## VALDAI DISCUSSION CLUB REPORT



# WHAT MAKES GREAT POWER WAR POSSIBLE

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Until recently the international security environment had come to reflect a relative calm among major powers. The numerous proxy wars of the Cold war had largely gone silent. The number of armed conflicts between regional powers reduced while great powers did not fight each other at all. Even though military conflict continues to be a pervasive feature of the international security landscape, since the end of the Cold War interstate violence had seen a sharp decline in favor of numerous intra-state conflicts.

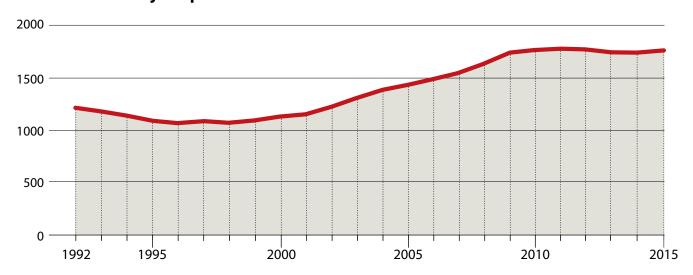
For the U.S. the past 15 years had come to be defined by a global campaign against international terrorism, along with two rather costly interventions in Iraq and Afghanistan. Both proved difficult counterinsurgency operations, representing exorbitant attempts at nation building in these countries. The U.S. walked away from these experiences, and the 2011 intervention in Libya, disappointed in how poorly use of military power translated to achieving political objectives abroad. This was a time of luxury, when the U.S. was relatively unchallenged in operations by near peer states,

having complete dominance across a spectrum of military domains.

However, in the past two years, there have been tectonic changes in the international system. New features of conflict begin to arise. As military technology continues to evolve, the international system has once again begun to accommodate use of force by a growing diversity of actors – including major military powers against each other.

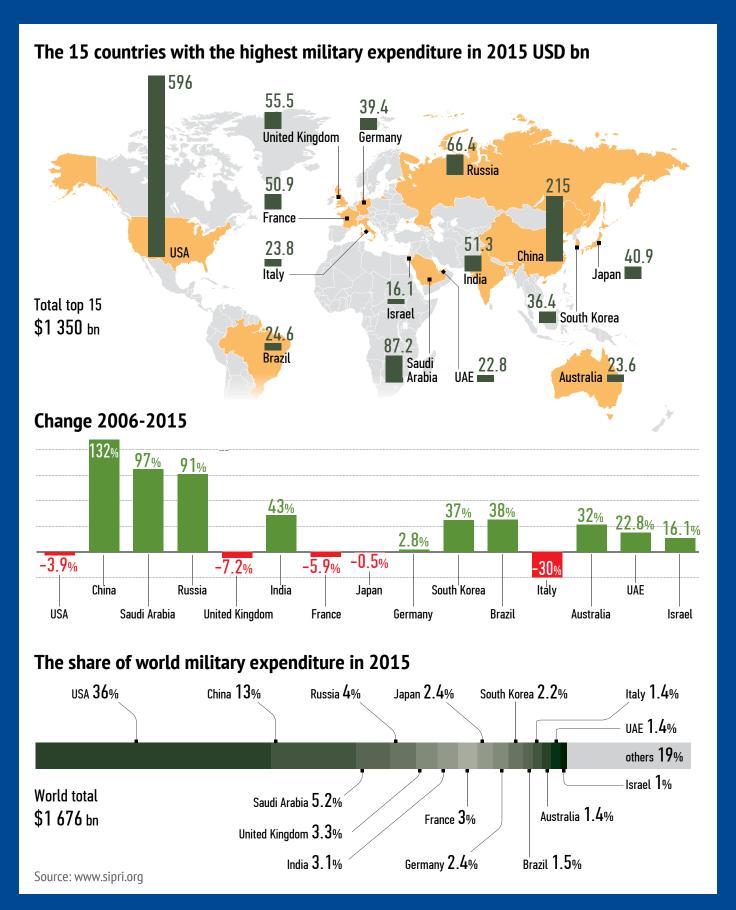
In the prevailing environment, the technological sophistication of military power has continued to increase while the thresholds for use of force among states have visibly declined. Besides that, numerous international competitors are seeing use of force as a solution to their challenges. In relations between Russia and NATO, China and Japan, Iran and Saudi Arabia, and most recently – Russia and Turkey – power plays unfold with unpredictable repercussions. The world must once again concern itself with major inter-state conflicts, together with new military capabilities that have been developed largely in times of peace.

