



REDUCING THE RISK OF **NUCLEAR WAR**

in the Nordic/Baltic Region

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EXECUTIVE SUMMARY

Europe is currently experiencing escalating political and military tensions that are rekindling fears of war between Russia and NATO. Any such conflict would inherently include a risk of nuclear weapons use. The Stimson Center, partnered with Project High Hopes, is examining the results of such nuclear exchanges and, more importantly, developing initiatives to avoid such catastrophes.

Vladimir Putin has revealed that he was prepared to use nuclear weapons in the Ukraine crisis and would protect ethnic Russian populations through any means necessary. There are significant ethnic Russian populations in Estonia and Latvia with a history of disagreements and some conflict with the national governments. Any armed conflict between a Russian secessionist movement and a Baltic government could provide Russia an excuse for military intervention, which could easily devolve into a war with NATO and a risk of nuclear use.

Illustratively, one could imagine a scenario we call **Escalation in Estonia**, beginning with the seizure by pro-Russian rebels of local government buildings. Responding to an Estonian request, NATO mobilizes against the rebels, and Russian troops move across the border. Desperate to end the conflict before more NATO forces can arrive, in conformity with its doctrine “escalate to deescalate,” the Russians launch two nuclear-armed missiles on NATO forces. NATO, in turn, responds with two nuclear bombs delivered by US B-2 bombers on Russian military headquarters within Estonia. As a result, Tallinn is largely destroyed and nearly 100,000 civilians and military service men and women could be expected to die as a result of the conflict and its aftermath.

In a second illustrative scenario Russia, perceiving NATO to be divided and irresolute, purposefully sponsors unrest in the Baltics to start a **Regional War** with the goal of regaining control of all the Baltic states, as well as Ukraine. Both sides begin large-scale mobilizations and Russian forces move into the three Baltic nations. As major NATO reinforcements arrive in Poland and the Baltic states, Russia resorts to nuclear weapons and NATO retaliates in kind. After an exchange of 20 nuclear weapons, the conflict leaves nearly one million dead with long-lasting impacts on the region’s environment, economies, and health.

Although the risk of such conflicts and nuclear use is small, it is essential to reduce these dangers even further. Two initiatives could help. First, **NATO should strengthen the conventional military capabilities it is able to move quickly into the Baltic region**, so that Russian leaders would be unlikely to believe they could seize Baltic capitals so quickly that NATO would be unable to respond. For instance, equipment for an armored brigade could be pre-positioned in each Baltic nation and battalions rotated through on temporary deployments for joint exercises. A US division headquarters also could be established in Poland, along with support units, to provide coherence to the Baltic brigades. Additionally, full NATO fighter squadrons could be rotated through the Baltic nations and other nearby NATO nations on a near-continuous basis.

Second, the region’s governments should examine the possibility of establishing a **Baltic Nuclear Weapons Free Zone (NWFZ)**. Implementing such a zone would necessitate removal of Russian weapons from Kaliningrad and NATO nuclear weapons from Germany; all other nations bordering the Baltic are already nuclear free. While difficult in current geo-political circumstances, pressures for NWFZ negotiations could direct the regional security dialogue toward a positive goal and away from the current escalatory rhetoric. A large swath of the globe is already protected by NWFZs. Many were created without the initial support of key nations and once established, provided a continuing source of pressure for comprehensive enactment.

RATIONALE

It has been 70 years since the United States used nuclear weapons against Japan at the end of World War II. The US ushered in the nuclear age, but the Soviet Union quickly followed, leading to a dangerous nuclear arms race during the Cold War. Nuclear tensions were never more intense than during the Cuban Missile Crisis, when the two superpowers came close to nuclear use in three separate incidents, any of which could have resulted in a full nuclear exchange.

Since the end of the Cold War, the world has seen a significant reduction in the risk of nuclear conflict. However, the abrupt reversal in political relations between Russia and the West following Russia's seizure of Crimea and incursion into Eastern Ukraine; recent changes in Russian military doctrine, rhetoric, and military activities placing greater emphasis on nuclear weapons; and the broad modernization of nuclear forces now being undertaken by both Russia and the United States have raised concerns that nuclear war is, once again, a risk that governments and their citizens must work actively to prevent.

