

Regional Nuclear Deterrence

March 28, 2023

U.S. Senate - Subcommittee on Strategic Forces Committee on Armed Services

MEMBERS PRESENT:

Sen. Angus King (I-ME) [presiding]

Sen. Deb Fischer (R-NE)

Sen. Tom Cotton (R-AR)

Sen. Tommy Tuberville (R-AL)

WITNESSES:

Ms. M. Elaine BUNN: - Senior Adviser (Non-Resident), Project on Nuclear Issues Center for Strategic and International Studies

Dr. Brad ROBERTS - Director, Center for Global Security Research Lawrence Livermore National Laboratory

Dr. Evan B. MONTGOMERY: - Senior Fellow and Director, Research Studies Center for Strategic and Budgetary Assessments

Mr.. Gregory WEAVER: - Senior Associate (Non-Resident), Project on Nuclear Issues Center for Strategic and international Studies

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SENATOR KING: This hearing of the Strategic Forces Subcommittee of the United States Senate Committee on Armed Services will come to order.

I first want to thank our witnesses for joining us at today's hearing on regional nuclear deterrence. Today's hearing may sound somewhat esoteric but it is

deadly serious to our national security. We have debated strategic deterrence extensively in this committee and, in fact, the 2022 Nuclear Posture Review concentrated on our nuclear use policy, modernizing our triad so that we might ensure that we are never coerced by a near peer adversary such as Russia or **China**.

The question we ask today is about regional nuclear deterrence. In other words, how can we ensure a conventional conflict with a near peer adversary or a conflict between two nuclear-armed adversaries does not resort to the use of nuclear weapons, which then escalates into a broader nuclear exchange? This is the nuclear escalation ladder that theorists have worried about for decades.

Today Ukraine is an example of regional nuclear deterrence. Russia's strategic triad is certainly something that the United States must take account of in terms of its involvement in the conflict. Meanwhile, our extended NATO deterrent has prevented Russia from intervening directly with NATO allies. However, that is not the end of this dilemma.

Russia has a doctrine referred to as "Escalate to Deescalate," which is when they feel that they are in danger of being conventionally overmatched and their country's existence is at stake. It will involve first using low-yield weapons to stun any opponent. Will taking back Crimea trigger this doctrine? Will taking back some of the property, the land that Russia has allegedly annexed trigger this doctrine? We know Russia is running low on conventional munitions. If Russia enters into a conflict with a NATO ally will they quickly resort to low-yield weapons?

I hope today's hearing informs us as to whether our deterrent is appropriately tailored for such a regional conflict. Are we self-deterred with our high-yield arsenal of ICBMs and SLBMs? There is a debate about bringing back a low-yield, submarine-launched cruise missile, that which will deter Russia in a regional conflict. Would it deter Russia in a regional conflict? These same questions apply to **China** and Taiwan, North Korea, South Korea, and Japan. Today's witnesses have all thought about these questions and many of them have served in government, enacting policies on this issue. It is important that we hear and learn from them today so that we are better informed as we prepare for our discussions of the National Defense Authorization Act later this spring. After remarks from Senator Fischer we will have statements from our witnesses

and a round of questions from our Senators. Senator Fischer.

STATEMENT OF HON. DEB FISCHER, U.S. SENATOR FROM NEBRASKA

SENATOR FISCHER: Thank you, Mr. Chairman, and thank you to all our witnesses for being here today and for sharing your perspective on nuclear strategy and deterrence theory, particularly with respect to the role it plays in regional nuclear stability.

According to the 2022 NPR, effective nuclear deterrence, quote, "requires tailor strategies for potential adversaries that reflect our best understanding of their decision-making and perceptions," end quote. The NPR also notes that the United States, quote, "will collaborate with allies and partners to tailor extended deterrence and assurance policies," end quote.

These strategies must be continuously evaluated to ensure they reflect and take into consideration the evolving threat environment. I look forward to hearing your thoughts on effective strategy concepts and how they may impact regional nuclear deterrence. Thank you very much.

SENATOR KING: If the witnesses will introduce themselves. I do not know what order you want to proceed. Brad, do you want to start?

MR. ROBERTS: Sure. Thank you for the opportunity to join you in this discussion today. I am Dr. Brad Roberts. I am Director of the Center for Global Security Research at Lawrence Livermore National Laboratory. The views I am expressing are my personal views, not those of the lab, and I had the pleasure and honor of serving as Deputy Assistant Secretary of Defense for Nuclear and Missile Defense Policy through the first Obama term.

In my time I would like to make five quick arguments. The first is that we should appreciate that allies are living in the nuclear crosshairs of our nuclear-armed adversaries. Our nuclear-armed adversaries seek to remake the regional orders in which they sit, and the prize in this competition, and if there were a war, in war, the prize is the allegiance of our allies. And they should not be simply an afterthought in our defense strategy. The deterrence protection we provide of them is central to the confrontation in which we are involved today. And these allies experience a good deal of anxiety about the life in the nuclear crosshairs and about the credibility of U.S. extended deterrence guarantees to them.

