god-voyny-ot-regulyarnoy-armii-k-dobrovolcheskim-korpusam/>> [in Russian].

¹³ 'Arab League gave Syrian seat to opposition', *Golos Islama*, 8 Mar. 2013

<<https://golosislama.com/news.php?id=15603>> [in Russian].

extent, Algeria) are in favor of the immediate resignation of al-Assad and the early withdrawal of all foreign Shia military formations from Syria. At the same time, Arab countries with ruling Sunni elites strongly support the Syrian external and internal opposition. Over the years of the civil war, Syria has turned into an arena of armed confrontation between regional centers of power – the Shia bloc led by Tehran and the Sunni one led by Riyadh. The Syrian crisis also has a destabilizing effect on neighbouring Arab states – Lebanon and Iraq and on the Middle East region as a whole. About one million Syrians have fled to Lebanon alone,¹⁴ with the population of this country being only 6.8 million people of which up to half a million are Palestinian refugees.

In November 2017, the presidents of Russia, Iran and Turkey outlined a plan to advance a political settlement in Syria. One of the concrete measures was to revitalize the negotiation process between various Syrian parties by holding in Sochi in 2018 an expanded Syrian National Dialogue Congress which would discuss a draft of the country's new constitution and schedule UN-controlled elections in Syria. And although most of the Syrian external opposition did not support this initiative,¹⁵ the Congress still took place on January 31, 2018 and served as another important step towards a peaceful settlement of the Syrian crisis.

Situation in Lebanon, Iraq, and Yemen

The very fragile political equilibrium existing in Lebanon in recent years between the main party blocs who represent the confessional communities (Sunni, Shia and Christians) was almost broken on November 4, 2017 when the acknowledged Sunni Arab leader, Lebanese Prime Minister Saad Hariri, unexpectedly flew to Riyadh and

¹⁴ 'Syrian refugees in Lebanon drop below one million: UN', *The Daily Mail*, 26 Dec. 2017, <<http://www.dailymail.co.uk/wires/afp/article-5213089/Syrian-refugees-Lebanon-drop-one-million-UN.html>>.

¹⁵ 'The Sochi plan met resistance', *RBC*, 23 Nov. 2017 <<https://www.rbc.ru/news/paper/2017/11/24/5a169b399a79479087643244>> [in Russian].

there announced his decision to resign. At the same time, he accused Iranian and Hezbollah leaders of destabilizing the situation in the country and the region, and also revealed the information about an attempt on his life.

After a long stay in Saudi Arabia, Hariri visited France, Cyprus and Egypt where he held talks with the heads of the states. Upon his return to Lebanon on November 21, 2017, the prime minister announced that upon the president's request he would postpone his official resignation. He also added that he was open to a further dialogue and cooperation with the Lebanese president Michel Aoun and the speaker of the parliament Nabih Berri in order to preserve the unity and territorial integrity of the country.¹⁶ It should be noted that Hariri's concerns regarding the strengthening of Iran and Hezbollah in Lebanon were not groundless. Over the years of the armed conflict in Syria, Hezbollah fighters have gained experience of conducting combat operations and received new weapons including heavy ones. In terms of numbers, the level of combat readiness and capability today Hezbollah does not concede to the regular army of Lebanon.

The internal political situation remains no less difficult in Iraq where after the victory over the Islamic State there remain serious disagreements and contradictions between the ruling Arab Shia majority and their opponents – Sunni Arabs and Kurds. So far, the central government in Baghdad is represented mainly by Shia Arabs and is heavily influenced by Tehran. Shia militia groups (Hashd al-Shaabi brigades) conduct clearance operations in the Sunni and Kurdish areas of Iraq freed from the Islamic State militants, make arrests of those suspected in helping the Islamic State, and take hostages causing discontent among the local residents. On December 14, 2017, the Human Rights office of the United Nations Assistance Mission for Iraq (UNAMI) launched an investigation into the crimes of the Shia Hashd al-Shaabi.¹⁷ In response, several attacks have occurred in the Shia areas

¹⁶ 'Prime Minister of Lebanon Hariri decided to remain in office', *RIA Novosti*, 22 Nov. 2017 <<https://ria.ru/world/20171122/1509350618.html>> [in Russian].

¹⁷ 'Iraq: UN launched investigation of Hashd al-Shaabi crimes in Tuz Khurmatu', *Federal'noye agentstvo novostey*, 14 Dec. 2017 <<https://riafan.ru/1007259-irak-oon-nachala-rassledovanie-prestuplenii-khashd-ash-shaabi-v-tuz-khurmatu>> [in Russian].

of Baghdad and other cities, while observers do not rule out an increase in activity of Sunni military and political groups and new uprisings of Sunni tribes.

The referendum held on September 25, 2017 in northern Iraq on the independence of Iraqi Kurdistan, as expected, confirmed the desire of the vast majority of Iraqi Kurds to create their own state.¹⁸ Although the local authorities did not force the process of secession from Baghdad, the central government responded rather sharply: it announced the closure of two international airports in the region, brought government forces and Hashd al-Shaabi brigades into the so-called disputed areas in the north of the country, tried to take control of checkpoints on the borders with Turkey and Iran, and in general exerted diplomatic and military-political pressure on the government and various political forces of Iraqi Kurdistan. The Iranian authorities took active part in this anti-Kurdish campaign by closing the border with the Kurdish region of Iraq and trying to split the Kurdish national movement including through closing the border crossings with the bordering Sulaymaniyah province.

As a result, a serious conflict over the 'Kurdish problem' in Iraq was avoided. Erbil and Baghdad expressed their intention to restore the relations, which they were pushed to not only by Tehran and Ankara but also by Washington, Brussels, and Moscow. But it is yet premature to talk about full normalization in Iraq. Not only the Sunni Arabs and Kurds but also the Shia themselves lost confidence in Iraqi Prime Minister Haider al-Abadi and Vice President Nuri al-Maliki. Muqtada al-Sadr, the influential Shia leader, accuses the central government of corruption and inability to rule the country and occasionally leads thousands of his supporters into governmental quarters of Baghdad and demands the dissolution of parliament and the resignation of the government.¹⁹ The separatist sentiments remain alive not only in the Kurdish and Sunni regions but also in the Shia province of Basra rich

¹⁸ 'Results of the referendum in Iraqi Kurdistan: 92.73% for independence', *EurAsia Daily*, 27 Sept. 2017 <<https://easaily.com/en/news/2017/09/27/itogi-referenduma-v-irakskom-kurdistane-9273-za-nezavisimost>> [in Russian].

¹⁹ 'Muqtada al-Sadr spoke against Hashd al-Shaabi', *Riataza*, 5 Aug. 2017 <<http://riataza.com/2017/08/05/muktada-as-sadr-vyistupil-protiv-hashd-shaabi/>> [in Russian].

in oil reserves whose authorities raise the possibility of creating their own federative entity similar to Iraqi Kurdistan.²⁰ A landslide victory of the al-Sadr bloc in the May 2018 parliamentary elections brought about an intense struggle to form a new coalition government. Al-Sadr would like to pursue a policy independent from Washington and Tehran, but he is unlikely to succeed since the election runner-up bloc is oriented towards Iran, while the block of al-Abadi, which has got the third place, tries to maneuver between the interests of the United States and Iran.

Overall, Iran-influenced Iraq, Syria, and Lebanon continue to represent a 'belt of regional instability' in the Middle East. Tehran's strengthening positions in these countries meets resistance not only from the local Sunni Arabs, Christians, and Kurds, but also from external forces – Saudi Arabia, Jordan, Israel, Turkey, and the United States. Riyadh and Washington are trying to build an anti-Iranian bloc of more than 40 states on the basis of regional organisations (the Arab League, Cooperation Council for the Arab States of the Gulf, Organisation of Islamic Cooperation).