In this report, we summarize two scenarios in which political conflicts in the Baltic region could lead to wars between Russia and NATO and the use of nuclear weapons. We then estimate the humanitarian consequences of such conflicts. These scenarios are but two of many possible such scenarios. They are not meant to predict that such a catastrophe is inevitable or even likely, but merely to illustrate the risks that current policies and military activities imply and to emphasize the logical links between military conflict and nuclear escalation. We then propose two policy initiatives to prevent such devastating outcomes. The first is a political/military initiative to strengthen NATO's conventional capabilities to defend the Baltic nations and thereby to deter any Russian temptation to intervene in those states. The second is to initiate a dialogue on a Baltic Nuclear Weapons Free Zone, thereby creating a positive diplomatic alternative to the escalating nuclear rhetoric and a rallying point for those seeking to turn Northern Europe into a zone of greater peace and tranquility.

NUCLEAR SCENARIOS

After more than two decades of peaceful relations following the Cold War, Northern Europe is experiencing escalating political and military tensions. With both sides' rhetoric and military activity becoming more combative, there are numerous ways in which the situation could deteriorate into war and the use of nuclear weapons. Two such scenarios are described in this section of the report.

1. Escalation in Estonia

This scenario replicates Russia's strategy in Eastern Ukraine, which begins by stoking the grievances of ethnic Russian Estonian citizens. We assume that ethnic Russian Estonians supported by irregular Russian forces then seize local government buildings in two cities, resulting in a serious political crisis.

In response, Estonia mobilizes its armed forces. Russia responds by placing its air defenses on alert and mobilizing the 76th Guards Air Assault Division and 25th Motorized Rifle Brigade. At this point, NATO signals that it will not permit the Ukraine scenario to be played out in a member nation, and deploys US and French fighter aircraft squadrons to bases in Poland. It also communicates that it is willing to "put boots on the ground" and deploys a Brigade Combat Team (BCT) from the Very High Readiness Joint Task Force (VJTF) and a second BCT from the US' 82nd Airborne division to Tallinn. These actions occur over ten days, during which NATO also readies other units for deployment, including naval forces and additional air wings.

Assessing that it must act before more substantial NATO forces can enter the theater, Russian troops cross the border on the 12th day of the crisis while additional forces move through Russian territory toward Estonia. Invoking Article 5, NATO takes additional actions: Polish forces mobilize and fortify the Kaliningrad border while US and French air wings (along with cyber and electronic warfare weapons) attack Russian air defenses, as well as advancing Russian troops. Determined to show that its military response will not be limited, the NATO air strikes include both air defenses and ground forces on Russian territory.

Russia's technologically inferior conventional forces now face an alliance willing to bring the fight to Russia itself. Following the dictates of its military doctrine, which calls for the use of nuclear weapons in such situations ("escalate to deescalate"), Russia launches two SS-26 nuclear armed missiles on NATO forces advancing in Estonia. One warhead targets the Estonian military base which is serving as NATO's base of operations; the second seeks to destroy the entry point for US and NATO reinforcements — Tallinn.

NATO now faces a difficult decision. It could seek to persevere and win conventionally, or retaliate in kind to show Russia it is willing to escalate as high as Russia is willing to go. It chooses to retaliate, but in an effort to end the escalation, it responds against Russian forces within Estonia only; a US B-2 bomber drops two weapons on Russian division headquarters. No one knows if such a conflict could be brought to a close at this point, but we assume that the reciprocal nuclear use shocks the two sides into a cease-fire, agreement for all Russian forces to withdraw from Estonian territory, and a vague promise of talks between the Estonian government and its ethnic Russian population for about greater autonomy.