Second argument. In the U.S. discussion of extended deterrence we tend to put our focus on the hardware – dual- capable aircraft, the B-61 bomb, SLCM/N – all very important, but we should not forget the software. The software includes declaratory policy and other statements of leadership intent. It includes consultations, processes, and mechanisms within the alliance structures. It includes concepts and principles for nuclear deterrence and employment. It includes operational plans and planning processes and exercise programs to exercise those plans. And it includes the knowledge base that is essential to all of that. And as we consider the weaknesses in the extended deterrence posture we should consider the weaknesses in the software side.

Third argument. The existing extended deterrence posture was designed for an era long past. The existing extended deterrence posture is a result of the Presidential Nuclear Initiatives of the immediate post-Cold War period, when the U.S. withdrew all of its nuclear weapons from Asia, 97 percent of its nuclear weapons from Europe, all of its weapons from naval surface combatants, and all of its nuclear-armed cruise missiles from attack submarines. Most of those things were destroyed. The cruise missiles were kept until 2010, when they aged out.

This was a bet we placed as a nation that extended deterrence could be provided with a few remaining nuclear weapons in Europe and our central strategic forces. We saw this as appropriate in the benign environment of the time. Russia, **China**, and North Korea perceived a different security environment, of course, and have done well focused on creating new nuclear advantages for themselves over a long period of time, and theories of victory in conflict with us that involve the coercion of our adversaries and the disruption of our military options by nuclear means. Our allies are very clear that they want forward-deployed weapons as a part of the extended deterrence commitment, or at least forward deployable in East Asia. And thus, there is a rising discussion of what kind of capabilities the alliances need in future years, whether there is the right diversity in the posture in addition to the right number.

Fourth argument. Looking ahead a decade or so, the challenges facing extended nuclear deterrence seem destined to grow. I think we all expect that when the Ukraine conflict dials back into a frozen conflict the Russia we are going to face for the next decade or so is going to be difficult, threatening, and ever more reliant on nuclear weapons. We clearly expect greater nuclear-backed coercion

out of **China**, as its nuclear arsenal grows and its theater nuclear force grows, and we expect the same from North Korea. There is a mismatch, in other words, between the legacy posture of 1991 and the challenge that is emerging in front of us.

Fifth and finally, strengthening of extended nuclear deterrence has been a clear priority for three presidential administrations in a row, and the fact of bipartisan consensus on this aspect of our nuclear strategy is striking and should be preserved. That bipartisanship has enabled a good deal of progress in adapting extended deterrence to new circumstances and strengthening it by various means, but more progress is needed. This will not be possible without leadership focus, which has ebbed and flowed, and with that focus I think we will see the accomplishment of various projects that are already underway, such as finalizing the nuclear modernization and strengthening the consultative processes in East Asia. But there are some important new challenges still in front of us about future capabilities and future concepts.

Thanks so much for the opportunity to contribute.

SENATOR KING: Thank you very much, Mr. Roberts. Mr. Weaver. Dr. Roberts, sorry. Mr. Weaver. STATEMENT OF GREGORY WEAVER, SENIOR ASSOCIATE [NON- RESIDENT], PROJECT ON NUCLEAR ISSUES, CENTER FOR STRATEGIC AND INTERNATIONAL STUDIES

MR. WEAVER: Thanks, Mr. Chairman, Senator Fischer, Senator Cotton, Senator Tuberville. Thanks for the opportunity to participate here.

My name is Greg Weaver. Today marks the 1-year anniversary of my retirement from Federal service. My last three positions in government I was the Chief Nuclear Policy and Strategy Advisor to the Chairman of the Joint Chiefs on the Joint Staff in the J5. I was the Principal Director for Nuclear Missile Defense Policy under Deputy Assistant Secretary Bunn in OSD policy. And before that I was the Deputy J5 in STRATCOM in Omaha. My comments today also reflect just my personal views. I want to commend the subcommittee for focusing on what I think is a particularly important, urgent, and evolving challenge that we need to get on top of. Frankly, I believe improving our ability to deter and counter adversary limited nuclear use in a regional conflict is the single most important challenge we face in U.S. nuclear strategy today, and let me explain why.

It is broadly agreed that the most likely path to limiting nuclear deterrence failure is escalation in the context of major conventional conflict between nuclear-armed adversaries. It is also broadly agreed that the most likely path to a large-scale homeland nuclear exchange between major powers is escalation from limited nuclear use in the context of such a conflict. Thus, regional nuclear deterrence is the key to addressing the most likely path to nuclear war at any level of violence.

Deterring Russian limited use is our most immediate and challenging regional nuclear problem, although **China** is rapidly rising in that area. So I am going to focus today on the Russia problem to illustrate the nature of what we are up against.

President Putin's criminal invasion of Ukraine demonstrated both a high propensity to take risk and to miscalculate in the process of doing so. Perhaps this propensity to take risk and miscalculate will be alleviated by Putin's eventual departure, but we cannot count on that and we do not know when that will be. The Russian leadership's historical propensity to underestimate NATO's resolve and unity under threat long preceded Putin and will likely survive him.

