



ASTROS 2020

PROCAD DEFESA

BOLETIM ASTROS



Apoio:



BOLETIM ASTROS

A Newsletter da Equipe Procad ASTROS



ASTROS 2020

O Boletim Astros é uma publicação mensal que reúne informações sobre Segurança Internacional, Defesa Nacional & Forças Armadas, Tecnologia, Mísseis & Sistemas de Defesa e ASTROS & Indústria de Defesa. Elaborado pela equipe de pesquisadores do Projeto Procad Defesa ASTROS, o boletim oferece um panorama geral de notícias e artigos publicados em portais especializados, revistas, jornais, magazines, periódicos, sites institucionais e think tanks com foco nas temáticas mencionadas.

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Linha do Tempo

Destaques do Projeto ASTROS

2020

O PROJETO ASTROS, COM INÍCIO NO FINAL DE 2019, PASSOU POR DIVERSAS REUNIÕES ADMINISTRATIVAS E DE ESTRUTURAÇÃO, AGREGANDO MAIS MEMBROS À EQUIPE E DEFININDO AS ATIVIDADES QUE TOMARAM LUGAR DURANTE O ANO DE 2020, ESPECIALMENTE NO SEGUNDO SEMESTRE.

NESTE PERÍODO, TAMBÉM FOI PRODUZIDO O PRIMEIRO SUMÁRIO EXECUTIVO DO PROJETO, DOCUMENTO QUE SERVIU DE BASE PARA DIVULGAÇÃO DAS ATIVIDADES DA EQUIPE E PRÓXIMAS ETAPAS DA PESQUISA.

TAMBÉM EM DEZEMBRO, A EQUIPE FINALIZOU A PRIMEIRA VERSÃO EM INGLÊS DO SUMÁRIO EXECUTIVO DO PROJETO, VISANDO COOPERAÇÃO COM INSTITUTOS DE PESQUISA INTERNACIONAIS

ENTRE AS VÁRIAS ATIVIDADES PLANEJADAS E PROMOVIDAS NESTE PERÍODO, ESTIVERAM AS REVISÕES DA NOTA TÉCNICA 1, A PRODUÇÃO DO BOLETIM ASTROS E OUTRAS NOVIDADES QUE ESTÃO PARA CHEGAR EM BREVE.

Junho

Início dos Seminários Internos do Procad Defesa ASTROS, promovido pelos pesquisadores do grupo para maior integração entre as equipes.

Visita da Equipe ao Comando de Artilharia de Mísseis e Foguetes em Formosa, no dia 19 de junho. Participação: Dr. Érico Duarte, Dr. Alcides Vaz, Cel Oscar Filho, TC Luz, General Lange, contando com a apresentação do Sumário Executivo preliminar e agenda de colaboração.



Julho

Participação do Seminário Doutrinário de Artilharia de Foguetes, nos dias 30 e 31 de julho. Os pesquisadores Dr. Érico Duarte e Dr. Eduardo Svartman participaram de debates e apresentação de propostas de material doutrinário sobre míssil de cruzeiro.



Setembro

Visita da Equipe de Brasília ao Escritório de Projetos do Exército (EPEX), no dia 04 de setembro de 2020.



Novembro

Realização do I Workshop Projeto ASTROS 2020, com apoio do Centro de Estudos Estratégicos do Exército (CEEEEx). O evento foi sediado na ESG Campus Brasília no dia 03/11/2020 e teve como objetivo promover subsídios para a produção da primeira Nota Técnica do projeto. No dia 04 de novembro, houve reunião geral da equipe do projeto.



Dezembro

Visita dos Coordenadores do Projeto, Dr. Alcides Vaz, Dr. Augusto Teixeira Jr. e Dr. Érico Duarte, ao Espaço Avibrás de Tecnologia e Inovação (EATI) em São José dos Campos, SP, no dia 11 de dezembro de 2020. A equipe foi prontamente recebida por Eduardo Leonetti e pelo Cel. Hélio Cordeiro.



2021

Janeiro

Foram feitas reuniões para o planejamento de 2021, incluindo planos de atividades, seminários e divisão de trabalho para a produção da segunda Nota Técnica pelo grupo.



Fevereiro

Foi finalizada a primeira Nota Técnica referente ao projeto, com perspectiva de lançamento oficial durante o mês de março.



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1. Relações entre EUA e Turquia são tensas no início da era Biden

15.02.2021

Defesanet

<https://www.defesanet.com.br/otan/noticia/39656/Relacoes-entre-EUA-e-Turquia-sao-tensas-no-inicio-da-era-Biden/>

Oscilantes na era de Donald Trump, as relações entre os Estados Unidos e os Estados Unidos e a Turquia já parecem tensas sob o novo governo de Joe Biden, e a disputa entre os dois países, que, no entanto, são aliados, pode piorar.

Se a ordem na qual o novo presidente americano contata seus pares é um espelho do estado das relações bilaterais, Recep Tayyip Erdogan deve se preocupar: mais de três semanas depois de Biden assumir a Casa Branca, uma conversa por telefone ainda não aconteceu.

Nem o chefe da diplomacia dos EUA, Antony Blinken, conversou com seu homólogo Mevlut Cavusoglu.

O diálogo entre Washington e Ancara certamente não passou por seus melhores momentos nos últimos quatro anos, mas Trump e Erdogan "tinham uma relação pessoal calorosa", lembra o pesquisador Steven Cook, do grupo de especialistas do Conselho de Relações Exteriores americano. Uma "amizade" que os democratas sempre fizeram questão de criticar.

Trump "protegeu a Turquia de muitas medidas punitivas possíveis", disse o pesquisador Galip Dalay em um artigo do grupo de reflexão Brookings Institution.

Um exemplo disso veio no final de seu mandato, quando finalmente decidiu sancionar a Turquia pela aquisição de mísseis russos S-400, conforme exigido pela lei dos Estados Unidos, mas após ter resistido por muito tempo. Além disso, as sanções foram mínimas.

"Suposto parceiro"

Antony Blinken convenceu vários senadores republicanos durante a audiência parlamentar para sua nomeação como secretário de Estado ao falar da Turquia como um "suposto parceiro estratégico" que "em muitos aspectos não se comporta como um aliado".

Legisladores de diferentes partidos estão pedindo uma linha mais dura em relação a Ancara.

Cinquenta e quatro senadores americanos de várias tendências escreveram ao presidente Biden nesta semana, instando-o a criticar a política de direitos humanos de seu homólogo turco.

Há três semanas, o Departamento de Estado já multiplicou as advertências ao governo turco, criticando-o por seus ataques verbais contra minorias sexuais ou a manutenção na prisão do ativista Osman Kavala por motivos "pouco claros".

A diplomacia dos EUA negou repetidamente qualquer "envolvimento" no golpe fracassado de 2016 na Turquia, que desencadeou uma onda de repressão sem precedentes contra a sociedade civil.

Para Steven Cook, o tom mais severo do governo Biden "é bem-vindo". "A Turquia está realizando uma ofensiva e o silêncio americano sobre isso foi notável", afirmou.

"Você não pode ter muitas expectativas", continuou. "A Turquia e os Estados Unidos têm interesses diferentes e não compartilham os mesmos valores." Os dois países "podem trabalhar juntos em algumas questões, mas não há nada que realmente os una". Os atritos são realmente numerosos.

"Abordagem realista"

Além da própria natureza do poder do presidente Erdogan - descrito no passado como um "autocrata" por Joe Biden - o destino dos combatentes curdos na Síria, aliados de Washington na luta contra os jihadistas, mas classificados como "terroristas" por Ancara, permanece em suspense.

A crise turco-grega no Mediterrâneo oriental agravou ainda mais as relações entre a Turquia e o resto da OTAN.

Os processos criminais dos EUA contra o Halkbank, um dos maiores bancos da Turquia, por violar sanções contra o Irã também continuam sendo um obstáculo para uma melhora nas relações.

Quando era vice-presidente de Barack Obama, Biden foi contra o arquivamento do caso, como Erdogan queria. Trump, de acordo com vários depoimentos, foi mais favorável às reivindicações do presidente turco. Mas o problema estratégico mais urgente continua sendo o sistema de defesa russo S-400.

Ancara, que afirma querer melhorar as relações com os Estados Unidos, deu a entender que está disposta, no contexto de uma negociação, a não colocar em uso esses polêmicos mísseis.

"Os S-400 ameaçam a segurança da tecnologia da OTAN", observou a diplomacia dos EUA.

Para Gönül Tol, do Instituto do Oriente Médio em Washington, "esta é uma questão difícil de resolver" porque "o presidente Erdogan dificilmente pode voltar atrás" nesta questão sem arranhar a própria imagem.

"Mas, se isso acontecer, acho que o governo dos EUA colocará os rancores de lado e adotará uma abordagem realista", disse ela.

Integrantes do entorno de Joe Biden poderiam, segundo ela, pressioná-lo a adotar uma posição "mais flexível" se conseguirem "cooperar com a Turquia em questões importantes para a segurança nacional".

Dois abordagens diferentes

O porta-voz do Departamento de Estado, Ned Price, descreveu a Turquia como um "aliado valioso e de longa data da OTAN".

"Buscamos cooperação em prioridades comuns e, como qualquer aliado, nos engajamos em um diálogo para resolver divergências", disse ele a repórteres, destacando o interesse de ambos os países em encerrar a guerra civil na Síria.

Mas a Síria tem sido uma fonte persistente de atrito desde que Obama se aliou aos combatentes curdos, ligados a separatistas dentro da Turquia, para derrotar o grupo jihadista Estado Islâmico.

O Grupo Eurasia analisou que tanto a Turquia quanto os Estados Unidos têm interesse em melhorar o vínculo, mas estimou em 60% de probabilidade de que as negociações sejam interrompidas no segundo semestre de 2021, provavelmente por causa do S-400 ou da Síria.