As a result of this conflict, even though the nuclear weapons were used solely against military targets, roughly 71,000 civilians could be expected to die, the vast majority of them Estonians. There would likely be more than 130,000 additional civilian casualties. The combined military losses could amount to roughly 10,000 fatalities and an additional 13,000 casualties. Longer term effects would include the massive destruction of Tallinn, affecting one-third of Estonia's population and destroying half its GDP.

Less severe, but serious effects would be felt across the region. Economically, shipping in the Baltic Sea would be disrupted, as well as business between Estonia and other nations, which would create problems for Finland, which is the biggest third party victim. The disruptions would affect north-western Russia, as well. While the air bursts assumed in this scenario would limit the potential for the spread of radiation, fears of environmental damage would disrupt livelihoods and the growing season over a large area.

2. Regional War in 2019

The second scenario assumes that low-level conflict has continued in Ukraine, with the Russian secessionists slowly gaining ground and NATO failing to respond in any decisive manner. This encourages Russian leaders to step up support for ethnic Russians in Baltic nations. Latvia is most affected, with the government paralyzed by secessionist protests in Riga and a low-grade insurgency in the south.

NATO has responded by fully implementing the VJTF, creating an enhanced NATO Response Force, and bolstering the US presence in Poland and the Baltic nations, but the alliance seems reluctant to become involved in the fighting itself. Russian leaders perceive, at a minimum, an opportunity to install friendly governments in Ukraine and the Baltic nations. At a maximum, they believe the conflict might split the Alliance and turn it into a much weaker foe.

We assume the US has pre-deployed a brigade set of armored equipment at airfields near ports in each Baltic nation prior to the conflict; over the previous two years, US battalions rotated through those nations to operate with local forces. At the onset of the confrontation, a US battalion is in Estonia. The scenario also assumes the NATO Response Force has established headquarters at a base south of Gdansk; also present in that area is the US division headquarters and support units and a US air wing. We further assume that a US wing is permanently based in Romania. Finally, a US carrier strike group (CSG) is monitoring the Baltic situation from the North Sea.

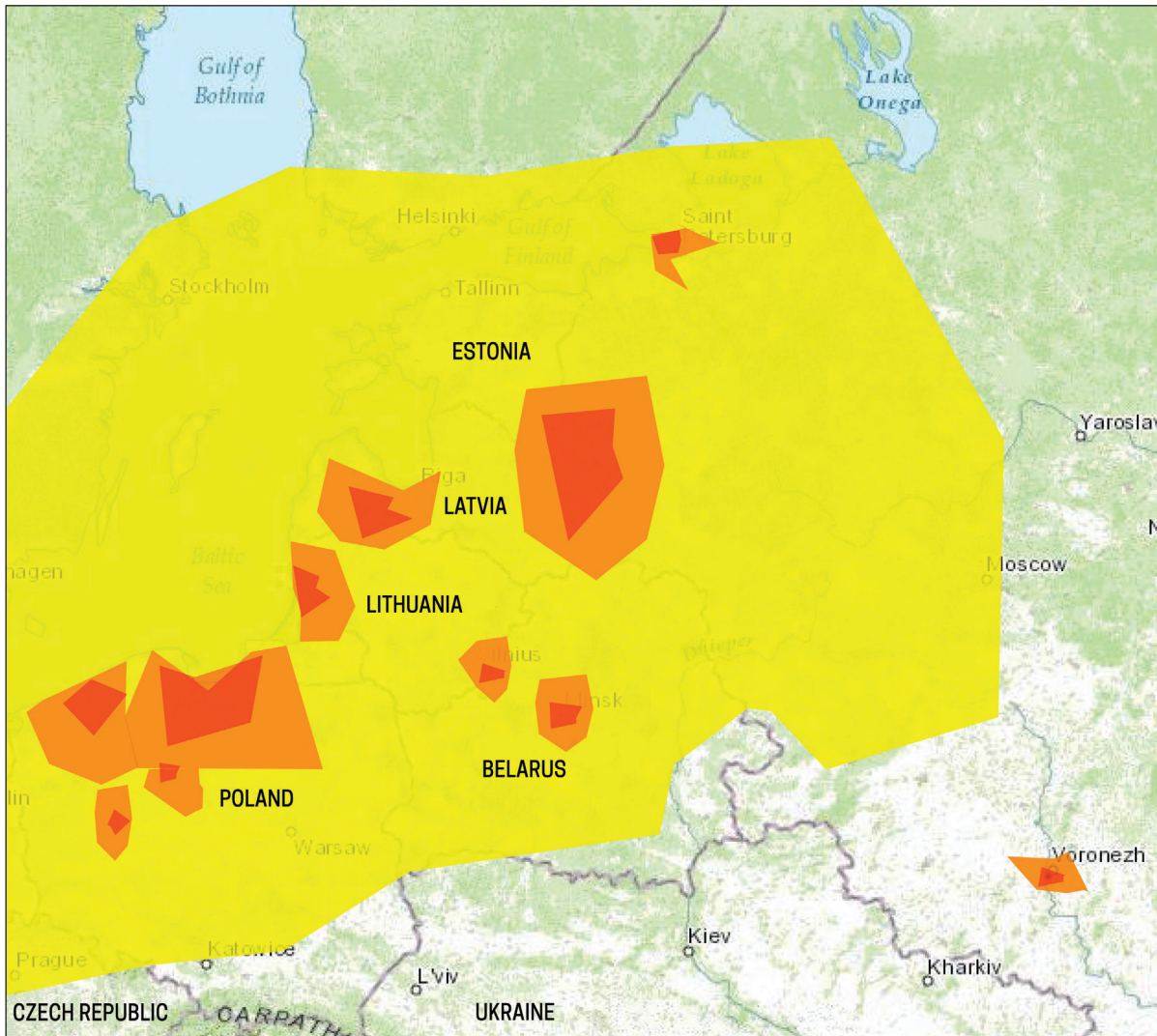
For Russia, we assume that current modernization plans have continued to be implemented, but not augmented, and that Russia retains its current force structure.