The events of the Arab Spring in Yemen have also been developing dramatically. Since February 2011, this country has plunged into a deepening internal political crisis and become the arena of a fierce armed confrontation between legitimate – from the point of view of the world community – national government and Houthi rebel groups.²¹ Radical Islamic groups such as Al-Qaeda and the Islamic State increased their activity in the country. In November 2011, in Riyadh, Yemeni President Ali Abdullah Saleh signed an agreement with the opposition on the transfer of power. In accordance with the agreement, on February 21, 2012, Yemen held elections of a new president. Abd-Rabbu Mansour Hadi (who was the vice-president under Saleh) was elected the country's president for a two-year transition period. In January 2014, Hadi's term was extended for

²⁰ 'Basra governor refers to constitutional rights and demands the creation of a federal region', *Riataza*, 9 Jan. 2018 <<http://riataza.com/2018/01/09/gubernator-basryi-ssylaetsya-na-konstitutsionnyie-prava-i-trerebuet-sozdaniya-federalnogo-regiona/>> [in Russian].

²¹ Houthis are Shiite Muslims living primarily in the north of Yemen. According to some estimates, they make up about a third of the country's 24.4 million population.

another year. Despite the election of a new head of state, the internal political crisis in the country was not resolved, armed clashes continued between the government and various opposition groups.

The most violent conflict erupted between Hadi's supporters and Houthi rebels. One of the key demands of the rebels was to grant greater autonomy to the northern province of Sa'ada. The Ansar Allah group is considered to be the fighting wing of the Houthi who rely on the help and support of Iran.

On the night of March 26, 2015, at the request of Hadi, the Air Force of Saudi Arabia launched air strikes against the Houthi positions. Bahrain, the UAE, Qatar, Kuwait, Morocco, Sudan, and Egypt took part in the operation code-named Decisive Storm. The coalition's navies also participated in the operation firing at the Houthi positions. The US provided logistical and intelligence support as well as air-refueling of the military aircraft. 14 April 2015, the UN Security Council adopted resolution 2216 which imposed a ban on the supply of weapons and military equipment to Shia rebels.

On April 21, 2015, the coalition's command announced the end of the Decisive Storm Operation and the beginning of the Renewal of Hope Operation aimed at protecting civilians, combating terrorism and political settlement in Yemen. It was noted that the completion of the first operation did not mean the termination of air strikes and Saudi Arabia continued to bombard rebels' positions.

In August 2015, the coalition began to concentrate ground forces in the Yemeni provinces of Marib and Saada. The number of foreign troops there reached 10 thousand. In addition to Saudi Arabia, Bahrain, the UAE, Qatar, Egypt, Morocco, and Senegal deployed their military forces in Yemen. At the end of November 2017, a conflict erupted in Sana, the capital of the country, between the recent allies – the Houthi rebels and the supporters of former President Saleh (he was killed in street fighting in 2017).

According to the UN, between March 26, 2015 and March 18, 2016 3.2 thousand civilian Yemenis were killed and 5.8 thousand more were injured. 21 million people (about 80% of the country's population) are in need of humanitarian aid, more than 2.5 million

Yemenis have been forced to flee their homes and become refugees and displaced persons.²²

To some extent, Yemen, like Syria, has turned into an arena of armed confrontation between Iran and the Arab-Sunni coalition with no durable peaceful solution in sight for this conflict.

Libya, once one of the most prosperous and socio-economically developed Arab states of North Africa, is now experiencing a crisis of power and a humanitarian catastrophe. A number of parallel governments with different degrees of legitimacy act on the territory of the country. There are also leaders of various Islamist and tribal groups who try to control the oil-rich and other strategically important areas of the country that disintegrated into enclaves. Al-Qaeda and the Islamic State also strengthen their presence in Libya. Similar to Yemen, there is no clear path to consolidation of a unified Libyan state and transition towards peace-building.

Re-imposition of US sanctions against Iran

The Islamic Republic of Iran, which aspires to the regional leadership, has not escaped protests either. In the second half of December 2017, spontaneous social unrest erupted at first in small settlements on the periphery of the country, but soon it quickly spread to twenty major cities and to Tehran by the end of 2017. The clashes with the law enforcement forces left killed and wounded people on both sides and hundreds of protesters were detained by the police.

Protestors expressed dissatisfaction with their social situation, rising prices, corruption in power and called for preventing impending hunger and poverty crisis in the country. They also demanded the government to stop wasting budget money to support the Lebanese Shia Hezbollah, Palestinian Hamas, and al-Assad regime in Syria. The

²² 'The main stages of the conflict in Yemen', TASS, 4 Dec. 2017, <<http://tass.ru/mezhdunarodnaya-panorama/2598135>> [in Russian].

anti-government political slogans were directed against the spiritual leader of the country and the ruling regime.²³

The reason for the popular unrest was that despite the gradual removal of international restrictive sanctions from Iran, the country's financial and economic situation had not improved but continued to worsen. The inflation and unemployment levels remained high, prices for food, basic necessities, gasoline were growing at a rapid pace, national currency was depreciating, population's purchasing power was decreasing. Many citizens believed that the ruling regime was primarily to blame for the crisis. Social networks played a big role in the social mobilization and informing citizens about the state of affairs in the country. Just as in the days of the Arab Spring, the Iranian streets were seething with unrest.

In fact, the Iranian population's discontent with the government is not entirely groundless. Tehran's attempts to bring Shia and pro-Shia regimes to power in a number of Arab countries (Iraq, Syria, Lebanon, Yemen, Bahrain) as well as to support Shia communities in Saudi Arabia and Kuwait and anti-Israeli Hamas and Hezbollah groups demand considerable financial and material resources. Tehran has spent tens of billions of dollars for this purpose, and over the past few years thousands of Iranians have died or been injured in conflicts in the territories of the Arab states. The IRGC and its Qods Force, which organise and manage the Shia Iranian militias abroad, have further strengthened their role in the political and economic life of the country and have increasingly become a state within a state.

In 2013 alone, Iran provide Syria with interest-free and almost non-refundable loans worth about \$15 billion. This money allowed the Syrian government to meet its social obligations in the territories under its control and to finance military expenditures. Approximately \$8-9 billion were given to al-Assad annually after 2013.²⁴

²³ 'Persian protest: how massive clashes started in Iran', *RBC*, 4 Jan. 2018

<<https://www.rbc.ru/politics/02/01/2018/5a4b5ab09a79475e2b588658><https://www.rbc.ru/politics/02/01/2018/5a4b5ab09a79475e2b588658>> [in Russian].

²⁴ Sazhin, V., 'Iran in Syria: the price of assistance', *Mezhdunarodnaya zhizn*, 1 Jan. 2018 <<https://interaffairs.ru/news/show/19090>> [in Russian].

The Iranian authorities managed to suppress the popular unrest, as they previously did in 2009, but it is likely that they will have to correct their internal and external policy. Apparently, the costs of supporting Shiaism and anti-Israeli forces in the Arab countries will have to be reduced. It is not unlikely that the IRGC will hand over some of its responsibilities to other military and civil authorities of the country. In particular, at the insistence of the president and the government the IRGC has already begun the process of scaling down its financial and economic activities including transferring control of some of its assets to the state.²⁵ Further deterioration of Iran's financial and economic situation due to the withdrawal of the US from the Joint Comprehensive Plan of Action (JCPOA) and the announced reinstatement of a strict sanctions regime against Tehran is to be expected. Even if none of the other parties to the JCPOA joins this regime, the damage can be significant for Tehran.

* * *

Generally, the unresolved Palestinian and Kurdish issues, armed conflicts in Syria and Yemen, activities of radical Islamist terrorist groups, disintegration of states, internal political crises and protests in Libya, Algeria, Lebanon, Tunisia, Egypt, Iraq, Saudi Arabia, Bahrain, Turkey, Iran, and other countries – all this creates an atmosphere of chaos and violence in the Middle East. One of the main obstacles to resolving the situation in the region is the struggle for power between Iran and Saudi Arabia whose actions provoked Shia–Sunni wars and conflicts. In this, not only the Arab–Sunni world, but also Turkey and indirectly the US and Israel support Riyadh. In conclusion, it should be noted that the Middle East crises, one way or another, affect the economic and political situation throughout the world and have global repercussions for international stability and security.