Para Galip Dalay, as tensões aumentarão porque os dois líderes têm uma noção diferente sobre a importância de melhorar os laços entre os países.

Biden escreveu o analista, visa restaurar uma ordem internacional liberal liderada pelos Estados Unidos, na qual a Turquia teria que reverter seus laços crescentes com a Rússia e uma China em ascensão.

Já o objetivo de Erdogan é que "os Estados Unidos aceitem a nova realidade geopolítica na vizinhança da Turquia e seu papel nela".

2. ONU saúda entrada em vigor do Tratado de Proibição de Armas Nucleares

25.01.2021

Defesanet

<https://www.defesanet.com.br/nuclear/noticia/39415/ONU-sauda-entrada-em-vigor-do-Tratado-de-Proibicao-de-Armas-Nucleares/>

Este é o primeiro acordo multilateral de desarmamento nuclear em mais de duas décadas; para secretário-geral, eliminação deste tipo de armamento continua a ser prioridade da organização; à exceção de Portugal, todos os países lusófonos aderiram ao Tratado. O Tratado de Proibição de Armas Nucleares, o primeiro acordo multilateral de desarmamento nuclear em mais de duas décadas, entrou em vigor em 22 de janeiro 2021. Em mensagem, o secretário-geral da ONU, António Guterres, diz que o Tratado "representa um passo importante para um mundo livre de armas nucleares e uma forte demonstração de apoio às abordagens multilaterais do desarmamento nuclear."

Sociedade civil

O documento, adotado em 7 de julho de 2017, entrou em vigor após ser ratificado por 50 Estados-membros, a quantidade mínima exigida para tal.

Ao todo, 86 países já firmaram o Tratado. Todas as nações de língua portuguesa à exceção de Portugal assinaram o documento: Brasil, Cabo Verde, Guiné-Bissau, Moçambique, São Tomé e Príncipe e Timor-Leste. O chefe da ONU cumprimentou todos os Estados-membros que adotaram o documento, bem como o papel fundamental da sociedade civil no avanço das negociações e na entrada em vigor.

Guterres contou que "os sobreviventes das explosões e dos testes nucleares partilharam testemunhos trágicos e foram uma força moral fundamental para o Tratado." Segundo ele, "a entrada em vigor é um tributo à sua causa."

Próximos passos

O secretário-geral disse esperar que as funções atribuídas pelo documento se tornem realidade, incluindo a preparação da primeira Reunião dos Estados-Partes. Para Guterres, "as armas nucleares representam perigos crescentes e o mundo necessita de ações urgentes para garantir a sua eliminação e prevenir as consequências catastróficas para a Humanidade e para o ambiente que seu uso poderia causar."

Segundo o chefe da ONU, "a eliminação das armas nucleares continua a ser a maior prioridade de desarmamento das Nações Unidas." Ele apelou ainda a todos os Estados para que "cooperem na concretização desta ambição de promover a segurança comum e a proteção coletiva."

3. As múltiplas camadas: entendendo a defesa antiaérea moderna

29.01.2021

Base Militar Vídeo Magazine

https://www.youtube.com/watch?v=QB6l_6sloxM

Uma estratégia de defesa antiaérea moderna e capaz demanda muito mais que a compra e colocação em serviço de um único modelo novo de mísseis SAM. No Brasil os investimentos deste segmento de sistemas defensivos, aparentemente, ainda se encontram bem atrasados. Apesar das repetidas lições que as guerras recentes nos deixaram.

Os maiores experts nesse tema desde o fim da segunda guerra mundial foram os Soviéticos/Russos e eles criaram e operacionalizaram o conceito de uma defesa composta pela combinação de vários sistemas de mísseis, cada um com uma característica e com uma capacidade.

Mas como se monta este tipo de defesa? Como se calcula quantos sistemas de cada tipo serão necessários, quantos lançadores? Quantos mísseis?

Para nos ajudar nessas questões conversaremos com o CMG (FN RM-1) André Accioly Vieira ex-comandante do Batalhão de Controle Aerotático e de Defesa Antiaérea do Corpo de Fuzileiros Navais.

4. Should Europe defend itself?

18/02/2021

War on the rocks

<https://warontherocks.com/2021/02/should-europe-defend-itself/>

Chris, Melanie, and Zack waded into the long-running debate on whether Europe can defend itself (chiefly from Russia), and how hard it should try. In a recent article, Barry Posen from the Massachusetts Institute of Technology concludes that Europe is capable of conducting major military operations against a potential Russian attack, and that these capabilities serve as an important deterrent. But others doubt that Europe will ever be able to stand on its own without substantial support from the United States. The ultimate unknown, however, might revolve around how much autonomy the United States is willing to grant to key NATO allies — and how much autonomy they will demand in exchange for greater burden sharing. Zack offers up an attorney/attorney-deputy secretary of defense to newly confirmed Kath Hicks, while Chris praises the Centers for Disease Control and Prevention for showing the way on how schools can reopen. Melanie has a grievance against those who just can't get along with others, even when they perform random acts of kindness, and Zack throws shade on people who refuse to put their names on major publications.

5. La verdad de los misiles utilizados en la Guerra de Malvinas

20/02/2021

Defense.com

<https://www.defensa.com/ayer-noticia/verdad-misiles-utilizados-guerra-malvinas>

Cuando en la primavera, y luego en el verano, de 1982, los periódicos de todo el mundo aparecían diariamente con su primera página monopolizada por las dramáticas noticias que llegaban desde dos pequeños pero violentísimos escenarios de conflicto, Líbano y las Malvinas, no tardaron en hacerse populares los nombres y denominaciones de un tipo de armas de las que rara vez se había oído hablar antes, a nivel de calle: los misiles.

En efecto, los nombres del azote de la Royal Navy, el Exocet, y del verdugo de las Fuerzas Aéreas siria y argentina, el Sidewinder, así como los de otros ingenios no menos devastadores, corrieron de boca en boca con la misma asiduidad y naturalidad que lo hacían los del político de turno o el del más rápido delantero del equipo local. Todo ello ha contribuido a crear en torno a los misiles —y no sólo en medios no especializados— una aureola de letalidad infalible que, como veremos a continuación, resulta generalmente exagerada en la mayoría de los casos y totalmente desconectada de la realidad en unos pocos más.

Contrariamente a la impresión general, el estudio de los datos recogidos en los conflictos señalados inducen a concluir que si bien los misiles configuran una de las amenazas más graves existentes en el moderno campo de batalla, no representan, ni mucho menos, esa arma definitiva frente a la que tanto el aviador, el marino como el carrista se encuentran indefensos.

Por todo lo señalado, hemos considerado oportuno preparar un trabajo sobre el comportamiento de los misiles en uno de los conflictos en que más intensamente se han empleado, para situar así en sus justas coordenadas las prestaciones que de ellos cabe esperar y no caer en la simplista aceptación de las triunfalistas proclamas de los fabricantes.

La tarea, a decir verdad, no ha sido fácil. La falta de información, por un lado, y las frecuentes contradicciones de los datos disponibles por otro (el juicio sobre la eficacia de un misil depende, en buena medida, de que el enjuiciador sea usuario y no víctima, o viceversa), hacen casi imposible aportar datos numéricos completamente fiables. Aun así, y admitiendo por anticipado que me

pueda equivocarse en algún caso determinado, sí creo haber elaborado un cuadro que, en conjunto, se ajusta a la realidad.

Los misiles contracarro, los mejores y más sencillos

Contrariamente a lo que cabría pensar, durante la guerra de las Malvinas se hizo un extensivo uso de los misiles contra-carro, a pesar de que no pasaron de la veintena los blindados que participaron en la lucha.

Efectivamente, al carecer los británicos de armas de tiro tenso que les permitieran apoyar el avance de su Infantería, hubieron de recurrir a los misiles MILAN, con magníficos resultados, para forzar el denso dispositivo argentino. Empleados por primera vez en Goose-Green para desatascar la paralizada ofensiva británica, desempeñarían luego un papel vital en todos los asaltos efectuados contra cada una de las líneas de defensa argentinas. El papel de este misil en la neutralización de trincheras, blocaos, nidos de ametralladoras, puestos de mando y asentamientos de artillería fue tan destacado que, según el jefe de uno de los regimientos paracaidistas británicos, el MILAN fue el arma decisiva en la mayoría de los combates terrestres.

Tan impresionadas debieron quedar las tropas ofensoras por las prestaciones de sus recién estrenados MILAN, que en el curso de una de las postreras incursiones aéreas argentinas del conflicto, un par de optimistas paracaidistas dispararon un MILAN contra... ¡un Mirage! A pesar de que el avión escapó naturalmente incólume de tan original ataque, el MILAN salió del conflicto con una magnífica fama de arma potente, sencilla y precisa. Basta recordar que más del 80 por 100 de los misiles dieron en el blanco, a pesar de que la mayoría de los disparos se hicieron de noche.

Otros misiles contracarro empleados por los británicos fueron los AS-11 y AS-12 que, lanzados desde helicópteros Scout se apuntaron la destrucción de algún atrincheramiento, un puesto de mando emplazado en un edificio de Port Stanley y, sobre todo, la inutilización del submarino argentino Santa Fe cuando trataba de abandonar el puerto de Grytviken, en las islas Georgias del Sur.

No existe ninguna información que sugiera que los argentinos llegaran a emplear misiles de este tipo en el curso de la guerra.

Misiles aire-aire: mayoría de edad

Uno de los misiles que salió del conflicto con un prestigio más acentuado fue el AIM-9L Sidewinder, apresuradamente suministrado por los Estados Unidos a la RAF y a la RN. Así, los primeros informes

del conflicto presentaban al AIM-9L como el principal agente de la derrota de la Aviación argentina ya que, al parecer, 24 de los 27 misiles disparados habían alcanzado sus objetivos.

foto: El destructor D-92 HMS "Liverpool" armado como otros muchos buques ingleses, con el misil "Sea Dart", que demostró no ser capaz de detener las audaces incursiones en vuelo rasante de los aviones argentinos.