## World military expenditure between 1992 and 2015



Source: www.sipri.org

## RECENT TRENDS IN MILITARY EXPENDITURE



## Great Power Temptation of the Use of Force

As the U.S. is transitioning from what it calls the "decade of war," the American military is adjusting once again to planning for high-end warfare against near peer adversaries. The time of fighting terrorism across the world may not be at an end, yet the challenge of managing conflict among major powers, and the dangerous escalation dynamics of war between conventionally or nuclear armed states, appears to have arrived. Bob Gates, long time US Secretary of Defense, famously said that:

"When it comes to predicting the nature and location of our next military engagements, since Vietnam, our record has been perfect. We have never once gotten it right, from the Mayaguez to Grenada, Panama, Somalia, the Balkans, Haiti, Kuwait, Iraq, and more — we had no idea a year before any of these missions that we would be so engaged."

While it is true that we cannot predict where the next war will take place, at the same time the international system offers signals and trends in state behavior that are equally impossible to ignore.

The conflagration surrounding Syria, involving many of the more prominent military powers, is already a stage for conflict. When after repeated warnings Turkey shot down Russia's Su-24 in November 2015, Moscow demonstrated military restraint, but this was already the first shot from one regional power to another, that is unlikely to go unanswered.

Turkey, a member of NATO, chose to assume the risk of conflict escalation with a major nuclear armed state in order to make a political point. Whether based in confidence or recklessness, such actions speak to the tangibly greater likelihood of war among major or regional powers in the international system.

Relations between Russia and the West have reached a nadir over the conflict in Ukraine to the point of Dmitry Medvedev saying at the 2016 Munich Security Conference that "One could go as far as to say that we have slid back to a new Cold War." The conflict in Ukraine is still simmering, while a Russian-led coalition advances air and ground campaign in Syria.

Left out of the headlines, though no less important, are the stirring tensions in the Asia-Pacific region between China and many of its neighbors, where the U.S. plays an important off-shore and on-shore balancing role. Beijing's rise continues to trouble American policymakers. Its immediate effects are felt in the military confrontation with neighboring states over who has sovereignty in outer lying island chains. A fight that is seemingly over parcels of sand, but one that is laden with political, military and economic implications. Instead of the Asia-Pacific region, where the U.S. expected a strong challenge, it is in Europe and the Middle East where the international order has begun to badly fray.

Between Russia and NATO in the West, Saudi Arabia and Iran in the Middle East, and the U.S. and China in Asia, the world is witnessing a set of unfolding games of signaling and escalation. The hallmarks of these interactions are large scale military exercises, snap readiness checks, freedom of navigation operations, bomber over flights, and close encounters in the air, matched by less visible interactions below the waters.

A quick survey of defense spending and modernization efforts across the world reveals substantial military build ups and a fluid military balance. Russia has been undergoing military reforms and modernization efforts since late 2008. In

response to Moscow's conflict with Ukraine, NATO too has begun a series of military redeployments, spending increases and military exercises to revive its combat potential in the European theater.

On the other side of the globe, China is also in the midst of sweeping military reforms, coupled to a military spending and modernization program that overshadows Russia's. Japan has invested heavily in its defense while the political leadership seeks to loosen up the constitutional strictures that keep its military a "self-defense force." Nowhere is this trend more pronounced then in the Middle East, where countries like Saudi Arabia have established one of the largest defense budgets in the world. Billions

of hardware from Russia, France and the U.S. is being purchased by Egypt, Iraq, UAE, Saudi Arabia and Algeria.

As major powers increasingly modernize their arsenals, retool force structures, and begin to engage in brinksmanship, the setting is one akin to Chekhov's "rifle on the wall," one that has all the signs of going off. With each year it appears more likely that competition among powers, military gambits and miscalculations are liable to cause the reemergence of an inter-state conflict with disastrous consequences. Russia's brush with Turkey is only one such example, there interactions between states in the Asia-Pacific region show little sign of better judgment.

## Indirect Warfare and the Lowering Threshold of Use of Force

All analogies are imperfect, but in some important ways, the world of today resembles the years preceding First World War. It may not be multipolar, but it is entangled in a complex web of regional alliances, bilateral treaty guarantees and the like. All of the leading military powers today are spending heavily on defense, investing in new technologies, doctrines, and plan to fight in wholly new domains. Just as over a hundred years ago, modern war will be fought with technologies for which doctrines have yet to be developed, in domains previously unexposed to combat, and without rules. The shadow of nuclear weapons looms over the present day strategic environment: how will new technologies impact the ability of powers to manage conflict escalation?

