

America's Missile Strategy: Countering and Defending Against Threats from Iran and North Korea

*A Conversation with Rebecca Heinrichs, David Maxwell, and Behnam Ben Taleblu.
Moderated by Bradley Bowman.*

MAY: Good morning I'm FDD's founder and president and I'm pleased you could join us this morning for a conversation on *America's Missile Strategy: Countering and Defending Against Threats from Iran and North Korea*. With release this week of the Administration's 2020 defense budget request, we thought it an important time to discuss the Iranian and North Korean ballistic missile threats and how the Department of Defense can best respond. FDD has for many years been covering the missile threats from these rogue regimes, but we are pleased today to meet under the purview of FDD's newly launched Center on Military and Political Power, CMPP.

CMPP seeks to promote, on a bipartisan basis, a better understanding of the strategies, policies, and capabilities necessary to effectively deter enemies of the U.S. and our allies, and make sure we have the capability to decisively defeat any who are not deterred. CMPP provides rigorous, timely, and relevant research and analysis. We have a senior group of former U.S. officials who are serving on our board of advisors, which is chaired by H.R. McMaster.

Before we begin, by way of housekeeping, I should note that today's event will be livestreamed and we are also live on C-SPAN. Many thanks for those who came out today to be with us, and for the many others who are joining in remotely. I encourage guests here and online to join in on today's conversation on Twitter, @FDD. I also encourage you to check out our website. We can now be found at FDD.org. And there you can find FDD's latest research, and subscribe to receive information on our latest research projects and experts. I'd also ask that you silence your cell phones.

And with that, I'm about to turn the conversation over to my colleague, Brad Bowman. Brad, as you may know, is Senior Director of FDD's Center on Military and Political Power, which you can follow on Twitter @FDD_CMPP. Brad previously served as a National Security Advisor in the US Senate as well as an active duty US Army Officer, Pilot, and Assistant Professor at West Point. With that, Brad, over to you, thank you.

BOWMAN: All right. Thank you, Cliff. As Cliff mentioned, my name is Brad Bowman with FDD's Center on Military and Political Power. I want to welcome each of you here in the room today. Welcome to those of you watching online as well as those watching on C-SPAN.

The focus of our event this morning is Iran and North Korea's missile threats, and how the DOD should respond. To explore this important and timely topic, we have an impressive panel that I'd like to introduce now. Beginning with Rebecca Heinrichs, in the middle.

She is a Senior Fellow at the Hudson Institute where she specializes in nuclear deterrence, missile defense, and counter proliferation. She previously served as an advisor on military matters and foreign policy to Representative Trent Franks.

David Maxwell, closest to me, is a Senior Fellow here at FDD. He's a 30-year veteran of the United States Army, retiring in 2011 as a Special Forces Colonel with his final assignment serving on the military faculty teaching national security strategy at the National War College. He focuses on security developments on the Korean Peninsula.

And on the far end is Behnam Ben Taleblu, who's a Senior Fellow here at FDD, leveraging his subject matter expertise in native Farsi skills. Behnam has closely tracked a wide range of Iran related topics, particularly nuclear non-proliferation in Iran's missile program.

So you can see, we have a good panel. I'm eager to get the conversation started. Very quickly, let me set the scene in hopes of providing some useful context in catalyzing our discussion.

As many of you may know, earlier this year the Trump Administration released the 2019 Missile Defense Review. The Missile Defense Review reiterated what the previous National Defense Strategy said, and that is that we confront a more complex and volatile security environment than we have seen in recent memory.

And certainly, the missile threat is part of that. The overall conclusion of the Missile Defense Review was that when we look at countries like China, Russia, Iran, and North Korea, we kind of see three broad trans-one. We see increasing capabilities of existing missile systems. We see them adding new unprecedented types of missile capabilities.

And they're integrating those existing and new capabilities more thoroughly than ever into coercive threats, military exercises, and war planning. So in short – in sum – the missile threat to the United States and our allies is increasing – is growing both in scope and severity. So while we could talk for hours about the Russian and Chinese missile threats, for today – for the purpose of today's event – we're going to focus on Iran and North Korea. Some quick comments on that.

Iran – the Missile Defense Review said that Iran is, “Increasing the size, accuracy, range, and lethality of its missile arsenal.” On North Korea, the MDR said that Pyongyang has quote, near the time, unquote, when it can possess the capability to credibly threaten the US homeland with an ICBM.

Today's event, as I mentioned, I think it's timely and relevant. A couple quick reasons. One is there was a story in *Foreign Policy* in the last 24 hours talking about the recent space-launches of Iran and the implications of that militarily, including for the potential development of an Iranian ICBM.

And then we also saw this morning a *Washington Post* story talking about Kim Jung-un maybe making an announcement regarding the possible resumption of ballistic missile tests. And then if that's not enough for you to make this relevant and interesting, of course, this week we had the DOD budget submission laid out.

So with that, I would like to get started. And I'd like to start with Rebeccah, if I may. For those, Rebeccah, who have not followed these issues as closely as you have and others have here, if you wouldn't mind can you start by giving us the big takeaways from your perspective on the

2019 Missile Defense Review. What does it tell us? What do you think they got right? And maybe where did they fall short?

HEINRICHS: Sure. Thank you. And I'm so happy to be here this morning. Thank you all for coming. FDD has done excellent work on the threat from Iranian missiles in particular, on missile defense. I was once a fellow here at FDD. And I can't say enough positive things about the organization. So, it's my pleasure to be here in this forum.

So the Trump Administration's Missile Defense Review. One of the things to notice right off the bat is it's Missile Defense Review, not Ballistic Missile Defense Review, which is what the Obama 2010 BMDR was. It was just looking at the ballistic missile threat.

We've opened the scope here. So now we're looking at just the missile threat. And that's because our adversaries have really taken big steps technologically on the kinds of threats they have. And now, we're also looking at the cruise missile threat as well as some other more complex threats coming out of Russia and China, the hypersonic glide vehicles, and some other things.

So – that's – it's a different – and it falls in line with the new era of great power competitions. So the National Security Strategy, the National Defense Strategy, the Nuclear Posture Review, and then, now this, the Missile Defense Review. The way I described them is they all, they all fit together like Russian nesting dolls. That's what they're like.

And so, the Missile Defense Review kind of follows that trend. Now, that doesn't mean – some people have asked me, “Does that mean that we're no longer worried about the terrorism threat, or that we're no longer worried about Iran and North Korea?” Of course not. And especially on the missile piece I'll say why that would be a wrong way to think about it.

But, it does mean that we are now trying to sort of do a little bit of course correction to make sure that we're looking at the high-end sophisticated threats that are coming out of our peer competitors, Russia and China. And China in particular in terms of the “peeriness” of the two.

Now, what the Missile Defense Review states is, as we've discussed already, the ICBM threats coming out of North Korea and Iran are still concerning. And when I say ICBM, you know I'm talking about the missiles that can actually reach the United States homeland. During the Trump – whenever President Trump and Kim Jung-un were going back and forth during “Fire and Fury” era, that's what I call it because everybody knows what I'm talking about when I say that.

That was right after the North Koreans had successfully tested a massive ICBM, the Hwasong-15. They rolled that out and launched it, and it was bigger than anything that we had ever discussed in open setting. Some people will say, “Oh, but we don't know if they've miniaturized a nuclear warhead to put it on that missile.” You don't have to. It's so big that – I mean – it was so big I mean – you could carry a lot mass in the nosecone there.