An effective regional nuclear strategy in Europe must be based, as Senator Fischer pointed out, on an understanding of Russia's nuclear strategy and doctrine. Both are ultimately rooted in the assumption that limited nuclear use in theater is unlikely to escalate to a large-scale homeland exchange, though I do not believe the Russians are certain that they can avoid uncontrolled escalation.

It is important to understand that Russian conventional and nuclear strategy and doctrine are fully integrated with each other. Their nuclear forces role is to both deter large-scale nuclear attacks on the Russian homeland and to compensate for NATO conventional superiority in two ways. First, through the limited use of nuclear weapons in theater to coerce war termination on terms acceptable to Russia, if possible, but second, to defeat NATO conventional forces through large-scale theater nuclear strikes, if necessary. The latter is what drives Russia's force requirement for thousands of theater nuclear weapons embedded throughout their conventional forces.

What then is required to deter Russian limited nuclear escalation in theater in an ongoing conventional war with NATO? Well, because Russian strategy is

based on the belief that mutual deterrence of large-scale homeland strikes is very robust, we cannot rely solely on the suicidal threat of a large-scale U.S. nuclear response to limited Russian escalation or on the potential for uncontrolled escalation. Deterrence of Russian limited nuclear use requires the perceived ability of the United States and our NATO allies to persevere in the face of limited nuclear escalation without being politically coerced into accepting Russia's terms and without being decisively militarily disadvantaged. Our longstanding flexible response strategy is, I believe, fit for that purpose but only if it is enabled by U.S. and allied nuclear and conventional forces that are capable of three key things. First, being able to continue to operate effectively to achieve U.S. and allied objectives in a limited nuclear use environment. Second, being able to counter the military impact of Russian theater nuclear use. And third, providing the President a credible range of response options to restore deterrence by convincing Russian leadership they have miscalculated in a dire way, that further use of nuclear weapons will not result in them achieving their objectives, and that they will incur costs in the process that far exceed any benefits they can achieve should they choose to escalate further.

In sum, our capabilities must convince them that nuclear escalation is always their worst option. Now, for the nuclear capabilities bottom line. To meet these requirements with high confidence we need a range of forward-deployed, survivable theater nuclear capabilities that can reliably penetrate adversary air and missile defenses with a range of explosive yields on operationally relevant timelines – and that is an extensive list of attributes. Based on these attributes, planned U.S. nuclear capabilities, in my view, are not sufficient for the future threat environment we face. Strategic nuclear forces alone are insufficiently flexible and timely to convince a major power adversary that we are fully prepared to counter limited nuclear use with militarily effective nuclear responses of our own.

Theater nuclear forces are needed for this role, but our planned theater nuclear forces, in my opinion, are too small, insufficiently survivable, and insufficiently militarily relevant. Completing the modernization of our dual-capable fighter aircraft capabilities is necessary, but it is not sufficient.

Our theater nuclear forces can be made a much more credible deterrent without having to match Russia and **China** weapon-for-weapon by supplementing our dual-capable fighter force with at least one more survivable, forward-deployed,

selectable yield delivery system that has a high probability to penetrate adversary defenses. Several candidate systems could meet this requirement, but I assess the SLCM/N, deployed on attack submarines, is the best solution for these reasons. First, it is highly survivable day to day and thus not subject to a preemptive strike. Second, it provides theater nuclear deterrent presence, whether it is actually present or not, because the adversary will not know where those submarines are located. Third, it provides an effective ability to penetrate, in part due to, in some cases, being capable of launching from inside the outer edges of an adversary's integrated air defense system. Fourth, it provides operationally significant promptness when compared to bomber-delivered, air-launched cruise missiles, it exploits the submarine fleet's large, preexisting launch infrastructure, reducing cost, it has no ballistic missile launch signature that could be misinterpreted by an adversary, and finally, it could leverage the LRSO, air-launched cruise missile modernization program, reducing the impact on our nuclear weapons infrastructure of building an additional theater nuclear capability. No other system I am aware of checks all those boxes.

So in conclusion, and I know I have gone a little long, regional nuclear deterrence is not the place the United States should choose to take risk, and not only because theater deterrence failure is the most likely path to large-scale nuclear war, though that is a pretty good reason in and of itself. An inability to confidently deter or counter adversary limited nuclear use will undermine the credibility of U.S. capability and will to project power against nuclear-armed adversaries in defense of U.S. and allied vital interests, making major power conventional war more likely in both Europe and Asia. Our allies have not forgotten this and neither should we.

SENATOR KING: Thank you very much. Compelling testimony. I appreciate it, Ms. Bunn.

MS. BUNN: Thank you, Chairman King and Ranking Member Fischer, and other subcommittee members for the invitation. It really is a pleasure to testify before you again, but this time as a private citizen representing only myself and not as a USG official. I spent 40 years in government, mainly at Department of Defense. My last job there was as Deputy Assistant Secretary for Nuclear and Missile Defense Policy, following Brad, in 2013 to 2017.

SENATOR KING: Did you say 40 years?

MS. BUNN: Forty years. Forty.

SENATOR KING: You were hired as a child?

MS. BUNN: I just had my 70th birthday. That is on the record.