As Russian Special Forces accelerate their support for insurgents in Ukraine and Latvia, Russia begins to mobilize its forces in the Western and Southern Military districts, assembles two brigades near Minsk, and inserts special operators into Lithuania. At this point, NATO invokes Article 5 to protect its Baltic members. The US begins to move two additional CSGs toward the region and the VJTF brigade combat team moves from Gdansk to Tallinn. By the fourth day, the US Baltic brigades begin to arrive and claim their pre-positioned equipment. A brigade from the US 82nd Airborne Division arrives in Latvia, additional US air wings prepare to deploy to Europe and UK and French aircraft move to Polish bases.

After five days of mobilization, Russian forces move into the Baltics. St. Petersburg-based forces move along the coast toward Tallinn and Pskov-based forces establish a base at Vastseliina and cross into Latvia a few days later. Kaliningrad-based forces cross into Lithuania and six more divisions begin moving through Russia and Belarus toward the Baltic States.

In response, Polish and US forces move into Kaliningrad and NATO aircraft (along with cyber and electronic forces) strike Russian air defenses, as well as Russian ground forces moving toward the Baltic capitals. Additional European and US forces are mobilized and move toward the theater. Additionally, a US Marine Battalion Combat Team lands at the Port of Klaipeda in Lithuania. A second CSG arrives in the North Atlantic soon after.

At this point, Russian leaders realize they had underestimated NATO's will. Fearing a conventional rout once NATO reinforcements enter the battle space, Russia escalates on day 13. It directs SRBMs against NATO reinforcements, with two nuclear strikes each in Poland, Lithuania, and Latvia. Two



- Fear of contamination, secondary effects damage, social and economic foundation

- Likely risks to human and agricultural life

- Civilian life and agriculture unsustainable for decades

days later, following intense deliberations, NATO retaliates with B-2 delivered weapons against Russian military headquarters near Minsk and Russian forces massing at the border near Pskov. In addition, US air-launched cruise missiles target Russian forces in Estonia and Latvia. This exchange of six nuclear strikes each does not end the conflict, however, and the following day, Russia strikes twice against the infrastructure supporting inbound NATO forces in Poland, two on the port of Gdansk and another two on the nearby NATO Division HQ. In response, NATO delivers two more strikes on Russian naval facilities in St. Petersburg, a third on the air war coordination HQ in Russia, and a fourth on the Russian Marine HQ in Kaliningrad.

