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A World in Crisis:
The “Winter Wars” of 2022-2023

By Anthony H. Cordesman
With the assistance of Paul Cormarie

November 15, 2022

Please provide comments to acordesman@gmail.com.

It is obvious that the world now faces a wide range of potential wars and crises. What is far less obvious is the level of confrontation between the U.S. and its strategic partners with both Russia and China, the rising levels of other types of violence that are emerging on a global level, how serious these wars and crises can become, and what kind of future could eventually emerge out of so many different crises, confrontations and conflicts, and trends.

This analysis explores risk on the basis that war does not have to mean actual military conflict. Here it is important to note that avoiding or minimizing combat is scarcely peace. As Sun Tzu pointed out in the *Art of War* well over 2,000 years ago, “war” does not have to involve the use of military force or any form of actual combat. His statement that “the supreme art of war is to subdue the enemy without fighting” applies to every form of major military confrontation and gray area warfare between opposing powers.

It recognizes that it is all too easy to predict dire outcomes from the War in Ukraine, the current arms races with Russia and China, and growing levels of violence and confrontation between other states. There is still a case, however, for examining the broader impact of the war, the growing intensity of the arms races with Russia and China, and the current overall patterns of global conflict as the world enters the winter of 2022-2023. It is already clear that this will be a deeply troubled winter in many areas of the globe, that the level of confrontation between major powers has risen sharply, that they do seek to subdue the enemy without fighting, and their rivalry has become the equivalent of political and economic warfare.

It is equally clear that the wide range of lower-level conflicts between other powers, their civil wars, and the abuses many governments commit against their own citizens are also intensifying, although many of these conflicts have been going on in some form for years or even decades. In far too many cases, the world is not moving toward peace. It is moving towards repression and war.

Accordingly, this analysis argues that the world already faces a series of possible and ongoing “Winter Wars” in 2022-2023 that may not escalate to open military conflict but that are wars at the political and economic level and in competition to build-up more lethal military forces both for deterrence and to exert political leverage. It also shows that these “Wars” already pose serious risks and could escalate sharply and in unpredictable ways for at least the next five to ten years.

The global list of wars that are ongoing in the winter of 2020-2023, and that seems likely to continue to affect global security in the future, that this study examines includes:

- The “Winter War” in the Ukraine
- The “Winter War” between the West and Russia in Economics, Politics, and Energy
- The “Winter War” in Conventional Force Modernization and Build-Ups by the U.S., NATO, and Russia.
- The “Winter War” in Nuclear Forces and Deterrence between the Major Powers,
- The “Winter War” in Precision Strike Capabilities, Air/Missile Defense and Emerging/Disruptive Technologies
- The “Winter War” in Going from Cooperation and Competition with China to Confrontation and Active War Planning

- The “Winter War” in the Middle East and the Gulf
- The “Winter War” in the Koreas
- The “Winter War” in Gray Area, Spoiler, and Proxy Warfare
- The “Winter War” in Fragile, Divided, Authoritarian, and Undeveloped States

It warns that the world is not moving towards peace, that new forms of Cold War divide all the world’s major powers, and that far too few smaller states have solid levels of development, effective governance, and are moving toward peace and stability.

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T h e “ W i n t e r W a r ” i n U k r a i n e

At least one war has already escalated into a major conflict, and that involves fighting between Ukraine and Russia that seems almost certain to continue to escalate through the winter of 2022-2023. The Russian invasion of Ukraine that began in February 2022 began with what appeared to be a Russian effort to seize the entirety of Ukraine, became a war of attrition on the ground, and has now escalated to a strategic level.

Ukraine, however, has had sufficient support from the West and other states to be able to defend against Russia to the point where it has forced Russia to mobilize. The U.S. alone has provided some \$60 billion in arms, economic aid, and other support by early October 2022, and is fighting the equivalent of a proxy war against Russia. Britain, the EU, and several other strategic partners have been providing major aid to Ukraine as well, and while Russia may have tried mobilizing up to 300,000 troops in October, it had also mobilized a substantial part of the developed world against it in ways where their aid to Ukraine did far more to challenge Russia than any aspects of their normal defense spending and modernization of their forces.

Tying Combat to Attacks on Ukrainian Civil Targets

The U.S. and other supporters of Ukraine have waged an economic war of sanctions, and trade controls on Russia, as well as have provided economic and military aid to Ukraine, but Russia has responded more effectively in other ways with a combination of military escalation and an economic war over energy exports.

Russia has escalated to conducting military attacks on Ukraine's population and economic and military warfare against its infrastructure. Russia has adapted its past reliance on “General Winter” and “General Mud” to try to destroy Ukraine's economy and its ability to resist. The War in Ukraine has escalated from fighting a land/air/missile battle for the control of the Eastern Ukraine to a Russian strategy designed to destroy enough of the Ukrainian economy and infrastructure to force the Ukrainian government to end the fighting in ways that leave Russia with significant territorial gains, and Ukraine with a crippled economy that will take years to repair and with an uncertain future political and economic stability.

The cost of the expansion of Russian attacks to civil and critical infrastructure targets has already reached critical levels by the end of October 2022 and has briefly shut off the flow of water and electric power to the Ukrainian capital of Kyiv in early November. The Ukrainian government reported then that strikes on key electricity generating targets in Ukraine had destroyed almost a third of its electric and other power generating facilities and left at least 1.5 million Ukrainians without power. They deprived Kyiv of safe drinking water for at least several days. Ukraine may be able to repair part of its infrastructure and deploy more effective and air defenses in the months to come but this is uncertain.

These Russia military attacks interacted with broader forms of economic warfare in Ukraine. They include attacks on Ukrainian grain exports and other targets that affect the entire Ukrainian economy. They have already levels of inflation that have reduced many Ukrainians to the poverty level and sharply increased Ukraine's needs for economic aid as well as created a legacy that will require a massive post-war recovery program. Unless the Russian attacks halt or Ukraine is given a much larger set of missile and air defenses, they will create steadily growing problems in maintaining a decent life as winter progresses – often increasing poverty to the point where hard choices have to be made between “heat” and “eat.”

While accurate cost and supply data are lacking, Russia's purchase of low-cost precision-guided conventionally armed missiles and drones from Iran may allow Russia to both destroy such Ukrainian economic targets and to saturate the more advanced air/missile defense systems the U.S. is providing to Ukraine – systems which will only provide limited area coverage for much of the winter, and whose operation is substantially more costly than Russia's missile strike forces.

Such attacks may cumulatively limit internal Ukrainian popular support for the war, and sharply reduce Russian casualties and embarrassing military defeats. At a minimum, the new Russian tactics and missile strikes will extend the length and intensity of the fighting, sharply raise its cost of military and civil aid and the cost of any postwar recovery.

They may well force Ukraine to compromise on a settlement or to fight a debilitating war indefinitely into the future and show NATO European states – especially those near the Russian border – that Russia still presents a major threat to them regardless of the problems the fighting has revealed in its land forces. They also seem likely to make Russia steadily more reliant on such tactics in the future, and to continue to link the use of such missile and air attacks to the threat of escalating to theater nuclear warfare.

Russian Realities Versus the Laws of War

From another perspective, such Russian attacks provide all too clear a demonstration of the fact that future combat is likely to involve more intense and deliberate attacks on civilian targets in spite of the “laws” of war. The war in Ukraine is also scarcely unique. Virtually all recent lower-level conflicts have involved attacks on civil targets – often by terrorists or in internal civil conflicts, but also by states against states, regimes against parts of their own, or the factions in civil conflicts. With few exceptions, it is also clear that the laws of war are unenforceable. Even most of the cases where the attackers lost the war did not result in any special punishment, and little real-world effort has been made to find more effective deterrents to such strikes on civilians.

It is striking that Russia's Defense Minister Sergei Shoigu openly stated on November 1st, 2022, that Russia was deliberately targeting the Ukraine's critical civilian infrastructure in a legitimate effort to reduce the country's military capacity. He stated that, “With precision-guided strikes, we continue to effectively hit military infrastructure facilities, as well as facilities that affect the reduction of Ukraine's military potential.” The most Shoigu did to imply any restraint was to state that, “Comprehensive measures are being taken to prevent the death of Ukrainian citizens.”

One key legacy of the war in Ukraine from the fighting of 2022/2023 may well be that it demonstrates that relying on unenforceable laws of war to provide real-world security for civilians may sometimes have worse consequences for the civilians involved than having no laws at all.

It is also a grim reality of modern warfare that other recent conflicts have shown almost any war fought in populated areas or cities involving key lines of communication or involving the use of artillery near population centers and critical infrastructure, will produce serious civilian casualties and amounts of damage to civilian facilities. The same is likely to be true of conflicts against terrorists, extremists, and any other faction that shelters in populated areas and use civilians as some form of shield.

The “Winter War” between the West Politics, and Energy

It currently seems doubtful that any resolution of the war in Ukraine will produce any stable form of peace or fail to lead to enduring confrontation and between Russia and the West and a continuing risk of new forms of active conflict. The current confrontation has already escalated to the level of political and economic warfare and may well be followed by a struggle to modernize and reshape the military forces on each side that has both conventional and nuclear dimensions and gray area clashes and spoiler operations.

War Without Combat

Once again, it is important to note that avoiding or minimizing combat is scarcely peace. Russia and the West, are clearly seeking to “subdue the enemy without fighting.” The same is true of the current relations between the U.S. and its strategic partners and China.

In practice, many “winter wars” are being fought on a political, economic, and ideological level – and by building up national military forces in ways that give them enough strategic leverage to force the opposing side to meet its opponents’ strategic goals without direct combat between them. The versions of these wars between are also generally being fought to change the political and economic behavior of other states rather than conquer them, to keep them from intimidating or forcing given patterns of action on other states, or to make them conform to international standards that are cooperative in nature. As such, some have a massive grand strategic impact on the world even though they are being fought without combat and an effort seeking to dominate or conquer the opponent.

Other such wars are far more limited. For example, proxy wars can be fought in ways that involve indirect combat. Examples are proxy wars like the West’s military aid to Ukraine, and Russia’s use of mercenaries in Libya and “advisors” in Syria. More generally, they can be fought in the form of spoiler operations that push other parties into fighting, in the form of deployments and exercises that act as military threats, and by using military forces passively to exert political leverage and influence. In practice, military deterrence is simply another a form of warfare: it too exploits the competitive use of military forces to achieve as strategic objective without fighting.

This is reflected in the fact that the war in Ukraine has created broad political and economic conflicts between Russia and much of the West. Both sides have steadily escalated their political and economic conflict since the start of the Ukraine conflict in February 2022. Putin has responded by mobilizing Russia, carrying out a major political campaign against the West, denouncing the U.S. and other states for supporting Ukraine, and accusing the United States and other Western powers of seeking to dominate Europe and isolate and dismember Russia.

The West has responded by building up its military presence in the forward areas of NATO, denouncing Putin, seeking support from the UN in criticizing the Russian attack and conduct of a war in Ukraine with steadily increasing civilian casualties and damage. The West not only is fighting a proxy war against Russia, but it has also launched the equivalent of economic war against Russia, which included halting gas and other imports from Russia.

The U.S., Canada, European NATO and EU states, and many other states are now providing arms transfers, security assistance, financial aid, and economic aid to Ukraine while simultaneously waging economic and political war directly against Russia. And, as noted previously, Russia is

replying in kind. This form of economic and political warfare, and competing major military build-ups, seems certain to escalate steadily throughout the winter and may well continue for years to come.

The Broader Forms of Economic and Political Warfare

Neither Russia nor the West are currently winning the economic and political side of the Ukraine War, nor seem likely to emerge as the winner in the near future. On the one hand, it is all too clear that Putin sharply underestimated the economic and political reaction of Western and many other states prior to his invasion of the Ukraine. There is no doubt that the Russian people have suffered deeply from Western reactions and sanctions. As yet, however, there has been only limited Russian popular resistance to the war, and Putin has escalated his war fighting efforts in spite of Western political and economic reactions.

On the other hand, the West has miscalculated as well. It began to implement major economic and political sanctions against Russia immediately after its invasion of the Ukraine. However, Western planners seem to have sharply underestimated Russia's ability to survive them. They did not foresee the sustained and escalating impact Russia's reactions would have on European and other energy supplies, on global food exports, on global political divisions, and on Russia's actual military behavior.

As of November 2022, the economic and political side of this war has escalated to the point where the West keeps adding sanctions and trade and investment barriers, including controls over the critical technologies, components, and materials similar to the war of sanctions against Iran and North Korea. Russia has replied in kind by using its gas exports to sustain its economy, and its ability to limit Ukrainian grain and other food exports by sea – measures that have sharply increased the cost of food to many other countries.

Yet, **Figure One** shows that Russia has actually increased its exports to a number of countries that support Ukraine and has not suffered nearly as much as some planners initially estimated in developing sanctions.

Figure One: Major Shifts in Russian Trade Patterns Caused by the Economic War over the Ukraine

| Country | Total Trade Before Invasion (\$billions) | Russian Imports Before Invasion (\$billions)* | Shift in Russian Imports After Invasion (Percent)** | Russian Exports Before Invasion (\$ billions)* | Shift in Russian Exports After Invasion (Percent)** |
|----------------|--|---|---|--|---|
| Belgium | \$0.763 | \$0.238 | -27% | \$0.524 | +130% |
| Brazil | \$0.456 | \$0.152 | -13% | \$0.303 | +166% |
| China | \$9.2 | \$4.3 | +24% | \$4.9 | +98% |
| Germany | \$5.0 | \$2.3 | -51% | \$2.7 | +38% |
| India | \$0.817 | \$0.219 | -19% | \$0.598 | +430% |
| Japan | \$1.5 | \$0.488 | -42% | \$0.978 | +40% |
| Netherlands | \$1.5 | \$0.506 | -52% | \$1.0 | +74% |
| Spain | \$0.472 | \$0.167 | -44% | \$0.305 | +122% |
| South Korea | \$1.8 | \$0.648 | -43% | \$1.2 | -4% |
| Sweden | \$0.402 | \$0.148 | -61% | \$0.249 | -86% |
| Turkey | \$2.1 | \$0.312 | +113% | \$1.8 | +213% |
| United Kingdom | \$1.6 | \$0.291 | -71% | \$1.3 | -81% |
| United States | \$2.3 | \$0.512 | -84% | \$1.8 | -20% |

*Monthly average Value: 2017-2021

** Post invasion average monthly value compared with average monthly value in 2017-2021

Source: Adapted from Lazaro Gamio and AnaSwanson, "How Russia Pays for War," New York Times, October 30, 2022, https://www.nytimes.com/interactive/2022/10/30/business/economy/russia-trade-ukraine-war.html?name=styln-russia-ukraine®ion=TOP_BANNER&block=storyline_menu_recirc&action=click&pgtype=LegacyCollection&variant=show&is_new=false&smid=nytcore-ios-share&referringSource=articleShare.

The Energy War as an Indicator of the Seriousness of Economic Warfare

The trade war and political and economic sanctions are only a part of this story. **Figure Two** shows that Russia has successfully retaliated against NATO and the other outside powers supporting Ukraine by conducting an energy war that has done critical damage to many Western economies. This energy war has interacted with impact of COVID and other Western economic problems that COVID helped create. The end result is that the West may have suffered as much as Russia.

Moreover, Russia has had some success in working with OPEC – and states as divided as Iran and Saudi Arabia – to place limits on global exports that help support its position. This has helped raise energy prices in virtually every Western and energy importing state and has succeeded in creating a level of inflation and other economic damage to the West which is roughly equivalent to the damage the West has done to Russia.

The energy war has also had many negative impacts on the rest of the world. It has again interacted with the impact of COVID, an uncertain global financial situation, and the damage done by global climate change. It has helped create a broader global crisis in food supplies, the rising levels of international poverty now reported by the UN and World Bank, and internal and local wars on a global basis. It is all too clear from this aspect of the War in Ukraine that there is no global “village,” but there clearly is “globalism” in the form of vulnerability.

There is no clear way to predict the future impacts of this energy warfare during the winter of 2022- 2023, or how it may develop in the months and years that will follow. However, the war’s impact on Russian energy exports and the global cost of oil and gas has already been critical and may lead to major strategic changes in the flow of energy exports.

However, the International Energy Agency (IEA) warned in the annual *World Energy Outlook for October 2022* that,¹

The world is in the middle of a global energy crisis of unprecedented depth and complexity. Europe is at the center of this crisis, but it is having major implications for markets, policies and economies worldwide. As so often is the case, the poorest and most vulnerable are likely to suffer most. The strains did not begin with Russia’s invasion of Ukraine, but they have been sharply exacerbated by it. Extraordinarily high prices are sparking a reappraisal of energy policies and priorities. The Europe-Russia energy relationship lies in tatters, calling into question the viability of decades of fossil fuel infrastructure and investment decisions built on this foundation. A profound reorientation of international energy trade is underway, bringing new market risks even as it addresses longstanding vulnerabilities.

Many of the contours of this new world are not yet fully defined, but there is no going back to the way things were. And we know from past energy crises that the process of adjustment is unlikely to be a smooth one. That adjustment will also be taking place in the context of commitments made by governments to clean energy transitions. A central theme of this *World Energy Outlook 2022* is how the levers of technological change and innovation, trade and investment and behavioral shifts might drive a secure transition towards a net zero emissions energy system, while minimizing the potential risks and trade-offs between various policy objectives.

- Today’s energy crisis shares some parallels with the 1970s oil price shocks, but there are also important differences. The crises in the 1970s were concentrated in oil markets and the global economy was much more dependent on oil than it is today. However, the intensity of use of other fossil fuels has not declined to the same extent; for natural gas it has risen in many cases. The global nature of the current crisis, its spread across all fossil fuels and the knock-on effects on electricity prices are all warning signs of broader economic impacts.
- The global energy crisis sparked by Russia’s invasion of Ukraine is having far-reaching implications for households, businesses and entire economies, prompting short-term responses from governments as well

as a deeper debate about the ways to reduce the risk of future disruptions and promote energy security. This is a global crisis, but Europe is the main theatre in which it is playing out, and natural gas is center stage – especially during the coming northern hemisphere winter.

- High energy prices are causing a huge transfer of wealth from consumers to producers, back to the levels seen in 2014 for oil, but entirely unprecedented for natural gas. High fuel prices account for 90% of the rise in the average costs of electricity generation worldwide, natural gas alone for more than 50%. The costs of renewables and carbon dioxide have played only a marginal role, underscoring that this is a crisis where energy transitions are the solution, rather than the problem.
- Price and economic pressures mean that the number of people without access to modern energy is rising for the first time in a decade. Around 75 million people who recently gained access to electricity are likely to lose the ability to pay for it, and 100 million people may revert to the use of traditional biomass for cooking.
- There remain huge uncertainties over how this energy crisis will evolve and for how long fossil fuel prices will remain elevated, and the risks of further energy disruption and geopolitical fragmentation are high. In all our scenarios, price pressures and a dim near-term outlook for the global economy feed through into lower energy demand than in last year's *Outlook*.
- With the loss of its largest export market in Europe, Russia faces the prospect of a much-diminished role in international energy affairs. 2021 proves to be a high-water mark for Russian export flows. Its share of internationally traded gas, which stood at 30% in 2021, falls to 15% by 2030 in the STEPS and to 10% in the APS. Importers in China have been actively contracting for liquefied natural gas, and there is no room in China's projected gas balance for another large-scale pipeline from Russia.