I also, in that NASD job, as did Brad, spend a lot of time with allies, both as the U.S. Representative to the High Level Group of NATO as well as co-chairing the deterrence dialogues with Japan and South Korea. The U.S. has made very explicit extended nuclear deterrence commitments to more than 30 countries, NATO countries as well as Japan, South Korea, and Australia. In so doing, the United States has privately and publicly affirmed that aggression against those countries could, under some circumstances, merit a U.S. nuclear response. I have come to believe that extended deterrence is amazing from both sides. We have our non-nuclear allies, who have foresworn their own nuclear weapons and rely on another country, the U.S., in high-end situations, including nuclear attacks on their own territory and people. And it is amazing that the U.S. takes on the risk and responsibility of putting its own forces, even its population and territory, at risk on behalf of an ally. And that is an amazing fact to the point that some, in the past, have found it incredible. That is the reason we have an independent French nuclear force.

It should be no surprise that our non-nuclear allies need to constant reassurance that they are very interested in how we think about deterrence, how we might respond. It is not amazing that they need that constant interaction to feel secure.

In January, South Korean President Yoon speculated publicly that if North Korean provocations increased, South Korea might consider building its own nuclear weapons or maybe asking the United States to deploy tactical nuclear weapons to the South, as it did before 1991. Although President Yoon later stress that his comments did not represent official policy, they were still significant, marking the first time since the '70s that a South Korean President has raised the prospect of acquiring nuclear weapons.

Do President Yoon's comments indicate that some in South Korea are concerned about the credibility of the U.S. extended nuclear deterrence commitment? I think so. While I am not worried about non-nuclear allies deciding to have their own nuclear weapons in the very near term, I can see it happening, 5, 10, 15

years from now, with South Korea probably the first among them.

U.S. will has long been the underlying concern for allies. They know we have weapons, but would we use them? It is not "could we" but "would we." I think it consultations at multiple levels, real ones, where we listen as well as talk, where we have exercises, both tabletop and field exercises, where we have forward deployments of conventional and sometimes nuclear forces. All of those things that we have a stake in and will take risk for allies' security.

If South Korea, or another ally, does ask for deployment of U.S. nuclear weapons on their territory, or nuclear sharing arrangements, dual-capable aircraft and the B-61 bombs, as in NATO, or offshore SLCM/N, which I have not heard allies discussing much, but if allies raise any of these hardware issues I think the U.S. should be willing to have frank discussions about their view and be open to talks on the plusses and minuses of what allies believe they need and not simply give a kneejerk "no."

There are things we can do short of deploying nuclear forces in allied countries. For example, the last three Nuclear Posture Reviews have all said that the U.S. maintains globally deployable, dual-capable aircraft, primarily to assure Northeast Asian allies. But we have not demonstrated that capability with exercises. That should be an easy one to do.

In any event, with or without forward-deployed nuclear weapons there is a need for ongoing consultations that are deep and nuanced, more realistic exercises, and greater allied integration in operational planning. Thank you.

SENATOR KING: Thank you very much. Mr. Montgomery.

MR. MONTGOMERY: Thank you, Chairman King, Ranking Member Fischer. I appreciate the opportunity to be here today and share my thoughts with you. I would like to focus my remarks on the potential consequences of **China's** nuclear modernization.

For more than a decade, **China's** conventional military modernization has been upending the balance of power in the **Indo-Pacific** region. Until recently, though, **China's** nuclear arsenal has been a secondary concern. The situation is starting to change now that **China** is engaged in a significant quantitative and qualitative nuclear buildup. This nuclear buildup could be

destabilizing both regionally and globally, and I would like to highlight three areas of concern that have been raised to date.

The first is the possibility that **China** could pose a future first-strike threat against U.S. strategic forces. This previously implausible scenario could become a genuine concern if **Beijing** fields accurate and difficult-to-detect system that could threaten U.S. command and control targets, as well as large numbers of ICBMs that could threaten U.S. strategic delivery systems.

Thankfully, the likelihood of this scenarios is extraordinarily low because the demands of a successful first strike are so extraordinarily high. Nevertheless, if **China 's** nuclear buildup unfolds in the way that many now anticipate, it cannot be discounted entirely, especially if U.S. officials take into account the combined nuclear forces of Russia and **China** in their calculations, as they should. The second area of concern is the possibility that **China 's** nuclear buildup could embolden **Beijing** to start a conventional conflict against the United States. From **China 's** perspective, a larger and more survivable strategic deterrent could ensure that any fight between the United States and **China** does not escalate and remains at the conventional level, a prospect that might actually benefit **China** given its conventional military modernization. This situation is certainly a far more plausible risk than the threat of a first strike. Nevertheless, **China** would still need to be confident that it could suppress Taiwan and succeed in a clash with the United States, two very costly courses of action no matter how many improvements the **PLA** makes.