So, the thing that we haven't seen them do, which is why if you look carefully at the wording from the Missile Defense Review it says that they're nearing a credible threat. And what that means is we have not seen them successfully launch it – launch the missile – and then have it re-

enter the atmosphere, and successfully, obviously, put the warhead on its intended target with some reliability.

But, if you look at even just previous open-source, the Defense Intelligence Agency discussed this in an open setting in a Congressional Hearing several years ago that with everything else we've seen the North Koreans test, that even if it's not reliable, meaning even if they wanted to roll out some of these things and launch them all at once, and maybe not reliably put the warhead on the intended target, it could get pretty close.

And all you really do – I mean it doesn't matter for the US purposes – I mean, it matters. But, it doesn't, it'll be a really bad day if that warhead still lands in Kansas, versus wherever it's supposed to land, you know, and that would be even further than where they might want to land it on the West Coast.

So, so, we should not rest soundly knowing that the North Koreans haven't proven this through a test. And then, we should worry about – I'd make one more point, is about President Trump often talks about the fact that the North Koreans have stopped testing. And he talks about that as an achievement of the diplomacy that he is engaging in with Kim Jung-un. I would say he's partially right.

You do need the continued testing to increase the reliability, and to get up to that credible threat where you've proven that you have the technology to actually do it. You need testing for that. But, you can improve the capability without testing by increasing the quantity of missiles that you have.

And there's no sign that the North Koreans have stopped producing missiles during this time of détente between the United States and North Korea. And so they can improve the capability, and improve their confidence that they would be able to successfully land a missile that can hit US territory simply by producing more of them.

Now, if Kim says we're going to stop talking and we're going to start testing again, I think that would be a very, very serious error on the part of Kim because that is something that President Trump really has put a lot of weight on of where he said that he's going to go in a different direction. And he has never taken going back to really hard maximum pressure, if diplomacy wasn't going to work with Kim.

Now, another interesting thing about this Missile Defense Review is it makes the very important point that missile defense is – we need it because we have entered a new era of – a new missile era. So not only are missiles increasing worldwide, they're increasing in number. They're increasing in sophistication among our adversaries. And they proliferate.

You can proliferate. So simply because North Korea has a particular missile technology doesn't mean that you can not worry that another country has it because in the past we have seen cooperation between Iran and North Korea. When they test these space-launch vehicles, that technology can be directly used and applied to an ICBM. So when Secretary Pompeo says that the Iranians cannot launch a space-launch vehicle without the United States understanding that as

an ICBM threat, that's why, and as an ICBM test, that's why because the technology is directly transferable to an ICBM technology.

But the Missile Defense Review makes a really important point, is that missile defense is two things. There's a couple of things. One, it's stabilizing. So in the past, you'll hear some people make the argument that if the United States increases its missile defense systems too much, that will create a destabilizing situation between the United States and our adversaries.

The Missile Defense Review makes it clear that no, no, missile defense is stabilizing. That to have a robust missile defense system that gives the United States an increased confidence that we might be able to defend that which we value most in an initial strike. That we can protect our ability to respond. That gives the United States some elbowroom in terms of knowing if they want to go with full offensive retaliation. It gives them some decision space. You can see that with the Israelis.

You can see this every time the Israelis are using Iron Dome is it, I often say, Iron Dome has saved Palestinian lives because it has given the Israelis the option to not respond with overwhelming force because it gives them the ability to intercept the missiles that are headed towards more populated areas, or areas that they want to protect.

And the same concepts can be with the United States. It gives the United States some options in how to respond. And it also can, well, this is I think one of the most important things that this Missile Defense Review makes the point now, and then I'll briefly say that I don't think that the budget quite matches what the Missile Defense Review says. But, it also has a deterrent effect, and it should if we're doing it right.

Because – if we can – we don't have to be able to intercept every single missile. That's a strawman when people say, "Oh, Rebecca, you just want to be able to sit there and catch every single missile that the adversary can throw at the United States." It's not what I want to do. It sounds nice. It's unrealistic. What I would like us to do is have a missile defense system that is so strong, an architecture that is so strong, that it can just create in the minds of our adversaries enough doubt that an initial strike would be worth the cost.

We might be able to intercept it, hopefully, we're able to intercept more than just one or two strikes. And that might give them enough thereby denying them that initial political gain they might think they have for an initial first strike, which could dissuade them from that initial active aggression in the first place.

So missile defense, if robust enough, and if we've proven enough through testing that we can create a doubt in the minds of our adversaries not to launch that attack. It's stabilizing, it creates a deterrent effect, and it also strengthens diplomacy. Because, if our missile defense systems are strong enough, we can show the North Koreans and the Iranians that we have the ability to do this. That perhaps, they might want to, you know, they can come so that we can take that option off their plate. And they might be more interested in having a diplomatic conversation with the United States.

Now, just briefly with the budget, or do you want to talk about that in the next round?

BOWMAN: Could we hold on that?

HEINRICHS: Sure.

BOWMAN: Thank you. Well, that was an excellent overview. Thank you. Behman, let me go to you, if possible. You focused on the Iranian missile program as much as anyone. Can you provide an update on the Iranian missile program? Perhaps starting with the regional threat it poses, and then talking about what Rebecca touched on in terms of the eventual, potential threat to our homeland.

TALEBLU: Sure. Thanks Brad. And thanks FDD for having me, and you guys for turning out today. I can think of no better thing to do on a Friday morning than talk about flying tubes. So, thank you for coming out. And just every time you do hear bad news very briefly on what Rebecca was saying. Every time you do hear bad news about one failed interceptor test, then all of a sudden you hear this outpouring of military contractors, non-pro specialists, arms control experts deriding missile defense.

I wish we just had that video segment of Rebecca saying, "Missile defense is stabilizing," and every rational she just provided because that is the rebuttal to what you are hearing, to what you do hear when you hear that, "Oh, some interceptor failed. Oh, this is too costly, or this is actually destabilizing."

It is exactly that argument that rebuts everything that you have been hearing in Washington for quite some time. On the Iran front, if I may, think about alliteration when you think about the threat. The alliteration that you need to think about is procurement, production, and proliferation.

Procurement because Iran's ballistic missile program was initially very heavily foreign sourced. It started during the Iran-Iraq War. Don't want to re-litigate this history, but Iran went to Syria, Libya, and North Korea got some Scuds, got knowledge about how to use these "tels," transporter-erector-launchers. And thus, became the basis for Iran's liquid fueled ballistic missile program.

Also in the 1990s, Iran got this missile called the No-dong-A from North Korea. It's been really the gift that keeps on giving. It's a medium-range ballistic missile. It's really in some ways is Iran's ultimate deterrent. It's Iran's preferred nuclear delivery vehicle. That missile, the No-dong-A, birthed the Shahab-3, which birthed in fact a whole series of space-launch vehicles. So that No-dong-A and North Korea's gift to Iran in the 1990s really was a force multiplier.

So when you think about the missile threat from Iran, that's the procurement angle. Iran has gone abroad purchasing whole systems. Overtime, its also purchased cruise missile systems. We know that in 2000 or 2001, Iran got a land-attack cruise missile. A nuclear capable land-attack cruise missile from Ukraine. Thus, diversifying its missile threat, not just ballistic, but cruise.

Then, once it got these systems, it reverse engineered them. Thus, production begins at home. So procurement, production. For over a decade, the Director of the National Intelligence, and other US intelligence agencies have been saying that Iran has the largest ballistic missile arsenal in the region. How did it get to be this way?