Sin embargo, el "Libro Blanco" de las Malvinas editado posteriormente por el Ministerio de la Defensa británico aumentó la cifra de ingenios disparados a 31 y redujo, en cambio, el número de derribos a tan sólo 16. Este baile de cifras resultaba ciertamente sorprendente en principio si se considera el papel absolutamente descollante que tanto militares y políticos como periodistas asignaron a las CAP (Combat Air Patrol) de Sea Harrier durante el conflicto, para luego adquirir un tinte ciertamente sospechoso al comprobarse que los éxitos que el "Libro Blanco" denegaba al Sidewinder los asignaba a otros sistemas... de fabricación inglesa, natural mente. En cualquier caso, aunque demos por bueno el más negativo de los dos informes, no se puede por menos que concluirse que el rendimiento del Sidewinder fue ciertamente sobresaliente.

El empleo de misiles aire-aire por parte argentina fue mucho más limitado. Apenas dos R-530 en versión SARH lanzados el 1 de mayo por sendos Mirage-III, cuyos pilotos no lograron mantener la iluminación de sus blancos hasta el impacto, probablemente sorprendidos por la extraordinaria maniobrabilidad demostrada por los Sea Harrier en aquel encuentro. Durante la misma refriega, otro Mirage lanzó un Magic —de características teóricamente superiores a las del AIM-9L, que según los británicos erró y según los argentinos acertó.

Este no es sino uno más de los casos en que los documentos de Londres y los de Buenos Aires se contradicen abiertamente, circunstancia que no se debe achacar únicamente a los pruritos propagandísticos de los contendientes sino también a la escasa fiabilidad que se debe conceder a los testimonios visuales de acciones de guerra, sobre todo si éstas implican a aviones y misiles desplazándose a elevadas velocidades por un cielo encapotado.

Misiles aire-tierra

Los únicos misiles aire-tierra empleados en el conflicto fueron los antirradar AGM45 Shrike y las bombas guiadas por láser Paveway, de procedencia estadounidense, que fueron utilizadas por los ingleses para ablandar las defensas de Puerto Argentino.

Por lo que se refiere al Shrike, tenemos noticia de al menos cuatro lanzamientos. Los primeros tuvieron lugar durante la madrugada del 31 de mayo cuando un Sea King adaptado para el empleo

de los Shrike, disparó los dos ingenios que portaba contra el radar AN/TPS-43 que los argentinos utilizaban para dirigir la batalla aérea y que previamente había sido triangulado por medio de los RWR (receptor de alerta radárica) de dos Sea Harrier despachados a tal efecto. Afortunadamente, los operadores argentinos se percataron en el último momento de la naturaleza del ataque de que eran objeto por lo que desconectaron inmediatamente el radar, cayendo los misiles tan sumamente cerca que la antena quedó averiada por algunos trozos de metralla.

Una vez reparado el radar fue un Vulcan el que el 2 de junio lanzó un nuevo Shrike contra el mismo. En esta ocasión, los argentinos habían vuelto a desconectar previsoramente el radar pero, por desgracia, una de las centrales de tiro Skyguard mantuvo sus sensores en funcionamiento resultando destruida por el misil y muertos todos sus ocupantes.

Un último ataque se verificó el 12 de junio cuando un nuevo Shrike fue disparado por un Vulcan contra el radar argentino, fallando esta vez por completo al haberse interrumpido las emisiones de éste con mucha anticipación.

Al contrario de lo ocurrido con los Shrike, que fueron apresuradamente suministrados a la RAF por la USAF, y en contra también de lo afirmado por la prensa argentina, las bombas guiadas por láser (LGB) Paveway utilizadas por los Harrier GR-3 sobre objetivos terrestres pertenecían desde años atrás al arsenal normalizado en la RAF. Aunque la información sobre las acciones efectuadas con las LGB es muy limitada se sabe que estos ingenios, cuyo primer empleo se remonta a la guerra del Vietnam, se mostraron extremadamente precisos y eficaces. Así, varios asentamientos de piezas de 105 mm., alguna batería AA, un polvorín y al menos un puesto de mando secundario fueron destruidos por estas armas, dándose el caso de que en el mismo instante en que las últimas posiciones argentinas enarbolaron la bandera blanca, varios GR-3 se disponían a descargar bombas LGB sobre dos puestos de mando regimentales localizados por medio de los servicios de escucha electrónica.

Se da el caso de que por primera vez en la historia operativa de las LGB, la iluminación de los blancos se efectuó por medio de los designadores láser manejados por fuerzas terrestres. En este sentido, parece ser que el misil que estuvo a punto de alcanzar al buque hospital Bahûz Paraíso era una LGB que seguía una guía láserica desviada por un banco de niebla o humo.

Ingenios mar-aire: costosa decepción

El prestigio de los misiles antiaéreos embarcados en los buques de la Royal Navy salió francamente mal parado de la prueba de las Malvinas, ya que fue precisamente a ellos a los que se achacó buena parte de la responsabilidad de las inesperadas pérdidas sufridas por la fuerza operativa.

El más criticado de todos ellos, en razón de lo que se esperaba de él y lo que realmente dio de sí, fue el Sea Dart, sistema que no obtuvo su primer éxito hasta el 9 de mayo cuando el Coventry derribó un Puma destacado en misión de rescate. Fue también el Coventry el que con sus misiles abatió el 25 de mayo un Skyhawk de reconocimiento que volaba a gran altura, así como otros dos que lo atacaban en vuelo rasante, sucumbiendo en cambio bajo las bombas del tercer aparato que formaba la escuadrilla.

El otro buque que consiguió derribos con el Sea Dart fue el Exceter, que abatió el 30 de mayo dos de los Skyhawk que acompañaban al Super Etendard que lanzó el último Exocet argentino contra el Invencible, un Leatlet que reconocía el área de San Carlos y, el 9 de junio, un Canberra enviado también en misión de reconocimiento.

En total, fueron hundidos dos buques armados con el Sea Dart, Sheffield y Coventry, y dañado otro, el Glasgow. Los defectos mostrados por el sistema fueron una absoluta incapacidad para enfrentar blancos a baja altura y un excesivamente prolongado tiempo de reacción, que viene dado por el hecho de que los giróscopos del misil necesitan 20 segundos para entrar en funcionamiento una vez que el mismo ha sido extraído del pañol. Sin embargo, sus defensores argumentan que lo que falló no fue el Sea Dart sino los anticuados sensores y equipos de cálculo que portaban los tres buques alcanzados; que hubo mala suerte (1) y que el sistema se mostró infalible contra blancos en vuelo a media y alta cota.

(1) Las compuertas del pañol de misiles del Coventry se encontraban averiadas, razón por la cual las tenía que abrir y cerrar a mano un marinero entre disparo y disparo.

Similar polémica despertó el Sea Wolf. Los éxitos obtenidos por este avanzado sistema se redujeron a dos Skyhawk derribados por la Broadsword el 9 de mayo y otros tres aparatos destruidos por la otra fragata portadora del sistema, la Brilliant, a lo largo de la batalla de San Carlos. Por el contrario, los dos buques resultaron ligeramente averiados a ser alcanzados por bombas que no explotaron (2). Los defectos mostrados por el Sea Wolf fueron un alcance excesivamente corto, errores en la programación táctica de su ordenador central (3) que se corrigieron sobre el terreno y cierta incapacidad para enfrentarse a blancos en vuelo ultrarrasante, ya que el canal de TV empleado en las intercepciones a baja altura carecía de la necesaria resolución.

(2) La Broadsword perdió su helicóptero al ser arrancado de la cubierta de vuelo y arrastrado al mar por dos bombas que previamente habían rebotado en la superficie del agua.

(3) En las primeras acciones, cuando más de dos blancos se acercaban desde direcciones diferentes, el ordenador no establecía ninguna prioridad, quedando interrumpido el proceso de intercepción.

En el mismo sentido, el Sea Wolf demostró las desventajas del automatismo, ya que derribó tres misiles Sea Dart disparados por otros buques contra aviones argentinos.

En cuanto al Sea Cat, dada la antigüedad de su diseño, no podía esperarse otra cosa que los pobres resultados que cosechó. De entre los 100 y 150 ingenios disparados sólo seis dieron en el blanco indicándose, eso sí que sus salvas eran tan impresionantes que debieron ejercer una notable presión psicológica sobre los pilotos contrarios.

Peor aún fue la actuación del Sea Slug, ya que ni siquiera llegó a ser disparado, pues su prolongado tiempo de reacción le impidió enfrentar los fulgurantes ataques de los aviones argentinos.

En descargo de los criticados SAM navales, hay que señalar que actuaron contra un enemigo totalmente diferente al que para combatir habían sido diseñados. Efectivamente, los SAM de la Royal Navy fueron creados para oponerse en medio de grandes espacios oceánicos libres de obstáculos terrestres, a bombarderos y misiles rusos a gran altura en trayectorias horizontales o de picado; escenario que no tiene nada que ver con la congestionada bahía de San Carlos, en las que las aproximaciones en vuelo rasante de los pequeños cazabombarderos argentinos eran detectadas antes por el ruido de sus motores que por unos equipos radáricos cegados por la masa terrestre circundante.

Los SAM terrestres

Indudablemente, la más comentada y polémica participación de un SAM terrestre en el conflicto de las Malvinas fue la del Roland que, como ya se sabe, efectuó ocho disparos derribando cinco aviones, según los argentinos, y sólo uno según los británicos. Como quiera que la actuación del Roland fue ya adecuadamente estudiada en estas páginas no volveremos a discutirla aquí.