²⁵ 'Business of Islamic Revolutionary Guards are taken away', *Kommersant*, 14 Sep. 2018 <<https://www.kommersant.ru/doc/3410252>> [in Russian].

10. ADJUSTING RUSSIA'S STATE ARMAMENT PROGRAMME

Lyudmila PANKOVA

On February 26, 2018, Russian President Vladimir Putin signed a State Armament Programme (Gosudarstvennaia programma vooruzheniia, GPV) for 2018-2027 thus officially turning a new page in the modernisation of the Russian armed forces. The level of its funding – approximately 19 trillion rubles¹ – is comparable to the one of the previous State Armament Programme – GPV-2020. In 2008, Russia started large-scale modernisation of its armed forces aimed at equipping new units (primarily those kept in constant combat readiness) with modern arms and military equipment (AME). By 2011, rearmament programmes had witnessed a trend shift: partial orientation on procurement of foreign weapons and components (including to boost competitiveness of the Russian defence industry) gave way to significant increase in production and procurement of indigenous weapon systems.² It happened even before 2014 Russia sanctions including those targeting the military industrial sector and resulting in Moscow adopting import substitution plans. The start of GPV-2027 may become the next important stage in technological modernisation of the Russian armed forces.

¹ Not adjusted for inflation.

² Pankova, L., The dynamics of modernisation of the Russian armed forces. In *Russia: arms control, disarmament and international security* (MEMO RAN: Moscow, 2015), pp. 141-156.

Main results of GPV-2020, as well as the priorities, goals, problems and details of implementation of the new state armament programme are discussed below.

Results of the modernisation of the Russian armed forces in 2008-2018

Both Russian and Western military experts have noted considerable progress in recent years in modernisation of the Russian army and its rearmament with new weapon systems demonstrated, inter alia, during military operation in Syria.³

First, it should be noted that the combat readiness of the Russian troops has increased, as has the quality of the AME produced in the country and the share of modern weapons in the armed forces⁴.

The Russian Land Forces and Navy have received a range of new AME, for example, submarine- and ship-launched Kalibr cruise missiles (Kalibr-NK and Kalibr-PL respectively), several types of unmanned aerial vehicles (UAVs) and some others⁵ which

³ For example, according to the members of the National Commission on the Future of the Army General Carter Ham and Kathleen Hicks, the Russian Federation 'has demonstrated progress in developing short-range air defence systems.' General Philip M. Breedlove, NATO's Supreme Allied Commander Europe, noted that Vladimir Putin managed to create a strong army and acquire powerful long-range missiles. See: 'Russia has significantly strengthened its military potential, US experts say', *Voennotekhnicheskoe sotrudnichestvo*, 29 Jan. 2016, no. 5, p. 43 [in Russian]; 'NATO admits the power of the Russian army', *Forbes*, 5 Apr. 2016 <<http://www.forbes.ru/news/317179-nato-priznalo-moshch-rossiiskoi-armii>> [in Russian].

⁴ In the last five years alone, the Russian armed forces have received 80 intercontinental ballistic missiles, 102 submarine-launched ballistic missiles, three Borei class strategic ballistic missile submarines, 55 space vehicles, 3237 tanks and other armored combat vehicles, more than 1000 aircraft and helicopters, 150 ships and vessels, six submarines, 13 BAL and Bastion anti-ship missile systems. 'How the Russian army has been modernised in five years', *Armia i OPK*, 11 Dec. 2017 <<http://tass.ru/armiya-i-opk/4796815>> [in Russian].

⁵ Over the last five years more than 300 new arms and military equipment have entered service many of which shape how the Russian armed forces look today. See: Presentation of the Chief of the General Staff of the Russian Armed Forces – First

effectiveness were tested in combat situations. The share of advanced AME has also risen considerably. In 2017, the Land Forces received more than 2,000 new and modernised weapon systems, while the Russian Aerospace Forces (ASF) and Naval Aviation – 206 new and modernised aircraft and helicopters.⁶

With priority being given to the development of the strategic nuclear forces, non-nuclear forces, including high precision conventional weapons, have witnessed rapid progress as well. Russia has begun mass deliveries of Iskander-M tactical missile systems to the armed forces and equipment of surface ships and submarines with Kalibr missile systems. Long-range aircraft are being modernised to carry a new Kh-101 air-launched cruise missile. As a result, the number of launchers of these ground-, sea- and air-based systems has increased by more than 12 times, and those of high-precision cruise missiles – by more than 30 times.⁷

Second, Russia has been actively developing advanced weapons, including hypersonic ones. In his address to the Russian Federal Assembly on March 1, 2018, the Russian president introduced a number of new systems at different stages of development.⁸

Third, by 2016, half of RAF – a new branch of military service – had been equipped with modern weapons.⁹ In 2017, ASF units had received 191 modern aircraft and helicopters and 143 air- and missile defence systems. In December 2017, the Unified Space System (USS)

Deputy Defence Minister, General of the Army Valery Gerasimov at a public meeting of the Board of the Russian Defence Ministry on November 7, 2017, Official website of the Ministry of Defence of the Russian Federation, 7 Nov. 2017 <https://function.mil.ru/news_page/person/more.htm?id=12149743@egNews> [in Russian].

⁶ Zakvasin, A., 'Russia has to be among the leading states: Putin called for creation of new generation army', *RT*, 22 Dec. 2017 <<https://russian.rt.com/russia/article/463425-putin-armia-minoborony-shoigu>> [in Russian].

⁷ Gavrilov, Yu., 'Alignment with modernity', *Rossiyskaya gazeta*, 7 Dec. 2017 <<https://rg.ru/2017/11/07/shojgu-dolia-sovremennogo-oruzhiia-v-rossijskoj-armii-vyroslo-do-59.html>> [in Russian].

⁸ Presidential Address to the Federal Assembly, 1 Mar. 2018 <<http://en.kremlin.ru/events/president/news/56957>> [in Russian].

⁹ Shevtsova, T., 'Russian defence budget can lose 5% in 2016, but not more'...

intended, among other things, for detection of ballistic missile launches, was put on trial duty.

Fourth, the major Russia's achievement in strengthening its defence capability is the creation of a continuous radar field of the missile early warning system (MEWS) along the entire perimeter of the state borders. According to the Russian Defence Minister Sergey Shoigu, it happened for the first time in modern history of the country¹⁰ with six new highly prefabricated Voronezh radar stations having been deployed and put on alert and three already operating radar stations – Daryal, Dnepr and Volga – having been modernised. Additionally, the territorially distributed and vertically integrated 6th generation National Centre for State Defence Control has been created.¹¹

Fifth, Russia has considerably improved the efficiency of preparation and implementation of the state defence order (SDO) – one of key indicators of its military posture. The rate of SDO implementation increased from 93% in 2013 to 98.8% in 2016. Such strong performance sets GPV-2020 apart from the previous state armament programmes (GPV-2010 and GPV-2015). At a meeting with members of the Russian government President Vladimir Putin summing up the results of 2017 noted that big success of SDO would have a positive effect not only the state's defence capability, but also its civilian industries.¹²

Among the most important features of GPV-2020 has been constant efforts to increase the share of spending under development budget line item which represents the total amount of expenditures of the Russian Defence Ministry on research and development (R&D), acquisition of new AME, maintenance and modernisation of existing AME. All that is primarily done within the SDO.¹³ The structure of

¹⁰ Zakvasin, A., 'Russia has to be among the leading states'...

¹¹ Presentation of Ruslan Tsalikov, First Deputy Defence Minister of the Russian Federation, *TVC*, 16 Mar. 2018 <<http://www.tvc.ru/channel/brand/id/1756/show/episodes/episo>> [in Russian].

¹² Dronina, I., 'Moscow intends to increase resilience of defence industry', *Nezavisimoe voennoe obozrenie*, 19 Jan. 2018 <http://nvo.ng.ru/realty/2018-01-19/1_980_moscow.html> [in Russian].