In First World War combat expanded to the air and underwater domain, while today conflict between major powers is likely to take place first and foremost in the cyber, information, and space domains. The Great War saw the evolution of unrestricted warfare, the targeting of civilian and commercial transport, infrastructure, and the abandonment of clear guidelines for war. Over the past hundred years the world has seen an ebb and flow in the consideration of rules of war, willingness to abide by laid down norms, and the actual separation of conflict from normative peace. At the time of WWI, economic integration among powers and growing interdependence made the cost of conflict seemingly unthinkable. Yet the fact that it proved almost mutually ruinous

for the European powers did little to prevent its outbreak.

Today we see a clear trend away from strict rules of warfare or the existence of any tangible separation between war and peace. There is a strong convergence between the U.S., Russia and China in the tendency to engage in indirect warfare and confrontation using the political, economic and information instruments of national power. This trend is witnessed in the military writings and observations of both Russia and China. From the ideas on unrestricted warfare, espoused by Chinese military thinkers in a famous book published in 1999 (by the same title) to those on nonlinear warfare by Russia's Chief of General Staff, Valery Gerasimov, written in an article in 2013.

These are not doctrines, but they are an important commentary about the absence

of a clear separation between war and peace, the preparation of the battlefield through non-military means, and the importance of non-military instruments of national power.

Indeed, many of these observations are not new, but represent a cyclical regression. They hearken back to those of George Kennan's famous memo on the inauguration of organized political warfare in 1948, in the early days of the Cold War. The important takeaway from these writings is that confrontation among the major powers in the international system today is already in progress, perhaps most intensively between Russia and NATO, but no less problematic in the Asia-Pacific region. Meanwhile while the threshold for the use of force continues to decline, and the intersection of actors in Syria, along with their contradictory interests in the conflict, is arguably the most likely place for that threshold to be crossed.

## A Future Great Power War

While the Second World War was the most devastating conflict, it represented the doctrinal and technical evolution of the capabilities that were born in the First World War. It began with a mechanized ground attack together with an air campaign, military technologies that had been honed through numerous conflicts following the First World War, particularly the Spanish Civil War 1936–1939.

The next great power war is likely to take us back in time, where pioneered technologies will be employed for the first time in large-scale warfare. Their targets will be the adversary's communications, intelligence, and a series of enablers ranging from land, space or underwater that form what is commonly known as the kill-chain. This is the sensor and communication network at the heart of modern warfare. We are in a rare historical moment when convergence of new weapon characteristics, ways and means of war produce a new generation of warfare.

While the great power wars of the past often involved large scale conventional operations this will not necessarily be the case in the 21st century. The goal of that

## FEATURES AND METHODS OF MODERN WARFARE

Modern war is a war without rules and restrictions. The convergence of new weapon characteristics, ways and means of war produce a new generation of warfare

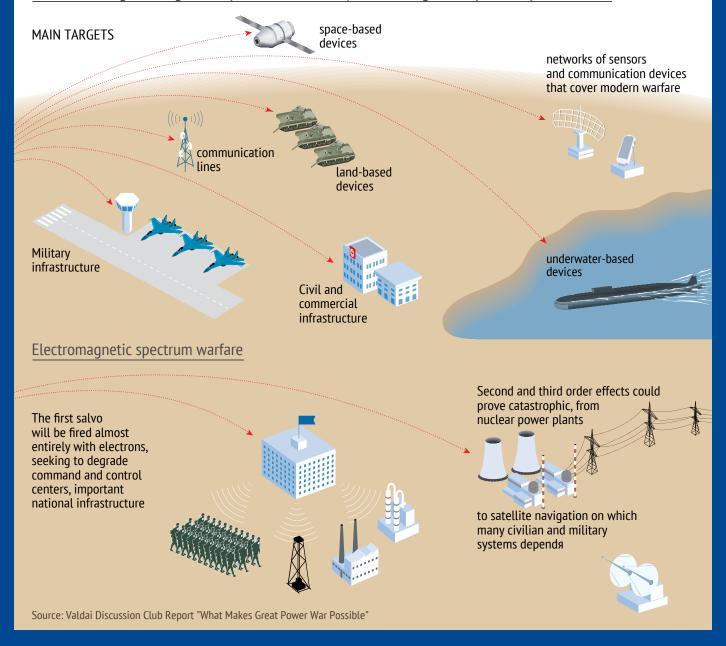
#### FEATURES OF MODERN WARFARE

The perceived utility of nuclear weapons as a meaningful deterrent to war will continue to decline