Notorio fue también el papel del Rapier, al que se le asigna, sobre algo más de 50 disparos, una puntuación definitiva de 14 derribos seguros y ocho probables que resulta notablemente más brillante que la que se le asignó en un principio. En este sentido, hay que señalar que no son pocas las fuentes que afirman que la actuación del Rapier no fue brillante, habiéndose subrayado que la cobertura AA. del desastroso desembarco en Fitzroy estaba confiada a dicho sistema; que se mostró muy frágil; que su tiempo de entrada en batería fue muy largo, etc., reproches que han sido desmentidos por el fabricante. Más aún, en medios oficiales se ha contestado que varios Rapier

fueron disparados sin problemas después de haber estado sumergidos en el agua o tras ser largados muy violentamente por los helicópteros de transporte. Sea como fuere, resulta evidente que el Rapiér se desenvolvió con dignidad en unas condiciones muy difíciles. Así, las baterías tuvieron que dejar sus radares Blindfire en casa para ahorrar sitio en los transportes, detectar los blancos visualmente, ya que el radar de alerta no pudo ser utilizado por un problema de interferencias y cazar sus blancos en un teatro de valles en donde los aparatos argentinos encontraban un continuo cobijo tras los obstáculos naturales o las mismas estructuras de los barcos.

No menos polémico ha resultado el funcionamiento del Blowpipe, que a pesar de los nueve derribos que se le asignaron oficialmente (seis Pucará, dos Mirage y un Skyhawk), llegó al final del conflicto con una difundida fama de total ineficacia. Así son numerosos los relatos de periodistas y soldados que se refieren burlescamente al comportamiento del Blowpipe. Leemos: el "Blowpipe" siempre erraba, por poco, pero erraba; ese misil que siempre parecía que iba a acertar pero que siempre fallaba; ... con la acostumbrada ineficacia del "Blowpipe" i., y así sucesivamente. Los argentinos, que también contaban con ese ingenio, tampoco parecieron sacarle mucho partido: un Sea Harrier seguro y un Gazelle probable.

Aunque no sirva de consuelo, hay que señalar que la actuación de los otros SAM portátiles tampoco fue brillante, pues de los cuatro Stinger disparados por los hombres del legendario Special Air Service (SAS), sólo uno logró derribar un Pucará, mientras que ninguno de los SA-7 disparados por los argentinos llegó a encontrar su blanco. Para terminar con los SAM, señalaré que los Tigercat de la Infantería de Marina argentina, directamente derivados de los Sea Cat, funcionaron tan mal como sus parientes navales, no obteniendo un solo derribo, a pesar de que se hicieron un número muy elevado de disparos.

Misiles antinavío: los triunfadores de la velada

La actuación del Exocet fue, sin duda, la más notoria y difundida de todos los misiles empleados en las Malvinas. Como se recordará, la primera acción con el Exocet se remonta al 4 de mayo cuando dos Super Etendard lanzaron sendos misiles contra el desprevenido destructor Sheffield y un blanco muy grande (el Hermes, con toda seguridad). Uno de los misiles alcanzó al Sheffield, incendiándolo a pesar de que su cabeza explosiva no detonó, mientras que el otro, aunque no llegó a ser descubierto visual ni electrónicamente, debió perderse entre la nube de tirillas antirradar que los buques británicos tendieron en cuanto el Sheffield fue alcanzado (5).

(5) Para dar una idea de lo apurado de esta medida, basta señalar que uno de los cohetes dispersores de tiras estuvo a punto de abatir el helicóptero pilotado por el príncipe Alberto.

La siguiente acción tuvo lugar el 25 de mayo cuando una pareja de Super Etendard lanzaron otros tantos Exocet contra el Hermes y sus escoltas. En esta ocasión los misiles fueron detectados y desviados del blanco por una gran nube de tiras antirradar tendida desde buques y helicópteros, pero con tan mala suerte que por lo menos uno de los misiles enganchó al Atlantic Conveyor, que habiendo quedado desprotegido, resultó alcanzado con las consecuencias de todos conocidas. El último Exocet de que disponían los Super Etendard fue lanzado el 30 de mayo contra el Invencible pareciendo, aunque el desarrollo del encuentro fue muy confuso, que el misil fue despistado por las contramedidas electrónicas.

Además de los ingenios lanzables desde el aire, la Armada argentina desplegó varios MM-38 superficie-superficie desmontados de un destructor, en un emplazamiento terrestre situado en las inmediaciones de Puerto Argentino. Este emplazamiento sólo entró en acción la noche del 12 de junio cuando lanzó dos misiles contra el destructor Glamorgan. Uno de ellos quedó enganchado en el lanzador mientras que el otro, tras ser tocado por un Sea Cat que no llegaría a explotar, alcanzó a su vez al destructor a la altura del hangar causándole unos daños limitados, ya que su espoleta tampoco funcionó.

De la actuación del otro misil antinavío empleado en las Malvinas, el Sea Skua, sólo señalar aquí que fue indudablemente el misil más seguro de los empleados, ya que todos los disparos dieron en el blanco.

6. A New Start for Arms Control?

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Carnegie Institute

<https://carnegie.ru/commentary/83801>

Moscow and Washington have finally agreed to extend the New Strategic Arms Reduction Treaty (New START), just days before it was due to expire on February 5. Numerous attempts to extend it under the previous U.S. administration had failed, and the January 26 breakthrough under President Joe Biden was met with relief by both presidents, as well as arms control experts, diplomats, and politicians on both sides.

While the five-year extension is undoubtedly good news, the excitement over it only attests to the dire state of U.S.–Russian arms control and bilateral relations in general.

The New START is the last treaty limiting strategic arms that is still in place between Russia and the United States. It prevents another arms race from unfolding, and reduces the risk of an accidental escalation. Its extension should have been an obvious step and routine affair that passed without any fanfare, amid talks on the next U.S.–Russian arms control agreement.

Instead, the Trump administration used the New START to try to extract concessions on other issues from Russia. This tactic failed, since the conditions laid down by Trump were unrealistic. Moscow and Washington were forced to wait until the inauguration of Biden, when there were only about two weeks left to extend the treaty.

Problems extending the New START could have arisen under the new U.S. administration, within which there are differing views on the treaty. Victoria Nuland, for example, who is tipped to be under secretary of state for political affairs, wrote last summer that the treaty should only be extended for a year or two, so that it could then be used as leverage to bring Russia to the table on other issues. With such little time left before the New START expired, however, Washington decided to accept Moscow's proposal to extend the treaty for the maximum term possible—five years—and without any additional conditions.

Extending the New START is the first and easiest step in rebuilding the U.S.–Russian arms control system from its ruins. Restrictions on anti-missile defense systems and short- and intermediate-range missiles disappeared with the respective collapses of the Anti-Ballistic Missile Treaty and Intermediate-Range Nuclear Forces Treaty, while conventional weapons in space and nonstrategic nuclear weapons have never been regulated by international treaties.

Russia and the United States have different views on all of these areas, but without taking each other's interests into account, it will be increasingly difficult to ensure national security. Progress in military technology never stands still, and the latest U.S. missile defense solutions have paved the way for a quantum leap, while investment in hypersonic technology has led to the creation of a dozen new systems whose effect can so far only be imagined. Recently, Moscow has been talking of "strategic equalization" with the United States.

In any case, talks need to begin now. The extended New START will expire in 2026, but there's no guarantee that the 2024 U.S. presidential election won't be won by Donald Trump again, or by someone with a similar approach. We have already seen what arms control talks look like under the Trump team, so in effect, the deadline is even sooner.

Traditionally, the U.S. side takes a while to confirm political appointments in ministries and agencies, and only then approves strategic planning documents such as the National Security Strategy,

National Defense Strategy, Nuclear Posture Review, and so on. The entire process usually takes several years. Russia and the United States simply cannot afford to put off negotiations until that process is complete.

The best option would be to capitalize on the positive dynamic of the extension of the New START to begin the first consultations. They might not be particularly substantial, and would likely be limited to exchanging information. It's entirely possible that the outgoing Trump team did not reveal to the incoming Democrats the details of their closed-door discussions with the Russians, and that may be no bad thing.

The Biden team has already appointed deputy assistant secretaries of state for arms control and nonproliferation. Both are very experienced experts in their field who are up to date with the latest developments, and they do not need to be confirmed by the Senate, which gives the Russian and American negotiators the chance to start talks without delay. Most of the candidates announced by the new administration are known for their professionalism, which is particularly important in the field of arms control: the talks between Russia and the United States will be very complex.

It's worth noting Moscow's enthusiastic approach to extending the New START. Both chambers of parliament voted on the extension in just one day, and passed it unanimously. Such speed and consensus—last seen over the annexation of Crimea back in 2014—shows how important arms control is to the Russian leadership. This should temper foreign criticism of Moscow's actions in this regard for some time.

Demonstrating that its intentions are serious should also strengthen Russia's position on other contentious issues, from the Open Skies Treaty to the moratorium on deploying short- and intermediate-range missiles. Russia is making it clear: when its interests are taken into account, it is prepared to act swiftly and efficiently. This model doesn't guarantee anything, of course, and can easily be destroyed, but it still gives some cause for optimism.

Finally, Moscow's approach to extending the New START is also a lesson for domestic critics of arms control. Recently, it has become fashionable in Russia's expert circles to opine that traditional arms control is obsolete as a concept, and doesn't correspond to the reality of the modern world. This view partly stems from the fact that existing treaties have disappeared one after the other, while Moscow has not held talks on a new one for more than a decade. The energy the Russian state has put into supporting arms control efforts, along with the first progress made on this front, could now put an end to that trend.

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7. Extending new START should be just the beginning

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What is the status of negotiations on extending new start?

On January 21, news broke that U.S. President Joe Biden and his administration will seek a five-year extension of the treaty, something Russia seems ready to agree to. It is unlikely there will be any conditions attached—both parties are eager to secure an agreement.

Senior U.S. officials seem keen on extending New START, while also moving quickly to address harmful actions Russia has taken against the United States in the past several years, such as the SolarWinds cyber attack. The Biden administration is taking a pragmatic view on New START—extending the treaty is in U.S. national security interests, but this does not preclude steps the administration may take to punish Russia for its misbehavior.