It kept producing what it knew how to reverse engineer again, and again, and again. And in so where it lacked a qualitative edge, where it lacked accuracy, where it lacked coercive capability, in the late 1990s, and in the early 2000s, it added redundancy to the quantity of its arsenal. Thus, making sure it could saturate ballistic missile defense in the Middle East. It could overwhelm its adversaries, and thus deter any act of aggression against the Iranian homeland while continuing to add a much lower level in the Middle East, export its revolution abroad.

And then once you got into systems that were smaller to smuggle, or when Iran wants to do things beyond rocket proliferation in the Middle East, but enter missile proliferation in the Middle East, Iran began proliferating systems to its constellation of friendly forces, this Shiite axis of resistance that you hear about.

The Assad regime for instance, has the Fateh-110. That's Iran's single-stage solid-fueled short-range ballistic missile. The Fateh-110 is Iran's most accurate platform in general. It's the one that Iran has refined for at least four generations. It's birthed two different names. You know, Iran could have simply just painted the missile body and called it something else. But, we know it's at least birthed a couple different systems that have a slightly better circular error probability, a slightly better range of accuracy for the Iranian missile.

And its given weapons not just to these Arab forces across the Levant and Mesopotamia, but to the Houthis in Yemen. And when you look at Iran's investment in Yemen, it really is the missile proliferation gift. Because, there Iran has provided the Badr-1. It's the only instance of finless short-range ballistic missile provision on Iran to not even a proxy, but simply to a partner in the Middle East.

So Iran's willingness to proliferate these missiles that it has procured, produced, reverse engineered is a sign that it knows that missiles do change the regional bounds. That missiles are effective. That missiles can be used to deter adversarial attacks, not just on its homeland, but against its partners' homeland and the territories its partners control.

And this is actually creating – this is actually eroding – the balance of power in the Middle East. Iran is not some conventional military monster. But, it is a potent, lethal, asymmetric military threat to the US as well as to the US allies and interests in the Middle East. So when you think about the Iranian missile threat in the region, you should think of this alliteration. Procurement, production, and proliferation.

The Iranians will continue to rinse and repeat that. In 2018 for instance, there was a busted Iranian national trying to smuggle a Kh-31. That's an anti-ship cruise missile. Again, through the same place they went shopping in 2001, Ukraine. Iran knows where it likes to go shopping for foreign missile supply, foreign tech, as well as where it wants to send missiles that it either procures or produces.

So that's the regional. And then if you stratify to the homeland, there is in this town a short historical memory. There are military experts, arms control experts, whom I love, respect, admire, have read growing up, and have informed my thinking on the Iran missile issue. But, I think on the SLB-ICBM are respectfully, incorrect on this.

India is one country you should look at to learn about the Iranian move from a satellite or a space-launch vehicle program to a potential intercontinental or ballistic missile, even intermediate-range ballistic missile. The reason I say that is while America and the Soviet Union really are the gold standard for how to deal up an ICBM program. Rapid testing, an all-weather missile force, taking a military industrial base, making it civilian and then rapid and continuing to flight test that, that's not what most developing nations have in terms of their own industrial base.

You have to look at the capabilities you have. And India's Agni program, and we should all go back and Google this later, is a nice model because India, during the Cold War, responding to different regional changes in the balance of power. It was part of the world's non-align movement then seeking to deter Russia, has status considerations of itself, has security considerations about itself vis-a-vie Pakistan.

Looks to rely on a network of foreign suppliers to move from a space or satellite launch vehicle program to an ICBM. So when you think about Iran's various space-launch vehicles, the Siphre derived from that North Korean gift, the No-dong-A, or the Simorgh, which relies on the No-dong-A engines as well as staging things that Iran has learned to develop potential satellite system that Iran can put into low earth orbit. Those aren't civilian only.

Now, I do hedge against the threat when I say that, "Yes, the Simorgh isn't currently optimized to deliver a warhead." The Simorgh is best suited at present, given the staging, and given what we know about how the Iranians stage the tanks within this system to enter low earth orbit because we don't know enough about Iranian reentry vehicle technology yet to say that this can actually reenter the atmosphere at this certain speed and deliver this warhead to this target.

But, Iran is still experimenting with it. And Iran is learning from failed tests. And what Americans and Russians have said for generations about failed tests that they inform our science and our data, Iranians learn too. So just because an Iranian missile test fails, does not mean, or a satellite test fails, does not mean that it doesn't provide the regime in Tehran with useful military information about its program.

And as Iran looks to grow the accuracy of its missiles, it will revisit this kind of temporary consideration it has vis-a-vie the Europeans right now regarding the range. And I'll stop there, if you want to unpack that, or we can poke and prod at it later.

BOWMAN: Outstanding. Thank you. So let's transition to North Korea. Just real quickly if you wouldn't mind, David, an overview of, if you would, of North Korea's –

MAXWELL: Sure. Well, really hard to follow those two great presentations. But, they haven't left much to talk about. But, I will focus, first, just let me say one thing. We say that

North Korea's missile threat is part of its asymmetric capabilities. You know, it is really, certainly it's asymmetric, but it is really a core capability that it uses. Not only for military purposes, but for diplomatic purposes and support its blackmail diplomacy. Its coercion, extortion, and I'll talk about that.

But, in the region, you know, North Korea poses a threat to US forces, to Japan. It's – you know – Scuds, No-dongs, and the like there. So, you know, we talk about missile defense in the region. We talk about Patriot PAC-3. We talk about Aegis. We talk about THAAD. I'm sure everybody's familiar with the controversy about that, and what that caused between South Korea and China.

But, you know, the ideal in the region would be to have an integrated missile defense, US, South Korea, and Japan. Of course, we know that – that is really unlikely given the friction between Korea and Japan. But, Japan has moved out on of course, Patriot PAC-3, Aegis Ashore, Aegis ships. And the Koreans have, you know, embarked on a program for the Korean Air Missile Defense, or the Kill Chain, which is really trying to target North Korean missiles before launch, which I think is really difficult to do for many reasons.

But, we really have, we don't have an integrated missile defense in the region. And I think that's a shortfall. And that's something I think we should all press South Korea and Japan to try to press forward on that. But again, as we know even with a joint intelligence sharing agreement, that was hard to negotiate. And that's proven very difficult.

So integrated missile defense, while an ideal, it's probably unlikely. But, it's still something we should aggressively pursue because it's important for many of the reasons I think Rebeccah – for deterrence – and have that capability that raises doubt in the minds of Kim Jung-un.

The ICBM threat and Rebeccah covered that great. But, I would just say that, Hwasong-15, obviously, it's big. It's long. It can carry a lot. Obviously, that size will – and the size of the warhead – depending on how far it can fly it's open to interpretation whether it can reach here, or the West Coast, or the Midwest. But, one thing I think that we should look at, the Hwasong-14 did test a reentry vehicle.

And there's some controversy over that. The observation was that it was it burned up in the atmosphere because they observed fire around it. From watching the movies like the *Right Stuff* and everything, when anything reenters the atmosphere there's going to be a lot of fire around that. So, I think that had they developed a reentry capability, I think the jury's still out. But, they certainly want to do that.

The other thing that doesn't get much coverage I think, is and you know, this also is a little bit perhaps out there. But, is EMP, the EMP threat.

BOWMAN: And EMP stands for?

MAXWELL: Electro-magnetic pulse. So, an atmospheric burst that would really destroy all the electronic infrastructure that it can reach.

MAXWELL: We haven't seen any tests of that, but they have said they're pursuing it. And of course, there are some analysts, Peter Pry, a major one there, who really focuses on that. And I think that we should consider that. Although again, we see no evidence of, or that I'm aware of, that they're moving towards that.