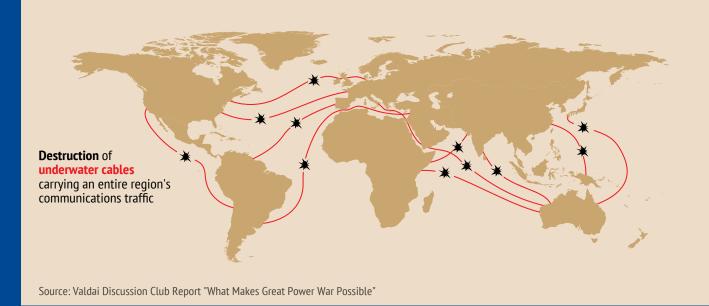


- States are focused on the conventional means of deterrence to the detriment of nuclear arsenals
- Nuclear weapons are vulnerable to attacks with highly precision non-nuclear devices
- Achievements in the missile defense development

Absence of large-scale ground operations and occupation of large enemy territory



#### Effective use of long range precision weapons that allow the closure of access to entire regions



#### METHODS OF MODERN WARFARE



#### **CYBERWAR**

Total infection and disabling of enemy computer networks for different purposes



#### **INFORMATION WAR**

It is one of the key elements of peace-time confrontation



#### **WAR IN SPACE**

destruction of enemy satellites (including commercial navigation systems as GPS and GLONASS, etc.), missile launch detection satellites

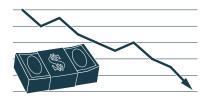


#### **SPECIAL OPERATIONS**

Subversion and sabotage, use of manpower, paramilitaries and militias



DEPLOYMENT OF POWERFUL MEANS OF ELECTRONIC WARFARE



**ECONOMIC / FINANCIAL WARS** 

Source: Valdai Discussion Club Report "What Makes Great Power War Possible"

war is less to devastate an enemy's armed forces, but instead the country's economic and political system. As a result, opponents military and government structures will be downgraded to the 20th century level. A future war among near peers is unlikely to start at the phalanx of formations arrayed at the front, but instead in space and cyberspace and the electromagnetic spectrum. The first salvo will be fired almost entirely with electrons, seeking to degrade command and control, important national infrastructure, and knock out or disable key enablers for the opponent's military effort.

These strikes will target economic and energy infrastructure, disabling nodes of communication, power distribution, and wreak havoc against civilian infrastructure. Their objective will be to prevent an opponent from being able to implement an effective resistance, while rapidly raising the costs to their economy and political system. Second and third order effects could prove catastrophic, from nuclear power plants to satellite navigation on which many civilian and military systems depend.

Modern great power wars are not likely to involve massive ground operations and would avoid occupation at all costs. Indeed, when looking at the potential candidates, who would wish to occupy China, Russia or all of Europe? The U.S. certainly had no desire for an invasion of Iran, by far the least daunting of potential adversaries. Following in American footsteps, there has been a trend across armed forces to invest in firepower, force multipliers and technology over raw manpower. Occupations are now not only improbable, in most scenarios they are impossible. Perhaps as in Ukraine, countries will affect a tiny fraction of another's territory to leverage a strategic

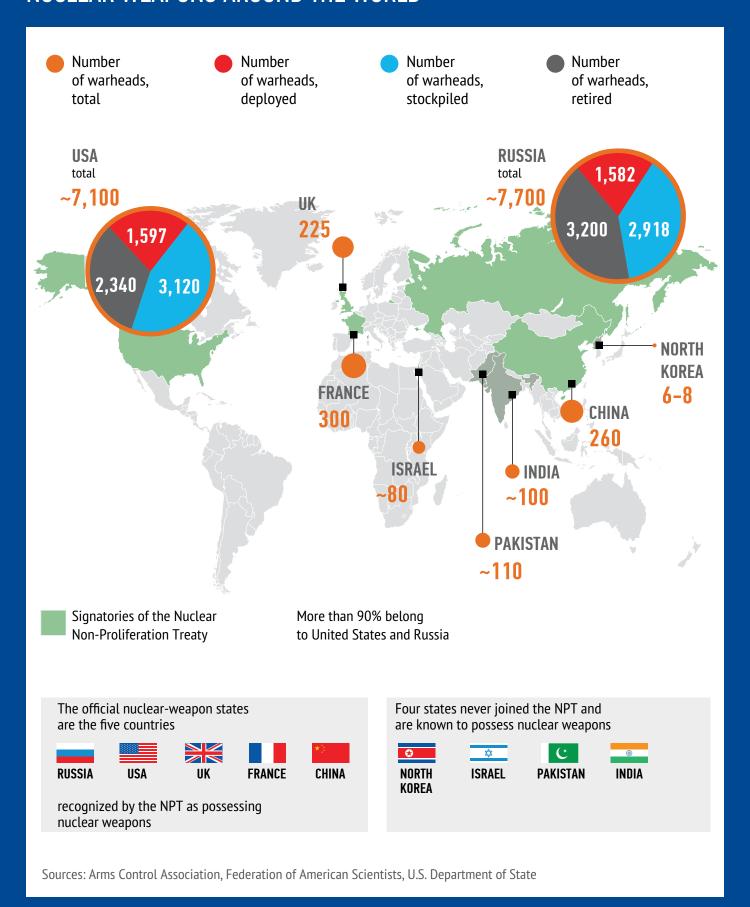
outcome. Hence the violent phase of future conflicts will have to be brief and intense, decided by technological advantage and national resilience. In some cases it may be possible to decide the outcome without significant direct contact with the enemy, causing sufficient damage to infrastructure of strategic significance with little kinetic application of force.