¹³ SDO in broad terms includes expenditures of not only the Defence Ministry but also other security agencies, but the latter are not the subject of this paper.

budget allocations for development has hardly changed in a decade: 19-20% go to R&D, 65-66% – to acquisitions, 15-16% – to maintenance.

Sixth, delivery of modern AME to troops goes hand in hand with the building of the necessary infrastructure, training of personnel, creating of educational and material base and service housing.¹⁴

Finally, the export production of AME has almost doubled (up to \$14 billion per year with a total order volume of about \$50 billion). Though many challenges remain¹⁵ (for example, with the implementation of shipbuilding projects of GPV-2020¹⁶), overall the share of modern AME in the Russian army has grown four times in the last five years and reached nearly 59.5%.¹⁷ The Land Forces are 45% equipped with new weapon systems, the ASF – 73%, the Navy – 53%. In 2018, the share of modern equipment in the Armed Forces will reach 61%, among them: 82% in the Strategic Nuclear Forces (SNF), 46% in the Land Forces, 74% in the ASF, 55% in the Navy. According to Sergey Shoigu, this momentum will allow the Defence Ministry to raise the share of modern AME to at least 70% by 2020.

Priorities of the new State Armament Programme 2027

All the above demonstrates that the starting point for GPV-2027 differs profoundly from that for GPV-2020 as its implementation started in an entirely different organisational, financial and military-technical context. Recently the yearly rate of completion of the state defence order has been 96-98% which significantly enhances the chances of the new programme to be fully implemented.

¹⁴ Gavrilov, Yu., 'Alignment with modernity'...

¹⁵ They are mostly related to the imposition of sanctions on the Russian Federation and import substitution issues.

¹⁶ Vasin, A., 'Russian navy: a failure amidst successes', *NVO*, 16 Mar. 2018 <http://nvo.ng.ru/realty/2018-03-16/3_988_vmf.html> [in Russian].

¹⁷ Defence Minister Sergey Shoigu reported on this matter at a meeting of the Board of the Defence Ministry on November 7, 2017. See: Gavrilov, Yu., 'Alignment with modernity'...

To ensure Russia's sufficient defence capability its military-economic sector has to be *effective and dynamic* (allocations, staff, goal-setting), *innovative* (more efficient R&D and innovation mechanisms), and *resilient* (sustainability of the innovation process, close network interactions between innovation agents, etc.). In general, given the current state of the Russian economy and its budgetary restrictions, Moscow needs new non-standard and possibly asymmetric approaches to a threefold challenge:

- to ensure defence/deterrence capabilities;
- to promote innovative digital development of military-oriented industries;
- to expand (through conversion/diversification, development of dual-use technologies, etc.) industrial base of the defence-industrial complex (DIC).

Addressing simultaneously all three aspects of the challenge while ensuring continuity between GPV-2020 and GPV-2027 will allow the Russian military economy to benefit from considerable synergetic effect.

The most important areas of addressing the threefold challenge within GPV-2027 are the following.

First, new weapon systems, including those unveiled in the March 2018 presidential address, require further efforts.

Second, along with modernisation of the strategic nuclear deterrent forces, the new programme will devote almost equal amount of attention to the development of air-, ground- and sea-based high precision weapons and of means to counter them. Besides, more emphasis will be placed on the development of artificial intelligence systems, such as robots, unmanned combat and reconnaissance vehicles, and reconnaissance, communication and electronic warfare systems.

Among different branches of the armed services the priority will be given to the Land and Airborne Forces.¹⁸

¹⁸ Alekseeva, N., 'We are reaching a new level: goals of the 2018-2028 armament programme', *RT*, 27 Feb. 2018 <<https://russian.rt.com/russia/article/486907-rossiya-programma-vooruzhenie>> [in Russian].

In particular, GPV-2027 includes delivery of RS-28 Sarmat and RS-26 Rubezh intercontinental ballistic missiles (ICBMs) to the Strategic Missile Forces (RS-26 is the road-mobile missile complex, a derivative on the RS-24 Yars ICBM, with a new guided warhead to penetrate missile defence).¹⁹ In 2018, Russia will complete the construction of the *Knyaz Vladimir* ballistic-missile nuclear submarine (SSBN) – the lead Project 955A and the fourth Borei-class SSBN. The S-400 Triumph missile system will be supplemented by S-500 Prometheus with a greater range and efficiency including in interception of intermediate-range ballistic missiles (S-500 is expected to enter service in 2020).²⁰ The Russian Navy will receive the Zircon anti-ship hypersonic missiles with a range of 400 km.²¹

Third, in 2019 Russia expects to complete a second round of testing and put into service Su-57 fifth generation fighter jet²² as part of PAK FA project (earlier known as T-50). The new Su-57 fighters were demonstrated during a Victory Day parade on May 9, 2018. Preliminary government tests and trial entry into service of the Armata heavy unified battlefield platform are scheduled for 2019.²³ The serial deliveries of A-100 multipurpose airborne early warning and control complex are planned for 2020.²⁴ Such complexes provide continuous tracking of the

¹⁹ However, there are indications that the work on the Rubezh missile system may be frozen until the end of 2027. See: ‘Source: Avangard complex has replaced Rubezh in the state armament programme till 2027’, *TASS*, 22 Mar. 2018 <<http://tass.ru/armiya-i-opk/5055517>> [in Russian].

²⁰ ‘Armata, Sarmat and Zircon: priorities of the state armament programme till 2027’, *TASS*, 30 Jan. 2018 <<http://tass.ru/armiya-i-opk/4911274>> [in Russian].

²¹ Gryshchenko, N., ‘Hypersonic Zircon is included in the Russian GPV’, *Rossiyskaya gazeta*, 20 Dec. 2017 <<http://www.rg.ru/2017/12/20/giperzvukovye-cirkony-voshli-v-gpsprogrammuvooruzheniy-rf.html>> [in Russian].

²² Karnozov, V., ‘Evolution of PAK FA: what has been done on SU-57 programme in eight years’, *TV Zvezda*, 29 Jan. 2018 <<https://www.tvzvezda.ru/news/opk/connent/201801291342-ofmr.htm>> [in Russian].

²³ ‘One expensive targeted strike is better, than hundred untargeted strikes. Dmitry Rogozin about plans of modernisation of the army, development of the Arctic and space exploration’, *Kommersant*, 26 Feb. 2018 <<https://www.kommersant.ru/doc/3558424>> [in Russian].

²⁴ ‘A-100 flying radar made its first flight’, *RIA Novosti*, 18 Nov. 2017 <<https://ria.ru/arms/20171118/1509083923.html>> [in Russian].

situation in the air, on the ground and at sea, increase real-time command and control efficiency amid the evolution of a hi-tech/network-centric warfare and sharp increase in the number of classes of targets.

Russia also continues R&D in anti-satellite weapons, including in Rudolf mobile 'strike anti-satellite complex' and Tirada-2S ground and mobile complexes for electronic warfare attacks against communication satellites.²⁵

Innovative and digital development

In November 2017, the Decree No 540 'On amending the Provision No 1082 on the Ministry of Defence of the Russian Federation approved by the Decree of the President of the Russian Federation of August 16, 2004' was signed. Under the Decree, the Russian Defence Ministry carries out activities on innovative development, supports scientific, technical and advanced programmes and projects, and creates conditions for their implementation²⁶.

According to Sergey Shoigu, one of the main objectives of the government support for innovation in 2018 is to establish the Military Innovative Technopolis ERA. In the words of Deputy Defence Minister Pavel Popov, 'the goal of the project is to create innovative infrastructure to facilitate search, development and implementation of innovative ideas and designs and cutting-edge technologies in the defence industry. Such infrastructure will increase effectiveness of applied scientific research, create a foundation for new technologies, and provide for rapid development of military systems.'²⁷ Popov is

²⁵ Deputy Chief of the 46th Central Scientific Research Institute of the Russian Defence Ministry Oleg Achasov reported to the Federation Council of the Russian Federation on this matter. 'Russia will have Rudolf combat complex capable of shooting down satellites', *RIA Novosti*, 30 Nov. 2017 <<https://ria.ru/science/20171130/1509923292.html>> [in Russian].