Benham has really talked about proliferation, but North Korea is a proliferator. And we really need to understand that. It is a money-making venture for them. It supports the regime. And we really need to press countries to not allow proliferation. I mean, I would really like to see the Proliferation Security Initiative reinvigorated to try to cut down on that.

Lastly, I'll just talk about – they've used missiles for its blackmail diplomacy, as provocations. As provocations to gain politically economic concessions. When you go back to the tape on Japan in 1998. But, their missile test, their missile launches are all, well, really to do either two things. To advance their program, their actual tests, or they're to send signals. Of course, we have to interpret what they mean by that.

But, it's clear that they use them to get concessions, or to get a response from South Korea, from Japan, from the United States, and from the international community. And so it's an important part of its diplomatic arsenal, or what we should call really political warfare. And that's something that a non-military use of its military capabilities to create political effects.

Lastly, war time is the most important. I mean, these missiles are critical to the war plans. And I would say that if war broke out on the Peninsula, you will see immediate targeting with their entire range of arsenal and missiles at all the aerial ports of demarcation, the seaports of demarcation in South Korea to prevent US reinforcement. But also the seven United Nations bases in Japan, which are critical intermediate staging bases to flow forces from the United States and from Japan to Korea in war.

So these missiles for North Korea are asymmetric. They have political component, diplomatic component, blackmail diplomacy, and a proliferation money-making component, and a war fighting component. So it is really one of the treasured swords, along with cyber, that Kim Jung-un wields to advance his interest.

BOWMAN: Great. Thank you, Dave. What a great overview of the threat. In 30 seconds or less can you give us an update on what the report is regarding Sohae? What are they doing, or what do we think they're doing in Sohae?

MAXWELL: So Sohae is the liquid-fuel launch fixed site. And they've launched their Sohae, or the Unha, or Taepodong-2 missile there – satellite launch – they test engines there. And they said they were going to take it down. They partially dismantled it last summer. And then, recent reporting that we've seen from CSIS and others that they have rebuilt it.

And so now the question is, are they going to embark on some kind of tests? There was speculation today. I mean, there's wide range of speculation. One of them of course is that they're sending a signal to us. And of course the reports from Choe Son-hui today, her statement that

Kim Jung-un's considering ending the diplomatic engagement with the US and returning to testing. So that's one.

South Korea intelligence reported to their general assembly that they think they're building it up so that they can take it down again. And that, which is quite an interesting – You know.

BOWMAN: Thank you. No, that's good. I want to be able to go to the audience around 10:30 for questions. So a few other quick things I want to cover. What a great overview of the threat. One of the things this new Center that we have here at FDD is trying to focus on is based on this understanding the threat. Don't stop there. Ask the second, in my mind, equally important question. What does the United States, what does the Department of Defense specifically do about this? In terms of strategies, policies, and capabilities.

So Rebecca, in that spirit, I'd love to go to you quickly. Just some quick numbers for context. I mentioned the budget request was announced this week. For FY2020 the Administration requests a total of \$13.6 billion to support missile defense, defeat and defense programs, which is actually a modest reduction from the \$13.9 billion from last year, which is interesting in light of everything we've just said.

And then if you look specifically at the Missile Defense Agency, they requested \$9.4 billion for FY20, which is a slight reduction from the FY19 requested level. But a very significant reduction from FY19 enacted level, for approximately 10%. And that's not getting a lot of reporting. You don't compare requests and requests in my mind, you would compare enacted to requested. And it was about \$10.5 billion including MILCOM last year. So about a 10% reduction in light of this growing threat, which I think is interesting.

So Rebecca, as you look at, you touched on this earlier. I'm eager to hear your thoughts. As you compare the budget requests of the MDR what are your major takeaways?

HEINRICH: Sure. Well, it's actually, a complicated answer. But, a couple things. One, I was disappointed. I do think it is useful to some degree to know what this President requested last year versus what he requested this year. Even though really it's the enacted number. But, that's Congress coming in and adding more money.

But, the Trump Administration asked for \$9.9 for MDA last year, billion. And then now this year, they're asking for \$9.4 billion. And then there's missile defense defeat, defense and defeat numbers are, and that's additional funding that requires – That comes from outside the missile defense agency budget, but will contribute to the missile defense mission.

Now, one of the reasons that there is a dip is because during when President Trump and Kim were kind of trading insults going back and forth, and we were ratcheting up maximum pressure with sanctions. President Trump to his great credit also increased the missile defense budget on the fly right then with a supplemental funding. And he increased the number of ground based interceptors that would be deployed on the United States homeland.

So remember, when we say missile defense everyone, it's actually a system of systems. You have the homeland missile defense system. Then you have regional missile defense systems.

Some of them, now that line is sort of being blurred between regional and homeland because we are going to be testing an SM-3-2A, which is our missile interceptor that we've been cooperating on with the Japanese. We're going to be – it's an IRBM interceptor – but we're going to be testing against an ICBM-class target, which the Missile Defense Review announced.

So some of these can – and they got longer legs – and we're going to test them against longer targets. But, the homeland missile defense system is the Ground-Based Midcourse Defense system. That's the interceptors that are deployed in Alaska and California. And we started deploying that in 2002 when President Bush withdrew the United States from the ABM Treaty.

And so there was increased funding. That's why you're going to see a bigger bump last year because of the procurement dollars to get those interceptors in the ground during that time to rush that. So we bought those. So we're talking about procurement dollars. Often times, when you're procuring things that's more expensive than when you're doing research and development of things.

This budget that we have this year is going to be studying some things because of this new change to shift towards the sophisticated threats. The hypersonic glide vehicles coming out of China and Russia. So when you're researching and developing things it's going to be a little less money than you're buying gigantic missile interceptors.

So to their credit, so that kind of explains that. I will say though, I do kind of want to hit him a little bit harder because we should be really looking to boost up homeland missile defense, like I said, because the North Korean missile threat has not gone down simply because they've ceased testing for now. The Iranian missile threat just because they're not testing it right now does not mean that they're not learning, and they're not making improvements to the program.

And so the United States really should be looking at what we can do to increase our testing program, test it more, get some more test targets, perhaps increase the number of ground-based interceptors that we do have. We're going to shoot more than one interceptor at an incoming missile. And so we're going to run out of missile interceptors pretty quickly.

Another important point here, when we talk about how the enemy tests. The enemy – the reason that the North Koreans have been able to quickly advance their missile program is because they're not afraid to fail. They test, they fail. They learn from that failure, they test, they fail. They learn from the failure. The United States is much more failure adverse, much more risk adverse.

So we don't test as frequently. We learn from our tests. We certainly improve them and learn from our tests. But, I have long recommended now that we've got to get to the point where we can go a lot faster than what we're going, then the pace at which we're going.

And then you'll often hear that the current Ground-Based Midcourse Defense system that we have is only about 50% reliable. You'll see that in every mainstream article that's every printed on this. That is incredibly unfair. We do not look at the North Korean, or the Iranian missile programs and count how many failures they've had, or the lifetime of those programs and give them a grade.

We look at what they've been able to do most recently, and that's the capability they have. That's the same thing with our Ground-Based Midcourse Defense system. If you look at the interceptors that are today deployed in the ground, so not the ones that we first deployed initially. But, the ones that are there now, they were five for six in the test, as currently configured, with the current upgrades that they have.

That's much better than – But, we need to continue testing them. So it's better than what it often gets accused of being, but it's still not where it really should be.

BOWMAN: You mentioned the 44 ground-based interceptors. As you mentioned, Alaska and California, and during the NDA briefing they talked about how there's going to be a two year delay on the redesign Kill Vehicle, and the impact that's going to have on the additional 20 GBIs that we're going to put in Alaska. Can you just quickly provide 30 seconds of thoughts on that? What the development is? And how significant or not you think it is?