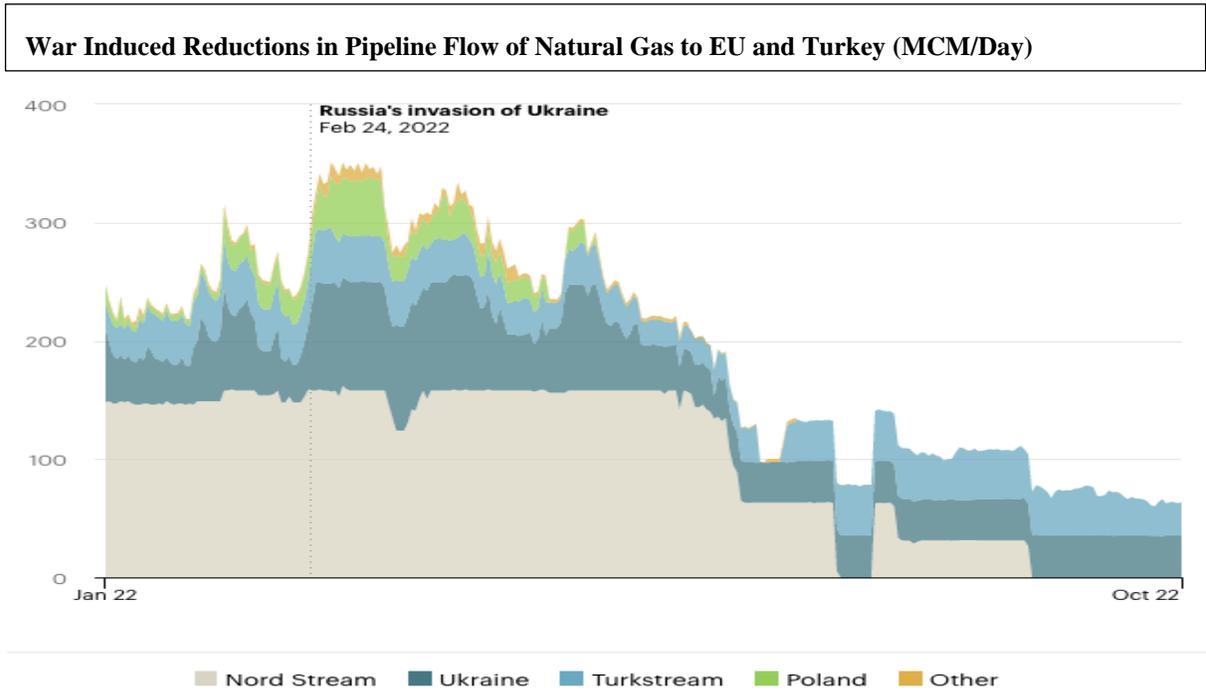
The trends in this energy war through early November 2022 are shown in **Figure Two**, and it is clear that the rise in energy prices through the late fall of 2022 illustrates the overall success of Russia's ability to conduct economic warfare and the risks it may impose for the future. It should be stressed, however, that there is no way to predict the future extent to which Russia and OPEC states will cooperate, nor whether Russia may make a major effort to shift its energy exports from pipelines to northern Europe to pipelines to China and Turkey.

Such shifts in Russian exports to China would take time to make and major new pipelines to China would be highly expensive, require gas exports to be liquified, and tie Russia to a single customer, and present potential issues in dealing with climate change to China.

At the same time, estimates of future Chinese oil and gas demand by the International Energy Agency indicate that if Russia did shift its export capabilities to provide far larger exports to China, China would become a major Russian customer well beyond 2030. Moreover, any analyses of China's strategic vulnerabilities do indicate that obtaining energy imports that did not pass through the Indian Ocean, Straits, and South China Sea could greatly reduce one of its key vulnerabilities.²

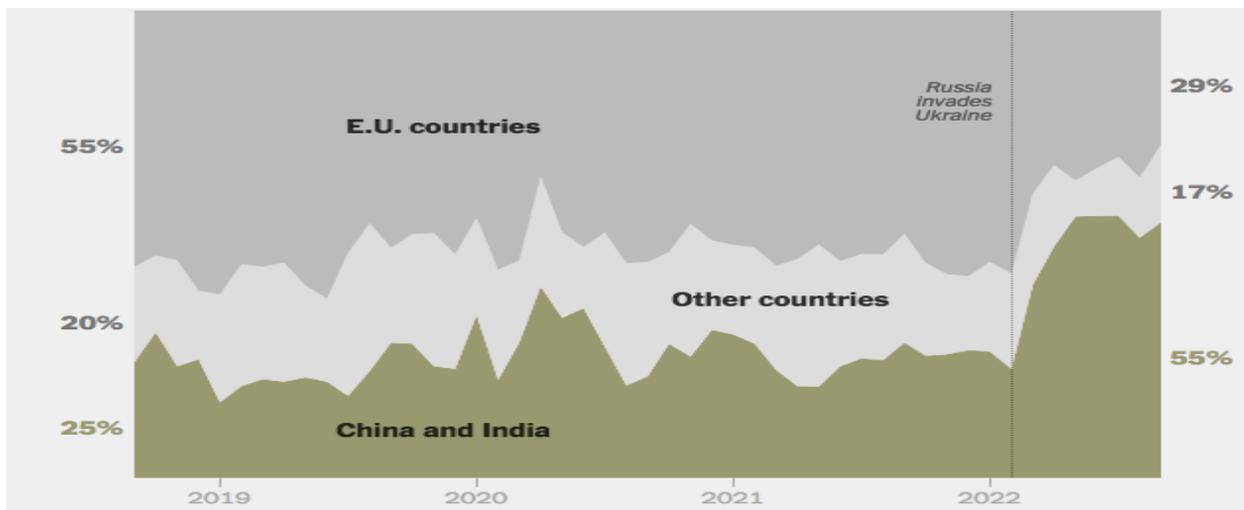
Some argue that there is one area where such a war might have global benefits, but such benefits are questionable. Some analysts also feel that the energy crisis may help speed reductions in the global use of fossil fuel as well. However, the IEA stressed in its October 2022 estimates that reaching zero emissions by 2050 would require clean energy investments higher than \$4 trillion by 2030. It also estimated that currently planned investments would only reach half of that figure.

Figure Two: The Impact of Russian Actions on Gas Supplies and World Energy Prices - Part One



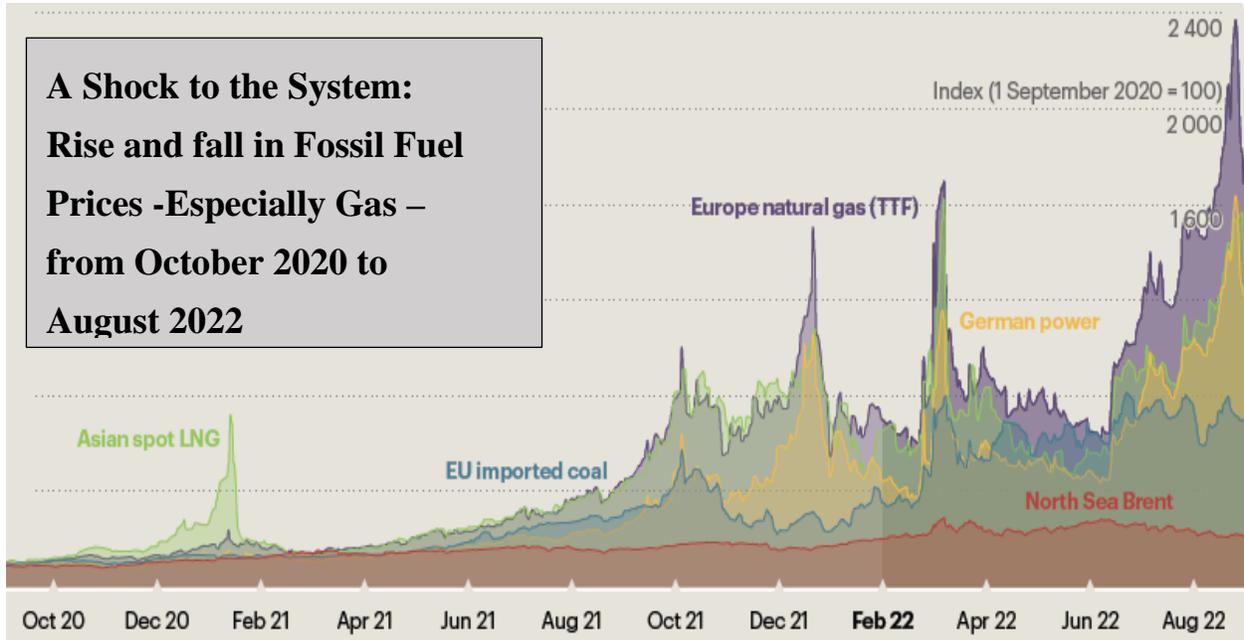
Source: IEA, *World Energy Outlook 2022*, <https://www.iea.org/reports/world-energy-outlook-2022/the-global-energy-crisis#abstract>

Shifts in the Flow of Russian Oil Shipments Caused by The Ukraine War



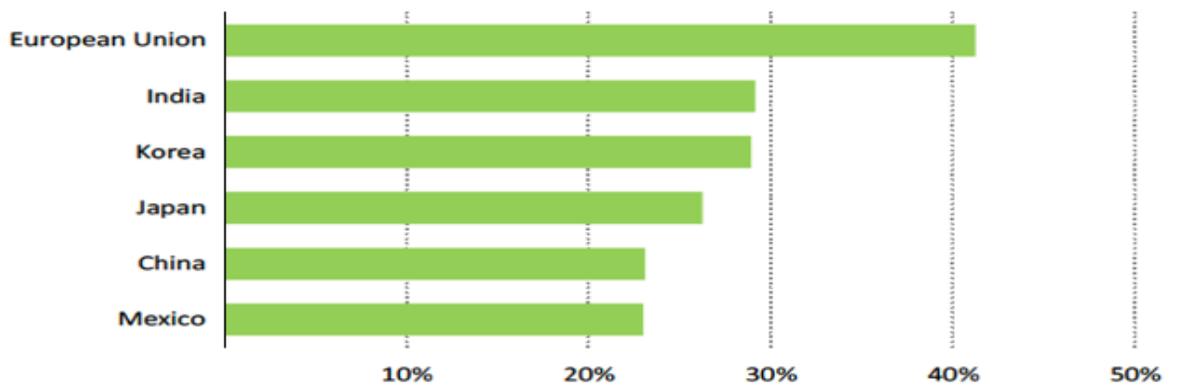
Source: Adapted from Lazaro Gamio and AnaSwanson, "How Russia Pays for War," New York Times, October 30, 2022, https://www.nytimes.com/interactive/2022/10/30/business/economy/russia-trade-ukraine-war.html?name=styln-russia-ukraine®ion=TOP_BANNER&block=storyline_menu_recirc&action=click&pgtype=LegacyCollection&variant=show&is_new=false&smid=nytcore-ios-share&referringSource=articleShare.

Figure Two: The Impact of Russian Actions on Energy Exports and World Energy Prices – Part Two



Source: IEA, *World Energy Outlook 2022*, <https://www.iea.org/reports/world-energy-outlook-2022/the-global-energy-crisis#abstract>

Increases in Peak Average Electric Power Costs Largely Cause by Economic Warfare in the Ukraine



IEA. CC BY 4.0

Increases in power generation costs were driven by higher fuel prices and have been particularly sharp in gas-importing countries and regions

Source: Adapted from Lazaro Gamio and AnaSwanson, “How Russia Pays for War,” *New York Times*, October 30, 2022, https://www.nytimes.com/interactive/2022/10/30/business/economy/russia-trade-ukraine-war.html?name=styl%3D%3Drussia%20ukraine®ion=TOP_BANNER&block=storyline_menu_recirc&action=click&pgtype=LegacyCollection&variant=show&is_new=false&smid=nytcore-ios-share&referringSource=articleShare.

The “Winter War” in Conventional F Build-Ups by the U.S., NATO, and Russia

It is a matter of semantics as to whether an arms race should be described as political or as military warfare, and the answer is probably both. The same is true of arms control, which generally is as much a battle for political influence, and the ability to use military forces as political leverage, as any move towards peace and stability.

In any case, the War in the Ukraine has already shown Russia and the world that Russian conventional military forces have serious weaknesses, has helped lead to a new and more proactive NATO strategy, and led key Western nations like Germany and Britain to call for major increases in military spending. It has also led the United States to put more emphasis on NATO at a time it sees China as its primary threat and adopt a strategy that calls for major new efforts in military reform and modernization.

The U.S. made this clear in the new *National Security Strategy* that it issued in October 2022:³

Alongside our allies and partners, America is helping to make Russia’s war on Ukraine a strategic failure. Across Europe, NATO and the European Union are united in standing up to Russia and defending shared values. We are constraining Russia’s strategic economic sectors, including defense and aerospace, and we will continue to counter Russia’s attempts to weaken and destabilize sovereign nations and undermine multilateral institutions. Together with our NATO Allies, we are strengthening our defense and deterrence, particularly on the eastern flank of the Alliance. Welcoming Finland and Sweden to NATO will further improve our security and capabilities. And we are renewing our focus on bolstering our collective resilience against shared threats from Russia, including asymmetric threats. More broadly, Putin’s war has profoundly diminished Russia’s status vis-a-vis China and other Asian powers such as India and Japan. Moscow’s soft power and diplomatic influence have waned, while its efforts to weaponize energy have backfired. The historic global response to Russia’s war against Ukraine sends a resounding message that countries cannot enjoy the benefits of global integration while trampling on the core tenets of the UN Charter.

While some aspects of our approach will depend on the trajectory of the war in the Ukraine, a number of elements are already clear. First, the United States will continue to support Ukraine in its fight for its freedom, we will help Ukraine recover economically, and we will encourage its regional integration with the European Union. Second, the United States will defend every inch of NATO territory and will continue to build and deepen a coalition with allies and partners to prevent Russia from causing further harm to European security, democracy, and institutions. Third, the United States will deter and, as necessary, respond to Russian actions that threaten core U.S. interests, including Russian attacks on our infrastructure and our democracy. Fourth, Russia’s conventional military will have been weakened, which will likely increase Moscow’s reliance on nuclear weapons in its military planning. The United States will not allow Russia, or any power, to achieve its objectives through using, or threatening to use, nuclear weapons. America retains an interest in preserving strategic stability and developing a more expansive, transparent, and verifiable arms control infrastructure to succeed New START and in rebuilding European security arrangements which, due to Russia’s actions, have fallen in to disrepair. Finally, the United States will sustain and develop pragmatic modes of interaction to handle issues on which dealing with Russia can be mutually beneficial.

The new *National Security Strategy* also made it clear that the U.S was returning to a broader emphasis on supporting European security:

Europe has been, and will continue to be, our foundational partner in addressing the full range of global challenges. To effectively pursue a common global agenda, we are broadening and deepening the transatlantic bond—strengthening NATO, raising the level of ambition in the U.S.-EU relationship, and standing with our European allies and partners in defense of the rules-based system that underpins our security, prosperity, and values.

Today, Europe stands at the front lines of the fight to defend the principles of freedom, sovereignty, and non-aggression, and we will continue to work in lockstep to ensure that freedom prevails. America remains

unequivocally committed to collective defense as enshrined in NATO's Article 5 and will work alongside our NATO Allies to deter, defend against, and build resilience to aggression and coercion in all its forms. As we step up our own sizable contributions to NATO capabilities and readiness—including by strengthening defensive forces and capabilities, and upholding our long-standing commitment to extended deterrence—we will count on our Allies to continue assuming greater responsibility by increasing their spending, capabilities, and contributions. European defense investments, through or complementary to NATO, will be critical to ensuring our shared security at this time of intensifying competition. We stand behind NATO's continued adaptation to modern security challenges, including its emphasis on defense in cyberspace, climate security, and the growing security risks presented by the PRC's policies and actions.

And the new U.S. strategy document described support of the Ukraine in terms close to support of continuing NATO aid at a level equivalent to proxy warfare:

Europe has been, and will continue to be, our foundational partner in addressing the full range of global challenges. To effectively pursue a common global agenda, we are broadening and deepening the transatlantic bond—strengthening NATO, raising the level of ambition in the U.S.-EU relationship, and standing with our European allies and partners in defense of the rules-based system that underpins our security, prosperity, and values. Today, Europe stands at the front lines of the fight to defend the principles of freedom, sovereignty, and non-aggression, and we will continue to work in lockstep to ensure that freedom prevails. America remains unequivocally committed to collective defense as enshrined in NATO's Article 5 and will work alongside our NATO Allies to deter, defend against, and build resilience to aggression and coercion in all its forms.

As we step up our own sizable contributions to NATO capabilities and readiness—including by strengthening defensive forces and capabilities, and upholding our long-standing commitment to extended deterrence—we will count on our Allies to continue assuming greater responsibility by increasing their spending, capabilities, and contributions. European defense investments, through or complementary to NATO, will be critical to ensuring our shared security at this time of intensifying competition. We stand behind NATO's continued adaptation to modern security challenges, including its emphasis on defense in cyberspace, climate security, and the growing security risks presented by the PRC's policies and actions

Putting the Conventional Military Balance in Perspective

As yet, there are no clear Russian plans to correct the many weaknesses the War in the Ukraine has revealed in its forces. It is clear, however, that Russia must be making such plans, and will take a much more competitive stance to shaping forces that can influence, deter, and – if necessary – fight NATO and Western supported countries. Putin's speeches have made this all too clear, and Russia would in any case have to make major efforts to restructure and modernize its forces just to keep up with the many new advances in weaponry and military technology.

The U.S., Canada, and NATO European states must make similar changes. They not only must compete with Russia, but also most must compensate for years of decline in the size of their forces, rates of modernization, and any real-world effort to improve interoperability either within their forces or by providing new forces and capabilities to match the changes in the most advanced national forces.

The Russian invasion of the Ukraine has shown all too clearly that most NATO countries have underestimated the Russian threat and have taken excessive “peace dividends” in terms of cuts in their defense efforts since 1992. Most former Warsaw Pact states that are now in NATO, and on or near the borders of Russia have failed to properly convert and modernize their forces to fight as part of NATO.

Moreover, most NATO countries also failed to take effective steps to correct this situation after Russia seized the Crimean Peninsula in 2014. They never met NATO's goal of spending 2% of their GDP on military forces, and those that did found that this goal was too low to properly

modernize, and maintain, readiness and force size. Seen with the hindsight provided by Russia's invasion of Ukraine, NATO countries generally came closer to "farce" planning than force planning. So far, neither NATO nor any NATO country have made their plans to deal with this situation clearly. They do not publish meaningful force plans, net assessments, or projected budgets.

As a result, there is no current way to know how well either Russia or NATO countries will engage in the "war" to modernize their forces and make them more effective, although Russia is clearly attempting to increase its influence and military role in Belarus and Moldova.⁴ The broad structure of U.S., European NATO, and Russian conventional military balance is shown in **Figure Three**, along with the forces of China which is the core of another winter war discussed later in this analysis.

This kind of traditional comparison of personnel and major weapons strength does not, however, approach a meaningful net assessment. It does not cover the wide range of competition for economic power, dominance in technology, and the capability to fund military competition between the United State and its strategic partners, Russia, and China. This analysis is far too long to include in this analysis, but it is summarized in a different study entitled *Major Powers and Strategic Partners: A Graphic Net Assessment*.⁵

It does not reflect the scale and impact of the massive cuts in the military forces of the former Soviet Union as shrank to become Russia, or the equally serious cuts in the forces that NATO countries deployed in Europe in 1992. It only compares key elements of force size based on active personnel and major weapons platforms.

This means that it does not compare training, other elements of readiness, sustainment and warfighting reserves, military industrial and technology bases, deployments and power projection capabilities, and interoperability. It also does not show comparative modernization and the massive shifts taking place in the role of battle management and secure communications, space, cyber, smart and long-range munitions, artificial intelligence, joint all-domain capabilities, and all the other emerging and disruptive technologies that are reshaping military forces on a global basis.

Such force comparisons help put the military dimension of the winter wars in perspective, but they also have serious limits. In many ways, traditional force comparisons are the equivalent of the kind of military analysis that focus only on infantry and cavalry before World War I, or that ignored the new role of armor, air power, and changes in the role of sea power before World War II. Put generously, traditional military strength analysis probably only addresses about 20% of modern military capability, and much of the "war" in the restructuring of Russian and NATO conventional forces triggered by the ongoing war in Ukraine will parallel the changes triggered by shifts in nuclear forces, dual capable forces, and precision conventional strike capabilities discussed later in this analysis. They will play out over the coming decades as a revolution in military forces that no one can currently predict and fully characterize.