The third area of concern associated with **China 's** nuclear buildup, and I think the one that is likely to be the most serious over the long run, is the possibility that **China** could build the tools to make limited nuclear threats. For instance, **China** could soon be equipped with multiple, highly accurate theater nuclear options, enabling it to hold many regional targets at risk with low-yield nuclear weapons. These capabilities are especially worrisome because they could serve as the foundation for an alternative coercive strategy against Taiwan, one that might look easier, faster, and cheaper than, for example, launching a direct invasion of the island and embarking on a large-scale conventional war against the United States. Specifically, if **Beijing** paired limited nuclear threats with, for example, blockade operations against the island and attacks against leadership targets, it would pose major dilemmas for the United States as it determined whether and how to intervene.

In sum, the nuclear buildup that **China** has embarked upon could have significant consequences. Although it has received less attention than the expansion of its strategic forces, a potential buildout of **China's** theater nuclear capabilities could have major implications for the United States, and here I will briefly highlight three.

The first implication is for U.S. nuclear force structure. For years, the United States has been concerned about the imbalance in non-strategic nuclear weapons between itself and Russia. Yet there might be a similar imbalance on the horizon with respect to **China**. If **Beijing** fields a variety of nuclear-armed theater missile systems, the United States may not have symmetrical, proportional, effective, and credible responses in hand. And that dilemma could become especially sharp if Washington's relatively small inventory of non-strategic nuclear weapons is needed to deter limited nuclear threats by two major power adversaries at the same time.

The second implication is for U.S. extended nuclear deterrence arrangements. Theater nuclear forces could enable **Beijing** to drive wedges between the United States and its allies and partners. In other words, Washington could face dilemmas similar to those that it confronted during the Cold War when Soviet investments in theater nuclear systems that could target European allies without striking the U.S. homeland raised decoupling concerns that required skillful alliance management to address. If so, the United States might need to consider binding itself and its allies more tightly together, for instance, by pursuing nuclear sharing arrangements with Japan and South Korea, not unlike those that exist with select NATO allies.

The third and final implication is a broader one for U.S. defense planning, namely that **China's** nuclear buildup will require the United States to prepare for a wider range of threats. To date, the Department of Defense, in particular, is focused on the challenges posed by a **PLA** air and amphibious assault against Taiwan as well as **PLA** attacks against U.S. ports, forward-operating forces, air bases, and information networks. **China's** nuclear buildup could open up new avenues of coercion against Taiwan, some of which, like the early resort to limited nuclear threats in lieu of invasion, could seem appealing to leaders in **Beijing** while posing considerable difficulties for policymakers in Washington.

Thank you for your time. I look forward to your questions.

SENATOR KING: I want to thank all of our witnesses. This has been amazingly provocative and thoughtful and information, so I want to thank you.

It seems to me – I mean, I think of the formula for deterrence as will plus capacity, and will is a hard thing to measure and quantify. I think you testified about the software of nuclear deterrence, and statements, policies, doctrines are important. Capacity, though, is something that can be measured. And I think all of you – well, I will ask – do any of you disagree with the proposition that we do not have sufficient low-level, regional deterrent capacity while we are deployed? Does anybody disagree with that?

MR. WEAVER: Senator, I not only agree with it, I also think that if we were to take steps to correct that –

SENATOR KING: I think your mic is not on.

MR. WEAVER: Yeah. I not only do not disagree with that, I think that if we were to take steps to correct that problem, to actually bolster our theater nuclear capabilities, it would actually help work part of the software problem, which is we would be demonstrating that we have the will to address this problem, even though it is politically fraught, potentially, in our alliances.

SENATOR KING: Believe it or not, I wrote my senior thesis on this subject. I will not tell you how many years ago it was, but Admiral Roberts at STRATCOM tried his best to get naval intelligence to find it, but I could not find it.

But it seems to me that the strategic dilemma is that if all we have is massive retaliation, it is not credible that we would use that in case of a tactical use in Ukraine or Southeast Asia or Northeast Asia. So that is really the dilemma.

And I will ask the question I know you are going to ask. SLCM/N is not funded in the current budget. It was funded for R&D last year. This year it is zero. Is that not correct? But, Mr. Weaver, you testified that you thought that was the most logical forward deployed, and you gave five reasons why. I do not mean to have you repeat your testimony but I am a little puzzled why that is not in the budget.

MR. WEAVER: Well, Senator, I was involved in the 2018 Nuclear Posture Review that recommended it and the Joint Staff, and I was also involved in the '22 Posture Review with the administration decided not to do it. As you know, the

Chairman recommended SLCM/N.

There are, as I said in my statement, there are other theater nuclear options we could pursue. We could build mobile, land-based systems. But when you take the full look at the set of attributes that most address the nature of our theater deterrence problem, in both Europe and Asia, I believe SLCM/N is the best option we have readily available. Now if you want to invent something completely new and have it take longer to get – and we do not have much time –

SENATOR KING: We do not need to invent a platform. We have the platform.

MR. WEAVER: Exactly, and we have the platform already.

SENATOR KING: Dr. Roberts, do you agree with this line of discussion?

MR. ROBERTS: I do. We have just concluded – three of the four of us just concluded a study group report on dealing with the emergence of a second nuclear peer, and its implications of two nuclear peers for our nuclear strategy, a bipartisan group, and we have a strong endorsement for SLCM/N in the report.