In his confirmation hearing before the Senate Foreign Relations Committee, Biden’s nominee for secretary of state, Antony Blinken, announced that the United States would seek to extend the treaty, and he signaled that he would be consulting with senators “almost immediately” to begin the process. After these consultations, the United States will likely reach out to Russia through diplomatic channels to secure an agreement to extend the treaty.

How quickly could the united states and russia complete an extension?

Under U.S. law, such an agreement does not require Senate advice and consent. A simple exchange of diplomatic correspondence between the two governments (referred to as diplomatic notes) is all that is needed. For Russia, extension requires domestic ratification. However, Moscow could implement the treaty provisionally if these formal procedures cannot be completed by February

5—a step both parties commonly take when signing a new agreement and waiting for ratification to be completed in each capital.

The Biden administration should engage the Kremlin, the Russian Ministry of Foreign Affairs, and the Russian Embassy in Washington, DC, as quickly as possible to set this process in motion. It should also convey to the Senate Foreign Relations Committee and the Senate Armed Services Committee the administration's intention to extend New START, a requirement in the 2010 Resolution of Advice and Consent to Ratification.

How is the coronavirus pandemic affecting new start?

Although Russian and U.S. officials met in person to negotiate New START's future, the two countries agreed to suspend inspections indefinitely because of the pandemic. Meetings of the Bilateral Consultative Commission, the treaty's implementing body, were also canceled in 2020. It's unclear when inspections or commission meetings will resume, but the Biden administration should make every effort to safely restart these treaty implementation activities as soon as possible.

Inspections are important because they help verify the valuable information exchanged between the two countries. Such information includes data on where individual ballistic missiles and heavy bombers are located, and when they are tested or transported. These activities must resume swiftly—along with the accompanying diplomatic discussions for resolving any implementation disagreements. Without inspections, both states may have less confidence in the other's treaty compliance.

What have U.S. allies, partners, and other countries said about a new start extension?

The United States' allies and partners have expressed strong support for a New START extension. NATO Secretary General Jens Stoltenberg said in June 2020, "we should not end up in a situation where we have no agreement whatsoever regulating the number of nuclear weapons in the world . . . we cannot risk losing the New START agreement without having something else."

UN Secretary General Antonio Guterres also urged the United States and Russia to extend New START, describing it as "among the most urgent disarmament and international security priorities of the moment." Government officials from a host of countries—including Argentina, Canada, Finland, Germany, Indonesia, Japan, Jordan, Kazakhstan, the Netherlands, New Zealand, Norway, South Korea, Spain, Sweden, and Switzerland—similarly supported the extension of New START in a February 2020 joint statement.

China supports a New START extension too, although Beijing has remained firm that it is not interested in joining a trilateral arms control agreement until the United States and Russia have made deep reductions to their nuclear arsenals.

If new start is extended, what comes next?

Even after the extension of New START, there are further steps Washington and Moscow should consider taking to avoid expensive arms buildups and to lower the risk of nuclear escalation in a crisis.

Russia and the United States should broker a deal that imposes limits on strategic weapons, including kinds that have emerged since New START was first hammered out. Such an agreement must also assuage worries about implementation. For example, the United States should address Russia's concerns about the U.S. practice of converting launchers on ballistic missile submarines and bombers so they can no longer launch nuclear weapons. This lets the United States reduce the number of its forces below the New START numerical limits, something that is allowed under the treaty. But Russia sees it as a way of dodging the rules. Moscow argues the U.S. procedures do not convert the systems in a confirmable way and insists that both countries must agree on the procedures before they are used. If this disagreement isn't resolved, Russia may accuse the United States of noncompliance, leading to far more difficult future negotiations.

Next, the United States should seek to negotiate five proposals to foster transparency and confidence building. Doing so would lower the risk of nuclear escalation and brinkmanship. These proposals—politically binding transparency and confidence-building measures—should address sensitive issues such as ballistic missile defense, nonstrategic nuclear weapons, and China's nuclear arsenal. These cannot realistically be included in a treaty today because strained domestic politics and tense diplomatic relations, particularly with China, would make any such treaty a tough sell for lawmakers.

For example, Russia and the United States should confidentially exchange data about sea-launched cruise missiles and nonnuclear boost glide systems to reduce the risks of worst-case assessments of each other's capabilities. The two countries should also agree to reciprocal inspections of empty actual or suspected warhead storage facilities to prove that no warheads are present. And Moscow and Washington should agree to a package of confidence-building measures on European Aegis Ashore ballistic missile defense installations to show that the interceptors are not fast enough to catch and destroy Russian ICBMs and that the installations could not launch offensive missiles.

To ease jitters about Beijing’s nuclear ambitions, the United States and China should agree on a joint cutoff in the production of weapon-usable fissile material to prove that China does not seek to match the size of the U.S. and Russian arsenals. And China, Russia, and the United States should agree to a trilateral ballistic missile and space launch notification agreement—effectively, promising to let each other know when they are carrying out such a launch—to reduce the risk of such a launch accidentally triggering escalation.

Lastly, it’s common for new U.S. administrations to look at nuclear policy and arms control policy early on, often as part of a nuclear posture review. In a recent report, Carnegie scholars recommend changes to U.S. nuclear strategy, policies, and posture, including on arms control. The Biden administration may want to read this report and pursue its suggestions.

8. Evolving UAE Military and Foreign Security Cooperation: path toward military professionalism

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After two decades of concerted investment and operational experience, the United Arab Emirates (UAE) armed forces, dubbed “Little Sparta,” are now one of the leading militaries in the region.¹ With approximately 63,000 active uniformed personnel for a population of 9.9 million (only 1.2 million of which are Emirati), allegedly augmented by foreign auxiliary and mercenary forces, the UAE has gained global attention for its role in countering Iran and violent extremist networks and for interventions in Yemen and Libya.² It is one of the United States’ closest military partners in the Middle East.³ American scholar Kenneth Pollack assesses that, taken as a whole, the UAE’s military is the most capable among the Arab states, while there may be variance across the force.

The UAE has an opportunity to capitalize on these developments and become a professionalized military by building its strategic planning and force development capabilities, enabling it to set its regional priorities and force structure, and by committing to international principles of professional military conduct and greater transparency and accountability that will buttress its legitimacy at home, in the region, and with international partners. Military professionalism includes an

understanding of leadership, strategy, history, tactics, warfighting domains, organization, technology, and capabilities. It also involves a commitment to moral conduct and to incorporating lessons learned to apply and move forward as part of an institution.

If developed, the UAE's strategic planning capabilities would enable it to better match defense priorities with resourcing. For example, if the country envisions other counterinsurgency and proxy war campaigns in the future, does it need to create both capacity and capability within the UAE force to perform those missions in a more effective and integrated manner? Or will a continued reliance on mercenary forces be sufficient, but open the UAE to international scrutiny and erode its legitimacy in the eyes of key partners? Concretely, the UAE should undertake a review of its interventions in Yemen and Libya, which have tested the military's force structure and capabilities and wherein the UAE reportedly has hired and mobilized mercenary groups and proxies to supplement its force. Gaps in the UAE's strategic planning capabilities exacerbate the risks of overextension and reliance on less professional and less integrated forces.

Investments in the UAE's strategic planning capabilities could also be linked to an integrated approach to defense and technology industrial development to build not only the UAE's industrial base but also to unlock further opportunities for joint production and development with the United States and other foreign partners.

However, international concerns about the values undergirding the UAE military as an institution, including whether it upholds Law of Armed Conflict principles and its reliance on shadowy mercenary forces, point to limitations in its growth as a professional military and may limit international cooperation with the UAE over time. Such concerns have drawn the scrutiny of the U.S. Congress.

To further professionalize its military and sustain key security cooperation partnerships, such as with the United States, the UAE should take several steps. It should invest in its strategic planning capabilities to better match priorities with resourcing. It also should invest in joint defense research and development opportunities with the United States while also building a technology security and export control regulatory framework. Finally, it should enhance the professionalism of its military to engender greater legitimacy with key partners by building oversight, accountability, and transparency measures to ensure adherence to the Law of Armed Conflict and international humanitarian law and to regulate the use of mercenary forces.

Priorities and performance

The priorities and performance of the UAE military highlight its government's goals to protect the country's role and influence and develop itself as a force in its own right within the broader region. In partnership with key regional and international allies, the UAE has pursued a security strategy that involves harnessing its human and natural resources to compensate for its modest size, building its military and national security apparatus, creating strategic depth through foreign military installations and deployments, and developing its partnerships with Saudi Arabia, the United States, and other key partners.

Three main priority areas rise above the rest for the UAE military: countering Iranian threats throughout the region, including in Yemen; preserving the regional status quo, particularly against the threat of radical political and terrorist groups; and becoming an increasingly self-reliant military force. The UAE's own threat perceptions, as well as shifting U.S. and other donor policies that encourage partners to take more responsibility for their security, inform these priorities.

Countering Iranian threats

Iran represents the greatest security challenge to the UAE. The two countries have a longstanding territorial dispute over three islands (Abu Musa, Greater Tunb, and Lesser Tunb), adjacent to strategic shipping lanes crucial for both countries. Moreover, the UAE has serious concerns about Iranian proxies' activities in Bahrain, Iraq, Lebanon, Syria, and Yemen.⁷ Iran's missile capabilities are well within striking range of all of the Emirates and its strategic resources.⁸ The UAE continues to closely watch Iran's nuclear development as well. The UAE recently became the first Arab nation to open a nuclear power plant, though it insists that this is for energy generation.⁹ Iranian competition poses a significant threat to Arab Gulf states' influence over the Middle East. Despite reported tensions over Yemen strategy between the UAE and Saudi Arabia, the former has been closely aligned with the latter in prioritizing and working to counter Iranian threats.¹⁰ On the military front, this has manifested most significantly in the UAE's involvement in the Yemen conflict and in its participation in a maritime coalition to deter Iranian attacks on commercial shipping in the Strait of Hormuz.