Figure Three: The Military Balance in 2021- Part One

| Category | United States | NATO Europe | Russia | China |
|---|----------------------|--------------------|---------------|--------------|
| Military Budget (\$U.S. billions) | 768 | 324 | 45.8 | 207 |
| Military Expenditures (\$U.S. billions) | 811 | 331 | 62.2 | 270 |
| Total Active Personnel | 1,395,350 | 1,584,205 | 900,000 | 2,035,000 |
| Reserve Military Personnel | 843,450 | 1,230,850+ | 2,000,000 | 510,000 |
| Nuclear Strategic Forces | | | | |
| ICBM | 400 | - | 339 | 116 |
| IRBM | NA | - | ? | 110+ |
| Nuclear Bombers | 66 | - | 76 | - |
| Satellites | 142 | 40 | 131 | 161 |
| Army Forces | | | | |
| Total Active Ground Personnel | 489,050 | 1,030,985 | 280,000 | 965,000 |
| Main Battle Tanks | 2,645 | 6,446 | 3,257 | 5,400 |
| Other Armored Fighting Vehicles (OAFVs) | 3,419 | 6,285 | 6,440 | 7,350 |
| Armored Personnel Carriers | 10,814 | 14,992 | 6,450 | 4,350 |
| Total Major Artillery (Towed, SP, MRL) | 2,616 | 6,452 | 3,174 | 7,034 |
| Self-Propelled Artillery | 689 | 2,925 | 1,968 | 2,910 |
| Towed Artillery | 2,151 | 2,642 | 150 | 1,234 |
| Multiple Rocket Launchers | 410 | 885 | 1,056 | 1,640+ |
| Surface-to-Surface Missiles | NA | NA | 162 | NA |
| Total Attack Helicopters ¹ | 871 | 433 | 411 | 308 |
| Naval Forces | | | | |
| Navy Active Personnel | 349,600 | 240,780 | 150,000 | 260,000 |
| SSBNs | 14 | 18 | 11 | 6 |
| Other SSNs | 53 | - | 18 | 6 |
| Conventional Attack Submarines | - | 46 | 20 | 46 |
| Total Principal Surface Combatants | 124 | 147 | 32 | 86 |
| Carriers | 11 | 5 | 1 | 2 |
| Cruisers | 24 | 36 | 4 | 3 |
| Destroyers and Frigates | 89 | 106 | 27 | 81 |
| Mine Warfare | 8 | 159 | 42 | 57 |
| Principal Amphibious | 38 | 13 | 9 | - |
| Patrol and Coastal Combatants | 86 | 266 | 129 | 196 |
| Naval Aviation | | | | |
| Combat Capable Aircraft | 954 | 93 | 219 | 446 |
| ASW and Mine Warfare Helicopters | 557 | 243 | 60 | 50 |

¹Includes air force holdings

Figure Three: The Military Balance in 2021- Part Two

| Category | United States | European NATO | Russia | China |
|--|----------------------|----------------------|---------------|--------------|
| Marine Forces | | | | |
| Active Marine Personnel | 179,250 | 23,750 | 35,000 | 35,000 |
| Tanks | 0 | 0 | 330 | 0 |
| AFV and APC | 1,949 | 303 | 1,660 | 280+ |
| Major Artillery | 859 | 69 | 405 | 40+ |
| Combat Capable Aircraft | 366 | - | - | - |
| Attack Helicopters | 131 | - | - | - |
| Air Forces | | | | |
| Active Air Force Personnel | 329,400 | 312,440 | 165,000 | 395,000 |
| Total Combatant Aircraft | 2,354 | 1,277 | 722 | 1,277 |
| Early 4th Generation Fighter Aircraft | 122 | 362 | 228 | 74 |
| 4th Generation Fighter Aircraft | 791 | 97 | 367 | 744 |
| 4+ Generation Fighter Aircraft | 829 | 744 | 126 | 97 |
| 5th Generation Fighter Aircraft | 612 | 74 | 1 | 362 |
| Bomber | 123 | - | 176 | 137 |
| Fighter Ground Attack | 1,055 | 1,157 | 427+ | 972+ |
| Fighter | 261 | 690 | 185 | 517 |
| Attack | 135 | 156 | 264 | 140 |
| Electronic Warfare, IS&R, ELINT | 24 | 46 | 92 | 73 |
| AEW and C2 | 35 | 17 | 17 | 24 |
| Tanker/Tanker Transport | 238 | 44 | 15 | 16 |
| Transport Airlift | 333 | 618 | 448 | 247+ |
| Long Range SAM/Missile Defense Launchers | 522 | 56+ | 608+ | 454+ |

Note: Data reflect the military balance before the beginning of the Ukraine War. They do not include the forces of

- Canada (defense expenditures of \$26.9 billion, 66,500 active military personnel, 82 main battle tanks, 163 major artillery weapons, 4 submarines and 12 principal surface combatants, and 111 combat capable aircraft,)
- Finland (defense expenditures of \$5.5 billion, 19,250 active personnel, 100 tanks, major artillery, no principal surface combatants, and 107 combat aircraft,)
- Sweden (defense expenditures of \$76.5 billion, 14,600 active personnel, 120 tanks, 35 major artillery, 5 submarines and 5 principal surface combatants, and 96 combat aircraft,)
- Ukraine before the Russian invasion (active personnel 196,000, 858 tanks, 1,476 major artillery, 1 principal surface combatant, and 124 combat aircraft,)

Source: Adapted from IISS, *Military Balance 2022* with some minor adjustments using U.S. military data. Figures for all countries do not include reserve personnel by service, Coast Guard, coastal defense, and paramilitary forces; and 175,000 active personnel in Chinese strategic support forces.

The Ukraine War and the Conventional Arms Race

At the same time, there are very real financial limits on what both sides can spend on improving and modernizing their conventional military forces, and the economic war between Russia and the

West will have a major impact on their spending. The improvements in military capability that both sides must now make are also driven by the need to make very costly improvements in their military forces and will probably involve the need to higher percentages of total national GDPs over the period of a decade or more. This will inevitably increase the competition over military spending versus spending on civilian programs and needs.

This is particularly true of Russia. The military and economic cost of the war in Ukraine alone has already reached levels which the Russian leadership almost certainly grossly underestimated in launching the conflict.

The cost to Western states and their strategic partners of their military and economic support for Ukraine has also been far higher than political leaders anticipated in shaping their initial aid plans. The rises in prices for energy and other imports mentioned earlier have raised inflation to critical levels, and there already have been political calls for less aid to Ukraine and broader political indications that NATO countries are cutting back on their plans to modernize and improve their forces.

Russia, however, is now far poorer than its Western challengers. Once again, the full range of trends involved is too complex to show in this analysis and is provided in a separate report called *Major Powers and Strategic Partners: A Graphic Net Assessment*.⁶ One metric alone, however, shows how serious the economic challenges Russia faces.

The World Bank estimates that the U.S. alone had a GDP of \$22.966 trillion in current dollars in 2021, the EU had a GDP of \$17.089 trillion, and NATO estimates that NATO Europe and Canada had a GDP of some \$22.687 billion. The World Bank estimates that Russia only had a GDP of \$1.776 billion in 2021, which scarcely makes it an economic superpower in global terms. Unlike the U.S. its only major strategic partner is Belarus, which had a GDP of only \$0.682 billion.⁷

Democracies do have to respond to popular civil demands by paying far more of their government income to meet civil needs, but NATO's total estimated GDP in 2021 was \$45,653 trillion, some 26 times the Russia GDP of \$1.776 trillion.⁸

Unfortunately, there are no reliable ways to compare the publicly reported military spending of command economies like Russia or China – which often conceal key aspects of national security spending – with the relatively open and reliable reporting of Western states. If one looks at some of the best and most directly comparable estimates of military spending, however, NATO reports that the U.S. spent \$793.99 billion on military forces in 2021, and NATO Europe spent \$361.29 billion for a NATO total of some \$1,096.6 billion. In contrast, the International Institute for Strategic Studies estimates that Russia spent only \$62.2 billion by the NATO definition of defense spending. This is only 5.7% of the reported total for NATO, which is 17 times the Russian figure.⁹

In practical terms, these GDP and military spending figures indicate that Russia is anything but a superpower in economic strength and military spending military. This becomes even more clear if one looks at the GDP and military spending of China and America's key Asian strategic partners as additional standards of comparison.

The World Bank estimated that China had a GDP of \$17,734 billion in current dollars, while key Asian strategic partners like Japan had a GDP of \$4,937 billion and South Korea had \$1,799 billion. These figures show that the World Bank estimated that China's GDP was almost exactly ten times larger than Russia's. If one looks at the IISS military spending estimates, the IISS indicates that China's official military spending figure was \$207 billion and was \$270 billion by

NATO's definition. The \$270 billion figure indicates that China was spending 4.5 times as much on military forces as Russia.

These comparisons are critical because it seems likely that the winter of 2022-2023 will mark the beginning of a lasting military confrontation between Russia and NATO, and a race to modernize and improve military forces that will last at least as long as Putin is in power. If the previous economic and military spending figures do represent real comparative power, they indicate that the funding of such a race to improve the military capabilities could sharply favor the West.

They also illustrate why the U.S. and Western effort to support Ukraine is so important, and so cost-effective. The U.S. alone had sent well over \$50 billion in military, humanitarian, and civil aid by November 2022 – scarcely a minor sum – and it was clear that the Ukraine would be dependent on outside aid indefinitely to both continue fighting and recover from the war after any settlement. The cost to Russia, however, was far greater and placed a burden on a far weaker economy – to the point where it was pushing Russia into the status of a second level military power. At the same time, it sent a critical message to China about U.S. strength and resolve that was equally important.

The U.S. national security strategy issued in October 2022 singled out China as the primary threat to the U.S., and several key U.S. security partners in NATO – notably Britain – have recently focused on China. Funding a “race” to modernize NATO will be limited by the fact that the U.S. and some strategic partners must also focus on China and other threats.

Furthermore, some experts question whether the current estimates of Russian military spending are too low. Russia has the potential military advantage of unity and a totalitarian leadership that can exert direct control over a command economy and do so with far less need to respond to popular civil needs. Although Russia also has suffered major losses in the fighting in Ukraine and has used up many of its reserves of weapons, munitions, and parts.

More broadly, NATO countries will enter the winter of 2022-2023 with major civil economic problems, and new popular demands for government spending that seem likely to limit member country military spending. NATO will also begin the broader Ukrainian War arms race having taken larger peace dividends over the last two decades, and with 30 (32?) member countries that have radically different force structures, poor overall interoperability, and radically different trends in real world force modernization.

More broadly, the unclassified data on the Russia military industrial base, and many key elements of its national and military technology base, are very limited. While it is not clear that this is still the case, it is also important to remember that Cold War intelligence estimates of the military expenditures of the Soviet Union were later shown to be gross underestimates of the actual spending as the West gained access to the Soviet Union. The same was true of the Soviet Union's military research and development activities, and the size and efficiency of its military industries – many of which provide to be far larger – and at the same time less efficient – than expert estimated during the Cold War.

More data are available on the U.S. and Western military industrial base, and many key elements of its national and military technology base, but a close example indicates that many seemingly comparable data are not truly comparable, and that there are many gaps in coverage, particularly on actual programs, ongoing active activities, and any credible measures of effectiveness. It is also clear from the history of many national efforts that quantity is not a measure of quality.

The “Winter War” Precision Strike Capabilities, Air/Missile Defense, and Emerging/Disruptive Technologies

Here, it is also important to put any such arms races in the proper context. Advances in military technology will have their own influence and all of the world’s major powers will have to compete in making major expenditures on new military technology, weapons, and new forms of warfare.

Russia and Ukraine have shown that new conventional weapons with precision strike capability, and advances in targeting and related forms of intelligence, can make a major difference in both military combat and in strike civilian targets. These weapons range from short-range systems like anti-tank missiles and drones to long range missiles and launch platforms ranging from hand-held weapons to theater-wide strike capabilities.

The U.S. and a number of European states already have long-range precision conventional strike systems that can destroy critical infrastructure and high value targets, and all of the world’s major powers are working on the development of new longer-range ballistic, cruise, and new approach to strike technology. Other developments include other related advances in precision strike capabilities against critical civil and military systems, advances in many forms of targeting, and the deployment of steadily more to advanced 5th generation aircraft, in multi-platform weaponry.

Almost inevitably, these advances in strike systems mean that missile and air defenses will be a matching source of competition, and another form of “war.” As is discussed shortly, the advances in precision strike also creates the risk that many new systems may acquire dual capability and nuclear warheads.

Even the more advanced current defense systems like the Russian S-400 and the U.S. Patriot have serious increase limits and there are good reasons why Ukraine had steadily increased its calls for more advanced air and missile defenses, why Russia will seek to speed up the development of its new systems and why the U.S. and NATO Europe must now seriously consider major near-term investment in effective theater defenses.

The war in Ukraine has also highlighted the vulnerability of existing armor, the need for more advanced artillery, the vulnerability of ships to missiles, and a host of other advances in secure communications, battle management, logistic support systems. They also interact with a wide range of new military technologies that affect the use of space, cyber warfare, artificial intelligence, and other emerging and “disruptive” technologies that can do far more to integrate every aspect of military operations and forms of joint all-domain operations.

None of these advances are cheap, but some deployments have already begun, and they may amount to a near revolution in military force structures and operations over the coming decade. This means the competition in the development and deployment of high technology military capabilities and systems will be a form of “warfare” where selecting the right mix of improvements could give one side a major advantage in terms of both deterrence and strategic leverage in peacetime, and where making the right investments selectively will be critical in shaping both deterrence and the nature of any actual warfighting.

The winter of 2022-2023 is not likely to produce major new developments in these areas, but each round of Russian missile attacks and every expansion of the target base does increase NATO’s need to move more quickly, invest more, and develop some coherent plans for deployment in all four areas. Like many other aspects of the “winter war,” the fighting already is a major catalyst in

shaping global arms races and one where it seems less and less likely that the world will return to anything like the levels of pre-Ukraine War stability, peace dividends, and arms control that had existed since 1992.

The “Winter Wars” in Russia, the Middle East, and Chinese Nuclear Forces

These challenges will also be further increased by yet another form of winter war. Russia has raised the issue of tactical nuclear warfare in the Ukraine War, and this is only a small part of the near collapse of many forms of nuclear arms control, and a steadily heightening nuclear arms that has reached the point where the competition in global strategic weapons has shifted from a competition between the U.S. and Russia to one that includes China.

In practice, Russia, the U.S., Britain, France, and China became involved in a major nuclear modernization effort long before the Ukraine War began. Here, a substantial amount of official unclassified data are available. The total nuclear weapons holdings of Russia, the U.S., Britain, France, and other powers are summarized in **Figure Four**. U.S. nuclear modernization plans are summarized in **Figure Five**, and Russian and Chinese plans are summarized in **Figure Five**.

It should be stressed that the summaries in **Figures Four, Five, and Six** use unclassified material developed in 2021, and their contents may differ significantly from current intelligence estimates, as well as from outside analysts who produced **Figures Four and Five**, which include Hans M. Kristensen, Matt Korda, Robert Norris, and Amy F. Wolf of the Congressional Research Service.

The data for China are particularly uncertain, since comparatively little unclassified detail is available on Chinese nuclear weapons developments. However, there have been reports that China has built three new fields of at least 250 new missile silos, and now has three new fast breeder reactors it can use to increase its production of Plutonium and nuclear weapons.¹⁰ Reports have also surfaced that China will actively participate in adapting different types of theater and tactical nuclear weapons to provide proven, functional nuclear warheads for the newer missile systems of Russia, China, and the U.S.

As the data for 2022 in **Figure Five** show, the War in the Ukraine has given Russian nuclear efforts a new and higher profile. Its importance has also been highlighted by the fact Putin has talked about “dirty” radiological bombs and made repeated references to the use of theater nuclear weapons, in his public speeches on the Ukraine War. Reports have also been made that Russian generals have begun to seriously discuss tactical and theater nuclear options, and members of the U.S. Congress have debated the need for new nuclear armed cruise missiles as a possible counter to such Russian weapons.

It is far from clear what holdings Russia and each NATO country now have of operational weapons because many are in storage, but unclassified estimates in **Figure Four** indicate that Russia has close to 2,000 theater and tactical nuclear weapons out of an inventory of as many as nearly 4,500 stored weapons, and the U.S. has some 3,750.

It is also clear that nuclear weapons represent the one major area where Russia is still a true superpower in military terms. The Ukraine war has made its weakness in conventional forces all too clear, and current estimates of its research and development resources indicate that it cannot compete with the West in military technology, or with the rising technology base of China. It does, however, have major holds of nuclear weapons that it inherited from the former Soviet Union.

While some aspects of such estimates are uncertain – particularly for China; the Federation of American Scientists (FAS) is almost certainly broadly correct in estimating that Russia had some 6,257 nuclear weapons in its total inventory in 2021. This compared with 5,550 for the U.S., 350 for China, 225 for Britain, 290 for France, 160 for India, 165 for Pakistan, 90 for Israel, and 45 for North Korea.

Russia's holdings also give it the ability to deploy large numbers of theater/tactical nuclear weapons, although the figures involved are uncertain. An unclassified estimate by the FAS indicates that Russia had 2,565 strategic nuclear warheads and 1,912 non-strategic and defensive force warheads in early 2022 and reported that some experts felt the latter number might double 2030. It also listed possible deployments of tactical and theater weapons in naval, air, land, and missile defense forces, and a wide range of possible delivery systems.¹¹

There are no similar estimates of the holdings of non-strategic weapons by most other states, but the FAS does indicate that the U.S. may be the only power with large holdings that could be rapidly adapted for theater and tactical use. It could draw upon 2,000 nuclear in storage and 1,750 more weapons awaiting dismantlement.¹²

The FAS also reports that the U.S. had 100 B-61 nuclear bombs in Europe for F-16, F-18, Tornado, and F-35 combat aircraft with yields from 50 KT to 170 KT and is adapting some strategic weapons to have a lower yield option that could be used for theater and tactical targeting. It states that, "Belgian, Dutch, German, and Italian air forces are assigned nuclear strike missions with US nuclear weapons." It reports France had some 300 variable yield nuclear weapons – three sets of 16 for its submarines and 54 cruise missiles for carrier and land-based Rafale delivery systems which could be used for both strategic and theater strikes. It does not report Britain as having tactical or theater nuclear weapons and indicate all of its weapons are for its SSBNs.

The Arms Control Association reports that the United States has some 100 B-61 nuclear gravity bombs, and that that are forward-deployed at six NATO bases in five European countries: Aviano and Ghedi in Italy; Büchel in Germany; Incirlik in Turkey; Kleine Brogel in Belgium; and Volkel in the Netherlands. Another 130 U.S. B-61s are in inventory. France and Britain also may have low yield or other nuclear weapons in storage that could be used or modified for theater use.¹³

In short, a situation already exists where there is a revival of active competition in the deployment of theater nuclear forces as forms of military leverage and a higher – if still limited – risk of their use actual warfare fighting. It is also clear that the future of arms control is highly uncertain, and that Russia has an obvious incentive to try to use its nuclear weapons to obtain political and military leverage. Combined with the faltering progress in arms control and the fact the U.S must now compete with China as well as Russia, the War in the Ukraine again highlights the fact that there is another kind of Winter War, and one that potentially is far more dangerous.