HEINRICHS: Yeah. We're trying to improve the Kill Vehicle on these missile interceptors. It's, you know, these things are hard because you're working with multiple contractors to get these things right. It's disappointing. And we don't know at this point if that's actually going to affect the delay of the interceptors because I've heard that you can still deploy interceptors as they currently are. And you can retrofit, and fix them after they're in the ground.

So I don't know if that's actually going to delay the deployment of those interceptors. But, again, I would just say we got to get to the point where this country is not afraid to fail. So that we can fail, and fail quickly. So that we can get back up and get these things improved because the phrase that you'll hear the Department use a lot is we have to move at the speed of relevance. And that couldn't be more true in the case of missile defense when our enemies are moving very quickly.

BOWMAN: That's great. No, thank you. I hope you're right. I hope there is a workaround. In the budget briefing this week, the Deputy Commander of MDA did say that the two year delay on the RKV was going to postpone the deployment of the 20 additional GBIs from 2023 to 2025. I hope you're right that there's a workaround. But, like you said, if there's a North Korean ICBM coming, we're going to fire more than one. And so, in my view, the more we have the better.

HEINRICHS: If I could say one more thing too. And there's other ways to get around this too. They don't have to be fixed. The GMD system, right now it's in Alaska and California. There's other concepts that are mobile ground based interceptors. So that doesn't, and the Department has already looked at the potential sites of where the United States might put other interceptors besides the Alaskan, Californian. Somewhere in the Midwest.

That environmental impact study has already been completed. So the Department should be ready to go if we needed to go quickly and actually put something else there.

BOWMAN: Can I follow up on that?

HEINRICHS: Sure.

BOWMAN: So just for those of you who don't follow this as well as Rebecca does, we have the two sites California and Alaska that are very well positioned for the North Korean threat. They are arguably less well positioned in terms of battle space for an eventual Iranian ICBM. So putting a third ground-based site in Ohio, in Michigan, in New York for example would give us, as people have said, an open-source, additional battle space for an Iranian ICBM that could be coming in future years.

And the whole thing that we keep saying is we want to stay ahead of the threat. Interested in your thoughts. If we want to stay ahead of the Iranian ICBM threat should, and MDR talked about this, they said this would provide value. But, in the budget we saw, correct me if I'm wrong. We saw nothing on that.

HEINRICHS: No, there's none in it. And what the MDR said – it hedged – and this is essentially part of its hedging posture that if we saw the Iranian threat mature, become more mature, that we might revisit this possibility. And it's because the system is so expensive that they're really putting their money elsewhere.

I think that that's unwise. I think especially because you have the environmental impact study already completed. But, they didn't name the site, name the location. It's still I think down to three different possible locations. Name the site, Pentagon! Name it, you know it. It's just you're keeping it. Let's name it and let's do what we can now while we have an opportunity to get prepared. So that if we need to roll out and populate it with more ground-based interceptors that we're able to do that.

And then the last thing I would just say too. This is the only homeland missile defense system that we currently have. It protects the country, all 50 states against an ICBM. It is better than it gets credit for. It still needs to be better. But, we also need to move towards other technologies. We need a space-based sensor layer.

A space-based sensor layer is going to qualitatively improve the GMD system now. The other missile defense systems we have now. And the reason that is, just real quick, is because if you just – we use sensors to be able to see these. To be able to see and track these missiles that are coming towards the United States. And then we had to discriminate the chaff, and the decoys, and the countermeasures that our adversaries might have to kind of trick our warhead.

But, if we have a space-based sensor layer, we have a much better ability to track these missiles from birth to death. So we don't lose them whenever they go over the horizon. We can just see what we're trying to kill a lot better. It gives us more space to be able to look at it and shoot, look, shoot, hit the interceptor.

So now space-based sensors, I understand that they're pricey. But, we've gotten to the point where every single administration says we need to do this and then they don't do it. This Administration has been very forward-leaning in saying we need it, we need it, we need it. And then not providing the funding for it.

So I just think that this can has been kicked way down the road to the point we've been long out of road. And we need to get a space-based sensor layer.

BOWMAN: Excellent. Thank you. All right. Love to go to audience questions if you could raise your hands, identify yourself, and your affiliation, and stand up if possible. Great. We have a question here in the front.

KAKATERA: Thank you guys for a really wonderful presentation, all three. What's your sense of where we ought to go with who's faced with either Iran or North Korea?

HEINRICHS: Sure. Thank you so much, Peter, for that question. Not only does our missile defense system – it's a system of systems – so different systems that intercepts different kinds of threats. It also intercepts the incoming missile in different phases of the missiles flight.

We do not have a boost phase. That's when the missile right after, when it's boosting in a stun phase. We have midcourse defense. We have terminal defense. We don't have boost phase defense. Having a boost phase defense capability would be the optimal place to intercept a missile because one, you intercept the missile over its own territory. It wants to put something nasty on that and send it to one of our allies or to the United States, well guess what? It's going to land on its head. Okay, so that's one benefit.

Two, you're going to intercept a missile before it has a chance to release its decoys and counter measures while it's boosting. So you don't, right now, when we talk about the Kill Vehicle. One of the reasons we're trying to get this new Kill Vehicle is because we want to be able to discriminate between the really nasty part that we want to hit and everything else around it. And then we have an MOKV, Multiple Object Kill Vehicle, that's a follow on to the RKV.

And we're doing all of that so that we have an increased reliability to be able to intercept a missile because of all the stuff they're putting on it. If you can intercept a missile in the boost phase, you really get at that problem a lot more effectively. It's also in the end cheaper because if you're using something like directed energy lasers to hit in the boost phase, you've got an endless magazine of opportunities to shoot at this thing as opposed to the kinetic Kill Vehicles that we have now.

So we want to get a boost phase. But, it's difficult to do because we either have to be right on top of the threat. You got to get close to it. If you're talking about China or Russia, they've got air defense systems. So it's hard to get close enough to it to intercept it there. It's got to be really fast, it's got to be super, super fast like speed of light fast lasers.

So there's different things that we're thinking about. This Administration is determined, they say, to get to this advanced missile defense technology and intercept in the boost phase. There is

some seed money. Some money there to look at that. They want to look at the space-based interceptor capability, but they're just studying it again.

So having a – being able to utilize space better to get that missile defense mission. Especially, when you're talking about the boost phase defense is the way to go. And there's, at this point, there's no policy or legal restrictions for the United States doing that. There's no treaty that prohibits the United States from utilizing this space domain for missile defense purposes.

It's just, the United States just has to make that decision to do it and resource it properly. But, that's all there. So very important that we move in that direction. That's going to get at all these threats. Especially, as the, just the number of missiles on the planet just continues to increase.

BOWMAN: Benham, do you have anything to add?

TALEBLU: No, I strongly concur. We do need birth to death tracking.

BOWMAN: Excellent. All right. Any other questions? Okay, I have a quick question. Rebeccah, and I kind of ask this in the context really for any of you, start with Rebeccah. In kind of the context of domestic politics, and a reluctance to sometimes spend money when it's perceived to be helping our allies or partners, but not us.

In the missile defense context, I note in the budget request they included just some examples very quickly, \$543 million to support staying TPY-2 or transportable radar surveillance systems, which are in places such as Japan and Israel.

So someone might look at that and say, "Well, that's Japan and Israel. We don't care about that." Or, \$500 million in FY20 for Israeli programs continue long stay support for Iron Dome, David's Sling, and Arrow. We know that the Department of Defense just deployed a THAAD system as part of its dynamic force deployment to Israel for the first time.