Conflict in Yemen

The UAE was a key player in the Saudi-led military intervention in Yemen, launched in 2015 to counter what both governments regarded as an Iran-backed threat from the Houthi rebels.¹¹ Although the UAE officially completed its military withdrawal from Yemen in February 2020, its five-

year involvement laid the foundation for continued Emirati influence within the country, creating a persistent bulwark against Iran in the UAE's view.

The Emirati military deployed around 3,500 troops to Yemen, with another 3,000 air- and sea-based personnel providing in-theater support.¹³ This force enabled the push back of Houthi territorial gains in southern and eastern Yemen, though it encountered resistance in the north.¹⁴ In parallel, the UAE has established a series of maritime access points on the Horn of Africa and along Yemen's coast that enable it to shape maritime trade and gather information about rivals' and adversaries' activities in the region.¹⁵ According to UAE sources, the military has also nurtured a network of some 90,000 Yemeni fighters, comprising a combination of tribal militias, former military personnel, and paramilitary units such as the Security Belt Forces and Shabwani and Hadrami Elite Forces.¹⁶ Despite the UAE and Saudi Arabia being on the same side of military operations in Yemen's war, they have had competing objectives in navigating a political outcome, including over support for the Southern Transitional Council, backed by the UAE, and the role of Yemeni President Abd-Rabbu Mansour Hadi, supported by Saudi Arabia.

Strait of Hormuz

After a series of Iranian attacks on oil tankers in the vitally important Strait of Hormuz, the UAE joined a U.S.-led maritime coalition in September 2019 seeking to protect commercial vessels in and around the strait.¹⁷ With one-fifth of the world's oil supply passing through the 21-mile-wide, strategically significant waterway, protecting the strait from asymmetric Iranian threats (such as undersea mines, cruise missiles, and swarming patrol boats) is of paramount importance to the UAE and its allies and partners.¹⁸ Further, the UAE has demonstrated effective interoperability and maritime performance within the coalition.

Countering violent extremism

Containing the spread of violent extremism is a high priority for the UAE. In particular, political groups such as the Muslim Brotherhood and terrorist groups such as al-Qaeda in the Arabian Peninsula (AQAP) and the self-proclaimed Islamic State are singled out as threats to the UAE's efforts to preserve the status quo and its own standing and influence within the region.

Muslim Brotherhood

The Emirati government views the Muslim Brotherhood as a threat to the Middle East's balance of power due to the group's opposition to monarchic and dynastic governments. The threat posed by the brotherhood intensified after its meteoric—albeit, in some cases, short-lived—political

resurgence in the wake of the status quo–shattering Arab Spring protests.²⁰ The UAE’s aversion to the brotherhood is evidenced by its 2014 decision to list the group as a terrorist organization, although the brotherhood publicly disavowed violence years prior, in the 1970s.²¹ The local Islamist group al-Islah, allegedly affiliated with the brotherhood, was accused by UAE officials of plotting to incite an armed rebellion against the state. The Emirati government also had a significant hand in the coup d’état that overthrew Egypt’s then president and Muslim Brotherhood leader Mohamed Morsi, and it supports the anti-brotherhood leader of the Libyan National Army, General Khalifa Haftar.

The UAE’s own experience with domestic protests has been less intense—largely limited to a letter petitioning President Khalifa bin Zayed for reforms, signed by roughly 130 Emirati activists, that included individuals linked to the brotherhood. However, the harsh reaction from the Emirati government was indicative of its fear of the status quo being disrupted; many of the signatories were jailed, and a handful had their UAE citizenship revoked.

Al-Qaeda and the Islamic State

Just as the Muslim Brotherhood poses a threat to the regional status quo, so do more violent groups such as al-Qaeda and the Islamic State. As part of its efforts to preserve stability within the Middle East, the UAE has focused military efforts on counterterrorism in Iraq, Syria, and Yemen. The UAE military has been an active member of the U.S.-led coalition to defeat the Islamic State since 2014. It has trained Syrian rebels to counter the Islamic State and focused on counter-messaging through the Communication Working Group (which it co-leads with the United Kingdom and the United States). The working group has convened meetings between Defeat ISIS (D-ISIS) Coalition member countries (including militaries), civil society, media, tech companies, and academics to exchange information and strategies to counter extremist messaging on and offline and to promote alternative, affirmative messages.²⁴ In addition, the Emirati military is second only to the United States in the number of sorties it has flown over Islamic State–held territory during operations in Iraq and Syria.²⁵

After the initial phase of Emirati operations to counter Houthi rebels in Yemen, the focus of the mission shifted toward the threat from AQAP.²⁶ UAE counterterrorism efforts against AQAP, in partnership with the United States—which mostly contributed via drone strikes—led to a significant degradation of the group’s ability to carry out attacks inside and outside of Yemen.²⁷

Self-reliance

Despite the UAE's close relationship with countries like the United States, it is working toward limiting its dependencies on foreign partners.²⁸ In order to achieve this goal, the UAE is focusing its efforts on augmenting two main areas: the defense industry and the capacity of military personnel.

Defense Industry

Emirati efforts prioritize increasing the UAE's military capabilities and developing its defense industry to the extent that it can wean off some partner-dependent foreign military sales and training while simultaneously working to become a niche market supplier.²⁹ In late 2019, the UAE consolidated twenty-five local defense companies into one all-encompassing corporation named Edge.³⁰ Edge aims to accelerate arms production at "cost-effective price points," with the ability to compete within the region on bids related in particular to ships, armored vehicles, and unmanned aerial systems.³¹ In addition, the UAE has entered into the small arms market via its manufacturer, Caracal.³² Further, the UAE's NIMR Automotive has developed a series of light combat vehicles. Its partnership with the UK's MIRA engineering company to develop the Rapid Intervention Vehicle highlights the potential for joint development with foreign partners.

Personnel Capacity

The UAE invests a significant amount in training its military personnel, particularly through U.S.-based and -led programs, ranging from professional military education at the staff and war colleges stateside to tactical training in U.S. and Emirati facilities. The country has also begun developing its own education capability through the establishment of a National Defense College. While most of its students have been Emirati nationals, the college aspires to matriculate U.S. and other foreign students. Emirati alumni are placed in positions of authority in the government after graduating. Over time, the college's graduates may help instill a greater focus on strategic planning and analysis within the UAE's national security and defense ministries.

In 2014, the UAE introduced universal conscription for men between the ages of 18 and 30.³⁵ Doing so seeks not only to increase the number of uniformed personnel and enhance Emirati self-reliance in the military arena, but also to instill a sense of identity and further a narrative that may counter domestic and external pressures.³⁶ The program's first three years saw about 50,000 men go through the conscription program, while 850 women volunteered for the same.³⁷ While there is no compulsion in continuing military service past the sixteen months of mandated conscription, the program helps identify military talent that may otherwise have slipped under the radar. The program also helps to augment the civilian workforce: those individuals falling below the

conscription fitness standards—about one in five—do not get an exemption, but instead are expected to train for civilian positions in the government.³⁸

Military effectiveness and leveraging foreign assistance

The Emirati military's effectiveness is characterized by the following overarching categories: policy and doctrine; equipment, training, education, and exercises; operations; and institutions. Although the UAE is often privately lauded by U.S. defense officials as having the most capable and effective military force within the Gulf Cooperation Council (GCC), in order to become a fully professionalized force, it must invest in its strategic planning capabilities, assess and incorporate lessons learned from the Yemen war, and address international concerns about its transparency and adherence to human rights and its reliance on mercenary forces. These issues cannot be fixed by money alone, requiring a willingness by the Emirati leadership to invest in these priorities, commit to principles to undergird military professionalism, and alter aspects of its operational culture.

Policy and doctrine

Although the UAE does not have a publicly available policy document akin to the U.S. National Defense Strategy, the tenets of its policy and doctrine can be deduced from how its defense and security actions and involvement have unfolded over time.³⁹ The UAE is closely aligned with the policies and priorities of the GCC, a body of Arab Gulf states established after the 1979 Iranian Revolution.⁴⁰ Members of the GCC have a shared interest in working together to serve as a counterbalance to the adversarial government in Tehran and to protect their respective monarchies from similar upheaval.⁴¹ Competition among the GCC states and their different political and ideological viewpoints undermines their cohesiveness and ability to plan and work together.

Security is a high priority for the UAE, whose defense spending is estimated to be between 11.9 and 14 percent of its total federal budget. In 2019, UAE federal budget spending reportedly increased to \$16.4 billion, up from \$13.9 billion in 2018. \$2.3 billion was reportedly allocated to defense spending in 2019, up from \$1.66 billion in 2018.⁴² While it has focused its investments in human capital, modernization, and technology and in its partnerships with Australia, France, GCC countries, and the United States, it has also invested heavily in military hardware. Lack of transparency about the UAE defense budget makes it difficult to determine the proportionate breakdown of these investments.

Due to the close ties between the UAE and the United States, elements of Emirati military doctrine reflect that of the U.S. military, adapted to its local context. For instance, the UAE Presidential Guard was established in the image of the U.S. Marine Corps, with the request reportedly coming directly

from Abu Dhabi Crown Prince and Deputy Supreme Commander of the Armed Forces Mohammed bin Zayed Al Nahyan (known to many by the acronym MBZ) to then commander of U.S. Central Command General James Mattis.