A future war could be sparked by a local confrontation, be it over an airspace violation, a ground incursion, or a series of military exercises that result in an incident. As states strive to develop strategies based around area denial and anti-access, leveraging long range precision weapons that allow the closure of access to entire regions, combat itself moves increasingly further out from national territory.

Therefore the conflict between armed forces will likely start much further out from the two nations and work its way in. However, winning that geographically localized fight will require both horizontal and vertical escalation. That is, prior to engaging in conventional war, adversaries will have to degrade or eliminate key capabilities and enablers of their respective A2/AD screens. This is the driving impetus behind the need to engage in cyberwarfare, dazzling or destroying satellites, wiping out sensors and deploying powerful electronic warfare capabilities.

Looking past the offense, we must also consider the approach of countries like Russia to establishing conventional deterrence. Conventional deterrence generally rests on denial and/or punishment. Russia for example favors a robust A2/AD environment in the Baltic and Black Sea region, which serves to establish denial, but it has also developed long range precision strike capability to effect

## **NUCLEAR WEAPONS AROUND THE WORLD**



punishment. Land attack cruise missiles of various kinds were recently demonstrated as part of Russian operations in Syria, fired from ships, submarines, and strategic bombers.

While Russia maintains a parity of capability here with that of Western counterparts, its platforms and munitions available are quite limited. Russia could not afford to trade blows with the U.S., or NATO, in a limited conventional conflict. Moscow's objective - in theory - would be to strike targets in Europe of special economic or political significance in order to impose critical costs on the nation and seek to deescalate the war. This is a strategy that rests on identifying important nodes in Europe and developing the ability to attack assets important to the U.S. All powers will seek to demonstrate a credible capability to impose strategically meaningful costs onto each other without having to escalate to the use of nuclear weapons.

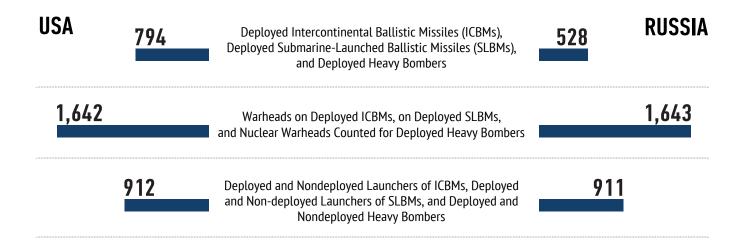
Nuclear weapons will always remain the paramount strategic consideration, but they will become vulnerable to conventional precision strike weapons and must factor in the advances being made in missile defense. Having achieved conventional dominance in a number of domains, the U.S. naturally seeks to reduce the relevance of nuclear weapons as they pose the only credible existential threat to the American homeland. Is conventional conflict possible among nuclear weapon states? The short answer is that it will have to be, and given all powers are planning for such a contingency, it is likely to be. With the steady proliferation of missile defense technology, led first and foremost by the U.S., the perceived utility of nuclear weapons as a meaningful deterrent to war will continue to decline. Powers will increasingly place emphasis away from nuclear arsenals and onto conventional deterrence.

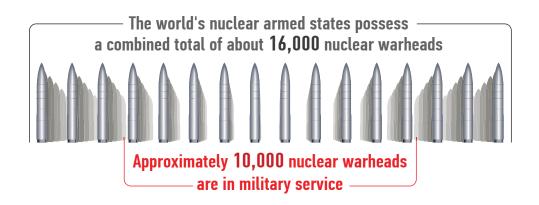
## Collateral Damage and Unintended Consequences of a War

Modern developed countries are particularly vulnerable in conventional wars and can operate only under conditions of peace. In war, no kind of deterrence and defense can prevent devastating blows to their infrastructure, economy and population. Preparing for the new war would imply finding a way to shield important economic assets, and build national resilience. In addition, it would imply developing mobilization plans aimed to adapt politics, economy and society to standards of wartime.