²⁶ Popov, P., 'Era of innovations for the state and army. The Russian Defence Ministry creates a unique military and innovative technopolis', *Nezavisimoe voennoe obozrenie*, 9 Mar. 2018 <www.nvo.ng.ru/armament/2018-03-09/1_987_tehnopolys.html?print=Y> [in Russian].

²⁷ Ibid.

referring to an effective organisational and management model of identifying emerging technologies, integrating new scientific ideas within innovative programmes and projects in close collaboration ‘with military and civilian governing bodies, leading scientific and educational centres, industrial corporations and defence industry enterprises.’²⁸

Nano- and biotechnologies, information and telecommunication technologies, information security, artificial intelligence, supercomputers are listed among the key scientific and technological research areas. If found, practical solutions to problems of dual use technologies (and, possibly, dual use innovations) are expected to promote greater optimisation and efficiency of innovation activity, improvement of technology and knowledge transfer between military and civilian sectors and strengthening of research base of the Russian Defence Ministry.

Two clusters – Science and Education (research-scientific and educational cluster) and Advanced Technologies and Innovations (research-production cluster) – are under consideration. The former (with the necessary infrastructure to be created in 2018) will focus on scientific research, laboratory experimentation and simulation modelling of advanced weapons and military and special equipment. The latter will be responsible for creating and testing prototypes of weapons, technologies and materials under the guidance of defence industry representatives.

Civilian production in DIC

In the face of declining defence spending and completed modernisation of the Russian army, the share of SDO in military budget will reduce. To keep its military-related production capacities in operation, Russia will have to increase civilian output by defence companies which at the

²⁸ The scientific management of research projects is assigned to Mikhail Kovalchuk, the president of the Kurchatov Institute National Research Centre, professor, corresponding member of the Russian Academy of Sciences.

moment is about 17% (in some industries up to 40%).²⁹ According to the plan announced by President Putin this figure will increase to 30% by 2025, and to 50% by 2030 (Box 1). Some Russian experts expect the growth of civil output of the DIC to be substantial. Due to the negative outcomes of the military-to-civilian conversion that took place in the 1990s, the current process has got the name of diversification.

Box 1.

Russian defence-industrial complex (DIC) – key figures:

- DIC employs more than 2.5 million people;
- DIC comprises 1300 enterprises and organisations in 64 Russian regions;
- Russia ranks among three top arms producing countries;³⁰
- total amount of 2018 contracts is about 3 trillion rubles.³¹

DIC goals and development indicators:³²

- to increase the share of civilian production from 17% (in some sectors – up to 40%) in 2017 to 30% by 2025, and to 50% by 2030;
- to raise AME technology and manufacture preparedness of DIC to 100% (2016 estimate was 97%);
- to commission 929 new production facilities;
- to increase the share of innovative products in the output to 40%;
- to develop over 1300 technologies for military production by 2020;
- to increase the share of equipment under 10 years old to 80%;
- to maintain the current position at the global arms market.

²⁹ Kanashkin, A., 'To go ahead with motivation', *Voenno-promyshlenniy kurier*, 2018, no. 9, p. 7 <<https://vpk-news.ru/articles/41571>> [in Russian].

³⁰ 'In the last decade Russia has doubled export of military goods', *Voenno-tekhnicheskoe sotrudnichestvo*, 2017, no. 38, p. 3 [in Russian].

³¹ Estimations are made by Deputy Defence Minister Tatiana Shevtsova. '20 trillion rubles are allocated for new State Armament Programme', *Natsional'naya oborona*, 2018, no. 1 <<http://www.oborona.ru/pages/mainpage/archive/2018/01/index.shtml>> [in Russian].

³² 'The updated programme of DIC development for 2016-2020 is approved', TASS, 30 May 2016 <<http://tass.ru/armiya-i-opk/3324561>> [in Russian]; 'Without leapfrogging', *Rossiyskaya gazeta*, 24 Feb. 2012 <<http://ppt.ru/news/104392>> [in Russian].

State participation in diversification of the defence industry is a controversial issue. In the view of Russian experts, ‘in the area of development and utilization of hi-tech civil goods, the state procurement should prioritize domestic manufacturers over foreign producers to allow the former to cover costs, develop products and secure sales.’³³

The DIC share in the industrial complex of Russia is about 4-5%. Meanwhile it accounts for about 30% of total machine building production and about 45% of machinery export. Improving pricing mechanism of SDO goods will be very important for effective diversification of the defence industry. A new regulation by the Russian Federal Antimonopoly Service has introduced a motivational pricing model which encourages SDO producers to reduce costs and use savings for modernisation and performance improvement.’³⁴

According to Minister of Industry and Trade Denis Manturov, funding for projects on diversification of DIC production till 2025 is estimated at 291.5 billion rubles which include federal budget funds and Vnesheconombank soft loans.³⁵ It was also suggested that defence industry companies, which in recent years have been equipped with new technologies and substantially modernised, should use their resources to produce hi-tech civilian and dual-use goods with high export potential. At the same time the full conversion has been ruled out. According to the head of the Federation Council Committee on Defence and Security Victor Bondarev, GPV-2027 allows ‘on the one hand, to continue technological improvement, make innovative breakthroughs, create new advanced arms, military and special equipment, and on the other hand – to ensure mass, large-scale

³³ Presentation by Oleg Lavrichev, General Director of the JSC Plandin Arzamas Instrument Engineering Plant (APZ). See: Fokeyeva, L., SDO effective pricing was discussed, APZ official web-site, 22 Feb. 2018 <[http://www.oaoapz.com/press/news/obsuzhdali-effektivnoe-tsenoobrazovanie-po-goz/-/](http://www.oaoapz.com/press/news/obsuzhdali-effektivnoe-tsenoobrazovanie-po-goz/)> [in Russian].

³⁴ Presentation by FAS Deputy Head Maxim Ovchinnikov. See: Kanashkin, A., ‘To go ahead with motivation’...

³⁵ ‘Manturov estimated projects on diversification of DIC production till 2025 at 291.5 billion rubles’, TASS, 24 Aug. 2017 <<http://tass.ru/armiya-i-opk/4504111>> [in Russian].

unhampered production and delivery of tried-and-tested vehicles, weapons and ammunition to the armed forces.’³⁶

Financial parameters of GPV-2027

As it is stated above, the cost of GPV-2027 is 19 trillion rubles with another 1 trillion rubles allocated (for the first time) for synchronizing arms deliveries and constructing storage facilities.

The Russian military budget for 2018 is 2.8 trillion rubles – or 46 billion dollars³⁷ – which amounts to 2.8% of GDP. It is 15 times smaller than the defence budget of the United States (700 billion dollars), 1.3 times smaller than that of Great Britain (60 billion dollars), and only 1.15 times larger than that of France or Germany (approximately 40 billion dollars each).

The structure of the Russian defence budget has not changed considerably (see Table 1). The bulk of the spending (over 80%) is allocated for the armed forces (budget item 02 01). GPV-2027 goals imply increasing expenditures for research and development. However, as Table 1 shows, the 2018-2020 budget envisages a slight decrease in funding for applied scientific research (budget item 02 08). One should expect an increase in R&D spending after 2020, when the technical re-equipment of the Russian armed forces will be completed.

The defence budget reflects Russia's pursuit of optimum balance between short-, medium-, and long-term development plans and spending on different branches of its armed forces.³⁸ To facilitate this pursuit, Russia has enhanced cooperation between its Ministry of Defence and Ministry of Finance on defence budget planning and increasing spending efficiency.

³⁶ ‘In all directions: The Federation Council told about the new armament programme’, *RIA Novosti*, 10 Jan. 2018 <http://www.ria.ru/defense_safety/20180110/1512398181.html?inj=1> [in Russian].

³⁷ ‘Russian military budget in 2018 will be \$46 billion’, *Kommersant*, 22 Dec. 2017 <<https://www.kommersant.ru/doc/3507257>> [in Russian].

³⁸ ‘In all directions: The Federation Council told about the new armament programme’...