SENATOR KING: Well, another danger, other than the weakness of the deterrent, it seems to me, is an incentive to our allies to develop their own nuclear capability. As you suggested, the President of South Korea sort of speculated on that some time ago. But at some point they are going to say, "Well, if we cannot rely on a reliable, credible deterrent, we have got to develop our own capacity." In a sense, our extended deterrent, it seems to me, is a proxy for those other countries developing their own capability, which, from a proliferation point of view, is a good thing. Ms. Bunn?

MS. BUNN: I am one who has reluctantly come to the conclusion that we do need a TLAM/N in this discussion group that we are talking about. I am sorry, SLCM/N. Did I say TLAM/N? SLCM/N. Many battles in my career over TLAM/N. And why was I reluctant? Because SSNs do have many missions, and I also fought many battles with the Navy. I am just not sure the Navy will ever fully support this because we fought many battles trying to keep TLAM/N in the force before it was retired.

So that was my reluctance. But I do think that we need it for – if we decide, if the U.S. decides we need it for deterring and responding to limited use, then we should go forward with it. We should fund it. Right now I do not think we can

pin it on allies are asking for it. I have not heard a lot of allies talking about it specifically. Usually in conference if it is raised, it is raised by Americans. But I suspect they do not want to get in the middle of a policy debate in the U.S.

SENATOR KING: But they want the extended deterrence.

MS. BUNN: They want capabilities. If they are concerned that either adversaries do not think we would use the capabilities we have now because they are not appropriate – they are too high yield, they cannot get through, various reasons we would not use those – then they have good analysts. They want us to have something that we can see actually, that our adversaries could see us actually employing. If they do not think you would ever use it, then it does not deter.

SENATOR KING: Well, I am over my time. I want to turn it over to Senator Fischer. But the whole point here is to never have these weapons used, and we do not want an adversary to think that they can use a low-level weapon and pay no significant price, which gets us to the place where we are in a nuclear confrontation. Senator Fischer.

SENATOR FISCHER: Thank you, Senator King. On Saturday, March 25th, President Putin, he announced that Russia is going to station tactical nuclear weapons in Belarus, and he also informed us that an agreement had been made with Belarus to equip 10 of the Belarusian aircraft with tactical nuclear weapons, along with their Iskander mobile short-range ballistic missile system. It was fascinating, I thought, that he did this. Obviously, I got a very strong message that he would do this, first of all, take the action, and secondly, tell us what he did. Mr. Weaver, let us start with you. How do you think that this action is going to change the nuclear deterrence dynamic that we see in Europe right now?

MR. WEAVER: So, Senator, I do not believe Russian deployment of some of their non-strategic capabilities to Belarus changes the military equation in Europe at all. It is a political move. The Russians have long complained that we have nuclear weapons forward based in Europe on the territory of our allies and that we have nuclear sharing arrangements with them.

SENATOR FISCHER: And they made it clear. This was not for Belarus to use. It was for Belarus to use for Russia.

MR. WEAVER: Right. But the Russians have somewhere between 1,500 and 2,000 non-strategic nuclear weapons today. They are embedded throughout their conventional forces across the Russian Federation. Moving a few of them forward now into Belarus really does not change the military equation. They range anybody in NATO that they want to with the existing systems they have, including the SSC-8 ground-launched cruise missile that has a range of about 2,000 kilometers, that violated the INF Treaty and led to our withdrawal.

So they can threaten NATO throughout its depth, and they have always had the ability to move Russian forces forward into Belarus in the event of a conflict, in any event. So I do not think it changes the military equation but it is a political signal.

SENATOR FISCHER: Dr. Roberts and Ms. Bunn, do you agree with that?

MS. BUNN: Yes, I would agree with that. It will be interesting. The Russians, and now the **Chinese** in NPT meetings have complained about NATO nuclear sharing, and I do not know if this will change their rhetoric on that at all. Probably not.

SENATOR FISCHER: Dr. Roberts, anything to add on that?

MR. ROBERTS: Same essential view. The Russian military strategy for local war, which is what it claims to be fighting, as opposed to a regional war against a large coalition, that strategy is in part about keeping it local, keeping the outsiders out, casting a long shadow, making us fearful that if we engage we will pay a terrible price. And President Putin has to keep beating that drum one way or another. And I think this is just one more sign of his effort to alarm us, but it does not change the military equation.

SENATOR FISCHER: Dr. Roberts, between recent news of Russia's noncompliance with the START Treaty, **China's** modernization rate, and North Korea's daily shows of force, we also see Iran's nuclear weaponization capability. How should the U.S. focus our regional nuclear strategy? If we are talking about regions, how do we focus that?

MR. ROBERTS: Well, I do not think we have the luxury of prioritizing. One of the big questions in the Two Peer Study was do you prioritize one over the other, or the first contingency over the possible second one? And our conclusion was,

we cannot afford to do that. Too much risk. It is giving a PineGreen light to aggression in the area you have not prioritized.