Today's combat environment is magnitudes more complex than those of previous wars. Many of these platforms are not only dual use, that is forming civilian and military infrastructure, but also shared. From commercial navigation satellites such as GPS and GLONASS, to underwater cables carrying an entire region's communications traffic, the first casualties of a modern conflict will directly impact not just the adversaries and their populations but many if not all other nations. From a commercial perspective, conflict between any regional

## New Start Treaty Aggregate Numbers of Strategic Offensive Arms





Sources: Arms Control Association, Federation of American Scientists, U.S. Department of State

powers is certainly preferable to that between major world powers, but it would still prove disastrous. Much of the world's interstate commercial traffic still transits by sea, while passengers travel by air. The shooting down of MH17 is a tragic example of the implications for international air travel of even a localized conflict.

The information domain and the electromagnetic spectrum will feature much more prominently in the next iteration of war compared to previous conflicts, with consequences unknown. In the First World

War, all sides favored the offense, believing in a speedy victory. However, the technologies they deployed were far ahead of the doctrinal knowledge or experience on how best to use them. Mark Twain said that history does not repeat itself, but it often rhymes. Space, cyberspace, and the information domain all favor the offense from a cost perspective; much easier to attack than to defend. That being said, likely adversaries will find themselves deploying offensive capabilities that have only been tested either at home or in select cases abroad.

## RUSSIAN AEROSPACE FORCES' OPERATION IN SYRIA



#### THE SYRIAN OPERATION IN FIGURES:

9,000 sorties in total

**70–80** sorties a day

250 targets hit

209
oil production
and transportation
facilities destroyed

**2,000** fighters of Russian origin, including 17 warlords, killed

700 tonnes of food deli

tonnes of food delivered to besieged towns by air and land

**42** groups joined the ceasefire

localities and more than 10,000 sq km (4,000 sq mi) of land liberated by the Syrian Arab Army

Sources: Russian Ministry Of Defence, Izvestia, Rossiyskaya Gazeta, Zvezda Tv

## The Russian Aerospace Forces Group in Syria

70 aircraft

**70** drones

**4,000** personnel

#### Different type of aircraft were used

**Su-35S** (Flanker-E)

**Su-30SM** (Flanker-C)

Su-34 (Fullback) Strike fighters **Su-24M** (Fencer-D)

Upgraded strike fighters

**Su-25SM** (Frogfoot)

Attack aircraft

The most state-of-the-art multipurpose fighter jets

Tu-160 (Blackjack)
Tu-95MS (Bear)

Russia for the first time used its strategic bombers to hit enemy targets

Tu-22M3 (Backfire)

Supersonic missile-carrying bombers

**Mi-24** (Hind)

**Mi-8** (Hip)

Helicopters

#### High-precision weapons were widely used

**KAB-500S** 

KAD-3003

**Kh-25** (AS-10 Karen)

**Kh-29** (AS-14 Kedge)

FAB-500

**FAB-250** 

Satellite-guided bombs

Laser-guided missiles

Kalibr NK (Sizzler)

**Kh-555** (AS-15 Kent)

Kh-101

L

improved the precision of strikes with unguided bombs

SVP-24 Gefest sighting complexes

installed on the Su-24M bombers

The Syria operation became the "debut" of Russian air- and sea-based cruise missiles. Dozens of them were launched from the distance of more than 1,000 kilometers (620 miles)

### A powerful air defence system was deployed in Syria

S-400

(SA-21 Growler)



**Buk-M3** (SA-17 Grizzly)



Pantsir-S1 (SA-22 Greyhound)



Tor-M2 (SA-15 Gauntlet)



It includes the most advanced systems of the Russian Armed Forces

\*NATO reporting names are given in parentheses, when available

Sources: Russian Ministry Of Defence, Izvestia, Rossiyskaya Gazeta, Zvezda Tv

Nuclear weapons add a higher level of complexity, not through their use, but simply by virtue of even their existence. The major nuclear weapon states, which possess strategic nuclear weapons, have distributed networks of early warning radars, launch detection satellites, communication centers, and dualuse command and control that one must be careful to avoid in order to prevent unnecessary escalation. When it comes to conventional attacks, many countries have a sense of where

each other's nuclear command and control infrastructure lies. However, how can one be sure when taking down enemy networks that they have not hit something vital to their early warning system, or nuclear command and control? When blinding or knocking out satellites, can the U.S., Russia or China know with certainty what their purpose was? Hence a future conflict will be fraught with dangerous uncertainties - the use of these new tools of war will demand high risk tolerance.