Although it is difficult to foresee the circumstances which would bring the war to a close at this point, we will assume that a truce is somehow negotiated after a total of 20 nuclear strikes, the results of which would be catastrophic for both sides. Immediate combined results would include about 700,000 civilian deaths and 64,000 military deaths, with over 1.5 million casualties. Including fatalities that could be expected in the aftermath of the conflict, total deaths would approach one million. In large swaths of the nuclear battlefield, civilian life and agriculture would be unsustainable for decades. Risks to human and agricultural life would exist across the region, including in neighboring Nordic countries. Even in areas where these risks were minimal, fears and mistrust would lead to refugee flows and severe economic disruption. The long-term effects on cancer rates and other diseases are impossible to calculate as their distribution is dependent on prevailing winds at the time. The lost prosperity and social cohesion of the broader North European region would take decades to recover. (The attached map shows the extent of the damage that could be foreseen.)

HOW TO LOWER THE RISK OF NUCLEAR WAR IN NORTHERN EUROPE

These scenarios are far from northern Europe's most likely future. But the escalating political and military tensions that have beset the region for the past two years certainly are increasing the risk of war, and any war between NATO and Russia would inherently involve a risk of nuclear use. Whether a nuclear exchange would be large or small is impossible to predict. Thus, no matter how low the risk of nuclear war might be, it behooves all responsible governments and citizens to do whatever they can to ease their rhetoric, reduce tensions, and avoid military incidents. We believe that a two-pronged strategy could help to achieve these goals.

1. Strengthen NATO's conventional military capabilities to defend the Baltic nations so as to deter Russia from intervening in those nations.

NATO is already taking minor steps to strengthen its conventional capabilities relevant to defense of the Baltic States and should continue these efforts, as well as consider more robust options.

The US periodically deploys small detachments of ground forces to the Baltic nations as symbols of the NATO commitment and to train with local forces. Secretary of Defense Ashton Carter announced in June 2015 that the Pentagon would place approximately 250 tanks, Bradley fighting vehicles and self-propelled howitzers in six countries close to Russia to help reassure NATO allies facing threats from domestic ethnic Russian organizations, supported by Russian special operations. The announcement came one day after the Secretary stated that the U.S. would provide other weapons, aircraft, and forces as needed for NATO's new Very High Readiness Joint Task Force, established to help Europe defend against potential Russian aggression from the east and the Islamic State and other violent extremists

from the south. In a symbolic move, in February 2015, US military vehicles rolled 300 yards from Russia's border as part of a parade to mark Estonia's Independence Day. US tanks also rolled through the streets of Riga, for Latvia's Independence Day parade in November 2014.

In addition to these measures, NATO has already increased military training and activities in the region. Expanded exercises include the annual BALTOPS exercise in the Baltic Sea, which this year involved 60 ships from 17 NATO countries. The US, UK, and France have also been deploying small detachments of fighter aircraft to Estonia on a rotational basis, and have utilized those aircraft to intercept Russian bombers flying close to, or actually intruding on, Estonian airspace. The US also deploys fighter aircraft periodically to Romania and other NATO member states; in August, such a deployment was made by F-22s, the most capable operational US fighter and one far superior to any fighter in Russia's inventory.

These actions provide a powerful reminder of the United States' commitment to defend all of NATO's members. But additional measures might also be taken to build NATO's conventional capabilities further, thus avoiding any misperception on the part of Russian leaders that they could orchestrate internal problems in Baltic nations and follow with an armed intervention that could occupy those nations' capitals so quickly that NATO would not be able to respond to a *fait accompli*. These steps might include the pre-positioning of a US armored brigade worth of equipment in each Baltic state; the rotation of US battalions through those countries for temporary deployments to exercise with local forces and maintain the equipment; and the establishment of a US division headquarters for the brigades in Poland, along with necessary support units. (There currently is no U.S. division-level or higher Army headquarters anywhere in Europe.)