Equipment, training, education, and exercises

Equipment

As a wealthy Gulf state, the UAE can afford to buy advanced capabilities and equipment beyond what its military likely needs. The UAE is one of highest importers of arms in the world and among the foremost customers of U.S. foreign military sales. The government purchased close to \$7.6 billion worth of arms from the United States between 2008 and 2018.⁴³ The equipment in its portfolio of purchases includes F-16 and F-35 aircraft, Apache and Chinook helicopters, precision-guided munitions, the THAAD and Patriot missile defense systems, and unmanned aerial vehicles (UAVs) and associated missiles.⁴⁴ In addition to the weapons that the UAE has bought out of pocket from the United States, it has also obtained \$32 million worth of U.S. excess defense articles.⁴⁵ The UAE is not, however, beholden solely to the United States for its arms. It has also purchased equipment from China, France, Russia, the United Kingdom, and allegedly North Korea.⁴⁶

In addition to purchasing equipment, the UAE is looking to develop its own capabilities in the same arena, largely through the aforementioned defense industry efforts of Edge. It also seeks to work with other countries to develop equipment. Controversially, there were reports that the UAE may have entered into a collaboration with Russia to produce aircraft modelled on the MiG-29 fighter jet, potentially in violation of U.S. sanctions.⁴⁷

Training and Education

The Emirati military has invested significantly in the training and education of its military officers, both within the country and outside. Professional military and defense educational institutions within the UAE provide an array of instruction. These include cadet academies such as the Zayed the Second Military Academy for men and the Khawla bint Al-Azwar Military School for women; traditional military training schools such as the Naval and Air College and the Joint Command and Staff College; and the National Defense College, which educates senior military as well as civilian leaders.

The UAE and the United States are signatories to a 2019 bilateral Defense Cooperation Agreement, an avenue to further enhance coordination, interoperability, and joint operations.⁴⁹ The U.S. training mission within the UAE and stateside ranges from aviation and missile defense training to

special operations training and artillery, reconnaissance, and maneuver exercises.⁵⁰ The UAE hosts 5,000 U.S. personnel, while annually, between 600 and 800 Emirati military personnel go to the United States for training and education.⁵¹ Notably, the U.S. Marine Corps trains UAE Presidential Guard Reconnaissance Group personnel at the Marine Corps Air Ground Combat Center in 29 Palms, California.⁵² The UAE does not receive educational funding from the United States' International Military Education and Training program, instead using its national funds to have its personnel educated in U.S. military staff and war colleges.⁵³ A number of retired U.S. military members advise in planning and administration for critical organizations like the Joint Air Command. In addition, a significant mix of active duty and retired British and Australian military personnel advise the UAE military.

Other than the U.S. military, approximately 400 French personnel and 1,600 South Korean personnel have reportedly been providing training to the Emirati military.⁵⁴

Exercises

The Emirati military takes part in several elaborate joint exercises with the United States, including the Iron Union and the Native Fury exercises, both of which take place in the UAE.⁵⁵ These exercises aim to increase interoperability and enhance ties between the two partners, as well as impart skills and experiential learning to personnel in the respective militaries. The UAE has also joined large-scale multilateral exercises hosted by and in the United States, such as the annual Red Flag aerial exercise in Nevada.⁵⁶ The Emirati military has also participated in joint exercises with other partners, such as Egypt, France, Jordan, Saudi Arabia, and the United Kingdom.

Operations

The UAE military has had operational experience in several joint missions and has been deploying with regularity since 1992, when it participated in operations in Somalia.⁵⁸ Emirati military personnel have served alongside North Atlantic Treaty Organization (NATO) forces in Kosovo and Afghanistan, alongside Saudi forces to quell uprisings in Bahrain during the Arab Spring, and alongside partner forces to counter piracy and terrorism in North Africa.⁵⁹

Although the UAE military had extensive operational experience, it had not planned and executed a campaign by itself until its involvement in the Yemen conflict, and earlier, the more limited airstrikes in Libya. After five years of fighting in Yemen, the UAE has gained experience in operating in urban and amphibious environments, conducting complex operations involving air, ground, and sea-based capabilities.⁶⁰ Yemen is also where the UAE suffered its most significant military losses, particularly in 2015, when forty-five Emirati soldiers were killed in a single missile strike. The UAE

recently completed a martyrs' memorial to commemorate these and other casualties across its military history.⁶¹

In addition to recent experience in Yemen, the UAE has also participated actively in counterterrorism efforts against the Islamic State as part of the D-ISIS coalition and also against AQAP in Yemen.

Institutions

Although the titular head of the UAE Ministry of Defense is the ruler of Dubai, Sheikh Mohammed bin Rashid al Maktoum, and although the title of supreme commander of the UAE Armed Forces rests with Sheikh Khalifa bin Zayed Al Nahyan, MBZ, Sheikh Khalifa's brother, is the true power broker when it comes to military affairs. MBZ has, in several decades as deputy supreme commander at the helm of the Emirati military, driven substantial changes within the military, particularly the Presidential Guard. In addition to successfully leveraging funds to purchase the best weapons and equipment available, MBZ has also molded the military's organizational culture and developed its human capital.

His personal relationships with senior U.S. military officers—such as Mattis and General John Allen, former commander of the International Security Assistance Force in Afghanistan—have also helped in the advancement of the Emirati military. Both U.S. generals served as advisers to the UAE military after their retirement, in addition to several other U.S., British, French, and Australian retired flag officers.⁶² Major General Michael Hindmarsh, a retired Australian officer, commands the Presidential Guard and retired U.S. Army lieutenant colonel Stephen Toumajan, raised to the rank of major general by the Emirati military, formerly led the UAE's Joint Aviation Command and National Search and Rescue Center. Some active duty foreign military officers have also been seconded on loan to positions within the Emirati military.

Although the UAE military as an institution has a strong central command and control structure modelled doctrinally on that of the United States, it lacks institutional mechanisms and oversight to ensure professionalism and accountability that other countries place on their forces. The large number of Emirati officers going through U.S. professional military education would, as is the norm, receive training on human rights and legal areas such as the protection of civilians and the Law of Armed Conflict. However, the Emirati military has yet to adopt these principles as institutional norms and lacks accountability processes to check and remediate behavior if those norms are violated.⁶⁴

The United Nations Office of the High Commissioner has documented violations and crimes by the UAE and other armed actors under international law.⁶⁵ Humanitarian organizations and advocacy

groups have also condemned UAE actions in Yemen. These allegations include using indiscriminate force resulting in civilian casualties, running secret torture prisons in Yemen, and turning a blind eye to proxy groups with links to al-Qaeda and the Islamic State.⁶⁶ Ostensibly due to the dearth of institutional processes and accountability mechanisms within the country and its military, substantive action to address, investigate, or remediate these criticisms has yet to be taken.

With its increasing involvement in regional politics and security operations, the UAE leans on foreign military auxiliaries to augment its force size or to train, advise, or command its personnel. This happens both through formal bilateral channels between partner militaries—Australia, France, the United Kingdom, and the United States, for instance, all have military forces serving a role within the UAE military—as well as through private firms such as Global Aerospace Logistics, an Emirati firm, and Academi, formerly known as Blackwater.⁶⁸ In 2015, the UAE also reportedly deployed 450 Latin American mercenary troops—mostly from Colombia, but also from Chile, El Salvador, and Panama—to bolster the proxy war in Yemen, drawing from a brigade of 1,800 Latin American personnel training in the UAE.⁶⁹ With institutional accountability already hazy, the presence of foreign auxiliaries outside the institutional structure and not subject to certain rules and norms adds to the ambiguity of the UAE's use of a range of security forces to achieve its objectives.

Conclusion

The UAE has made remarkable progress in building one of the most capable militaries in the region over the last twenty years. However, in order to chart a sustainable plan to secure its objectives in the region as a fully professional military and to ensure enduring partnerships with countries like Australia, France, and the United States, it should pursue several reforms.

First, it will need to invest in strategic planning capabilities to better chart its priorities to its resourcing. This should also include investments in institutions for strategic, operational, and tactical lessons learned and feedback loops to inform future force planning—most immediately from the Yemen war, while lessons are still fresh. If the UAE wants to achieve its objectives, it should rigorously review and prioritize where it wants to make investments and deploy its forces. It should seek cooperative arrangements with partners within and outside the region to match its comparative advantages with partners' capabilities in order to better achieve its objectives and to seek efficiencies.

Augmenting its ranks with auxiliary and mercenary forces may increase capacity in the short term to take on additional missions, but absent reflection on the relative effectiveness of these auxiliary forces and their level of integration with the core UAE military, their ultimate value is suspect. Moreover, use of auxiliary forces could undermine security cooperation relationships with Australia,

France, and the United States over time, particularly if they are not closely regulated or held accountable for their actions and particularly within these partners' legislative bodies. The UAE should be transparent about the goals and activities of these groups. Foreign partners could share best practices with the UAE on how to oversee and manage security contractors in pursuit of national objectives.

Second, the UAE should seek to professionalize its military by developing transparency, oversight, and accountability mechanisms for upholding Law of Armed Conflict and human rights principles. With significant gains in operational prowess and close relationships with the United States and other key partners over the last decade, the UAE will plateau in its development as a professional military if it does not uphold international principles for military conduct and take publicly transparent steps to address transgressions. Taking these steps will buttress the UAE military's legitimacy in the eyes of its own population and with its regional partners beyond the Gulf, such as Iraq, Jordan, and Lebanon, where popular legitimacy is growing increasingly important for determining military success and stability. Evolving to this level of military professionalism can also improve planning at all levels, with the ability to recognize missteps or failures and learn from them. While not always perfect themselves, the United States and other partners can reinforce this goal through diplomatic engagement and military training, institutional capacity building, and combined exercises.

Finally, the UAE should work with partners like the United States to pursue joint development opportunities for new military technologies. Harnessing the UAE's industry, joint research opportunities could benefit both the UAE and U.S. militaries. Advancing this form of partnership will require enhanced technology security protocols and export control infrastructure to regulate development in the UAE and bring it in line with other advanced international partners and professional defense and military establishments. The United States and the UAE share a long-term interest in building defense transparency and strong institutions that can extend into a post-oil future for the region.