## How States Prepare and Adapt to the Next Iteration of War

Military build-ups around the world are changing the map of political alliances and returning to consideration issues of sovereignty over self-defense. Implied but not formal US military guaranties given to some pro-Western countries around Russia and China leave them in a neurotic security limbo. These ill-defined relationships beg to be tested, as in the case of the August 2008 Russia-Georgia war. More formal alliances, such as NATO, could see a challenge in the form of open conflict between Russia and Turkey in Syria. The same applies to Armenia-Azerbaijan conflict, where some of Armenia's CSTO allies are sympathetic with Baku.

Turkey and Armenia are figuring out how to fight independently from their allies, and exactly what shared high-tech assets – like GPS/GLONASS systems, air defense infrastructure and satellite communications – they can use without allied approval. Many conclude that national sovereignty should spread to as many modern military assets as possible, or at least seek to diversify the dependency. Thus Turkey was signaling it

might buy an alternative to American air defense by purchasing from China, possibly in a failed gambit to leverage technology transfers from Western producers. Following the Arab Spring, a number of countries like Egypt and Iraq sought to diversify dependence on the West, and turned to Russia.

Along with the quantitative asymmetry of capabilities between regional powers and military front-runners, there is a qualitative superiority in military technology of the latter. In the course of conflicts in Yugoslavia, Iraq, and Libya, NATO forces achieved total superiority over their adversaries mostly due to their technologically more advanced arms and command and control systems. Western militaries are professional, specialized, experienced, and substantially better paid making them qualitatively superior to those of potential adversaries. This has encouraged aspiring powers to reform their own forces so that they are adequate to face the challenges of modern wars.

Key principle of 'sufficiency' in military defense – that is to prevent leaving an

attack unpunished – is evolving alongside with military capabilities. The 'sufficiency' for conventional weaponry implies having military forces and equipment in sufficient quantity and quality to ensure security. Nowadays limits of 'sufficiency' are set by the potential response to military actions of the front-runners – the US, Russia and China. Aspiring powers cannot seek more security than great powers have achieved, however, they do not want to put up with vulnerability. This means resenting any actions that substantially alter the balance of forces in the region, be they military build ups or high tech arms sales, and investments in technologies that could impact the strategic balance such as missile defense or conventional prompt global strike.

Countries increasingly see the importance if not preeminence of non-military methods in achieving political and

strategic goals. Indeed, they engage in a range of political and economic confrontation during a time of peace. Today's conflicts are often decided with diplomatic, economic and information instruments of national power. From Gerasimov's discussion of how the West engages in non-linear warfare, to NATO's complaints over Russian 'hybrid warfare', or Chinese commentary on unrestricted warfare, we can see the rekindling of concepts that were during the Cold War considered classical political warfare and its associated dark arts. From subversion to the employment of expendable proxies, paramilitary groups, militias, and occasionally covert operations, war has taken on a decidedly unattributed face. Information warfare is part and parcel of confrontation between great powers today, another element of confrontation during peacetime, effectively eliminating the concept of normative peace among contending states.

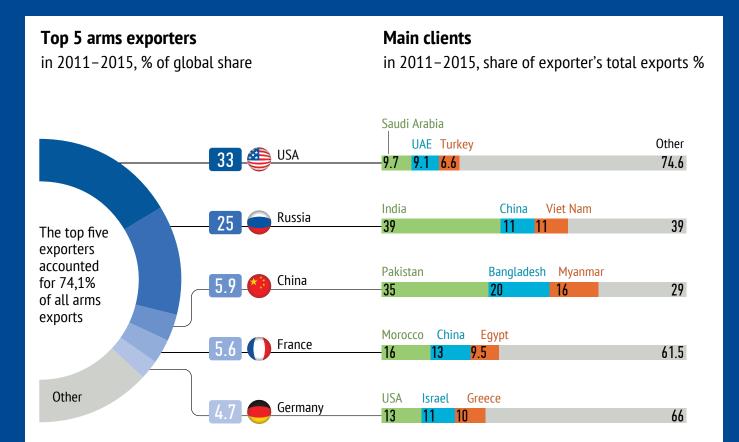
## Conclusion

The likelihood of war between great powers continues to increase in the present day international environment, and more worrisome is the high probability that it could emerge unexpectedly. In NATO the focus has been on a possible conflict with Russia over the Baltics, while few predicted the possibility of a Russia-Turkey clash in late 2015. Similarly, a series of proxy wars between Saudi Arabia and Iran continue to spiral out in the Middle East, destroying Syria and Yemen in their wake. Iraq remains unstable, Libya has imploded and stability appears unlikely in Afghanistan's future. China's conflicts with its neighbors, many of which are U.S. treaty allies or partners,

are only increasing. The steady militarization of the island dispute in the South China Sea, recently highlighted by China installing HQ-9 air defenses on one of its islands, is a trend likely to have consequences.