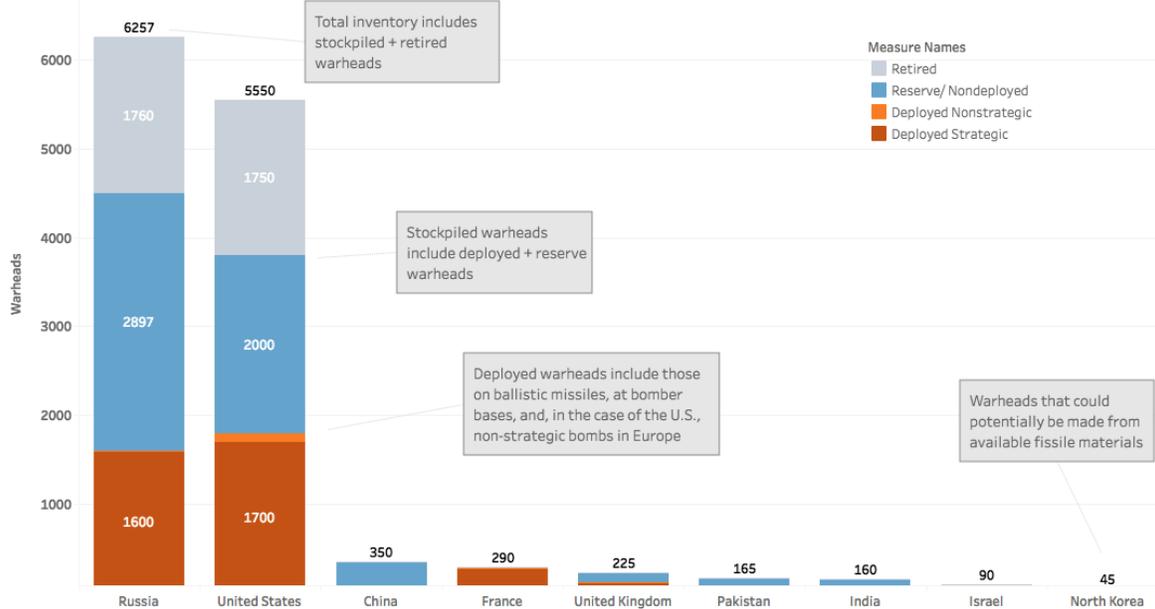
Figure Four: Estimate of Total World Nuclear Weapons Holding by Country

| Country | Deployed Strategic | Deployed Nonstrategic | Reserve/ Nondeployed | Military Stockpile ^a | Total Inventory ^b |
|---------------------------|--------------------|-----------------------|----------------------|---------------------------------|------------------------------|
| Russia | 1,600 ^c | 0 ^d | 2,897 ^e | 4,497 | 6,257 ^f |
| United States | 1,700 ^g | 100 ^h | 2,000 ⁱ | 3,800 ^j | 5,550 ^k |
| France | 280 ^l | n.a. | 10 ^l | 290 | 290 |
| China | 0 ^m | ? | 350 | 350 | 350 ^m |
| United Kingdom | 120 ⁿ | n.a. | 105 | 225 | 225 ⁿ |
| Israel | 0 | n.a. | 90 | 90 | 90 ^o |
| Pakistan | 0 | n.a. | 165 | 165 | 165 ^p |
| India | 0 | n.a. | 160 | 160 | 160 ^q |
| North Korea | 0 | n.a. | (45) | (45) | (45) ^r |
| Total:^s | ~3,700 | ~100 | ~5,820 | ~9,600 | ~13,100 |

Estimated Global Nuclear Warhead Inventories, 2021

Last updated: 2 August 2021

Hans M. Kristensen, Matt Korda, and Robert Norris, Federation of American Scientists, 2021



May not include weapons in new missile silos found in fall of 2021, or reflect all the results of the 2022 US. nuclear posture review. “Deployed strategic warheads” are those deployed on intercontinental missiles and at heavy bomber bases. “Deployed nonstrategic warheads” are those deployed on bases with operational short-range delivery systems. “Reserve/Nondeployed” warheads are those not deployed on launchers and in storage (weapons at bomber bases are considered deployed). The “military stockpile” includes active and inactive warheads that are in the custody of the military and earmarked for use by commissioned deliver vehicles. The “total inventory” includes warheads in the military stockpile as well as retired, but still intact, warheads in the queue for dismantlement.

Source: Hans M. Kristensen, Matt Korda, and Robert Norris, “Status of World Nuclear Forces,” 2022, <https://fas.org/issues/nuclear-weapons/status-world-nuclear-forces>

Figure Five: Russian, and Chinese Nuclear Modernization

Russian Nuclear Modernization

| System | Warheads | Notes |
|--|--------------------------|--|
| Avangard HGV | One per vehicle, nuclear | Can be delivered by SS-19 and potentially the Sarmat ICBMs; intended to overcome missile defense |
| RS-28 (Sarmat) silo ICBM | 10+, nuclear | Deployment expected around 2022; intended to overcome missile defense |
| Poseidon Autonomous Underwater Vehicle | Conventional or nuclear | Carried by special-purpose submarines; intended as a second-strike, retaliatory weapon |
| Burevestnik Nuclear Powered Cruise Missile | Nuclear | “Unlimited” range, owing to its nuclear reactor; intended to overcome missile defense |
| Kinzhal Air-Launched Ballistic Missile | Conventional or nuclear | Intended to target naval vessels |
| Tsirkon Hypersonic Cruise Missile | Conventional or nuclear | Intended to attack ships and ground targets |
| Barguzin Rail-Mobile ICBM | up to 4? Nuclear | Program reportedly postponed in 2017 |
| RS-26 Rubezh ICBM | up to 4? Nuclear | Program reportedly postponed in 2018 |

Source: Compiled by CRS.

Note: While the text used both Russian designations (RS-X) and U.S./NATO designations (SS-X) to identify deployed Russian weapons systems, this table displays the Russian only the Russian designation (RS-X) because a NATO designation has not yet been assigned.

Chinese Nuclear Modernization

- “ Seems to be more than doubling its stockpile of nuclear weapons. May have risen from around 200 to 350 by 2020. 272 operational for existing missiles and bombs and 78 for new systems. Possibly grew by 118 warheads during 2020-2021.
- “ Have detected 270+ new missile silos. 119 in Northwestern China seem to be for ICBMs.
- “ Has shunned arms control and transparency.
- “ Steadily improving nuclear command and control and battle management systems.
- “ Deploying advanced solid-fuel mobile ICBMs (DF-21 & DF-31/DF-31A/DF-3 2 A G) , M I R V ’ d l i q u i ICBM (DF-5 B) , n e w M I ICBM, d y p d 0 0 4 SSBN with JL-2 SLBMs.
- “ Developing low noise 096 SSBN and 9,000 kilometer range 096 SLBM.
- “ Progressively harder to determine what theater and short-range delivery systems may become dual-capable. DF-21 MRBM (2,150 KM) and DF-26 IRBM (4,000 KM) known to be nuclear. DF-21 is precision strike, dual-capable and could deliver low-yield nuclear weapons.
- “ Modifying H-6 nuclear bombers to H-6N with refueling, missile carrying capability. H-20 stealth bomber in development.
- “ May be evolving far beyond countervalue second strike capability. Examining use as theater warfare threat?

Source: Hans M. Kristensen, Matt Korda, and Robert Norris, “Status of World Nuclear Forces,” 2022, <https://fas.org/issues/nuclear-weapons/status-world-nuclear-forces>; SIPRI Yearbook, *Section 2: China’s Nuclear Forces: Moving Beyond a Minimal Deterrent*, 2021, https://www.uscc.gov/sites/default/files/2021-11/Chapter_3_Section_2--Chinas_Nuclear_Forces_Moving_beyond_a_Minimal_Deterrent.pdf; and DIA, *China, Military Power*, 2021

Figure Six: U.S. Nuclear Modernization – Part One

As of January 2022

Modernized Strategic Delivery Systems: Existing delivery systems are undergoing continual modernization, including complete rebuilds of the Minuteman III ICBM and Trident II SLBM. The service lives of the Navy's 14 Trident Ohio-class ballistic missile submarines are being extended. Additionally, a new submarine, the Columbia-class, which will replace the Ohio-class ballistic missile submarines, is undergoing development and is expected to cost [\\$127 billion](#) to acquire the 12-ship class...The B-2 strategic bomber, a relatively new system, is being upgraded, as is the B-52H bomber. The Air Force is also planning a new strategic bomber, the B-21 Raider, and a new nuclear-capable cruise missile, known as the Long-Range Standoff Weapon (LRSO) to replace the existing Air-Launched Cruise Missile (ALCM).

Refurbished Nuclear Warheads: The U.S. stockpile of nuclear warheads and bombs is continually refurbished through NNSA's Life Extension Program (LEP). Existing warheads are certified annually to be safe and reliable. The NNSA is currently pursuing a controversial and expensive plan to refurbish or replace nearly every warhead type in the stockpile.

Modernized Production Complex: The nuclear weapons production complex is being modernized as well, with new facilities planned and funded. For example, the FY 2021 NNSA budget request includes \$750 million for the Uranium Processing Facility (UPF) at Oak Ridge, Tennessee. The total construction cost for UPF is estimated at \$6.5 – 7.5 billion, according to an [independent study](#) conducted by the Corps of Engineers, although some estimates put the price tag at \$11 billion. NNSA has [pledged](#) to complete construction by 2025 at a price tag of no more than \$6.5 billion.

Command and Control Systems: The Defense Department maintains command, control, communications, and early-warning systems that allow operators to communicate with nuclear forces, issue commands that control their use, and detect or rule out incoming attacks. The 2018 NPR calls for placing greater attention and focus on sustaining and upgrading command and control capabilities. The CBO estimates that the Pentagon will need to spend \$77 billion on these activities between FY 2019 and FY 2028 in order to implement the department's plans.

As of October 2022

Adopt a strategy and declaratory policy that maintain a very high bar for nuclear employment while assuring Allies and partners, and complicating adversary decision calculus.

Adopt an integrated deterrence approach that works to leverage nuclear and non-nuclear capabilities to tailor deterrence under specific circumstances.

Field and maintain strategic nuclear delivery systems and deployed weapons in compliance with New START Treaty central limits as long as the Treaty remains in force. We will continue to deploy a nuclear triad and are fully committed to the programs that will begin to field modernized systems later this decade. Programs are also being executed to modernize U.S.DCA, the nuclear weapons stockpile, the NC3 architecture, and the weapons production infrastructure.

Clearly convey to the PRC that the United States will not be deterred from defending our Allies and partners, or coerced into terminating a conflict on unacceptable terms. Forces that provide this flexibility include the W76-2 low yield submarine-launched ballistic missile warhead, globally-deployable bombers, dual-capable fighter aircraft, and air-launched cruise missile

Deter theater attacks and nuclear coercion of Allies and partners, by bolstering the Triad with capabilities that strengthen regional deterrence, such as F-35A dual-capable fighter aircraft (DCA) equipped with the B61-12 bomb; the W76-2 warhead; and the Long-Range Standoff (LRSO) weapon.

Eliminate “hedge against an uncertain future” as a formal role of nuclear weapons.

Take steps to strengthen extended deterrence and Allied assurance.

Pursue enhanced security through arms control, strategic stability, non-proliferation, and reducing the risks of miscalculation.

Affirm full-scope Triad replacement and other nuclear modernization programs, including NC3.

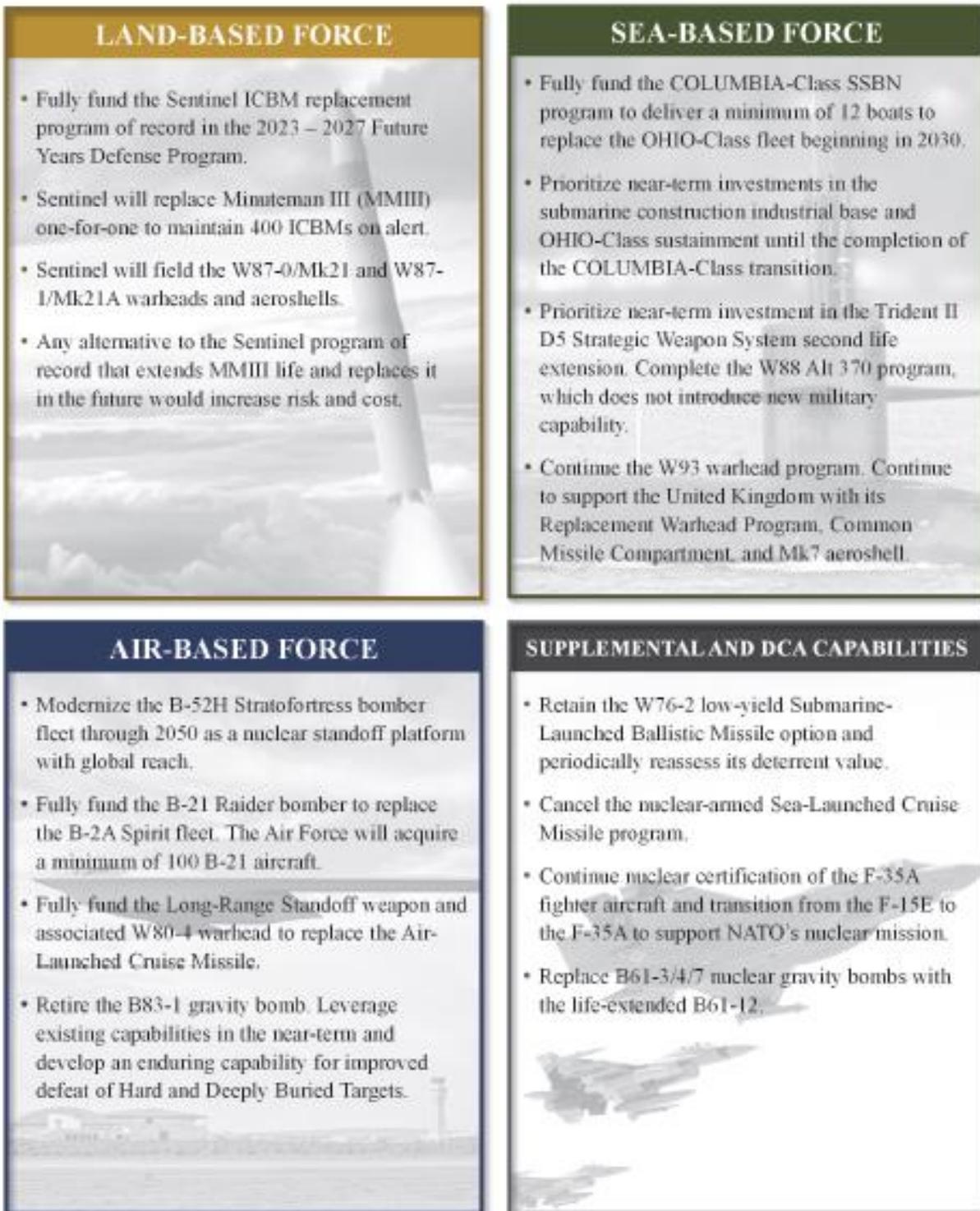
Retire the B83-1 gravity bomb.

Cancel the nuclear-armed Sea-Launched Cruise Missile (SLCM-N) program.

Deliver a modern, adaptive nuclear security enterprise based on an integrated strategy for risk management, production-based resilience, science and technology innovation, and workforce initiatives.

Source: Data for early 2022 are excerpted and adapted from Shannon Bugos, “Nuclear Modernization Program Fact Sheet,” Arms Control Association, January 2022, <https://www.armscontrol.org/factsheets/USNuclearModernization#snapshot>, and data for October 2022 are excerpted from 2022 *Nuclear Posture Review*, DoD web site, October 27, 2022, <https://media.defense.gov/2022/Oct/27/2003103845/-1/-1/2022-NATIONAL-DEFENSE-STRATEGY-NPR-MDR.PDF>.

Figure Six: U.S. Nuclear Modernization – Part Two



Source: 2022 Nuclear Posture Review, DoD web site, October 27, 2022, <https://media.defense.gov/2022/Oct/27/2003103845/-1/-1/1/2022-NATIONAL-DEFENSE-STRATEGY-NPR-MDR.PDF>, p. 21

The “Winter War” from Cooperation and Competition to Confrontation and Active War Planning

More broadly, it is clear that the levels of tension between China and the U.S. and several of its strategic partners have created yet another form of winter war. While the active combat in Ukraine has gotten more public attention than the growing level of political, economic, and military confrontation between China and the US and its European and Asian strategic partners, the extent of political and economic warfare between the U.S. and China is nearly as great, and the current level of military confrontation between the U.S. and China has received at least as much attention in U.S. strategic and war planning as the confrontation between the U.S. and Russia.

The level of tension between China and the West has also increased sharply as the world has entered the winter of 2022-2023. President Xi Jinping clearly emerged as the dominant leader of China at the 20th Party Congress in October 2022 and made it clear that he was committed to make China the dominant economic and military power in the world, and to expanding its political role and leverage on a global basis.

The Role of China in the New U.S. National Security Strategy

the U.S. National Security Strategy issued October 2022 makes it clear that the U.S. now sees China as the primary threat to its security, and more in terms of war than any real intention to emphasize cooperation.¹⁴

The 2022 National Defense Strategy advances a strategy focused on the PRC, and on collaborating with our growing network of Allies and partners on common objectives. It seeks to prevent the PRC’s dominance of key regions while protecting the U.S. homeland and reinforcing a stable and open international system. Consistent with the 2022 National Defense Strategy, a key objective is to dissuade the PRC from considering aggression as a viable means of advancing goals that threaten vital U.S. national security interests. Conflict with the PRC is neither inevitable or desirable. The Department’s priorities support broader whole-of-government efforts to develop terms of interaction with the PRC that are favorable to our interests and values, while managing strategic competition and enabling the pursuit of cooperation on common challenges.

...The most comprehensive and serious challenge to U.S. national security is the PRC’s coercive and increasingly aggressive endeavor to refashion the Indo-Pacific region and the international system to suit its interests and authoritarian preferences. The PRC seeks to undermine U.S. alliances and security partnerships in the Indo-Pacific region, and leverage its growing strength and military footprint to coerce its neighbors and threaten their interests. The PRC’s increasingly provocative rhetoric and coercive activity towards Taiwan are destabilizing, risk miscalculation, and threaten the peace and stability of the Taiwan Strait. This is part of a broader pattern of destabilizing and coercive Chinese behavior that stretches across the East China Sea, and along the Line of Actual Control. The PRC has expanded and modernized nearly every aspect of the PLA, with a focus on offsetting U.S. military advantages. The PRC is therefore the pacing challenge for the Department.

The PRC is the only competitor with both the intent to reshape the international order and, increasingly, the economic, diplomatic, military, and technological power to do it. Beijing has ambitions to create an enhanced sphere of influence in the Indo-Pacific and to become the world’s leading power. It is using its technological capacity and increasing influence over international institutions to create more permissive conditions for its own authoritarian model, and to mold global technology use and norms to privilege its interests and values. Beijing frequently uses its economic power to coerce countries. It benefits from the openness of the international economy while limiting access to its domestic market, and it seeks to make the world more dependent on the PRC while reducing its own dependence on the world. The PRC is also investing in a military that is rapidly modernizing, increasingly capable in the Indo-Pacific, and growing in strength and reach globally – all while seeking to erode U.S. alliances in the region and around the world.

...Our strategy toward the PRC is threefold: 1) to invest in the foundations of our strength at home – our competitiveness, our innovation, our resilience, our democracy, 2) to align our efforts with our network of allies and partners, acting with common purpose and in common cause, and 3) compete responsibly with the PRC to defend our interests and build our vision for the future. The first two elements— invest and align— are described in the previous section and are essential to out- competing the PRC in the technological, economic, political, military, intelligence, and global governance domains.

Competition with the PRC is most pronounced in the Indo-Pacific, but it is also increasingly global. Around the world, the contest to write the rules of the road and shape the relationships that govern global affairs is playing out in every region and across economics, technology, diplomacy, development, security, and global governance. In the competition with the PRC, as in other arenas, it is clear that the next ten years will be the decisive decade. We stand now at the inflection point, where the choices we make and the priorities we pursue today will set us on a course that determines our competitive position long into the future.

Many of our allies and partners, especially in the Indo-Pacific, stand on the frontlines of the PRC’s coercion and are rightly determined to seek to ensure their own autonomy, security, and prosperity. We will support their ability to make sovereign decisions in line with their interests and values, free from external pressure, and work to provide high-standard and scaled investment, development assistance, and markets. Our strategy will require us to partner with, support, and meet the economic and development needs of partner countries, not for the sake of competition, but for their own sake.

We will act in common purpose to address a range of issues – from untrusted digital infrastructure and forced labor in supply chains and illegal, unreported, and unregulated fishing. We will hold Beijing accountable for abuses – genocide and crimes against humanity in Xinjiang, human rights violations in Tibet, and the dismantling of Hong Kong’s autonomy and freedoms – even as it seeks to pressure countries and communities into silence. We will continue prioritizing investments in a combat credible military that deters aggression against our allies and partners in the region, and can help those allies and partners defend themselves.

Growing Chinese Ties to Russia?

At the same time, serious questions exist about the extent to which U.S. and other security efforts to deal with China can be separated from those necessary to deal with Russia. Although most experts feel there are serious limits to the level of “friendship” and alliance between the two countries, this is far from certain. For example, Japan’s 2022 defense white paper notes that Russian and Chinese overflights and naval exercises have sharply increased in the areas north of Japan and treats them as a serious potential threat.¹⁵

The U.S. *National Security Strategy*, issued in October 2022 makes it clear that the U.S. sees both China and Russia as major threats to the international order, although it views such threats as different in character:¹⁶

The People’s Republic of China harbors the intention and increasingly, the capacity to reshape the international order in favor of one that tilts the global playing field to its benefit, even as the United States remains committed to managing the competition between our countries responsibly....The most pressing strategic challenge facing our vision is from powers that layer authoritarian governance with a revisionist foreign policy. It is their behavior that poses a challenge to international peace and stability—especially waging or preparing for wars of aggression, actively undermining the democratic political processes of other countries, leveraging technology and supply chains for coercion and repression, and exporting an illiberal model of international order. Many non-democracies join the world’s democracies in forswearing these behaviors.