So, my take on this is that the complex landscape you describe renders essentially out of date the bet we placed in 1991, the bet that we could do regional deterrence essentially with our strategic forces and a little bit of theater nuclear force. And the rebalance has to come between those two elements of the bet we placed. So, with the rest of the group, I think more weapons and a more diverse toolkit at the regional level are in our interest and in the interest of our allies.

But let us be clear. I do not think any of us are arguing that the U.S. and its allies should have a regional nuclear posture that is symmetric to that of Russia or **China** or North Korea. We have different strategies, so we need different numbers and different types of weapons.

SENATOR FISCHER: Would you say there are plans out there now that would address that? Has planning taken place? Do you know?

MR. ROBERTS: Capability development or operational planning?

SENATOR FISCHER: Both.

MR. ROBERTS: Both.

SENATOR FISCHER: Both. You said it. It is not the same. It is not the same.

MR. ROBERTS: Correct.

SENATOR FISCHER: You have to address each one individually. So do you know of any plans that have taken place either within government or outside of government?

MR. ROBERTS: So for development of new capability, the Administration certainly has a plan.

SENATOR FISCHER: Right.

MR. ROBERTS: In my view, it needs to evolve in the direction we have talked about. Operational planning, of course the STRATCOM commander stands ready to do what might need to be done tonight. But I bear in mind the findings

of the National Defense Strategy Commission of 2018, which concluded, as you will recall, that the United States could well lose a war against a nuclear-armed rival, largely not because we have the wrong capabilities, but because we have not understood the nature of the war that is being waged against us. We have not done our intellectual homework. We have not developed the concepts we need to organize our operational planning and conduct operations. I do not know to what extent that remains true, but that was an important marker that rang a lot of alarm bells for me.

SENATOR FISCHER: Thank you. Thank you, Mr. Chair.

SENATOR KING: This is the third Armed Services hearing I have been at today, and the question that you just touched upon has come up at all three, which is the change nature of modern warfare, and the likelihood of a modern conflict starting with cyber, directed energy, electronic warfare, space capabilities. I asked the Marine general today if his landing ships would be okay with no GPS and no communications. That is the world that we have to live in. So this is beyond the scope of this hearing to some extent, but I would be interested in your thoughts about, the cliché is generals always fight the last war. Are we doing that or are we adequately taking account of the change strategic, not only the strategic landscape but the technological landscape. Wars are often won on whoever has the newest technology. Mr. Montgomery, your thoughts.

MR. MONTGOMERY: I do believe we are. To some extent, at least when we talk about this in the nuclear domain I think we may overemphasize some of those changes in technology. They are very worrisome. They are concerning. They certainly pose risks to command and control, which is a serious concern. But at the end of the day, when we are talking about strategic stability between major powers, it ultimately comes back to the ability of one side to pose a disarming threat against another one. And right now we have Russia, that does not quite pose that capability but is a nuclear peer, **China** apparently aspires to be a nuclear peer, and those buildups are not unrelated to but separate from those very novel aspects of future warfare.

So I think while important, it is still essential to keep our focus, at least again in the nuclear domain, in terms of delivery system warheads, yields, accuracy, et cetera.

SENATOR KING: Well in command and control, I have always said we do not

have a triad. We have a quad, that command and control is an essential –

MR. MONTGOMERY: Absolutely.

SENATOR KING: – part of the credibility of the deterrent, which is essentially providing a deterrent. Let me ask another question. We have talked about peer adversaries and Russia and **China** particularly. What about nuclear-armed countries that we are not engaged with directly, India and Pakistan being an example? What role, if any, do we have in their potential use of nuclear weapons? One of the things that I think that may be deterring Russia is after Hiroshima they have never been used. Nobody wants to be the first person to use them again, and I think that is something of a deterrent. I suspect that **China** is communicating that to Russia. What about Pakistan and India? Ms. Bunn, do you have thoughts?

MS. BUNN: That is a hard one because I think we have less influence. They are not our adversaries.

SENATOR KING: Right.

MS. BUNN: And they are not our formal extended nuclear deterrent allies. And so they are in a different category as far as how we deal with them and how we can influence them, how we deal with them as adversaries or how we can influence them as allies.

SENATOR KING: The last thing we want is to normalize the use of nuclear weapons.

MS. BUNN: Absolutely. I would certainly agree with you that trying to make sure that nuclear weapons are not used again is one way to keep that diplomatic psychological pressure on them not to be the ones to do it.

SENATOR KING: Other thoughts on this issue?

MR. WEAVER: Could I add one thing on it, Senator?

SENATOR KING: Sure.

MR. WEAVER: So I think another aspect of the question you are asking is when and if there is another limited use of nuclear weapons in a conflict, what lessons will all the other nuclear states – and non-nuclear states – draw from

the outcome of that use? And that is another reason why it is so important that we focus on this problem of being able to deter limited nuclear use effectively, with high confidence, and second, if deterrence fails in a limited way that we have the ability to counter the effects of adversary-limited nuclear use so that they do not win the conflict as a result. They are not seen as having won because they used nuclear weapons, because that would create a huge proliferation problem around the world.