The US also could increase the size of the periodic aircraft deployments to the region, rotating full squadrons from US-based air wings through the Baltic nations, Poland, and Romania for joint exercises with local forces. The size of rotating deployments of aircraft from other NATO nations to Estonia also could be increased, along with periodic deployments to the other Baltic nations.

Of course, these military deployments and exercises could be undercut unless NATO leaders continue to make clear, repeatedly, that the alliance's defense commitments extend to all members, including the Baltic nations. Any signs of divisiveness on this issue could encourage greater Russian assertiveness. Alliance cohesion and decisiveness, as witnessed by political and diplomatic initiatives, are if anything even more important than military moves in deterring Russian intervention in the Baltics.

The Russians, of course, will complain bitterly about such moves, just as they have about the small improvements already made. But as has been shown repeatedly in the history of relations between Russia and western nations, demonstrations of strength tend to deter Russian aggressiveness, while failures to repair weaknesses only encourage greater demands and assertiveness. Importantly, the steps proposed here and those already taken by NATO involve only improvements to conventional capabilities. NATO policy and doctrine make clear that NATO will respond to nuclear attacks in kind. Its new military doctrine notwithstanding, Russian leaders are unlikely to put their military forces into a situation in which they are likely to face a choice between conventional defeat and initiating nuclear war.

2. Initiate a Diplomatic Dialogue about Creating a Baltic Nuclear Weapons Free Zone

This additional strengthening of conventional deterrence could open the way to the possibility of creating a Nuclear Weapons Free Zone (NWFZ) encompassing all nations and regions bordering the Baltic Sea, including Kaliningrad.

General Assembly resolution 3472 B (1975) defines a Nuclear Weapons Free Zone as:

Any zone recognized as such by the General Assembly of the United Nations, which any group of States, in the free exercises of their sovereignty, has established by virtue of a treaty or convention whereby: (a) The statute of total absence of nuclear weapons to which the zone shall be subject, including the procedure for the delimitation of the zone, is defined; (b) An international system of verification and control is established to guarantee compliance with the obligations deriving from that statute.

In a report issued in 1999, The UN Disarmament Commission recommended a set of principles and guidelines for the establishment of a Nuclear Weapons Free Zone:

- Nuclear Weapons Free Zones should be established on the basis of arrangements freely arrived at among the States of the region concerned.
- The initiative to establish a Nuclear Weapons Free Zone should emanate exclusively from States within the region concerned and be pursued by all States of that region.
- The nuclear weapon States should be consulted during the negotiations of each treaty and its relevant protocol(s).

A Nuclear Weapons Free Zone should not prevent the use of nuclear science and technology for peaceful purposes and could also promote bilateral, regional and international cooperation for the peaceful use of nuclear energy in the zone.

Nuclear Weapons Free Zones already cover most of the Southern Hemisphere, including Latin America and the Caribbean (Treaty of Tlatelco), the South Pacific (Treaty of Raritonga), Africa (Treaty of Pelindaba), and Southeast Asia (Treaty of Bangkok). Nuclear weapon free zones have also been created in Central Asia. Some of these agreements and their attached protocols have not yet been ratified by all relevant states. Indeed, many of these existing NWFZ were created and instated without the initial participation of key nations. The Treaty of Tlatelco, for example, went into force without the signatures of Argentina, Brazil, and Cuba — all three have now ratified the treaty. (Existing treaties also completely prohibit the deployment of nuclear weapons in the Antarctic, in outer space, and on the sea-bed and ocean floor.)