Unfortunately, Russia and the People’s Republic of China (PRC) do not. Russia and the PRC pose different challenges. Russia poses an immediate threat to the free and open international system, recklessly flouting the basic laws of the international order today, as its brutal war of aggression against Ukraine has shown. The PRC, by contrast, is the only competitor with both the intent to reshape the international order and, increasingly, the economic, diplomatic, military, and technological power to advance that objective.

... we recognize that globalization has delivered immense benefits for the United States and the world but an adjustment is now required to cope with dramatic global changes such as widening inequality within and among countries, the PRC's emergence as both our most consequential competitor and one of our largest trading partners, and emerging technologies that fall outside the bounds of existing rules and regulations. We have an affirmative agenda for the global economy to seize the full range of economic benefits of the 21st century while advancing the interests of American workers. Recognizing we have to move beyond traditional Free Trade Agreements, we are charting new economic arrangements to deepen economic engagement with our partners, like the Indo-Pacific Economic Framework for Prosperity (IPEF); a global minimum tax that ensures corporations pay their fair share of tax wherever they are based in the world; the Partnership for Global Investment and Infrastructure (PGII) to help low- and middle- income countries secure high-standard investment for critical infrastructure; updated rules of the road for technology, cyberspace, trade, and economics; and ensuring the transition to clean energy unlocks economic opportunities and good jobs around the world.

... The world is now at an inflection point. This decade will be decisive, in setting the terms of our competition with the PRC, managing the acute threat posed by Russia, and in our efforts to deal with shared challenges, particularly climate change, pandemics, and economic turbulence.

China has also made it clear since at least the early 1990s that its military build-up is focused largely on the U.S., the Pacific, Southeast Asia, Central Asia, the Indian Ocean, and the Middle East. It has cooperated with Russia in the Shanghai Cooperation Organization since the days when it was the Shanghai Five.

China has also based much of its military modernization on Russian weapons and technology, and Japan's 2022 defense white paper notes that Russian and Chinese overflights and naval exercises have sharply increased in the areas north of Japan and treats them as a serious potential threat.¹⁷

While it seems likely that Russia will ultimately emerge from the war in the Ukraine in greater need of a major outside strategic partners, China and Russia could both gain from a stronger partnership in the strategic aspects of their wars in energy, economics, and technology, and building up their military strength in gaining military leverage and in the event of any serious regional or theater conflict. It is true that authoritarian regimes tend to seek partnerships that serve the ambitions of their individual leader, but in this case that ambitions may increasingly coincide.

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China does seem to be far more successful than Russia in moving towards the point where it can compete directly with the U.S. and its strategic partners in conventional military power. The new U.S. strategy describes China's efforts to improve its conventional military forces in terms that describe them as focusing on all the major elements of the U.S. effort to improve its conventional military forces:¹⁸

In addition to expanding its conventional forces, the PRC is rapidly advancing and integrating its space, counterspace, electronic, and informational warfare capabilities to support its holistic approach to joint warfare. The PLA seeks to target the ability of the Joint Force to project power to defend vital U.S. interests and our Allies in a crisis or conflict. The PRC is also expanding the PLA's global footprint and working to establish a more robust overseas and basing infrastructure to allow it to project power at greater distances. In parallel, the PRC is accelerating the modernization and expansion of its nuclear capabilities. The United States and its Allies and partners will increasingly face the challenge of deterring two major powers with modern and diverse nuclear capabilities – the PRC and Russia – creating new stress on strategic stability.

China has already made significant progress in achieving parity with the U.S. The conventional balance shown earlier in **Figure Three** reflects massive increases in China's conventional military strength since 1990, and these numbers only show a comparatively small part of the massive Chinese shift away from a reliance on creating the largest possible ground forces to defend Chinese

territory in 1990 to creating land, naval forces, and air forces as modern or more modern than U.S. forces. China has been creating major power projection capabilities in the Pacific and Indian Ocean since at least the mid-1990s, and China has published a variety of unclassified defense white papers and strategies that make it clear that it is seeking to become superior in its ability to use the most advanced emerging and disruptive technologies.

An unclassified series of estimates of the growth of Chinese sea power relative to U.S. sea power is shown in **Figure Seven**, and shows that China is not only becoming a major blue water navy, but could also overtake the US Navy in numbers. While Chinese ships would generally be smaller, they do not need the ability to project power across the entire Pacific over long periods of time that the U.S. Navy must provide, and work by the Congressional Budget Office (CBO) and General Accountability Office (GAO) warn that the U.S. Navy may have significantly overestimated the ship building efforts that current budgets allow it to perform.¹⁹

The impact of Chinese efforts over the past few decades are also reflected in the estimate of the military balance in the northwestern Pacific is shown in **Figure Eight**. It shows that Chinese, Taiwanese, and U.S. military forces are already postured for a possible war over Taiwan, and the overall level of military confrontation in the region.

More broadly, **Figure Nine** shows that unclassified intelligence assessments, and a variety of unclassified studies by outside experts, report that that China is increasing its military spending far more quickly than Russia, and **Figure Ten** highlights a Japanese official estimate of how the increases in Chinese military spending are affecting some key aspects of the regional balance by showing the rising totals of modern Chinese naval surface vessels, submarines, and combat aircraft.

Figures Nine and **Ten** show that China and Xi can also draw upon a far stronger economic base and level of military spending in stepping up such competition than Putin can in Russia. China is also making a far larger annual investment in technology and a far higher level of manufacturing capability. These affect many aspects of its comparative military industrial base and ability to eventually match the U.S. and West's technology base – trends that are shown in detail in *Major Powers and Strategic Partners: A Graphic Net Assessment*.²⁰

The trends in latter assessment also show that China's rapid growth as a global economic trading power, aggressive foreign investment, and state-driven ability to seek economic ties and leverage on global basis – exemplified by its Belt and Road Initiative – have made it a much more serious challenger than Russia, although its action have alienated a number of states.

China's future growth does, however, face growing challenges. Its rate of economic growth has diminished since 2021, it has badly mismanaged its effort to deal with COVID, its property market is in a crisis, its labor and manufacturing costs are rising, it is over-regulating its technology sector, unemployment is rising, and its population is aging. Nevertheless, China is still growing sharply as a military and global power, and the U.S. National Security Strategy issued October 2022 makes it clear that the U.S. now sees China as the primary threat to its security, and more in terms of war than any real intention to emphasize cooperation.²¹

The 2022 National Defense Strategy advances a strategy focused on the PRC, and on collaborating with our growing network of Allies and partners on common objectives. It seeks to prevent the PRC's dominance of key regions while protecting the U.S. homeland and reinforcing a stable and open international system. Consistent with the 2022 National Defense Strategy, a key objective is to dissuade the PRC from considering aggression as a viable means of advancing goals that threaten vital U.S. national security interests. Conflict

with the PTC is neither inevitable or desirable. The Department's priorities support broader whole-of-government efforts to develop terms of interaction with the PRC that are favorable to our interests and values, while managing strategic competition and enabling the pursuit of cooperation on common challenges.

...The most comprehensive and serious challenge to U.S. national security is the PRC's coercive and increasingly aggressive endeavor to refashion the Indo-Pacific region and the international system to suit its interests and authoritarian preferences, The PRC seeks to undermine U.S. alliances and security partnerships in the Indo-Pacific region, and leverage its growing strength and military footprint to coerce its neighbors and threaten their interests, The PRC's increasingly provocative rhetoric and coercive activity towards Taiwan are destabilizing, risk miscalculation, and threaten the peace and stability of the Taiwan Strait. This is part of a broader pattern of destabilizing and coercive Chinese behavior that stretches across the East China Sea, and along the Line of Actual Control. The PRC has expanded and modernized nearly every aspect of the PLA, with a focus on offsetting U.S. military advantages. The PRC is therefore the pacing challenge for the Department.

Guessing at the Future

There is no reliable way to project the comparative rate of Chinese and U.S. modernization at this point of time. As has already been discussed in the case of Russia, the unclassified data on Chinese military industrial base, and many key elements of its national and military technology base, are very limited.

Once again, it is also important to point out that more unclassified data are available on the U.S. and Western military industrial base, and many key elements of its national and military technology base, but a close example indicates that many seemingly comparable data are not truly comparable, and that there are many gaps in coverage, particularly on actual programs, ongoing active activities, and any credible measures of effectiveness. It is also clear from the history of many national efforts that quantity is not a measure of quality.

The available unclassified data do clearly indicate that China's efforts are now massively greater than Russia. Nevertheless, it is still far from clear when China expects achieve any parity in its conventional forces and power projection capabilities in its areas of primary interest. Chinese national strategy and defense reports have listed a number of possible years for such parity that have extended from the late 2020s to well beyond 2035. In practice, however. China has been careful to qualify their meaning and strategic impact. It also has failed to tie them to future forces levels, success in meeting modernization goals, and levels of defense spending, or any clear intentions to use them for active combat as distinguished from military leverage.

As noted earlier, the full range of U.S. efforts to reshape and modernize its forces to deal with China is also unclear. The full impact of the new strategy on U.S. plans to deal with China and Russia will only begin to become clear when the President submits his new defense budget proposal to Congress early in 2023.

The U.S., however, is already reshaping its Navy and Marine Corps to deal with the emerging Chinese threat, however, and media reports make it clear that it is conducting a wide range of war games and studies to deal with the possibility of war to defend Taiwan from a Chinese invasion as well as to support Japan, Australia, South Korea, and other partners and friendly states. The National Security Strategy document notes that,²²

We have an abiding interest in maintaining peace and stability across the Taiwan Strait, which is critical to regional and global security and prosperity and a matter of international concern and attention. We oppose any unilateral changes to the status quo from either side, and do not support Taiwan independence. We remain committed to our one China policy, which is guided by the Taiwan Relations Act, the Three Joint Communiques, and the Six Assurances. And we will uphold our commitments under the Taiwan Relations

Act to support Taiwan's self-defense and to maintain our capacity to resist any resort to force or coercion against Taiwan.

Any major conflict or clash between the U.S. and China seems unlikely in the near term, and both President Biden and a top U.S. official in the Department of Defense have stated that war is unlikely in next two years, although he expects the PRC to increase pressure on Taiwan as it expands its military capabilities for an amphibious invasion.²³ Two years, however, is scarcely a long period in strategic terms, and media reports make it clear that the U.S. is conducting war games and exercises to find the best way to deal with a Chinese invasion of Taiwan, and is planning for a sudden war over Taiwan and one that could easily escalate to cover much of the South China Sea and the rest of the western Pacific.

In practice, the "Winter War" between the U.S. and China is far more serious at a practical military level than U.S. and Chinese political rhetoric usually indicates and presents a special challenge for the US. The late Andrew Marshall highlighted this challenge early in China's competition with the U.S. by highlighting what he called "countervailing power:" The ability of one side to pressure the other by create a military crisis and build-up that forced the other spend far more of its money and military efforts to meet a challenge than the other.

In some ways, Taiwan is a clear case in point. Competing at the far end of the Pacific where China normally deploys much of its military power, and over the comparative vast distances the Pacific imposes in terms of power projection, is far more expensive for the U.S. than for China. China could step up the level of force the U.S. needs to compete through relatively simple deployments and at little cost, and it takes relatively minimal risk. A successful U.S. defense of Taiwan would scarcely lead to an invasion of China and would confront the U.S. with having to then sustain a far greater forward military presence tailored to the defense of one strategic partner, while any U.S. failure to defend would undermine its entire strategic position in Asia. The base case for the U.S. is close to the worst case in terms of countervailing power.

It is also clear from the U.S. *National Security Strategy* that the U.S. sees the expansion of Chinese influence in Southeast Asia, the Indian Ocean, and the Gulf, the rest of the Middle East, and Africa as hostile and as a far broader threat.²⁴ No one on either side can dismiss that risk of a conflicts somewhere else in the Pacific or Asia, or be certain of the level of theater-wide escalation or intensity of combat that might occur.

Moreover, the level of tension over trade, economic policy, and technological espionage has also reached a level of confrontation bordering on economic warfare. China is after all the land of Sun Tzu and has already shown how well it can focus on forms of warfare that rely on economic power and military influence rather than combat.

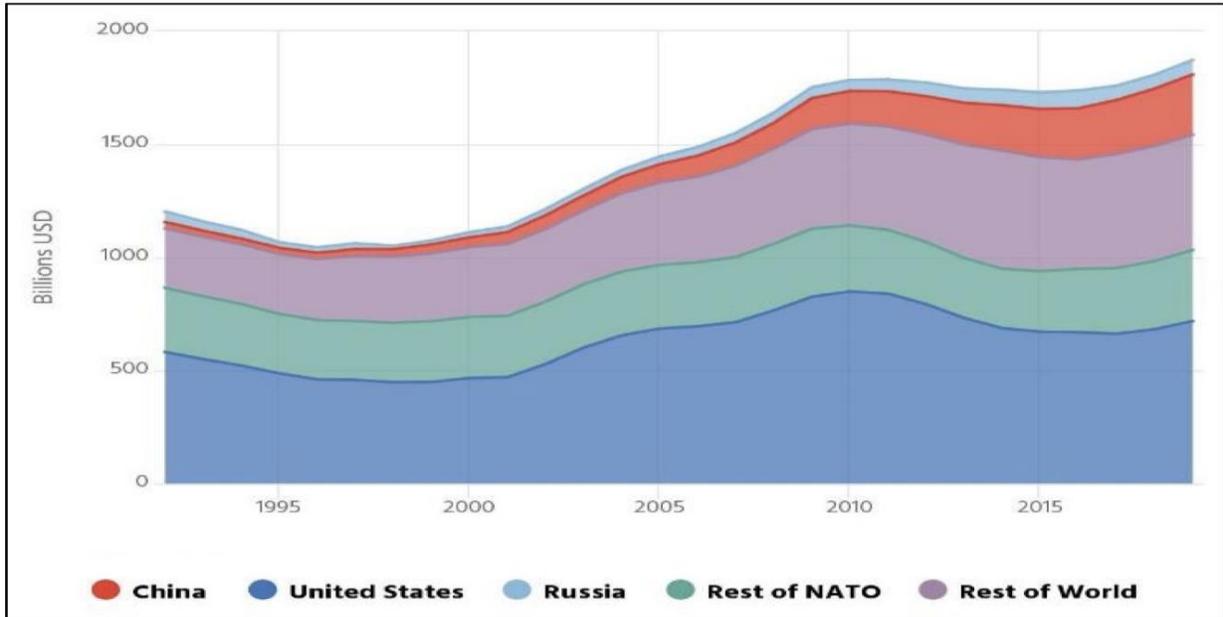
Finally, it seems likely that if the full range of Western intelligence on Chinese nuclear weapons, and nuclear and dual-capable delivery systems was made public, it might well indicate that China intends to become a far larger nuclear power and one that can directly compete in strength with the U.S. and Russia. Certainly, its improvement in ICBMs and SSBNs, and its development of a wide range of longer range and advanced strike systems will be given far greater capacity than it has had in the past.

A meeting of President Biden and President XI on November 14th, 2022, tried to put a different face on these developments, and give the impression that the U.S. and China were actively seeking to improve their level of cooperation. In reality, however, it seemed to be largely an attempt to find ways to maintain trade and more limited forms of economic cooperation between two powers

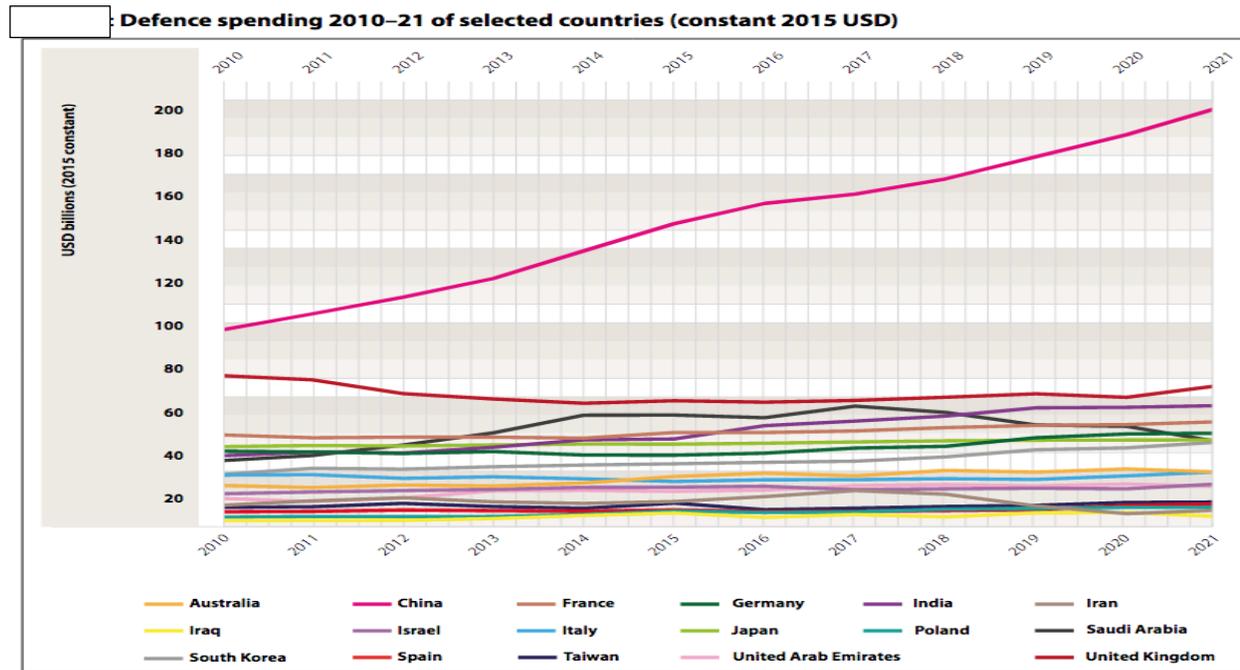
that were actively involved in political and economic warfare in many areas than any real progress towards real cooperation and cutbacks in their military build-ups on ongoing levels of political and economic warfare. It was all too clear from the White House statements about the meeting that the meeting did not resolve any key issues, but was designed rather to find some areas where both sides could benefit without making any serious changes in their competition, and that it reflected more of a reaction to the common problems the U.S. and China faced because of COVID and the war in Ukraine than any serious effort to change their strategic positions.²⁵

In short, Xi and the 20th Party Congress, and the new US National Security Strategy issued in October 2022 have already made China part of a “winter war,” and one with all of the same major risks as the “winter war” with Russia. However, this is a combination of military confrontation and political and economic conflict whose intensity has been steadily rising for more than a decade, and that seems just as likely to ensure for years to come as the “winter war” with Putin’s Russia.

Figure Seven: The Massive Increases in Chinese Military Spending
Comparison with U.S., NATO, Russia, and Rest of World



Comparison with Individual Powers



Source: Caitlin Campbell, *China Primer: The People’s Liberation Army (PLA)*, Congressional Research Service, January 5, 2021, <https://crsreports.congress.gov/product/pdf/IF/IF11719/4>; and Bastian Giegerich, Emile Hokayem, and Sharinee Jagtiani, *Regional security and alliances in the Middle East and the Indo-Pacific: Implications for European security*, IISS, Hans Seidel Foundation, January 2022, p.3\

Figure Eight: U.S. Navy Estimate of Chinese Combat Shipbuilding Relative to U.S. Navy

Numbers of Chinese and U.S. Navy Battle Force Ships, 2000-2030

Figures for Chinese ships taken from ONI information paper of February 2020

| | 2000 | 2005 | 2010 | 2015 | 2020 | 2025 | 2030 |
|---|-------------|------------|------------|------------|------------|-------------|---------------------|
| Ballistic missile submarines | 1 | 1 | 3 | 4 | 4 | 6 | 8 |
| Nuclear-powered attack submarines | 5 | 4 | 5 | 6 | 7 | 10 | 13 |
| Diesel attack submarines | 56 | 56 | 48 | 53 | 55 | 55 | 55 |
| Aircraft carriers, cruisers, destroyers | 19 | 25 | 25 | 26 | 43 | 55 | 65 |
| Frigates, corvettes | 38 | 43 | 50 | 74 | 102 | 120 | 135 |
| Total China navy battle force ships, including types not shown above | 210 | 220 | 220 | 255 | 360 | 400 | 425 |
| Total U.S. Navy battle force ships | 318 | 282 | 288 | 271 | 297 | 287 | 290 or 291 |
| U.S. total above compared to China total above | +108 | +62 | +68 | +16 | -63 | -113 | -135 or -134 |

Source: Table prepared by CRS. Source for China's navy: Unclassified ONI information paper prepared for Senate Armed Services Committee, subject "UPDATED China: Naval Construction Trends vis-à-vis U.S. Navy Shipbuilding Plans, 2020-2030," February 2020, 4 pp. Provided by Senate Armed Services Committee to CRS and CBO on March 4, 2020, and used in this CRS report with the committee's permission. Figures are for end of calendar year. Source for figures for U.S. Navy: U.S. Navy data; figures are for end of fiscal year.