And then another example we have in the United Kingdom. A Ballistic Missile Early Warning System, which provides missile warning surveillance not only to the UK, but also the United States. So interested in your thoughts on how the US currently works with our allies, how it benefits Americans, and what more we should be doing in terms of working with our allies?

HEINRICHS: Yeah, absolutely. First, I will say there is something to this public sentiment that the United States continues to pay a lot for our ally cooperation when our allies could really pay more. There is something to that. And this is not a new phenomenon, Trump Administration, or it's like Donald Trump just realized this was happening. Now, he has a little bit – He doesn't have as much of a soft touch as President Obama had when he talked about it publicly.

And the reason for that is because he's really trying to shake up, get our allies to contribute more. Because, it's – especially – we'll just take one little piece of the puzzle. Take our cooperation with Japan for instance on missile defense.

It is hugely beneficial, not just the Japanese, but to the United States for our forward presence in the region. If you just look at the amount of trade that goes through that region. If the United States is going to be able to have a free and open Indo-Pacific, we have to be able to get in there. And China is doing everything that it can right now. It's been planning for years while we've been, I think it's fair to say, asleep at the switch to deny the United States the ability to move in that region.

And so you know what? When you think about missiles, a lot of people will say, "Well, Rebecca, the North Koreans, the Chinese, would never launch a missile at the United States. That would mean nuclear war. And why would you think that?" That even if that – first of all, we don't know the future. And we don't know at what point an adversary might decide to make a move, an act of aggression.

But, these missiles have incredible coercive capability. And so they can keep us out of a region because we might not be willing to accept a particular risk to be able to move into a region if they have this capability to hold our carriers at risk, which the Chinese are looking to do. The Chinese have a massive missile force. I know this is about North Korea and Iran.

But, since missiles don't stay in the same place, I think it's important to note that. The United States is pulling out of the INF Treaty because the Russians haven't been abiding by it. And we're the only ones that have been parties to it. The United States and the Russians. The Chinese, more than 90% of their entire missile force would violate the INF Treaty had it been party to it. Huge, massive numbers of ground-launch missiles that can hold at risk United States bases in the region, in Japan.

And so anyway, so the forward presence, it is hugely important to the United States. If we want to continue having trade and peace in these regions that we're able to get in there. Missile defense is a major part of it. To paraphrase, my friend Tom Karako over at CSIS, has said this so well, has said, "Missile defense really is about America's place in the world. Are we or are we not going to insist on having access to the Indo-Pacific?" Or, access to the Med.

You look at what's going through there. If we're going to do that, we need to be able to actually protect our allies, and I mean, our basing that's there. And our ships and our carriers that are in those regions.

And then obviously, in the case of Israel. I believe that the United States security is tied to the security of Israel. And so, and that region in particular, and the Israelis have been incredible partners on the forefront of developing missile defense technology. And that we are now able to benefit from as well in the case of Iron Dome.

BOWMAN: I think that's what a lot of perhaps, Americans don't fully appreciate is how much the United States benefits from our missile defense cooperation with countries like Israel. We arguably are getting as much as we're giving in that relationship when it comes to missile defense.

And the recent THAAD deployment, if you're a military planner in Iran, it creates issues for you. Suddenly, you have this new capability, right, Behnam, how does this change the thinking of an Iranian military prior to the THAAD deployment?

TALEBLU: Well, Israel is a really great example because it has redundancy to a capability Israel already has. I mean, if you're a GCC country and you want to offset the rising Iranian quantitative and qualitative missile challenge, you really just need to look West. You need to look towards Israel. And look at what Israel has done to create a stratified robust integrated multi-layer missile defense system.

So you have anything that defends against rockets at different ranges of missiles. You have Iron Dome. You have Arrow. You have David's Sling. And now you have THAAD. These are going to be better integrated with one another. They're going to continue testing them. Unfortunately, they continue to see quite a bit of operational use with Iron Dome because there are rockets that are fired at Israel on a quite regular basis as we saw the other day.

So, these are systems that are really at the forefront of the nation's security. And so if Iran wants to dampen Israel's security, it's going to have to overcome this. And I mean, currently, it's still tilted in Israel's favor. But, what Iran is doing in the region by proliferating these systems, go back to the P again, is to think about ways that it could saturate Israel's missile defenses. Think about ways that it could qualitatively improve its allies that are on the border of Israel, such as the Assad regime with a provision of gyroscopes who sell Iran these guidance kits that make its allies and proxies as dumb weapons, smarter weapons.

BOWMAN: Excellent. Thank you. Coming back to the issue of kind of cost sharing, and I thought you phrased it Rebecca in a nuanced and good way. David I know you recently published an op-ed on the cost sharing idea that are going to make our allies and partners pay 150% of the cost of hosting US forces. In the Korea context, why would that be a problem? From your perspective if we're demanding that from the South Koreans? Both their missile defense and more broadly.

MAXWELL: Yeah, the cost plus 50. I was happy to hear the acting Secretary of Defense yesterday say that's an error and we're not going to do that. But, I do think that was the opening gambit for the burden-sharing with Korea. So I think we've probably already tested it in the Korean context. But, I think we – Korea's now paying almost a billion dollars for support to US forces there. I mean, they did increase significantly in this last round.

But, we have to remember that we are in Korea for our interest. And defense of Korea and preventing war in the Peninsula is in our interest. And I think Rebecca laid out for our missile defense point of view, we need more bases to support radars. And I think if we ever did boost phase, I think we'd want to have an aircraft stationed in the region there to be able to operate.

So overseas basing is important to us. Korea has responsibility for, the Combined Forces Command to defend South Korea. They're chartered with that. It's only 28,000 US forces. Those 28,000 US forces don't – won't win the war, but, they do deter war. And we know that from

interrogating the highest level defectors that have come out. So that deters war. And that is in our interest to do that.

Paying cost plus 50%, the other aspect of it is, the financial aspect. If we withdrew our forces, we would absorb a huge bill to our taxpayers to station those forces back in the United States. So there is a cost effective aspect of this because we don't have the facilities to base them.

I mean, if we return the Seventh Fleet from Japan, the Air Wings, and about 70,000 forces, Marines and Army, from Korea and Japan we'd be building new bases in the United States at taxpayer expense. So, we do benefit from having the burden sharing, the host nation's support. But, I think cost plus 50% is going to cause some political problem with our allies.

HEINRICHS: Yeah. If I could just say, just real quick. But, I wouldn't want to leave the impression from my own statement though that – and I don't think I have – but, our allies can pay more. Okay – so this is not – the danger I think we can get in – we can pull up on either side of the horse. We can say we do need it, therefore we got to foot the bill. But, our allies have kind of been taking advantage of that for a while now.

And this is not like I said, everybody – not everybody – but many people talk about it. When you talk to forces that are deployed whenever they come back and they talk to members of Congress, they talk to think tank analysts, previous administration officials, they'll all say the same thing. And we know what they're spending, how they're spending their money in other ways. So it's not like there isn't money there.

These are pretty well – these are wealthy nations. And they do have more. And so we, remember, these are not just military allies. These are political allies. Especially in the case of NATO. And so we have our missile within a European-phase re-dactive approach that we have laid out to go into these NATO countries, is to provide protection against threats from the Middle East.

Now, we're going to sort of gear towards some threats coming from Russia as well too. But, these are, it's in their interests just like it's in our interest. And so, I think that there is – and we've been – this Administration has been able to get more money out of our allies because of the approach that the President has. I call it tough love. I don't know if our allies would consider it –

BOWMAN: Was it President Trump, or was it what Russia did in Crimea that resulted in that increase in defense spending in Europe?