Table 1. National defence budget (budget item 02), mln rubles

	2017	2018	2019	2020
National defence budget, item 02	2,872,282.9	2,771,784.6	2,798,497.4	2,807,994.3
% of GDP	3.1	2.8	2.7	2.5
% of federal budget	17.0	16.8	17.1	16.8
<i>including:</i>				
Armed forces, budget item 02 01	2,128,612.2	2,138,384.2	2,146,904.8	2,230,413.3
% of GDP	2.3	2.2	2.1	2.0
% of federal budget	12.6	12.9	13.1	13.3
Nuclear military complex, budget item 02 06	44,439.7	45,142.0	45,219.7	44,951.0
% of GDP	0.05	0.05	0.04	0.04
% of federal budget	0.3	0.3	0.3	0.3
Applied scientific research, budget item 02 08	365,111.0	284,872.3	269,944.4	286,528.1
% of GDP	0.4	0.3	0.3	0.3
% of federal budget	2.2	1.7	1.6	1.7

Compiled from: Opinion of the State Duma Defence Committee on the federal budget draft for 2018 and 2019-2020 planning periods <<http://voensud-mo.ru/doc/conclusion%20law/budget2018>> [in Russian].

This collaboration has resulted, inter alia, in the amendment of the Budget Code of the Russian Federation allowing the Defence Ministry to re-allocate up to 10% of its budgetary funds and re-distribute financial resources in order to increase their efficiency and

addressing priority concerns.³⁹ Since 2015, the Defence Ministry has been employing a system of cross-departmental control of SDO funding that allows to track various types of payments in any entity or organisation of the Russian Federation, and to assess and mitigate risks of contract failure.⁴⁰

In fact, GPV-2020 was implemented in a new legal framework following the adoption of Federal Law 275 'On State Defence Order' in 2012. As it was mentioned above, the law introduced government control over the pricing mechanism in the defence industry and established oversight principles and responsibilities of an SDO supervisory body. This framework was supplemented with bank brokerage in 2015 and with treasury brokerage in 2017 of the Defence Ministry contracts.⁴¹

In 2018, for the first time in a decade Russia's annual defence spending declined by 100 billion rubles compared to the previous year.⁴² It is true that the 2017 defence budget was smaller than the 2016 one, but in 2016 interest payments on loans led to irregular increase of expenses of the Russian Defence Ministry.

Chairman of the Accounts Chamber Alexey Kudrin noted that within three next years (2018-2020) military spending would fall by more than one percent of the GDP⁴³ which, in his view, was a substantial reduction. The actual share of defence expenditures in GDP by 2020 is expected to be 2.5% (see Table 1). The reduction of the

³⁹ 'Russian Defence Ministry was authorised to redistribute up to 10% of the budgetary funds allocated for it', *TV Zvezda*, 26 Nov. 2017 <<https://tvzvezda.ru/news/forces/content/4219450f7db27206a44aef32d1fbec624417860833b87554e975d3db1da271>> [in Russian].

⁴⁰ Bazanova, E., Nikolsky, A., 'Decrease in defence spending can slow down Russia's economy', *Vedomosti*, 15 Feb. 2018 <<https://www.vedomosti.ru/economics/articles/2018/02/15/751023-rashodov-oboronu>> [in Russian].

⁴¹ 'One expensive targeted strike is better, than hundred untargeted strikes'...

⁴² 'The budget of the Russian Federation for 2018 and for 2019-2020 planning periods', *TASS*, 24 Nov. 2017 <<http://tass.ru/info/4679765>> [in Russian].

⁴³ 'Kudrin: Russia committed to reducing military expenses', *TV Mir 24*, 26 Nov. 2017 <<https://mir24.tv/news/16279256/kudrin-rossiya-vzyala-kurs-na-umenshenie-voennyh-rashodov>> [in Russian].

defence budget provokes much disagreement among the Russian expert community and general public.

Traditionally military budget has two large spending items – equipment and maintenance. In 2018 similar to 2016-2017, equipment expenses will surpass maintenance expenses (1.5 and 1.3 trillion rubles, respectively). About 60% of 2018 defence costs will be allocated for purchasing hi-tech products, R&D, and maintenance. As Deputy Defence Minister Tatiana Shevtsova has repeatedly stressed, equipment expenses ‘are big investments into our DIC which have multiplicative effect.’⁴⁴ Since 2015, tax payments of defence industry to local and regional budgets alone have totaled 481 billion rubles. Salaries and allowances paid during the same period have amounted to 444 billion rubles.⁴⁵

According to the Ministry of Economic Development, the decline in defence expenditures in 2017 (with 6.7% underperformance) negatively affected the industry. In the fourth quarter the industry went into the red – the output fell by 1.7% on a year on year basis. All main sectors recorded a decline, including 2.2% in manufacturing industry. Its downturn can be partially explained by a decrease in the output of vehicles and equipment with its large share of defence production.⁴⁶

Many experts agree that the decrease in defence expenditures along with continuing slow GDP growth (1.5–2.0%) will automatically increase a technological gap between Russia and the USA, China and other leading countries in equipment the army with advanced hardware. The defence expenditures in comparison with those of the leading countries will decrease even if allocated more than 4.0% of GDP. According to Alexander Shirov, Deputy Director of Institute of Economic Forecasting of the Russian Academy of Sciences, each ruble

⁴⁴ ‘20 trillion rubles are allocated for new State Armament Programme’, *Natsional'naya oborona*, 2018, no. 1 <<http://www.oborona.ru/pages/mainpage/archive/2018/01/index.shtml>> [in Russian].

⁴⁵ Ibid.

⁴⁶ Bazanova, E., Nikolsky, A., ‘Decrease in defence spending can slow down Russia’s economy’...

of increase in defence industry means 80 kopeks of additional revenues for the country's economy.⁴⁷

Georgy Ostapkovich, Director of Institute for Statistical Studies and Economics of Knowledge at the Higher Schools of Economics, believes that the reduction of military spending has a negative multiplicative effect on defence-related sectors, such as machine building, metallurgical industry, transport, etc. However, partial transfer of DIC funding, for example, to science and education, while incurs short-term decrease in industrial output, will have a long-term positive effect on economic growth.

It is estimated that the growth and steadiness of industrial output in a wide range of knowledge-based, including dual-purpose, sectors (aviation, space, shipbuilding, radio-electronics, etc.) lead to an increase in the overall production and corresponding multiplicative effects creating added value. At the same time a decrease in military production has to be compensated with expansion of production of civilian and dual-use goods supported by a well-elaborated and sound diversification strategy and a major update and digitalization of the DIC production base.

* * *

The magnitude of political and economic changes in the world, strategic uncertainty, traditional and emerging challenges and threats create an incentive for more effective and dynamic development of the Russian military economic sector.

The major objective of the Russian defence industry for the next decade is to secure leading positions on the widest possible range of AME. To achieve this objective in current conditions it is necessary to focus on innovative and digital development of DIC along with its effective diversification.

⁴⁷ Shirov, A., 'Civilian industry will wait. Modernisation will expand the export potential of the defence enterprises', *Rossiyskaya gazeta*, 18 Feb. 2018 <<https://rg.ru/2018/02/18/modernizaciia-rasshirit-eksportnyj-potencial-oboronnyh-predpriatij.html>> [in Russian].

PART III. DOCUMENTS AND REFERENCE MATERIALS

11. Key documents of the Russian Federation on national security, defence, and arms control (January–December 2017)

11. KEY DOCUMENTS OF THE RUSSIAN FEDERATION ON NATIONAL SECURITY, DEFENCE, AND ARMS CONTROL (JANUARY–DECEMBER 2017)

Sergey TSELITSKY

Legislative acts

Federal Law no. 67-FZ of 17 April 2017 ‘On ratifying the Agreement between the Russian Federation and Uzbekistan on developing military-technical cooperation’

Passed by the State Duma (SD) on 5 April 2017, approved by the Federation Council (FC) on 12 April 2017, signed by the President of the Russian Federation (President) on 17 April 2017.