Note: In the column for the year 2000, the ONI information paper showed a figure for the total number of China navy battle force ships of 110, but the Navy later stated that this was a typo, and that the correct figure is 210.

Numbers of Chinese Combat Ships: 2020-2040

Figures for Chinese ships are from U.S. Navy, reflecting data as of October 2020

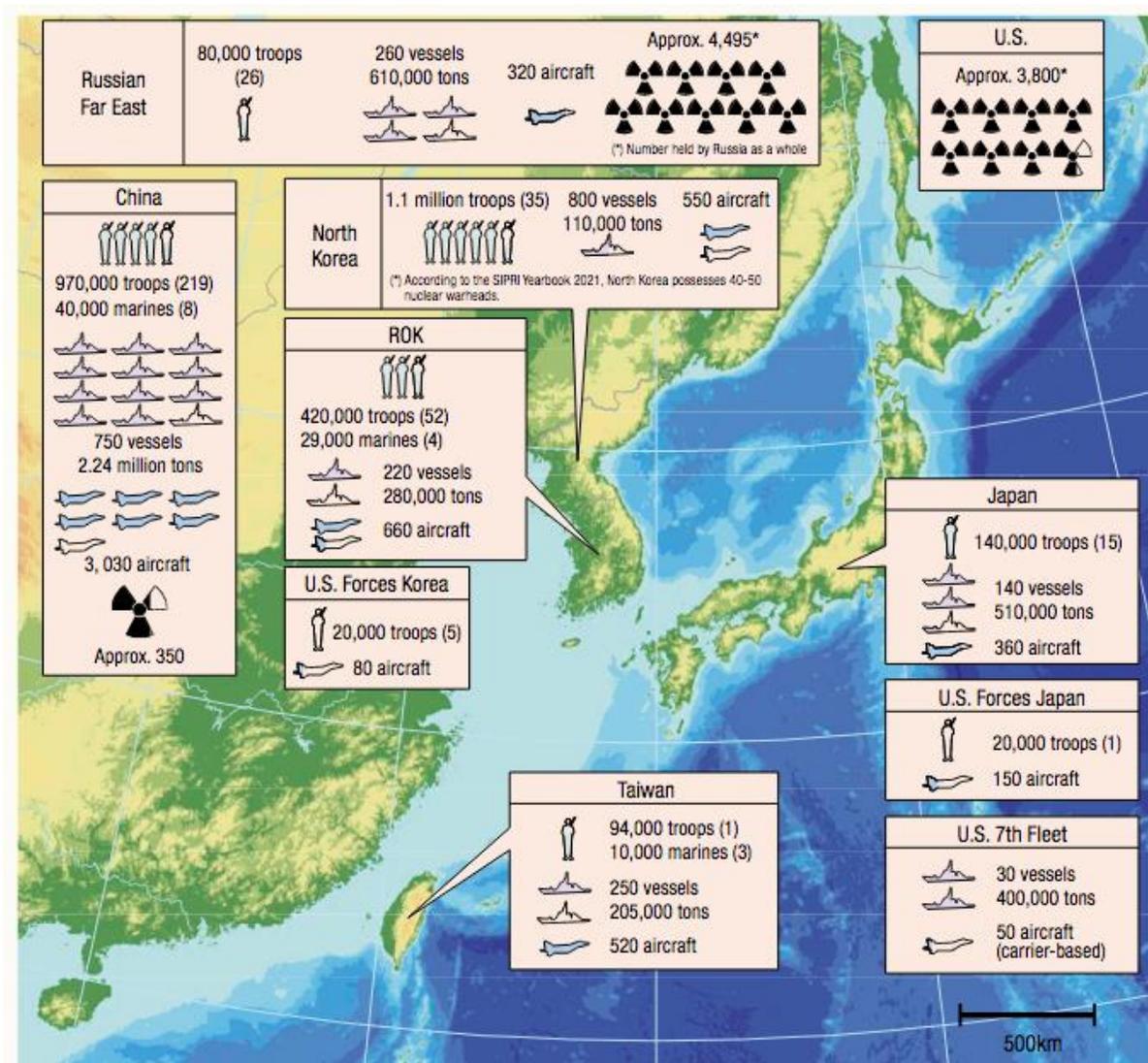
| Ship type | 2020 | 2025 | 2030 | 2040 | 2040 change from 2020 |
|---|------------|------------|-------------------|-------------------|-----------------------|
| Ballistic missile submarines | 4 | 6 | 8 | 10 | +6 |
| Nuclear-powered attack submarines | 6 | 10 | 14 | 16 | +10 |
| Diesel attack submarines | 47 | 47 | 46 | 46 | -1 |
| Aircraft carriers | 2 | 3 | 5 | 6 | +4 |
| Cruisers and destroyers | 41 | 52 | 60 | 80 | +39 |
| Frigates and corvettes | 102 | 120 | 135 | 140 | +38 |
| LHA-type amphibious assault ships | 0 | 4 | 4 | 6 | +6 |
| LPD-type amphibious ships | 7 | 10 | 14 | 14 | +7 |
| LST-type amphibious tank landing ships | 30 | 24 | 24 | 15 | -15 |
| TOTAL for China of types shown above | 239 | 276 | 310 | 333 | +94 |
| TOTAL number of U.S. Navy battle force ships | 297 | 287 | 290 or 291 | 324 or 350 | +27 or +53 |
| U.S. total above compared to China total above | +58 | +11 | -20 or -19 | -9 or +17 | -67 or -41 |

Source: For Chinese navy ships: U.S. Navy data provided to CRS by Navy Office of Legislative Affairs, reflecting data as of October 26, 2020.

Note: The figures for the U.S. Navy for 2030 and 2040 show different alternatives presented in the Navy's FY2023 budget submission.

Source: Adapted from *China's Naval Modernization: Implications for U.S. Capabilities*, Congressional Research Service RL33153, pp. 9&10

Figure Nine: Japanese MOD Estimate of the Military Forces in the Western Pacific and Taiwan in 2022



- Notes: 1 Source: Documents published by the DoD, "The Military Balance 2022" and "SIPRI Yearbook 2021," etc.
 2 Figures for Japan indicate the strength of each SDF as of the end of FY2021; the number of combat aircraft is the sum of ASDF aircraft (excluding transport aircraft) and MSDF aircraft (fixed-wing aircraft only).
 3 Figures for the ground forces of U.S. Forces Japan/Korea indicate the combined total for Army troops and U.S. Marines.
 4 Figures for combat aircraft include naval and marine aircraft.
 5 Figures in parentheses indicate the total number of major units such as divisions and brigades. That for North Korea includes only divisions. That for Taiwan includes military police.
 6 The figures for the U.S. 7th Fleet indicate forces forward-deployed to Japan and Guam.
 7 The figures for the combat aircraft of U.S. Forces Japan and the U.S. 7th Fleet include only fighter aircraft.

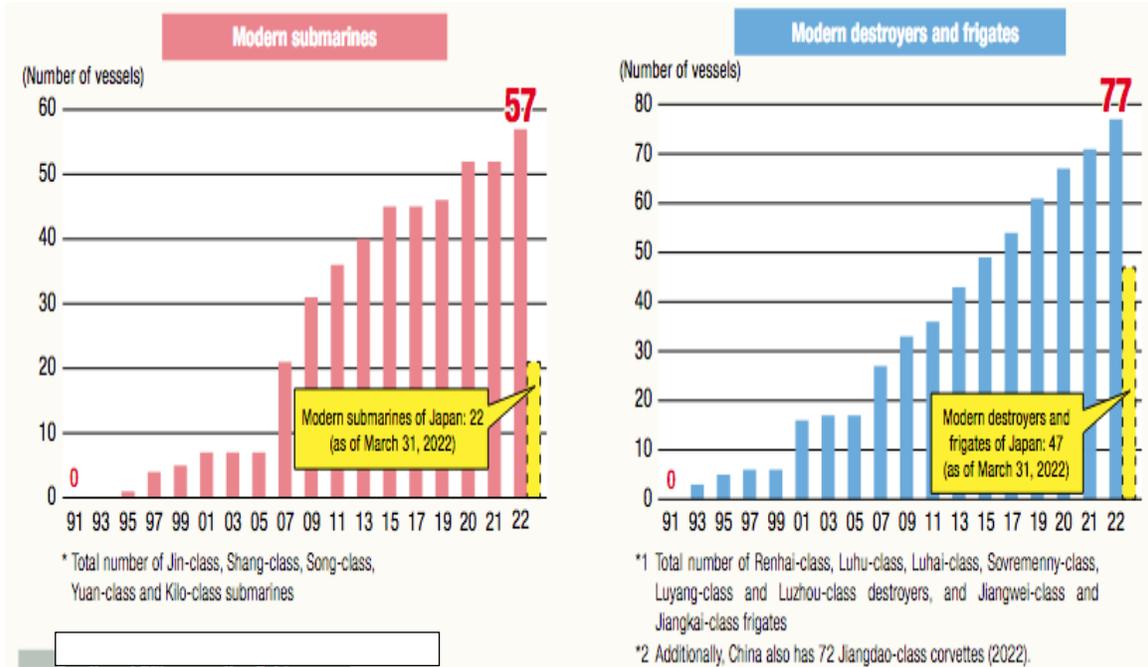
Legend

| | | | |
|--------------------------------|------------------------|--------------------------------|----------------------------------|
| Ground forces (200,000 troops) | Vessels (200,000 tons) | Combat aircraft (500 aircraft) | Number of nuclear warheads (500) |
|--------------------------------|------------------------|--------------------------------|----------------------------------|

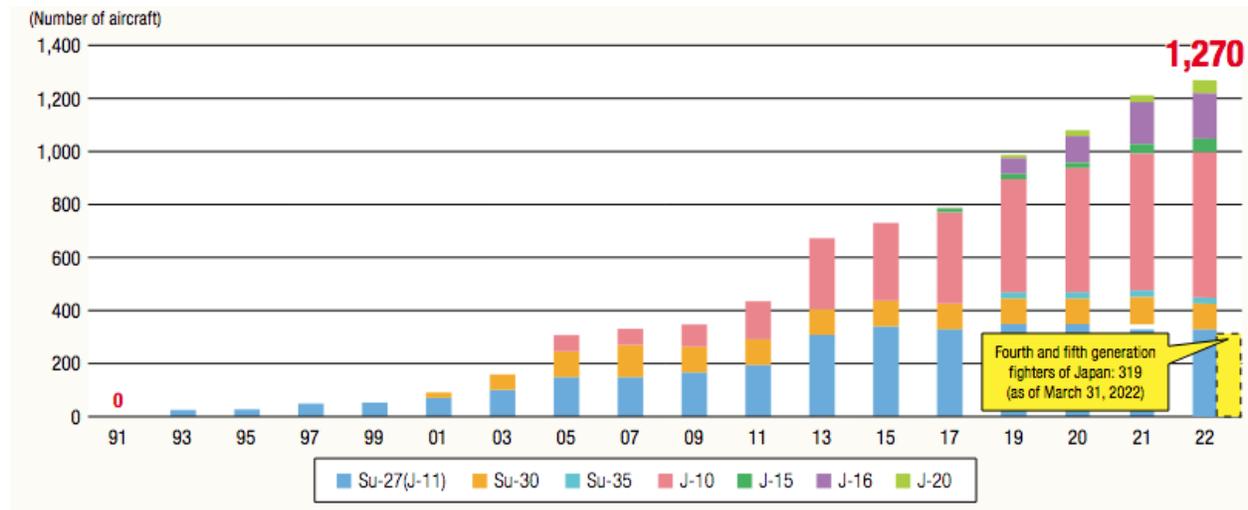
Adapted from Japan, Ministry of Defense, *Defense of Japan 2022*, August 2022, p. 5, https://s3.documentcloud.org/documents/22187264/doj2022_en_full.pdf

Figure Ten: Chinese Deployment of Advanced Modern Submarines, Surface Ships, and 4th and 5th Generation Aircraft

Modern Submarines, Destroyers, and Frigates



Fourth and Fifth Generation Combat Aircraft



Adapted from Japan, Ministry of Defense, *Defense of Japan 2022*, August 2022, p. 43, https://s3.documentcloud.org/documents/22187264/doj2022_en_full.pdf

The “Winter War” in the Middle East

There are a wide range of other active and potential “winter wars,” most of which preceded the War in Ukraine, and that involve threats and actual conflicts that will continue through the winter of 2022-2023. Many seem certain to continue for years to come. All have the potential to become much worse, however, and their cumulative impact places yet another major burden on U.S. and partner resources and capabilities.

One key center of such “winter wars” is North Africa, the Middle East, and the Persian/Arab Gulf. Algeria and Libya are key centers of instability and civil tension in North Africa. Syria and Iran are key centers of instability in the Middle East, Iraq’s stability and unity is uncertain, and it seems likely that the Sudan, Ethiopia, Eritrea, Tigray, Somalia, and Yemen will continue to be flashpoints in the future.

This helps explain why the U.S. has been actively involved in warfare in the Persian/Arab Gulf region since at least the first Gulf War in 1990, although it was indirectly involved in the Iran-Iraq War during 1980-1988, as well as every major Arab-Israel conflict. It is still involved in the fighting in eastern Syria and support its strategic partners in their fight against terrorism and their deterrence of external threats. Russia is involved in the civil war in Libya and Syria.

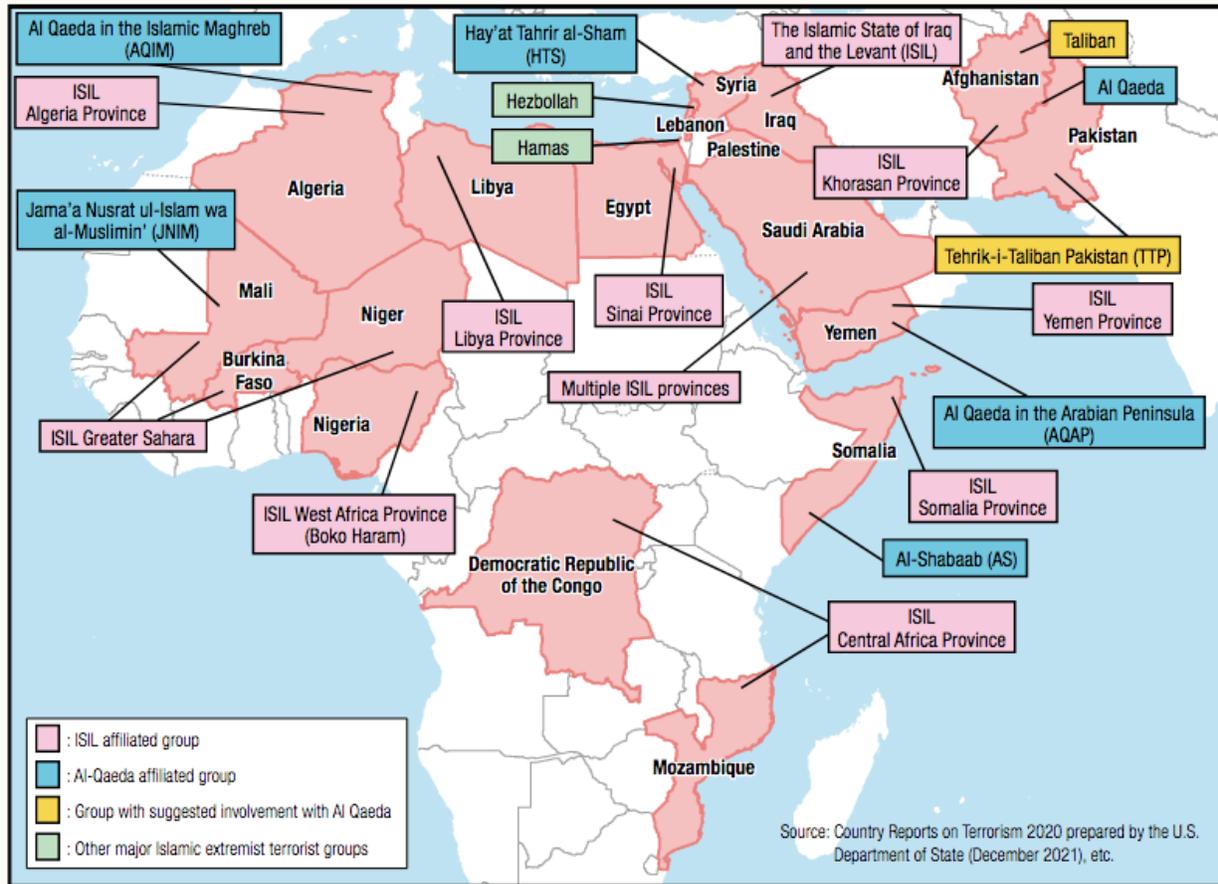
From a purely military viewpoint, Iran is the most current serious regional threat in the region. Its arms race with the Arab Gulf states has been a war for political and military leverage. Iran is also a potential nuclear power, and one that may well have completed the design and passive testing of non-fissile nuclear weapons. It can come steadily closer to the production of weapons grade Uranium, and it that may form serious security and economic ties to Russia and China. There is also a risk that Iran may be able to form a more serious security alliance with Syria, Iraq, Yemen, and even a Hezbollah dominated Lebanon.

China and Russia are both competing with the U.S., Britain, and France for military influence and leverage in the region. China now has a military base in Djibouti, is playing a major role in the development of Pakistan’s ports and may be seeking to create more serious ties to Iran that include port facilities on its territory outside the Gulf. Russia is buying missiles and drones from Iran and Russian mercenaries have been active in the Libyan civil war. In contrast, U.S. ties to Egypt and the Arab Gulf states are weakening, as is European influence and ability to deploy land and air forces east of Suez. It is also clear that extremist and terrorist movements continue to be a threat.

As **Figure Eleven** shows, the Middle East and nearby areas in North Africa and Asia are also major centers of terrorism and extremism. The terrorist activities sometimes interact on a regional basis, and most are driven by both failed governance and development, and at least low-level fighting between sects, ethnic groups, and tribes

As yet, these shifts do not seem to pose serious risks of new levels of conflict, but they do have that potential. Moreover, U.S. relations with Turkey do seem to be steadily more distant, and the overall level of development, stability, and security in the region continues to decline.

Figure Eleven: Major Terrorist Groups in Africa and the Middle East



Adapted from Japan, Ministry of Defense, *Defense of Japan 2022*, August 2022, p. 43, https://s3.documentcloud.org/documents/22187264/doj2022_en_full.pdf

The “Winter Wars” in Asia and the Korean Peninsula

The Afghan conflict seems to be over, although the Taliban have yet to show they can actually govern effectively. However, Asia and the Indian Ocean region present a continuing range of regional and internal security problems and the own range of wars for territory and military influence. China has recently clashed with India. India and Pakistan are steadily arming for another possible round of war, that could involve the use of nuclear weapons. Myanmar is a nightmare of internal conflict and repression, Afghanistan faces major internal instability, and there is a wide range of religious and ethnic tensions that include Chinese repression of the Uyghurs.

The most serious current risk of a major conflict in the region, however, seems to be the rising level of tension and arms race between North Korea and South Korea, which could easily escalate to involve the U.S. and Japan, and possibly Russia and China.