HEINRICHS: Well, I will say too – well, it depends on who you talk to of course. Some people don't want to give this President for anything. But, I would actually say it is both. And if you talk to Secretary Mattis, Secretary Mattis came out of the NATO Summit, this most recent Summit and said it was the most successful summit he has ever participated in. And it's because why?

When President Trump turns to Angela Merkel and really kind of gives her a hard time publicly. And it makes everybody nervous about the – What is he doing? I mean, and it makes our NATO

allies nervous too. That you have a President who's not only just saying this, he means it. And there's going to be consequences if you don't pay more.

And so I would actually say I sort of predicted that the NATO Alliance is going to be in better shape than when the President inherited it. And I think that, that has actually happened in terms of NATO's posture. It is becoming a more muscular alliance. You do want to make sure that we're aligning politically and not just militarily.

But, there is something to it. When we see that the South Koreans are spending money in ways that we wouldn't even want them to in terms of their diplomatic entrees into the North Korean regime. We see what they're doing. And it's my view that Kim Jung-un's gotten over his skis in terms of his approach to Kim Jung-un –

MAXWELL: Moon Jae-in. Moon Jae-in.

HEINRICHS: I'm sorry, what did I say?

MAXWELL: Kim Jung-un.

HEINRICHS: Moon Jae-in. Moon has gotten in over his skis. Yeah, Kim is way out, over the slope.

Yeah, that Moon Jae-in is – So whenever you see that kind of thing, it does kind of cause you to wonder. We're providing the security for them and for us. And we should have more say about kind of how things are going. And they do need to contribute more to their own security as well.

BOWMAN: Did you have a comment?

TALEBLU: Yeah, just some alliances, some partnerships are more problematic than others. But, in the areas where you do share the same assessment of the threat, it's very important to your action. In the area of the Persian Gulf for instance, the GCC countries, some of them have expressed interest in purchasing or acquiring American-made missile defenses.

There's the case of Saudi Arabia and THAAD, whether or not that's going to get held up depending on how you'd define that it's going to be another political football for this Administration. But, it's clear that the threat is there. It's clear that there's an intent for America to provide a threat. But, it's also providing a hedge against the threat.

But, it's also very important for us to have no old goals. An old goal I'd like to point to is Summer of 2018 – late in Summer of 2018 it was reported that the US was stripping four Patriot batteries out of the Persian Gulf in a desire to kind of shift towards Asia, pivot towards Asia.

There has to be a more cost effective way to deal with the North Korean missile threat that does not require denying yourself the capability to offset the Iranian missile threat. And then this is very important because the last – Iran in the past year-and-a-half has launched military operations using its ballistic missiles.

The last time it did that was in 2000, or 2001 against an opposition group in Saddam Hussein's Iraq. So, Iran has launched 19 ballistic missiles from its territory, publicized it into the backyard of its Arab neighbors. This means it knows there are no missile defenses in the region against it. This means it knows America will not quickly moved missile defenses into the region against its missile assets, which are mostly road mobile. And it knows that he can get away with it.

And it publicizes it. And it does it again and again. And we're in an era of not just qualitative changes to the Iranian missile program, but growing confidence in Iran's ability to use these systems and not even have them be intercepted, or offset if it uses them against anyone in the region except Israel.

I mean it's – they're not going to fire it on Riyadh, but they will give it to them the Houthis to fire on Riyadh. They're not going to tell the government in Baghdad, but they'll fire it on Iraqi Kurdistan. They obviously, don't have to give the Assad regime warning, but twice they have struck ISIS positions in Eastern Syria.

Obviously, there is a slight bit of denial and deception to the Iranian missile program. It's nowhere as qualitatively capable or robust as the North Korean one, but it's a threat that's growing. And if your partner or your ally in the region sees the threat the same way you do, that's the predicate for talks. That's the predicate for military sales. That's the predicate for integration.

BOWMAN: Thank you. Question right here I believe.

DES ROCHEs: Yeah, sure. Thank you. Dave Des Roches from Near East South Asia Center. I'd actually like to dispute two things to the panel. First off, Jim Mattis saying that that was his most successful NATO summit. He's only been to two. So the bars a little bit lower.

HEINRICHS: Well, he said it was his most successful summit that he's participated in.

DES ROCHEs: Okay, well –

HEINRICHS: I mean, summit generally they have papers sort of – you know – so there's not a lot that sometimes comes out of these things. But, he said it was successful. And if you look at their meeting –

DES ROCHEs: No, I understand. I'm just saying that as Secretary of Defense he only went to two. The Saudis and the Emirates between them have intercepted over 100 missiles. So areas that missiles have been launched into, I mean, they are the most effective missile interception force in the world. Arguably with the Israelis, but then you get in a definitional argument over missiles versus rockets.

TALEBLU: Important argument by the way.

DES ROCHEs: Well, it's yeah, yeah, it is.

TALEBLU: Iran's proxies are firing more rockets than missiles at Israel.

DES ROCHES: It is an important argument. I take it, but there's also issues of distance and things like that. So they've got over 100 intercepts to the extent that there have been successful Iraqi or Houthi missile launches. Generally, they've just been launched in places that aren't –

TALEBLU: Aren't guarded.

DES ROCHES: They aren't defended. So I think that this idea that our partners are ineffective. I mean, Kuwait –

TALEBLU: I didn't mean to give the impression that our partners are –

BOWMAN: Sir, I need your question. Do you have a question for –

DES ROCHES: Well, no, I don't. So thank you very much for your patience.

BOWMAN: It's a welcome comment. But –

DES ROCHES: Thank you for your patience.

BOWMAN: All right. No, absolutely. Right over here.

PERKINS: Hi, Charles Perkins, APAC. Three tremendous presentations. I'd like to really congratulate you for a panel, a single panel on both Iran and North Korea. At the same time, I think it can't be stressed enough how in many ways this is just one single threat because, and Behnam referenced this, a long history of collaboration between the programs.

Especially now as the two countries move forward into potential ICBMs, production, a precision revolution. They can leapfrog each other. And again, I totally support David's reference to counter-proliferation efforts because it's the geography in many ways that's the biggest barrier. Although that obviously, doesn't stop the knowledge being transferred.

Things like PSI and other kind of proliferation. I'm just wondering though if you could, any of you, talk a little bit about where you see the greatest problems in terms of one of the two being behind and being able to draw upon the expertise either operational, or testing, or in the research labs where they don't have to go through the R&D because the other side, the DPRK has done something already, and vice versa.

The Iranians have more operational experience that they can share with the North Koreans. Where do we really have to look at for that? And also, just really an observation. We tend to focus on this problem, rightly so, strictly as a nuclear proliferation issue. That this is primary purpose of especially, the ICBMs clearly.

But, with the precision revolution, and also simply – I hate to draw on the trope the cost of the interceptor versus the cost of the missile itself, the rocket. But, the bad guys are going to figure out at a certain point if we can just produce enough cheap, perhaps quite precise missiles and

rockets, we have a fair shot at trying to swamp any system. And that's clearly the case in Southern Lebanon. And it's also the case in the Southern part of North Korea.

BOWMAN: All right. Thank you.

HEINRICHS: I'll take the last one first, and then if you want to talk about their cooperation. And I would just say that the calculation that you're going to look at the cost of the missile interceptor versus the cost of the missile. I would say that the better calculation is to look at the value of the thing you're protecting versus the cost. And what you're willing to do to protect that.