SENATOR KING: Well, I commented in my opening statement about the doctrine of "Escalate to Deescalate." The Russians have told us that is their doctrine, and for us to not take that seriously it seems to me is a major strategic and tactical mistake. I mean, Maya Angelou says when somebody tells you who they are, you should believe them. And they have told us who they are on this subject, and we need to be sure that we have a credible deterrent that does not involve a massive strike, which they do not think we will do, if they use a one-kiloton weapon on Kharkiv. Dr. Roberts?

MR. ROBERTS: I just wanted to add a comment on your comment about no one wants to break the taboo. I hope that is true, but President Putin seems like a guy who has gotten a lot of power and influence out of breaking taboos. You know, in 2014, he stood under the banner when he explained his annexation of Crimea, the banner saying, "New Rules or No Rules." And he has been living the "no rules" game and generating a lot of power and fear accordingly. The taboo against the employment of nuclear weapons is one of the last major taboos he has not broken. I hope he does not break it, but I am not convinced that he thinks preserving the taboo is important.

SENATOR KING: Well, we have to give him a reason in terms of what he will reap as a consequence –

MR. ROBERTS: That is right.

SENATOR KING: – beyond the taboo. We cannot rely on the taboo to protect us, I think.

MR. ROBERTS: That is right. Absolutely.

SENATOR KING: I would like to like, are either of our Senators intending to come back? Okay. Senator Fischer.

SENATOR FISCHER: I just want to really thank you for being here today. I think these discussions are extremely helpful to, first of all, educate the Members of Congress, but also to educate our public as well to the threats that this country faces. When we look at North Korea, they have various missiles. They have ICBMs. They have long range, short range. They have an underwater nuclear attack drone now that is out there. You know, we obviously are developing things as well, but when we see other countries doing this, how does that affect us in our decision-making, to counter and provide deterrence, not just for the weapons, which we have talked about – tactical weapons, weapons in theater, the changes we see there regionally – but also the platforms? Dr. Montgomery, you are nodding your head.

MR. MONTGOMERY: I often do. Two points. I think there is a quantitative dimension to this and a qualitative dimension. So quantitatively, when you see countries like North Korea building up their forces – and we are not talking about a rogue state with 10 or 15 nuclear weapons, but potentially a regional nuclear power with 50 or 100 nuclear weapons – those numbers matter. And it becomes potentially more difficult for the United States with say, 1,550 treaty-accountable strategic warheads, to manage threats from and deter a peer in Russia, an aspiring peer in **China**, a North Korea with a significant arsenal. That is a lot of weapons to measure up against.

In terms of the qualitative dimension, if you look at the diversity and capabilities that a country like North Korea is investing in – and, Senator King, this ties to your question about Pakistan and India as well – Pakistan also has made investments in low-yield nuclear capabilities. So now we see Russia placing significant emphasis on low-yield nuclear weapons, Pakistan placing significant emphasis on low-yield nuclear weapons, North Korea investing in low-yield nuclear weapons, and potentially **China** exploring low-yield nuclear weapons. We should probably take that message that a lot of adversaries and potential adversaries or countries we have difficult relations with see a lot of value in these capabilities and think about what deficiencies in our arsenal might exist that could potentially undermine deterrence, relative to those systems.

SENATOR FISCHER: And it also limits the options that can be presented to our President to make decisions in a short period of time, in response to actions of other nations. Correct?

MR. MONTGOMERY: Absolutely. You know, we talk about our strategic forces, one of their key attributes being promptness. Promptness, I do not think, is an attribute you would ascribe to some of the limited low-yield nuclear options that we have. And that does mean that the options available to the President in a crisis that are time sensitive are limited.

SENATOR FISCHER: Any other comments on that?

MR. ROBERTS: Sure. You asked about how we react watching these developments. And for a long time we watched and did not react. For a long time it was unthinkable to us that these things mattered because, after all, we had conventional dominance, we had confidence in our strategic nuclear deterrent, and we did not see – the problem, the threat remained unthinkable. It was just implausible to most in the U.S. national security community that an adversary might ever contemplate the possibility of employing a nuclear weapon in a conflict with the United States and somehow escaping intact.

And our view began to shift, principally as a result of the Russian annexation of Crimea, a wake-up call. As Ash Carter said at the time, it was time for a "new playbook on Russia," and we discovered a need for a new playbook on North Korea, a new playbook on **China**, and now we are all trying to create that new playbook.

SENATOR FISCHER: Thank you. Thank you, Mr. Chair.

SENATOR KING: Well, again I want to thank you. I cannot help but mention something that bothers me in this field. It turns out that no President since Jimmy Carter has participated in a nuclear exercise, an attack exercise, in real time. I find that puzzling. I mean, I do not the President to walk into that room for the first time in a real-life situation. I have gone through several of those exercises, and it is terrifying but also educational. So that is neither here nor there, but I find it striking that, as I say, no President, apparently since Jimmy Carter, has participated in such an exercise, which I do not get.

Thank you all very much for your testimony today. It has been very informative, as I said, and helpful to this subcommittee as we prepare for the National Defense Act that is coming up in a couple of months. Thank you again. The hearing is adjourned. [Whereupon, at 5:47 p.m., the hearing was adjourned.]