An estimate of the conventional military balance in the Koreas is shown in **Figure Twelve**, but it seems likely that the level of U.S. forces in South Korea would change so quickly if a serious combat began that such a Figure can only provide limited insight into the risks involved. It also does not mention North Korea’s possession of nuclear weapons

The second half of **Figure Twelve** also warns that North Korea has begun a new kind of “winter war” by sharply increasing its missile firings, and this chart does not include the further massive increases in missile tests, and violations of South Korean territory in October and November of 2022. By early November, North Korea had already launched 86 missiles – an annual record – and fired 23 missiles in one day.²⁶

The Northern Korean missile tests have illustrated its potential threat to Japan, and to U.S. military bases in Japan and Guam, and North Korea seems to have tested an ICBM-like missile in November 2022, although the test failed. It is clear that North Korea is increasing its nuclear weapons inventory, is making extensive use of its centrifuge facilities to produce more fissile material and may conduct its first nuclear weapon test in years during the winter of 2022-2023.

At present, this new level of confrontation does seem to be designed more to use military force to gain influence than present a near-term risk of any major conflict. Nevertheless, the possibility remains of that incident could trigger such a conflict. North Korea’s ties to China, its recent sales of artillery weapons Russia, and the sheer extremism of North Korea’s authoritarian leader are all warnings that such an incident could occur in ways that involve all of the major powers.

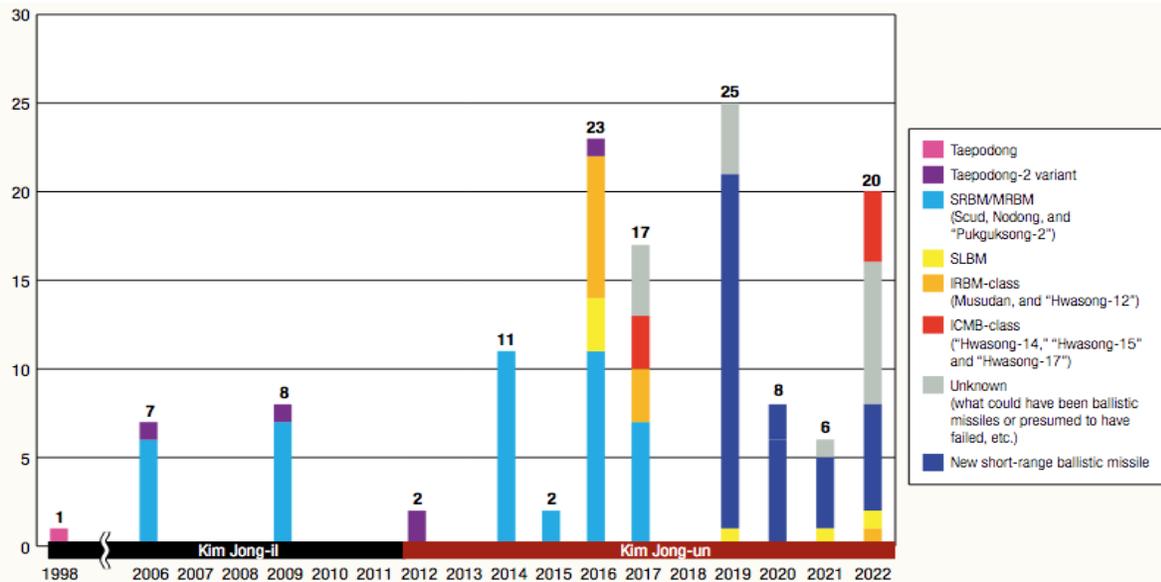
Figure Twelve: Developments in the Korean Military Balance

Conventional Military Balance

| | | North Korea | ROK | U.S. Forces Korea |
|--------------------|---|--------------------------------------|--|--------------------------|
| Total armed forces | | Approx. 1.28 million personnel | Approx. 560,000 personnel | Approx. 30,000 personnel |
| Army | Ground troops | Approx. 1.1 million personnel | Approx. 420,000 personnel | Approx. 20,000 personnel |
| | Tanks | T-62, T-54/55, etc. Approx. 3,500 | M-48, K-1, T-80, etc. Approx. 2,070 | M-1A2SEPV2 |
| Navy | Naval vessels | Approx. 800 110,000 tons | Approx. 220 280,000 tons | Supporting corps only |
| | Destroyers | | 12 | |
| | Frigates | 6 | 12 | |
| | Submarines | 25 | 18 | |
| | Marines | | Approx. 29,000 personnel | |
| Air Force | Combat aircraft | Approx. 550 | Approx. 660 | Approx. 80 |
| | Third, fourth and fifth generation fighters | MiG-23 × 56 MiG-29 × 18 | F-4 × 30 F-15 × 59 F-16 × 162 F-35 × 36 | F-16 × 60 |
| Reference | Population | Approx. 25.83 million | Approx. 51.72 million | |
| | Term of service | Men: 10 years Women: 7 years | Army: 18 months Navy: 20 months Air Force: 21 months | |

Note: Data from "The Military Balance 2022," etc.

Rise in North Korean Missile Tests: 1998 to May 2022



- (i) **Increase of ranges:** Development of intercontinental ballistic missiles-class ballistic missiles (since 2017) with a range exceeding 10,000km
- (ii) **Enhancement of the accuracy and operational capabilities necessary for saturation attacks:** Repeated launches from unprecedented locations in the early morning and late hours of the night using TELs, often in multiple numbers (since 2014). Some ballistic missiles are said to be equipped with a Maneuverable Reentry Vehicle (MaRV) (since 2017).
- (iii) **Enhancement of secrecy and instantaneity and the ability to conduct surprise attacks:** Launches of SLBMs (since 2016) and acceleration of the development of solid-fueled ballistic missiles (since 2016)
- (iv) **Irregular trajectories:** Launches of short-range ballistic missiles having a shape similar to that of the Russian "Iskander," which are said to be able to fly at a lower altitude than conventional ballistic missiles and with irregular trajectories (since 2019)
- (v) **Diversification of the forms of launches:** Ballistic missile launches assumed to have used a lofted trajectory have been confirmed (since 2016).

Adapted from Japan, Ministry of Defense, *Defense of Japan 2022*, August 2022, pp. 77 and 120, https://s3.documentcloud.org/documents/22187264/doj2022_en_full.pdf

The “Winter Wars,” Spoiler, and Proxy Campaigns

There is no way to predict what existing or new gray area, spoiler, or proxy campaigns will escalate to the point where they become serious problems for the U.S. or its partners, but many risks already exist – including ones in Latin America and the rest of Africa, and rising tensions with China and Russia will inevitably increase this risk over time.

As noted earlier, Russia’s trade war with the West qualifies as a serious level of gray area operations, as does the West’s proxy war in the Ukraine, and Russia’s more direct proxy roles in Syria and Libya. So does China’s effort to control critical mineral and manufacturing resources in solid state devices, batteries, and other areas.

The U.S. and its strategic partners also have come to realize how serious industrial and technology espionage and efforts to dominate key areas of trade have become, and that these are serious forms of gray area warfare that they have taken actions to address that approach to economic warfare. The same seems to be true of Chinese efforts to control strategic minerals and investment patterns that have been designed to give China added economic leverage, particularly in areas like the materials need for advanced batteries and solid-state devices – area critical to both civil and military technology.

The “Winter War” in Fragile, Divided, and Underdeveloped States, and Against Terrorism and Extremism

Finally, there is no doubt that the larger “winter wars” are only part of the overall threat to the developing world, where most states face increasing problems in terms of food supplies, energy imports, and poverty this winter, as well as serious damage from climate change and global warming. These have, however, been increased to some extent by the War in the Ukraine’s impact on food exports and energy costs, and many of these problems are the result of internal tensions and violence.

The new U.S. National Security Strategy recognizes the existence of a growing global food crisis and energy problems. The various NGO lists of fragile states also reflect a growing number of what are called “fragile states,” also they often should really be called “failed states” or governments – something that is all too clear when the rankings of “fragile states” are compared with the corruption rankings of Transparency International and the governance rankings of the World Bank. UN estimates of population growth, and various failed state indices of NGOs warn that this is a major problem for poorer and less developed states that gets far too little practical attention.

The global trends in the winter of 2022-2023, and the risk they create of more serious forms of war, are also clear. The IMF *World Economic Outlook for 2022*, issued in October 2022, warns that,²⁷

Our latest forecasts project global growth to remain unchanged in 2022 at 3.2 percent and to slow to 2.7 percent in 2023—0.2 percentage points lower than the July forecast—with a 25 percent probability that it could fall below 2 percent. More than a third of the global economy will contract this year or next, while the three largest economies—the United States, the European Union, and China—will continue to stall. In short, the worst is yet to come, and for many people 2023 will feel like a recession. Russia’s invasion of Ukraine continues to powerfully destabilize the global economy.

Beyond the escalating and senseless destruction of lives and livelihoods, it has led to a severe energy crisis in Europe that is sharply increasing costs of living and hampering economic activity. Gas prices in Europe have increased more than four-fold since 2021, with Russia cutting deliveries to less than 20 percent of their 2021 levels, raising the prospect of energy shortages over the next winter and beyond. More broadly, the conflict has also pushed up food prices on world markets, despite the recent easing after the Black Sea grain deal, causing serious hardship for low-income households worldwide, and especially so in low-income countries.

Persistent and broadening inflation pressures have triggered a rapid and synchronized tightening of monetary conditions, alongside a powerful appreciation of the US dollar against most other currencies. Tighter global monetary and financial conditions will work their way through the economy, weighing demand down and helping to gradually subjugate inflation. So far, however, price pressures are proving quite stubborn and a major source of concern for policymakers. We expect global inflation to peak in late 2022 but to remain elevated for longer than previously expected, decreasing to 4.1 percent by 2024

The World Bank warns that while the rise in global poverty caused by COVID may now be declining, this decline is uncertain and that some 75 to 95 additional millions of people are still in a state of dire poverty. Its *2022 Poverty and Prosperity Report* indicates that, “nearly half the world—over 3 billion people—lives on less than US \$6.85 per day, which is the average of the national poverty lines of upper-middle-income countries,” and that “574 million people—nearly 7 percent of the world’s population—will still be living on less than US \$2.15 a day in 2030.”²⁸

It is no coincidence that the World Bank list of Fragile and Conflict Affected Situations in FY2022 shown in **Figure Thirteen** includes so many countries governed by regimes that have failed to develop effectively, have failed to heal the division between their peoples are actively exploited, and/or highly authoritarian and repressive.

At the same time, the *UN Human Development Report for 2022*, reports record levels of political polarization, and negative views of the world, and that more than 6 in 7 people polled feel insecure about the level of global progress. It notes that declines on the Human Development Index (HDI) were widespread, with over 90 percent of countries enduring a decline in 2020 or 2021.²⁹ The Global Peace Index, which covers 163 countries, found the 11th deterioration in peacefulness in the last fourteen years.³⁰

These negative trends were partly driven by the impact of COVID, and the inflation and food crisis caused by the War in the Ukraine, but they were also driven by failed national governance over what has normally been periods of several decades, and the end result is that there has been a steady rise in global political extremism, and in ethnic, sectarian, and tribal tensions and conflicts. They have also led to a more than 100% increase in the number of refugees since 2011, and an 8% increase in 2021.

The UNHCR report on the global trends in refugees for 2022 reports that by the end of 2021, there were 27.1 million refugees globally and 53.2 million people displaced within their home countries.³¹ In virtually every case, the country involved at most received humanitarian aid and only provided temporary relief and failed to make any serious advances in development or providing lasting solutions to the problems that were creating more refugees.

The sheer scale of the current level of global conflicts is illustrated in the fact that the summary list of ongoing conflicts that is available on Wikipedia is four pages long, although this list ignores many smaller ethnic, sectarian, tribal, and other low-level internal civil conflicts.³² ACLED also provides an extensive analysis of such conflicts.³³

The level of global terrorism and extremism have also risen in recent years, as is shown in the graphs showing the trends in global terrorism developed by START shown in **Figure Fourteen**, and in the series of maps in available in the *Counterterrorism Guide* of the U.S. Director of National Intelligence.³⁴ It also is all too clear from the 2021 *U.S. State Department Country reports on Terrorism*.³⁵

A key irony behind any focus on these trends in terrorism and extremism, however, is that they are a relatively minor part of the problems affecting the overall patterns in global violence, particularly in lower incomes states. If one examines the trends and impact of poor governance, corruption, leadership that favors given internal factions, failed development efforts, and repression; they almost certainly do more to threaten their populations than terrorists or extremists.³⁶

This is especially true of governments that Steven Levitsky and Lucan Way have characterized as competitive authoritarianism: “In competitive authoritarian regimes, formal democratic institutions are widely viewed as the principal means of obtaining and exercising political authority. Governments that control a pliant or cowed media as well as the security services and many elements of the economy and where the regime fails to meet conventional minimum standards for democracy.”³⁷

In fact, such authoritarian governments probably do at least an order of magnitude more damage to their peoples than terrorist and extremist movements. They also make their countries more vulnerable to exploitation by more developed powers and encourage more developed powers to exploit their weakness and instability interact with the forces creating instability. One key example is Assad’s Syria. His Russian-backed war to reestablish his power and control has been estimated to have killed as many as 499,700 to 600,000 by March 2022. More conservative estimates put the figure at over 350,000.³⁸

Estimates of the total deaths caused by terrorism and extremism differ sharply, but a high estimate indicates that they average around 26,000 per year over the same ten-year period as the estimate for Syria, or a total 260,000. Statista reports annual figures ranging from 11,098 to 32,763, or 250,141 for the eleven years of the Syrian civil war. The *Global Terrorism Index For 2022* reports only 7,142 deaths from terrorism and extremism, in 2021, and an uneven pattern of decline in deaths from a peak of only 10,669 in 2015.³⁹

And Syria is only the worst of many countries where governments kill their peoples. No similar estimates are available, but there are all too many examples. Myanmar is certainly one of the worst. Iran is another, and there are all too many additional states in Africa and Asia.⁴⁰

And it should be remembered that all of these trends generally interact with failures to adequately cope with disease, global warming, and population growth. The first two of these trends are already the source of global attention, but **Figure Fifteen** indicates a massive rate of actual population growth between 1950 and 2020 that makes the additional threat from population pressure all too clear.

Figure Thirteen: World Bank List of Fragile States and Conflict Situations in 2022

**HIGH-INTENSITY
CONFLICT**

Afghanistan
Somalia
Syrian Arab Republic
Yemen, Rep.

**HIGH-INTENSITY
CONFLICT
(INTERNATIONAL)**

Armenia
Azerbaijan

MEDIUM-INTENSITY CONFLICT

Burkina Faso
Burundi
Cameroon
Central African Republic
Chad
Congo, Dem. Rep.
Ethiopia
Haiti
Iraq
Libya
Mali
Mozambique
Myanmar
Niger

Nigeria
South Sudan

**HIGN INSTITUTIONAL
AND SOCIAL FRAGILIY**

NON SMALL STATES

Congo, Rep.
Eritrea
Guinea-Bissau
Kosovo
Lebanon
Papua New Guinea
Sudan
Venezuela, RB
West Bank and Gaza (territory)
Zimbabwe

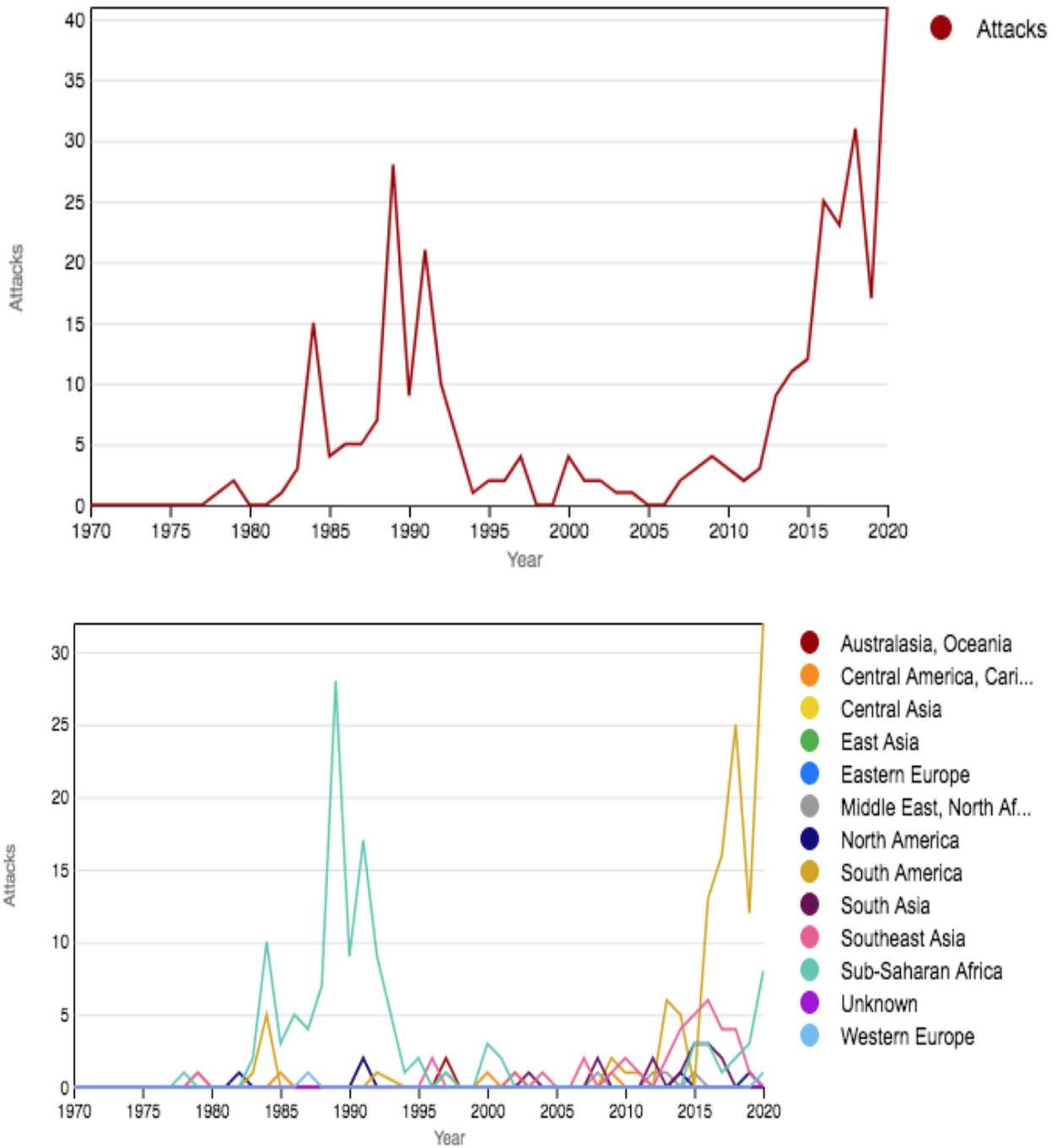
SMALL STATES

Comoros
Kiribati
Marshall Islands
Micronesia, Fed. Sts.
Solomon Islands
Timor-Leste
Tuvalu