Beginning a diplomatic dialogue about creating a Baltic NWFZ could have beneficial political effects. It would provide a positive alternative to the escalating rhetoric about nuclear threats and dangers. It would provide a rallying cry and position for those seeking to reduce tensions in Northern Europe. And it would reinforce long-standing norms against the use or threatened use of nuclear weapons. Sweden has a historic track record of pioneering new ideas concerning the reduction of nuclear tensions and movement toward disarmament and, indeed, proposed a Nordic/Baltic NWFZ in the 1970s. Finland also has made proposals to reduce tensions in the region. It would be logical for the two nations to initiate such a dialogue.

Russia could not be expected to be a signatory to a treaty creating a Baltic NWFZ, as that would require it to eliminate all of its nuclear weapons. Russia could be asked, however, to sign a Protocol to the Treaty, in which it agreed not to deploy nuclear weapons in Kaliningrad. (Although Russia has deployed nuclear-capable missiles in Kaliningrad, it is not known publicly whether or not it has yet deployed nuclear warheads for them in the region.) In a similar manner, although not parties to the Treaty of Tlatelco, all the declared nuclear weapon states signed protocols agreeing to respect the treaty and to not deploy nuclear weapons in any territories under their control within the zone.

Implementing a Baltic NWFZ would necessitate removal of NATO nuclear weapons from Germany and Russian weapons from Kaliningrad if, indeed, they are already there. All other nations bordering the Baltic are already nuclear free. Establishment of this zone would not imply any change in the US

nuclear commitment to NATO. The US nuclear weapons currently in Germany are not necessary for the US to exercise its commitment to deter nuclear attacks against any NATO ally, by responding, if necessary, to such an attack with nuclear weapons. US strategic nuclear forces are more than adequate to fulfill this commitment.

Indeed, the practice of deploying US nuclear weapons in Germany, Belgium, the Netherlands, and Italy — to be delivered by aircraft owned and operated by nationals of those nations — was initiated when Soviet armored divisions threatened a rapid blitzkrieg across the intra-German border. Under such circumstances, it was credible to believe that such a threat might be carried out, although studies have shown that such nuclear strikes would do little to stop an armored advance and would be devastating to civilian populations. Today, however, the threat is posed far to the East. The fighters that the European nations would use to deliver the weapons would have difficulty penetrating modern Russian air defenses. Under such circumstances, it is difficult to believe that the NATO tactical weapons actually would be used to retaliate for a Russian nuclear attack. More likely, in our view, would be the use of stealthy US strategic bombers, perhaps pre-deployed to European bases during the crisis that would precede the war. Given this logic, the removal of the weapons from Germany would have no real effect on NATO's capabilities — either military or political. In current political circumstances, establishing a Baltic NWFZ would be a difficult undertaking. Still, Russian leaders would see political benefit from removal of the weapons from Germany — a long sought goal, and all the north European states would benefit from removing, or preventing the deployment of, Russian nuclear weapons in Kaliningrad. Initiation of a diplomatic discussion of such possibilities, moreover, could serve as a positive political offset to the existing dialogue that features threats of war and nuclear dangers. It also would provide an initiative around which those seeking to reduce tensions might rally. And, as political relations between Russia and NATO improve in the future, implementation of the Baltic NWFZ might just become a reality.

CONCLUSION

In this report, we have described two scenarios in which the Nordic/Baltic region could become the theater for conventional wars ending in the exchange of nuclear weapons. These examples are only illustrative, of course, but the humanitarian and economic consequences of any nuclear exchange would be grave. Both Russia and some NATO nations seem to have repressed the nuclear close calls and dangers of the Cold War, and have embarked on a new nuclear competition. We suggest that the two sides rethink their current policies and return to the safer world in which nuclear threats and nuclear operations are relegated to a back-seat. The Nordic/Baltic countries can facilitate such a de-escalation by examining a wide range of preventive political processes to avoid nuclear scenarios, including the establishment of a Nuclear Weapons Free Zone. Political pressures for NWFZ negotiations could provide a positive political rallying point to offset the current trend of inflammatory nuclear rhetoric and actions and help to de-escalate east-west tensions.

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