So, every time I hear that, and I think why is it that we've gotten into this rut where we think about the cost versus the interceptor versus the cost. The enemy doesn't care about the cost. I mean, they want us to spend more money on defenses so they might overwhelm it. But, we're still going to have a value that we attach to the thing we want to protect. And you have to defend it.

The other thing is we're not going to just sit here with a catcher's mitt and try to catch every single – the whole raid of missiles that come at us. But, we can do some damage limitation. You can have – in the effects that deterrence fails – in the event deterrence fails – which hopefully, we have such a robust defense so they think it's not even worth it, which there is evidence in some regions of the world that we have dissuaded different missile deployments and attacks because of missile defenses that are there.

It's a hard thing to prove because you're proving, you're trying to prove a negative. But, you also want to be able to absorb an initial attack. And that you can respond and retaliate with offensive capability. And so it is really is we need to have a better plan for offense defense integration, which this Missile Defense Review again, to its credit moves to the improvements in the Missile Defense Review are in policy and strategy more so than conceptual, than what I would say the budget fully matches.

But, this MDR came out very last minute when the budget was already sort of in the works. And now that we have the House of Representatives has switched parties, it's going to be very difficult to get the President's agenda fully implemented anyway with this budget. But, your point is well taken. But, we do want to have this offense defense mix so that missile defense is cooperating and complementing, and coordinating our offensive strategy in the event that deterrence does fail, and we end up having to go war.

And I just – not to belabor this. But, the point that I heard was that Mattis was making it over his career. He has engaged in many summits. And the point that he was just making, and it's just that does seem to be, this had an effect of President Trump really putting the squeeze on our allies publicly in a much more serious way has resulted in more contributions from our allies. We might be uncomfortable with it, but it's giving some results.

TALEBLU: Yeah, just very briefly to the gentleman's comment. And then to Charlie's. I did not mean to give that impression at all. I'm fully supportive and cognizant of the GCC missile defense capabilities. I simply think that more is better.

And the success that the UAE have had are really only against one class of Iran's many classes of SRBMs. So more is better. Respect the current capability. Let's help bolster that capability. And yes, the Iranians are firing in the Levant. But, that's because they're cognizant that there are no missile defenses. I'm not saying that the deserts in Syria need to be protected, but if it's an area that the Iranians are striking or if you have forces there, then maybe it's a reason to consider a based missile defense at least on a temporary basis.

Especially, when this land ridge, thank you sir, is being entertained by the Iranians from Iran all the way to the Eastern Med. To Charlie's point about what Iran and North Korea could be doing. I read an article with the former FDD North Korea person, Anthony Ruggiero about what Iran might look to purchase from North Korea's missile arsenal.

It's been a while since Iran acquired a whole system. There are two whole systems that Iran acquired that are really force-multipliers for its ballistic missile arsenal. The one is the No-dong-A, which became the Shahab-3, which is the basis for the liquid fueled MRBMs, nuclear capable. The other is BM-25/Musudan, whatever you want to call it, which became the Iranian Khorramshahr, which is relatively failing its flight test. But still a qualitative change to Iran's liquid fueled ballistic missile-based inventory.

Both of these can carry nuclear warheads. What's the next possible one? Iran could look to purchase wholesale from the North Koreans if that's something they want to do. Anthony and I speculated back in 2017, I think, I at least will still stand by it. That it could be a two-stage solid fuel MRBM. Iran has one called the Sejil-2.

I haven't really seen it tested since 2011, or 2013. I think it's because some of its tests weren't so successful. But, if the North Koreans have this, it could be something the Iranians want to look to purchase.

MAXWELL: For Charlie's question there. I don't have the technical ability to say who's ahead or not. But, they do have a symbiotic relationship. And I think they benefit from that relationship. In terms of proliferation, I think you're exactly right. It's not just nuclear proliferation. It's not just missile proliferation. North Korea proliferates everything.

I mean, down to small arms and training as well. And I think that needs to be addressed on a global scale. But, of course, we focus on nuclear missile because those are the biggest threats.

HEINRICHS: And the North Koreans, the UN report, was kind of saying that the North Koreans are still even during this time of diplomacy and diplomatic engagement sending chemical weapons' technology to Assad's regime in Syria. So this is a really bad, nasty proliferator of the whole gamut of dangerous weapons.

TALEBLU: And just to kind of, an article that I had written with the current North Korea Senior Fellow, David Maxwell. We had also mentioned North Korea's military proliferation to Iran includes a whole host of things, including submarines. So it's not just in the missile domain. It's everything in the military.

BOWMAN: Excellent. Well, our time is winding down. I want to give each of you one last 30 seconds literally, closing thoughts, any important policy descriptions, that sort of things. So we'll start here with David, and then go down that way.

MAXWELL: Yeah. I think North Korea's missile capabilities are critical to its survival. We always focus on its nuclear, but the missiles are the key tool there across the spectrum as I mentioned. Diplomacy, information and influence, and war time, and proliferation to make money. So they're really critical.

I think we do need to focus more on North Korea's proliferation. And shut that down as well as find, you know, we've got to improve our defense system. I think that's really the hardest. In defending against the missile threat is both in the region and the homeland is the most difficult thing.

BOWMAN: Thank you.

HEINRICHS: Yeah. Just to reiterate, missile defense is stabilizing. We've gotten to a point where we can no longer only defend against limited threats and not look at the more sophisticated threats because the line is being blurred between what is even limited and what is sophisticated as missile technology continues to improve and the number of missiles continues to increase. And so we have to finally make the shift in terms of putting resources – putting our money where our mouth is.

Getting space-based tracking layer in place so that we can really take our missile defense system to the next level. And you don't hear it very often, but the Chinese and the Russians work on missile defenses themselves. And so everybody's got to act in their own interests. And because we're in a new missile era, we've got to take missile defense to the next level.

BOWMAN: Thank you.

TALEBLU: So much I want to say. I'll squeeze it in, I promise. The first is that you hear this statement from the Iranians and this is coming from an Iranian-American. But, you hear this statement from the government in Iran that the West is trying to disarm us unilaterally. That the West is against all of our missiles. That armistice is all we have.

And if you look at it, their missiles are a supplement for their very, weak, grain conventional 1970 supplied air force. But, we shouldn't let that argument sit at face-value. Iran did protect itself against Saddam's Scuds in the 1980s. And the Iranian people did have a defense when the regime lobbed missiles back at Baghdad and back at Iraq.

But, it's very interesting to note that today, in 2019, that which makes Iran insecure is its missile force. So that which kept it secure in the '80s is making it insecure. It's driving the GCC and Israel together. It's driving America to be further into the regions. So, this is really a source of insecurity for the Iranian people.

So people just tend to cite these statistics that everyone loves missiles and Iran. It's not just the regime, it's the people. I'm pretty sure the people are cognizant that it's the regime's missile testing and all this missile proliferation in the region that is driving everyone to focus on the Iran threat.

So a more responsible Iranian government hopefully, one day, would be cognizant of that development. In the absence of that, I would say our European partners need to stand with us. They need to stand up on the Iranian missile challenges. Great having them stand with us at the UN Security Council. But, we need to translate word into action.

The last time there were EU sanctions on Iran's missile program using missile and nuclear authorities from the EU council was in December 2012. From the JCPOA until present, there have been 49 Iranian missile tests. That includes SLV tests and military operations as well as tests that have failed, and tests that have succeeded. That is 49 too many. Time to bridge the transatlantic gap on the Iran issue. And work on tempering the full scope of the Iranian missile threat.

BOWMAN: Please join me in thanking our panels for a great discussion. Thank you guys.