Adapted from World Bank, date base,

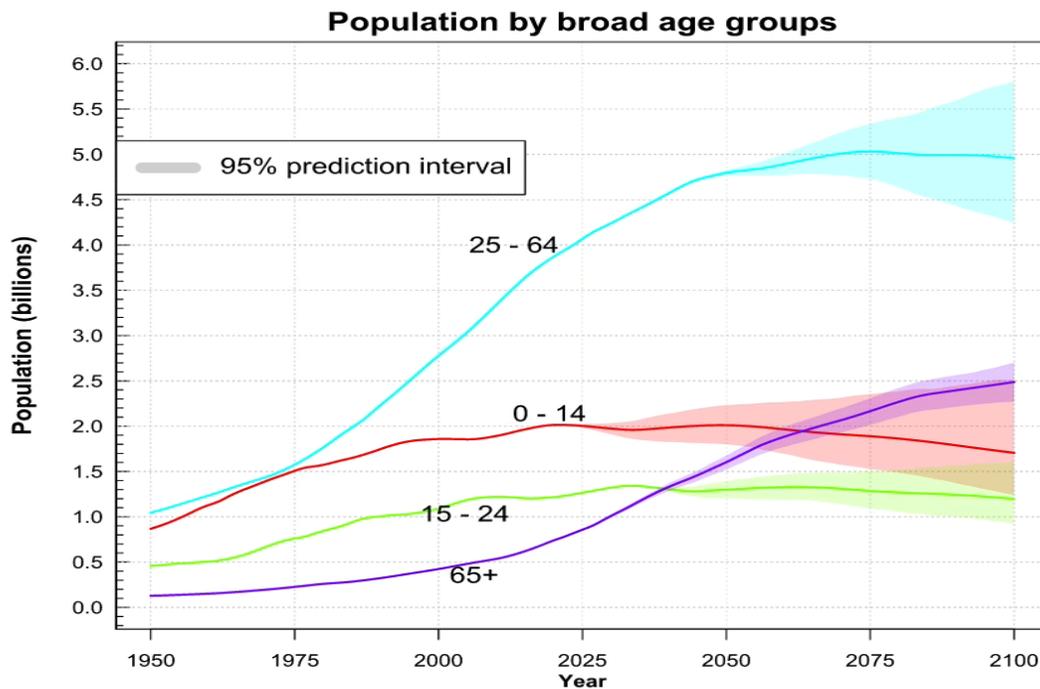
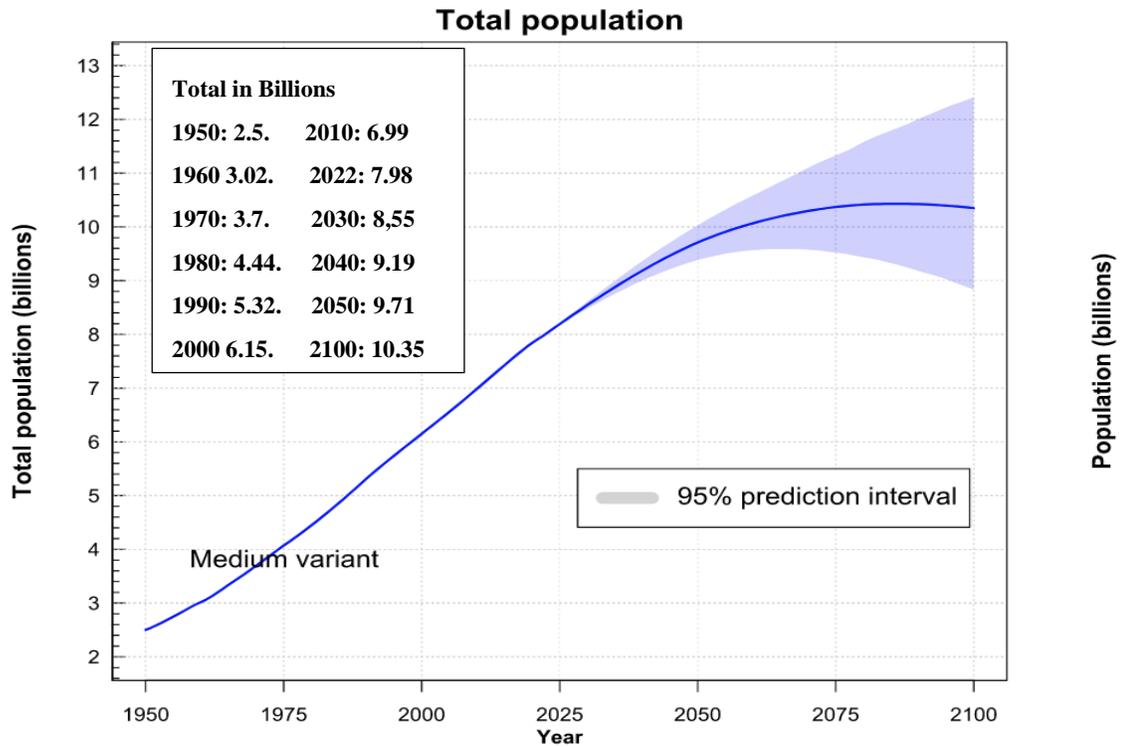
<https://thedocs.worldbank.org/en/doc/bb52765f38156924d682486726f422d4-0090082021/original/FCSList-FY22.pdf>.

Figure Fourteen: START Estimate of Trends in Global Terrorism: 1970-2020



Source: START, University of Maryland,
<https://www.start.umd.edu/gtd/search/Results.aspx?chart=overtime&search=map>.

Figure Fifteen: The Growing Global Threat from Population Pressure: 1950-2020



Source: United Nations, *World Population Prospects*, <https://population.un.org/wpp/graphs/> and, <https://population.un.org/dataportal/data/indicators/49/locations/900/start/1950/end/2100/line/linetimeplotsingle>.

From Peace, “Globalism,” and a “Global Village” to a World Filled with Global Tensions and Warfare

In conclusion, this discussion of “winter wars” may seem to be deliberately pessimistic and to focus on worst cases. It also discusses wars that have sometimes already gone on for decades, and many that seem likely to go on for a decade or more after the winter of 2022-2023. It is still striking, however, that it describes overall patterns in global violence and conflict a world where it has taken less than a decade to go from a focus on how the world might come together in a form of “globalism” – one that approximates a peaceful and cooperative “global village” – to a world with so many tensions and risks.

As for the broad use of the term “war,” this analysis also shows that Sun Tzu was all too correct in stating that “the supreme art of war is to subdue the enemy without fighting.” World War I and World War II have shown how dangerous it can be to escalate to major conflicts, and today’s world of nuclear weapons, tightly integrated global supply chains, and steadily more lethal forms of conventional combat have greatly increased the damage a truly major war can inflict. It is all too clear that the relations between the great powers, and between the more advanced and developed democracies and authoritarian and repressive states, have shifted from the image of cooperation to active confrontation.

The analysis shows that major powers and developed nations are actively involved in trying to achieve the “supreme art of war.” The list of “winter wars” makes it all too clear that major powers now focus on political and economic conflicts and confrontations and on efforts to use military force that are limited to exploiting political and military leverage without engaging in combat.

While the major powers still seem to find it obligatory to at least mention “cooperation,” and actively seek to keep some degree of real-world cooperation in areas where all sides can still benefit from cooperation, the primary focus of their political and economic confrontation, and military build-ups, has clearly shifted. They are all trying to achieve their strategic objectives by creating a far more confrontational set of military goals and plans, and taking more serious risks in terms of political and economic struggles that at least approach a form of warfare and increase the risk of some form of escalation to the actual use of force.

Moreover, the analysis does understate the full threat of “winter wars” to the extent it has touched relatively briefly on the number of developing and poorer states that are experiencing serious internal violence, and where the failures of their governments to come to grips with internal tensions, population growth, and sustained development makes them as much of a threat to their peoples as any terrorist or extremist faction. It has not tried to address the combined impact of war, climate change, population pressure, and disease – although all of these problems reinforce each other, and climate change, population pressure, and disease – like failed governance – often have greater impact.

Finally, the analysis has concentrated on the nature and scale of key types of political economic military conflict, and not on whether any given side has a clear strategic objective in trying to “win.” Putin’s grand strategic objective seems to be close to one of rebuilding the former Soviet Union and strategic partnerships of equal importance, but there is no way to know how real this

goal really is. The same is true of China's grand strategic objectives which are equally broad and vague.

The U.S. new national strategy does talk about the creation of a world with a common economic system and set of international rules – one most its strategic partners support but does not present any plan for achieving it. As for all too much of the rest of the world – rhetoric aside -- the national grand strategic goal of its leadership seems to be to retain or expand their power at the national, local, and regional level. The current process of a given “winter war” is clear, but the grand strategic goal is not defined beyond some broad level of rhetoric.

Santana once warned that “he who forgets the past is condemned to repeat it.” In some ways, the world has already done so in two World Wars. For all of the military tensions that preceded World War I, most Europeans though assumed that the equivalent of a stable level of deterrence had been established following the war of 1870, which would prevent any major European conflict in spite of the arms races that were increasing the lethality and size of European forces.

The results were devastating, but similar assumptions about postwar stability largely governed Europe until the depression and the collapse of the Weimar democracy in Germany, and then helped encourage isolationism and appeasement until the German invasion of Poland. The result was World War II – a war that did even more damage on a global basis than World War I, and then helped to create a Cold War that may well be returning in more lethal and even more global form.

If anything, this analysis of Winter Wars warns that the corollary to Santana's thesis may well be that “we repeat the past regardless of whether we remember it or not.”

¹ International Energy Agency (IEA), *World Energy Outlook for October 2022*, October 27, 2022, <https://iea.blob.core.windows.net/assets/c282400e-00b0-4edf-9a8e-6f2ca6536ec8/WorldEnergyOutlook2022.pdf>.

² See Anthony H. Cordesman, *U.S. Strategy: Rebalancing Global Energy between Europe, Russia, and Asia, and U.S. Security Policy in the Middle East and the Gulf*, May 12, 2021, pp. 21-30, <https://www.csis.org/analysis/us-strategy-rebalancing-global-energy-between-europe-russia-and-asia-and-us-security-policy> ; Anthony H. Cordesman with the assistance of Paul Comarie, *A New Energy Strategy for a Post Ukraine War World*, CSIS, August 22, 2022, <https://www.csis.org/analysis/creating-new-energy-strategy-post-ukraine-war-world>, and Energy Information Agency, *China*, April 18, 2022

³ *US National Security Strategy*, Office of the Secretary of Defense, October 27, 2022, <https://www.whitehouse.gov/wp-content/uploads/2022/10/Biden-Harris-Administrations-National-Security-Strategy-10.2022.pdf>.

⁴ See Catherine Belton, “Russia Works to subvert Moldova's pro-West Government,” *Washington Post*, November 6, 2022, p. A23.

Anthony H. Cordesman, with the assistance of Paul Cormarie, *Major Powers and Strategic Partners: A Graphic Net Assessment*, CSIS, October 14, 2022, https://csis-website-prod.s3.amazonaws.com/s3fs-public/publication/221017_Cordesman_Major_Power.pdf?qe3u_LPWVU76NNkoKQUH.iiUJLyQ5h0m.

⁶ Anthony H. Cordesman, with the assistance of Paul Cormarie, *Major Powers and Strategic Partners: A Graphic Net Assessment*, CSIS, October 14, 2022, https://csis-website-prod.s3.amazonaws.com/s3fs-public/publication/221017_Cordesman_Major_Power.pdf?qe3u_LPWVU76NNkoKQUH.iiUJLyQ5h0m.

⁷ See World Bank, Database, <https://data.worldbank.org/indicator/NY.GDP.MKTP.CD>. The NATO data are taken from Table 5 of NATO, *Defense Expenditure of NATO countries*, and are converted from 2015 constant dollars to 2021 dollars using a CPI Ends year multiplier of 1.18.

⁸ See World Bank, Database, <https://data.worldbank.org/indicator/NY.GDP.MKTP.CD>. The NATO data are taken from Table 5 of NATO, *Defense Expenditure of NATO countries*, and are converted from 2015 constant dollars to 2021 dollars using a CPI Ends year multiplier of 1.18.

⁹ The IISS definition of military spending is standardize in ways the differ from national reporting. These figures are taken from the country chapters of the IISS *Military Balance for 2022*.

¹⁰ See Shanon Bugos and Julia Masterson, *New Chinese Missile Silo Fields Discovered*. Arms Control Today, September 2021, <https://www.armscontrol.org/act/2021-09/news/new-chinese-missile-silo-fields-discovered>; and Timothy Gardner, *UPDATE 1-China reactors will yield weapons-grade plutonium -U.S. commander*, Reuters, April 21, 2021, <https://www.reuters.com/article/usa-china-nuclear-plutonium/update-1-china-reactors-will-yield-weapons-grade-plutonium-u-s-commander-idUSL1N2ME1U8>.

¹¹ For more detail, see the work of Hans M. Kristensen and Max Korda in the *Nuclear Notebook, 2021*, in the *Bulletin of Atomic Scientists*, 2021, Volume 77, Number 1.

¹² Hans M. Kristensen, Matt Korda, and Robert Norris, “Status of World Nuclear Forces,” 2022, <https://fas.org/issues/nuclear-weapons/status-world-nuclear-forces>

¹³ See Kelsey Davenport and Daryl Kimball, *Nuclear Weapons: Who Has What at a Glance*, Arms Control Association, January 2022, <https://www.armscontrol.org/factsheets/Nuclearweaponswhohaswhat>.

¹⁴ *US National Security Strategy*, Office of the Secretary of Defense, October 27, 2022, <https://www.whitehouse.gov/wp-content/uploads/2022/10/Biden-Harris-Administrations-National-Security-Strategy-10.2022.pdf>

¹⁵ See Japan, Ministry of Defense, *Defense of Japan 2022*, August 2022, https://s3.documentcloud.org/documents/22187264/doj2022_en_full.pdf

¹⁶ *US National Security Strategy*, Office of the Secretary of Defense, October 27, 2022, <https://www.whitehouse.gov/wp-content/uploads/2022/10/Biden-Harris-Administrations-National-Security-Strategy-10.2022.pdf>.

¹⁷ See Japan, Ministry of Defense, *Defense of Japan 2022*, August 2022, https://s3.documentcloud.org/documents/22187264/doj2022_en_full.pdf

¹⁸ *US National Security Strategy*, Office of the Secretary of Defense, October 27, 2022, <https://www.whitehouse.gov/wp-content/uploads/2022/10/Biden-Harris-Administrations-National-Security-Strategy-10.2022.pdf>

¹⁹ An Analysis of the Navy’s Fiscal Year 2023 Shipbuilding Plan, Congressional Budget Office, November 10, 2022, <https://www.cbo.gov/publication/58447>; Naval Shipyards: Ongoing Challenges Could Jeopardize Navy's Ability to Improve Shipyards, General Accountability Office, May 10, 2022, <https://www.gao.gov/products/gao-22-105993>, and Report to Congressional Committees, Weapons System Annual Assessment, June 2022, <https://www.gao.gov/assets/gao-22-105230.pdf>.

²⁰ Anthony H. Cordesman, with the assistance of Paul Cormarie, *Major Powers and Strategic Partners: A Graphic Net Assessment*, CSIS, October 14, 2022, https://csis-website-prod.s3.amazonaws.com/s3fs-public/publication/221017_Cordesman_Major_Power.pdf?qe3u_LPWVU76NNkoKQUH.iiUJLyQ5h0m

²¹ *US National Security Strategy*, Office of the Secretary of Defense, October 27, 2022, <https://www.whitehouse.gov/wp-content/uploads/2022/10/Biden-Harris-Administrations-National-Security-Strategy-10.2022.pdf>

²² *US National Security Strategy*, Office of the Secretary of Defense, October 27, 2022, <https://www.whitehouse.gov/wp-content/uploads/2022/10/Biden-Harris-Administrations-National-Security-Strategy-10.2022.pdf>

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- ²³ John Grady, "China Will Increase Pressure on Taiwan in Next Two Years Rather Than Invade, Says Pentagon Official," *USNI News*, November 7, 2022 2:39 PM, [https://news.usni.org/2022/11/07/china-will-increase-pressure-on-taiwan-in-next-two-years-rather-than-invade-says-pentagon-official?ct=\(USNI_NEWS_DAILY\)&mc_cid=7cf69a4b76](https://news.usni.org/2022/11/07/china-will-increase-pressure-on-taiwan-in-next-two-years-rather-than-invade-says-pentagon-official?ct=(USNI_NEWS_DAILY)&mc_cid=7cf69a4b76), and Katie Rogers and Chris Buckley, "Biden Sees No Imminent Invasion of China by Russia," *New York Times*, November 14, 2022, <https://www.nytimes.com/live/2022/11/14/world/biden-xi-meeting>.
- ²⁴ *US National Security Strategy*, Office of the Secretary of Defense, October 27, 2022, <https://www.whitehouse.gov/wp-content/uploads/2022/10/Biden-Harris-Administrations-National-Security-Strategy-10.2022.pdf>.
- ²⁵ Katie Rogers and Chris Buckley, "With Tensions Mounting, Biden and Xi Try a Warmer Tone," *New York Times*, November 14, 2022, <https://www.nytimes.com/2022/11/14/world/asia/biden-xi-bali-g20.html?smid=nytcore-ios-share&referringSource=articleShare>; Ishaan Tharoor, "Biden says no 'Cold War' with China, but tensions may flare soon," *The Washington Post*, November 15, 2022, <https://mail.google.com/mail/u/0/#inbox/FMfcgzGqRZgKkDRbCLJLerxTWbqmvjx>; The White House, *Readout of President Joe Biden's Meeting with President Xi Jinping of the People's Republic of China*, November 14, 2022, <https://www.whitehouse.gov/briefing-room/statements-releases/2022/11/14/readout-of-president-joe-bidens-meeting-with-president-xi-jinping-of-the-peoples-republic-of-china/>; and the White House, *Remarks by President Biden and President Xi Jinping of the People's Republic of China Before Bilateral Meeting*, November 14, 2022, <https://www.whitehouse.gov/briefing-room/speeches-remarks/2022/11/14/remarks-by-president-biden-and-president-xi-jinping-of-the-peoples-republic-of-china-before-bilateral-meeting/>.
- ²⁶ Choe Sand Hun, "North Korea Sees New Opportunities in 'Neo-Cold War'," *New York Times*, November 14 2022, <https://mail.google.com/mail/u/0/#inbox/FMfcgzGqRZfCBQLnDtvCnTvSMMcPkTh>.
- ²⁷ IMF *World Economic Outlook for 2022*, October 2022, p. XIII, <https://www.imf.org/en/Publications/WEO/Issues/2022/10/11/world-economic-outlook-october-2022>.
- ²⁸ World Bank, *Poverty and Prosperity Report*, 2022, p. xii, <https://openknowledge.worldbank.org/bitstream/handle/10986/37739/9781464818936.pdf>.
- ²⁹ United Nations, *Human Development Report, 2022*, p. 11, https://hdr.undp.org/system/files/documents/global-report-document/hdr2021-22pdf_1.pdf.
- ³⁰ Vision for Humanity, *Global Peace Index, 2022*, p.2, <https://www.visionofhumanity.org/wp-content/uploads/2022/06/GPI-2022-web.pdf>.
- ³¹ UNHCR, *Global Trends Report*, June 2022, <https://www.unhcr.org/en-us/globaltrends.html>.
- ³² See Wikipedia, (*List of Ongoing Armed Conflicts*, https://en.wikipedia.org/wiki/List_of_ongoing_armed_conflicts).
- ³³ See <https://acleddata.com/about-acledd/>.
- ³⁴ See <https://www.dni.gov/nctc/groups.html>.
- ³⁵ U.S. State Department, *Country Reports on Terrorism*, <https://www.state.gov/country-reports-on-terrorism-2/>.
- ³⁶ For summary ranking of the problem in governance see World Bank, *Worldwide Governance Indicators, 2021*, <https://info.worldbank.org/governance/wgi/> and for analyses of corruption, see the work of Transparency International, and its *Corruptions Perceptions Index*, <https://www.transparency.org/en/cpi/2021>.
- ³⁷ Steven Levitsky and Lucan A. Way. "Elections Without Democracy: The Rise of Comparative Authoritarianism," *Journal of Democracy*, 2002, https://scholar.harvard.edu/levitsky/files/SL_elections.pdf?utm_campaign=wp_todays_worldview&utm_medium=email&utm_source=newsletter&wpsrc=nl_todayworld; and in the "New Competitive Authoritarianism," *Journal of Democracy*, January 2020, https://muse.jhu.edu/article/745953?utm_campaign=wp_todays_worldview&utm_medium=email&utm_source=newsletter&wpsrc=nl_todayworld.

³⁸ Wikipedia, <https://www.google.com/search?client=firefox-b-1-d&q=Casualties+in+Syrioan+civil+war+>, and UNHCR, *Presentation of the report on civilian deaths in the Syrian Arab Republic*, June 30, 2022, <https://www.ohchr.org/en/statements/2022/06/presentation-report-civilian-deaths-syrian-arab-republic>.

³⁹ Institute for Economic and Peace, *Global Terrorism Report, 2022*, March 2022, p.12, file:///Users/anthonycordesman/Desktop/GTI-2022-web_110522-1-2.pdf,

⁴⁰ For example, see Anthony J. Blinken’s statement in his Designation of the Burmese Regime’s Military Aircraft Suppliers that, “Burma’s military regime has waged a brutal campaign of violence against the people of Burma, carrying out lethal air strikes against the political opposition and the broader civilian population. On October 23, the regime carried out one of its deadliest aerial bombings since the coup, firing upon an ethnic community gathering in an attack that killed as many as 100 people and claimed the lives of artists, performers, and concertgoers in Kachin state. We stand with the people of Burma in the face of the regime’s increasingly brazen attempts to terrorize and intimidate them, while suppressing their aspirations for a democratic, inclusive, and prosperous future.” U.S. State Department, <https://mail.google.com/mail/u/0/#inbox/FMfcgzGqRQJksfqjJnhpKXQzXsbKPBzp>.