Federal Law ratifies the Agreement between the Russian Federation and Uzbekistan on developing military-technical cooperation.

Federal Law no. 130-FZ of 1 July 2017 ‘On ratification of the Protocol between the Russian Federation and the Republic of Kazakhstan on measures to terminate the Agreement on terms of use and lease of Emba Test Ground (5580th Test Base) signed between the Russian Federation and the Republic of Kazakhstan on January 20, 1995, and the Treaty on the lease of the Emba Test Ground (5580th Test Base) signed between the Government of the

Russian Federation and the Government of the Republic of Kazakhstan on October 18, 1996'

Passed by the SD on 16 June 2017, approved by the FC on 28 June 2017, signed by the President on 1 July 2017.

Federal Law no. 181-FZ of 26 July 2017 'On ratification of the Protocol between the Russian Federation and the Syrian Arab Republic on the deployment of an air group of the Russian Federation's Armed Forces in the Syrian Arab Republic on August 26, 2015'

Passed by the SD on 12 July 2017, approved by the FC on 19 July 2017, signed by the President on 26 July 2017.

Federal Law ratifies the Agreement between the Russian Federation and the Syrian Arab Republic on the deployment of an air group of the Russian Federation's Armed Forces in the Syrian Arab Republic on August 26, 2015, signed in Damascus on January 18, 2017.

Federal Law no. 182-FZ of 26 July 2017 'On ratification of the Agreement between the Russian Federation and the Republic of Armenia on a Joint Group of Armed Forces of the Russian Federation and the Republic of Armenia'

Passed by the SD on 14 July 2017, approved by the FC on 19 July 2017, signed by the President on 26 July 2017.

Federal Law ratifies the Agreement between the Russian Federation and the Republic of Armenia on a Joint Group of Armed Forces of the Russian Federation and the Republic of Armenia signed in Moscow on November 30, 2016.

Federal Law no. 183-FZ of 26 July 2017 'On ratifying the Council of Europe Convention on laundering, search, seizure and confiscation of the proceeds from crime and on the financing of terrorism'

Passed by the SD on 14 July 2017, approved by the FC on 19 July 2017, signed by the President on 26 July 2017.

Federal Law ratifies the Council of Europe Convention on laundering, search, seizure and confiscation of the proceeds from crime and on the financing of terrorism on May 16, 2006 signed in Strasbourg on January 26, 2009 with some statements.

Federal Law no. 187-FZ of 26 July 2017 ‘On security of critical information infrastructure of the Russian Federation’

Passed by the SD on 12 July 2017, approved by the FC on 19 July 2017, signed by the President on 26 July 2017.

Federal Law sets out the basic foundations and principles for ensuring security of Russia’s critical information infrastructure, including the state system for detecting, preventing and eliminating the consequences of cyberattacks against Russian Federation’s information resources.

Federal Law no. 237-FZ of 29 July 2017 ‘On amending the Federal Law ‘On the State Defence Order’

Passed by the SD on 20 July 2017, approved by the FC on 25 July 2017, signed by the President on 29 July 2017.

Federal Law amends the Federal Law ‘On the State Defence Order.’

Federal Law no. 296-FZ of 30 October 2017 ‘On ratification of the Agreement between the Government of the Russian Federation and the Government of the Republic of Tajikistan on cooperation in military postal and courier service’

Passed by the SD on 20 October 2017, approved by the FC on 25 October 2017, signed by the President on 30 October 2017.

Federal Law ratifies the Agreement between the Government of the Russian Federation and the Government of the Republic of Tajikistan on Cooperation in military postal and courier service signed in Dushanbe on February 27, 2017.

Federal Law no. 297-FZ of 30 October 2017 ‘On ratifying the Agreement between the Government of the Russian Federation and the Government of the Republic of Belarus on joint logistics

support for the Regional Army Group (Forces) of the Russian Federation and the Republic of Belarus'

Passed by the SD on 20 October 2017, approved by the FC on 25 October 2017, signed by the President on 30 October 2017.

Federal Law ratifies the Agreement between the Government of the Russian Federation and the Government of the Republic of Belarus on joint logistics support for the Regional Army Group (Forces) of the Russian Federation and the Republic of Belarus signed on November 2, 2016, in Minsk.

Federal Law no. 298-FZ of 30 October 2017 'On ratifying the Protocol to amend and augment the Agreement between the Russian Federation and the Republic of Belarus on jointly guarding the Union State's air space and on establishing a Joint Regional Air Defence System of the Russian Federation and the Republic of Belarus of February 3, 2009'

Passed by the SD on 20 October 2017, approved by the FC on 25 October 2017, signed by the President on 30 October 2017.

Federal Law ratifies the Protocol to amend and augment the agreement between the Russian Federation and the Republic of Belarus on jointly guarding the Union State's air space and on establishing a Joint Regional Air Defence System of the Russian Federation and the Republic of Belarus of February 3, 2009, signed in Minsk on November 2, 2016.

Federal Law no. 327-FZ of 25 November 2017 'On amendments to Articles 104 and 153 of the Federal Law on information, information technology and protection of information and Article 6 of the Law on mass media'

Passed by the SD on 15 November 2017, approved by the FC on 22 November 2017, signed by the President on 25 November 2017.

Normative acts

Government Decree no. 208 of 17 February 2017 ‘On state regulation of prices on production supplied under the State Defence Order and recognizing as invalid some acts of the Government’

Government Order no. 348-r of 23 February 2017 ‘On signing the Agreement on the exchange of information within the framework of the Commonwealth of Independent States in the field of combating terrorism and other violent manifestations of extremism, as well as their financing’

Order approves a draft agreement on the exchange of information within the framework of the Commonwealth of Independent States in the field of combating terrorism and other violent manifestations of extremism, as well as their financing, submitted by the Federal Security Service and agreed with other interested federal executive agencies, and previously agreed with the Member Nations of the Commonwealth of Independent States according to Paragraph 1, Article 11 of the Federal Law ‘On international treaties of the Russian Federation.’

Government Order no. 736-r of 19 April 2017 ‘On signing the Agreement between the Government of the Russian Federation and the Government of the Republic of Paraguay on defence cooperation’

Order approves a draft agreement between the Government of the Russian Federation and the Government of the Republic of Paraguay on military cooperation, submitted by the Ministry of Defence and agreed with the Ministry of Foreign Affairs and other interested federal executive agencies according to Paragraph 1, Article 11 of the Federal Law ‘On international treaties of the Russian Federation.’

Presidential Decree no. 177 of 19 April 2017 ‘On approving the Regulations on the military districts of the Armed Forces of the Russian Federation’

Decree approves the Regulations on the military districts of the Armed Forces of the Russian Federation in order to optimize the management of the Armed Forces of the Russian Federation, enhance their interaction with other forces and military formations in fulfilling defence objectives.

Presidential Decree no. 236 of 24 May 2017 ‘On approving the Regulations on the operative-territorial grouping of the National Guard troops of the Russian Federation’

Government Order no. 1025-r of 25 May 2017 ‘On signing the Protocol between the Government of the Russian Federation and the Government of Japan on amending the Agreement between the Government of the Russian Federation and the Government of Japan on the prevention of incidents at sea outside territorial waters and air space above them of October 13, 1993’

Order approves a draft protocol between the Government of the Russian Federation and the Government of Japan on amending the Agreement between the Government of the Russian Federation and the Government of Japan on the prevention of incidents at sea outside territorial waters and air space above them of October 13, 1993, submitted by the Ministry of Defence and agreed with the Ministry of Foreign Affairs and other interested federal executive agencies and previously agreed with Japan, according to Paragraph 1, Article 11 of the Federal Law ‘On international treaties of the Russian Federation.’

Government Order no. 1026-r of 25 May 2017 ‘On the conclusion of the Agreement between the Government of the Russian Federation and the Government of the Republic of Chad on military cooperation’

Order approves a draft agreement between the Government of the Russian Federation and the Government of the Republic of Chad on military cooperation, submitted by the Ministry of Defence and agreed

with the Ministry of Foreign Affairs and other interested federal executive agencies according to Paragraph 1, Article 11 of the Federal Law ‘On international treaties of the Russian Federation.’