The current military balance is rife with asymmetries and uncertainties which will only increase with time as regional powers and major powers continue to modernize their militaries. The implications and consequences of modern day conflict remain unknown, the stuff of tabletop wargames instead of experience. Their implications are such that a conflict is unlikely to be localized, since its very pursuit would require horizontal

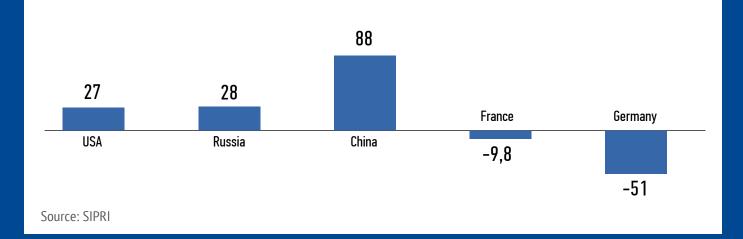
## INTERNATIONAL ARMS TRANSFERS



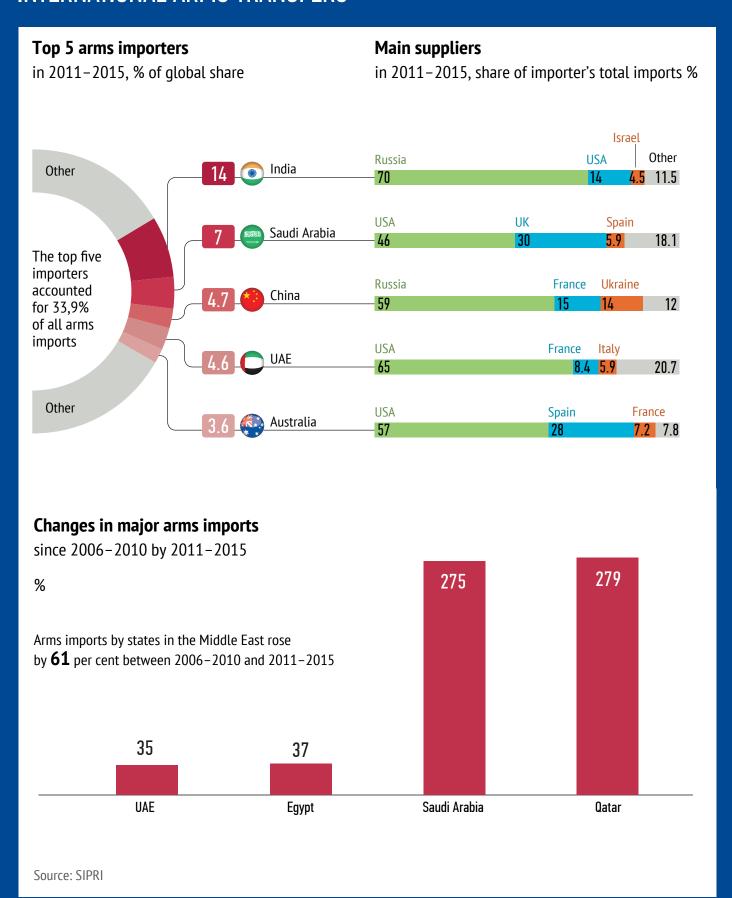
### Changes in major arms exports

since 2006-2010 by 2011-2015

%



## INTERNATIONAL ARMS TRANSFERS



and vertical escalation at the outset in order for either power to secure success. As such, how any nuclear power can hope to manage escalation dynamics is uncertain at best. Yet the present day confrontation between Russia and NATO, military exercises, long range bomber overflights, and the like demonstrate a high tolerance for risk - one that is unwarranted.

As in other wars, technology and doctrine will determine the course of the possible conflict, with all sides looking for 'offsets' in an effort to gain an edge. This quest for technological determinism belies

the frequent employment of traditional political warfare, subterfuge and other means simply made more effective by modern day media. The old and the new come together, modernizing the means with which the Cold War was fought, while states develop and procure altogether new technologies previously untested in war. One certainty is that in order to win, even in a regional conflagration, great powers will have to destroy important parts of the modern world all states depend on. Hence any conflict will prove to have unmeasured global consequences.