Presidential Executive Order no. 203-rp of 16 June 2017 ‘On signing the Shanghai Cooperation Organisation Convention on Countering Extremism’

Order approves the proposal of the Government of the Russian Federation to sign the Shanghai Cooperation Organisation Convention on Countering Extremism. It is deemed expedient to sign the Convention at the Shanghai Cooperation Organisation Heads of State Council Meeting.

Government Order no. 1289-r of 20 June 2017 ‘On Signing the Agreement between the Russian Federation and the Kyrgyz Republic on developing military-technical cooperation’

Order approves a draft agreement between the Russian Federation and Kyrgyz Republic on the development of military-technical cooperation, submitted by the Ministry of Defence and agreed with the Ministry of Foreign Affairs and other interested federal executive agencies and previously agreed with the Kyrgyz Republic according to Paragraph 1, Article 11 of the Federal Law ‘On international treaties of the Russian Federation.’

Presidential Decree no. 279 of 21 June 2017 ‘On approving the Regulation on the procedure for implementing the Agreement between the Russian Federation and the Republic of Uzbekistan on developing military-technical cooperation of November 29, 2016’

Government Order no. 1372-r of 29 June 2017 ‘On the conclusion of the Agreement between the Government of the Russian Federation and the Government of the Federal Republic of Nigeria on military cooperation’

Order approves a draft agreement between the Government of the Russian Federation and the Government of the Federal Republic of Nigeria on military cooperation, submitted by the Ministry of Defence

and agreed with the Ministry of Foreign Affairs and other interested federal executive agencies according to Paragraph 1, Article 11 of the Federal Law 'On international treaties of the Russian Federation.'

Presidential Executive Order no. 245-rp of 5 July 2017 'On signing the Additional Protocol to the Council of Europe Convention on the Prevention of Terrorism'

Executive Order approves the proposal of the Government of the Russian Federation to sign the Additional Protocol to the Council of Europe Convention on the Prevention of Terrorism of October 22, 2015.

Presidential Decree no. 327 of 20 July 2017 'On approving the Basic Principles of State Naval Policy of the Russian Federation for the Period until 2030'

Decree approves the Basic Principles of State Naval Policy of the Russian Federation for the Period until 2030. The Basic Principles of State Naval Policy of the Russian Federation for the Period until 2020 approved by the President on May 29, 2017 (no. 1459-rp) is no longer valid.

Presidential Decree no. 345 of 29 July 2017 'On improving command and control system of the Joint Group of Troops (Forces) carrying out counter-terrorist operations in the North Caucasus region of the Russian Federation'

Government Order no. 1705-r of 8 August 2017 'On signing the Protocol amending the Agreement between the Government of the United Kingdom of Great Britain and Northern Ireland and the Government of the Union of Soviet Socialist Republics concerning the Prevention of Incidents at Sea beyond the Territorial Sea of July 15, 1986'

Order approves a draft Protocol amending the Agreement between the Government of the United Kingdom of Great Britain and Northern Ireland and the Government of the Union of Soviet Socialist Republics concerning the Prevention of Incidents at Sea beyond the

Territorial Sea of July 15, 1986, submitted by the Ministry of Defence and agreed with the Ministry of Foreign Affairs and other interested federal executive agencies and previously agreed with the Great Britain according to Paragraph 1, Article 11 of the Federal Law 'On international treaties of the Russian Federation.'

Presidential Decree no. 473 of 9 October 2017 'On abolishing the State Commission on Chemical Disarmament'

Decree abolishes the State Commission on Chemical Disarmament and repeals a number of presidential decrees in relation to the completion of the Russian Federation's commitments on the total elimination of chemical weapons.

Presidential Decree no. 484 of 14 October 2017 'On measures for implementing UN Security Council Resolution 2321 of November 30, 2016'

In conjunction with adoption of UN Security Council Resolution 2321 of November 20, 2016 and in accordance with Federal Law no. 281-FZ of December 30, 2006 'On special economic measures,' Decree imposes restrictions on Democratic People's Republic of Korea in response to its missile and nuclear tests.

Government Order no. 2491-r of 10 November 2017 'On signing the Agreement between the Russian Federation and the Republic of Uzbekistan on the procedure for monitoring the availability and targeted use of military goods supplied under the Agreement between the Russian Federation and the Republic of Uzbekistan on developing military-technical cooperation'

Government Decree no. 1374 of 15 November 2017 'On submitting for ratification the Agreement between the Russian Federation and the Republic of South Ossetia on cooperation in military postal and courier service'

Presidential Decree no. 555 of 17 November 2017 'On the number of the Armed Forces of the Russian Federation'

Decree established the number of the Armed Forces of the Russian Federation is 1 902 758 personnel including 1 013 628 military personnel.

Government Decree no. 1416 of 23 November 2017 ‘On submitting the Agreement between the Russian Federation and the Republic of South Ossetia on the integration of selected units of the Armed Forces of the Republic of South Ossetia into the Armed Forces of the Russian Federation to the President of the Russian Federation for ratification’

Government Decree no. 1428 of 27 November 2017 ‘On the specifics of state defence and security procurements’

Government Decree no. 1446 of 30 November 2017 ‘On submitting the Agreement between the Russian Federation and the Syrian Arab Republic on expanding the territory of the Russian Navy’s maintenance centre in the port of Tartus and on the arrival of Russian ships in the territorial sea, national waters and ports of the Syrian Arab Republic to the President of the Russian Federation for ratification’

Government Decree no. 1465 of 2 December 2017 ‘On state regulation of prices on goods supplied under the State Defence Order and on amending or repealing certain government decrees’

Government Order no. 2837-R of 15 December 2017 ‘On signing the Agreement on the use of military-purpose communication satellites and their further improvement’

Order approves a draft Agreement on the use of military-purpose communication satellites and their further improvement, proposed by the Ministry of Defence and agreed with the Ministry of Foreign Affairs, other interested federal executive agencies and ‘Roscosmos’ State Space Corporation and previously agreed with the Member Nations of the Commonwealth of Independent States.

Government Decree no. 1577 of 16 December 2017 ‘On amending the rules of developing the State Defence Order and its key indicators’

Presidential Decree no. 620 of 22 December 2017 ‘On improving the state system for detecting, preventing and mitigating the consequences of cyberattacks against the information resources of the Russian Federation’

ABOUT THE CONTRIBUTORS

ARBATOV, Alexey – Academician of the Russian Academy of Sciences (RAS), Ph.D. in History, Director of the IMEMO Centre for International Security

BUBNOVA, Natalia – Ph.D. in History, Leading Researcher at the IMEMO Centre for International Security

DIAKOV, Anatoly – Ph.D. in Physics and Mathematics, Senior Researcher (former Director) at the Centre for Arms Control, Energy and Environmental Studies at the Moscow Institute of Physics and Technology

DVORKIN, Vladimir – Ph.D. in Engineering, Senior Researcher at the IMEMO Centre for International Security, Major General (ret.)

ESIN, Victor – Ph.D. in Military Science, Leading Researcher at the Institute for the US and Canadian Studies RAS, Colonel General (ret.)

IVANOV, Stanislav – Ph.D. in History, Leading Researcher at the IMEMO Centre for International Security

NIKITIN, Alexander – Ph.D. in Political Science, Director of the Centre for Euro-Atlantic Security at the Moscow State Institute of International Relations (University), Senior Researcher at the IMEMO Centre for International Security

PANKOVA, Lyudmila – Ph.D. in Economics, Head of the Department of Military and Economic Security Research at the IMEMO Centre for International Security

TOPYCHKANOV, Petr – Ph.D. in History, Senior Researcher at the IMEMO Centre for International Security

TSELITSKY, Sergey – Researcher at the IMEMO Centre for International Security

ZAGORSKY, Andrey – Ph.D. in History, Head of the Department of Conflict Resolution and Disarmament at the IMEMO Centre for International Security

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