9. IAI apresenta WASP, um Sistema Inovador de Vigilância Aérea para Monitoramento Persistente de Grandes Áreas

18.02.2021

Defesa Aérea e Naval

<https://www.defesaaereanaval.com.br/defesa/iai-apresenta-wasp-um-sistema-inovador-de-vigilancia-aerea-para-monitoramento-persistente-de-grandes-areas>

Fevereiro de 2021 – A Israel Aerospace Industries (IAI) apresenta o WASP, um sistema de vigilância de nova geração que fornece, dia e noite, uma imagem de consciência situacional em alta resolução de alvos em movimento em uma ampla área de interesse.

Utilizando sensores EO e IV de última geração, algoritmos de IA e mecanismos de regras adaptáveis, o sistema captura grandes áreas com alta taxa de revisita para rastrear, identificar e alertar o operador do sistema sobre alvos em movimento correlacionados aos requisitos e objetivos da missão. Compacto, leve e com baixo consumo de energia, o WASP atende a uma ampla gama de plataformas aéreas como Sistemas Aéreos Remotamente Pilotados (SARPs) táticos, drones, aeronaves de asas fixas e rotativas ou balões de vigilância amarrados.

A área de cobertura e a resolução do WASP mudam de acordo com sua plataforma e altitude operacional. Montado em um SARP tático como o BirdEye 650D, o WASP cobre dois quilômetros quadrados em resolução ideal para detectar todos os tipos de alvos em movimento. Quando montado em um SARP de grande autonomia e altitude média, como o Heron I, a área de cobertura se expande para mais de 15 quilômetros quadrados para detectar, sobretudo, objetos do tamanho de veículos e afins.

Moshe Levy, vice-presidente executivo e gerente geral do Grupo de Aeronaves Militares da IAI, disse: “O desenvolvimento do WASP exemplifica a nova estratégia da IAI para o desenvolvimento de sistemas de IVR (Inteligência, Vigilância e Reconhecimento), recursos de inteligência e de fusão de informações.

Ao fornecer uma imagem de inteligência altamente detalhada em uma área ampla, o WASP fornece excelente consciência situacional em dois níveis, compreendendo informações visuais e de inteligência. “Sendo um sistema compacto e leve, pode ser montado em uma variedade de plataformas para fornecer sólidos recursos de inteligência já em nível tático.”

10. Iran unveils ballistic missile, 'new generation' engines

09.02.2020

Times of Israel

<https://www.timesofisrael.com/iran-unveils-ballistic-missile-new-generation-engines/>

TEHRAN, Iran — Iran's Revolutionary Guards unveiled Sunday a short-range ballistic missile that they said can be powered by a "new generation" of engines designed to put satellites into orbit.

The Guards' Sepahnews website said the Raad-500 missile was equipped with new Zoheir engines made of composite materials lighter than on earlier steel models.

It also unveiled Salman engines made of the same materials but with a "movable nozzle" for the delivery of satellites into space.

The Raad was "a new generation missile that has half the weight of a Fateh-110 missile but with 200 kilometers more range," it added.

The Fateh-110 is a ballistic ground-to-ground missile first unveiled in 2002. Its latest generation has a range of 300 kilometers (186 miles).

Islamic Revolutionary Guard Corps commander Major General Hossein Salami unveiled the missile and engines alongside IRGC aerospace chief Brigadier General Amirali Hajizadeh.

"The complicated achievements on the bleeding edge of global technology that were unveiled today are our key to entering space," Salami said.

Salami noted the movable nozzle on the new engine allowed "maneuverability beyond the atmosphere" and amounted to a "leap in modern missile technology."

The new technologies that made the missiles "cheaper, lighter, faster and more precise" could be applied to all of Iran's missile classes, he added.

ensions between Iran and the United States have soared since May 2018 when US President Donald Trump withdrew from a nuclear deal that offered Tehran sanctions relief in return for curbs to prevent it acquiring nuclear weapons

Washington says it seeks to rein in Iran's ballistic missile program as well as its "destabilizing behavior" in the region. It has since slapped crippling sanctions on Iran as part of its "maximum pressure" campaign, with Tehran hitting back by progressively rolling back commitments to the nuclear deal.

The US has also raised concerns in the past about Iran's satellite program, saying the launch of a carrier rocket in January 2019 amounted to a violation of curbs on its development of ballistic missiles.

Iran maintains it has no intention of acquiring nuclear weapons, and says its aerospace activities are peaceful and comply with a UN Security Council resolution.

11. In the 1st Missile Battle at Sea in 1973, Israeli craft evaded Soviet-made missiles

16.02.2021

Times of Israel

<https://www.timesofisrael.com/how-the-cherbourg-boats-bested-a-superpowers-weapons-and-changed-naval-warfare/>

The passport control officer at Orly Airport glanced at the Israeli passport handed him and then at the line of young men in blue windbreakers waiting their turn. The man opposite him was also wearing a blue windbreaker.

"What kind of group is this?" asked the officer. nes fly to protect rare New Zealand dol

"Students."

"Come off it," said the Frenchman, who assumed that the bronzed and purposeful faces in the line were not for cloistered studies destined. "Are you military?"

Even more startling than the question was the language in which it was asked — Hebrew.

"No, why do you ask?"

“Because you’re all wearing the same windbreakers and you’ve all got fresh haircuts.” Nodding at several other Israelis who had just passed through and were waiting near the exit, he added: “And all your passports are numbered consecutively.”

The Israeli, agitated, called to the men at the exit. “Leave the airport.” There was a chance, he thought, that some might get away before the gendarmes closed in.

The passport officer calmed him with an upraised palm. “Take it easy,” he said. “You’ve done nothing illegal.” He identified himself as a Moroccan-born Jew who had lived for some years in Israel. “But you ought to tell your superiors about this.”

Had the Mossad been involved, such mistakes would doubtless have been avoided, but the navy was unschooled in semi-clandestine crossings far from the sea.

The men were among 100 naval personnel — most just a couple of years out of high school — being sent to the port of Cherbourg to run off with five boats embargoed by the French. They were to be hidden below decks by maintenance crews stationed there until the boats sailed.

The vessels were the last of 12 “patrol boats” ordered by Israel from a local shipyard. Seven had already reached Israel over the previous two years but French President Charles de Gaulle, seeking closer ties with the Arab world, seized on an Israeli commando raid on Beirut Airport to embargo the last five. Prime Minister Golda Meir rejected the navy’s proposal to just run off with the boats one night. Nothing illegal must be done, she said, that might give France a reason to sever relations.

Admiral (ret.) Mordecai Limon, head of Israel’s military purchasing mission in Paris, argued that legality in this instance was an arbitrary term. Israel had purchased the boats in good faith while the French government was undoing a legal contract to promote geopolitical objectives. Limon proposed cloaking the getaway with a veneer of legality, leaving behind a *fait accompli* for lawyers to argue about to their hearts’ content after the boats had sailed. After being convinced that the boats were truly needed, Meir gave her consent.

Limon, a former commander of the Israeli navy, flew to meet Martin Siemm, owner of a large Norwegian shipbuilding company. An underground leader during World War II, Siemm had been recommended to Limon by a mutual friend as a friend of Israel. Meeting in an airport restaurant, Limon described Israel’s quandary regarding the boats. A possible solution, he said, would be for Israel to sell the boats to a foreign entity, or at least be seen to sell them, and then to discreetly reclaim them. Would Siemm agree to be party to such a scenario? “Give me 48 hours,” said Siemm. When he called Limon in Paris it was with a positive response.

Limon chose Christmas eve for the breakout when alertness in the port would be minimal. Two hours after midnight mass, the Cherbourg boats, as they came to be known, slipped past the harbor's breakwater into a Force Nine gale roiling the English Channel. Pursuit in this weather was unlikely. As the boats turned south, the land mass of England shielded them from the full force of the storm. But as they emerged into the open Bay of Biscay, mountainous waves came at them from the west where the storm had been raging for days in the Atlantic. Captain Hadar Kimche, commanding the operation, ordered that no one venture onto deck unless secured by a line. Some bridge officers lashed themselves to their seats.

The mad roller coaster continued as Christmas day dawned. As the boats rose higher towards the crest of a wave, a huge green wave would lunge from behind and crash just astern. Then the descent began, a stomach-turning downward rush in which the helmsman could feel the wheel reluctant to respond. When the boat plunged into the bottom of the trough, the surging sea brimmed the deck and seemed about to pull the boat under. Then the vessel would somehow break loose and begin the agonizing climb again. For the men on the bridge it was an extraordinary and frightening sight. Below decks the crew could feel the boat shudder and wondered whether it would rise up again. Except for an occasional terse order and the noise of the engines there was total silence.

Kimche stood on the bridge of the lead vessel with a stopwatch adjusting the boat's speed. If it descended a wave too rapidly, the prow could be thrust into the trough and control lost. If it was too slow climbing out, tons of water would crash upon its stern. Kimche had hoped to sail at 30 knots, but finally settled for an average speed of 18. Constant orders from the bridge required quick responses from the engine room. The crewmen, almost all seasick, worked steadily but kept buckets close to hand.

Anchored in a sheltered bay on Portugal's southern coast, Capt. Amnon Tadmor, master of the freighter *Lea*, told his chief mate that he would not have taken his ship to sea in this weather even though it was many times the size of the Cherbourg boats; if he was already out, he said, he would have sought shelter. The *Lea* was the first of a string of Israeli merchantmen that the navy had deployed along the boats' 3,500-mile escape route in order to refuel them and otherwise provide assistance. First contact from the boats came at dusk on December 26, in a message from Kimche asking Tadmor to confirm his position. Four hours later Tadmor saw them rounding the corner of the bay, five small boats showing only navigation lights and moving fast.

In the post-Christmas torpor, France was slow to realize that the boats were no longer there. Officials were not immediately concerned because Limon had sent copies of documents to the relevant authorities showing that Israel had renounced its claims to the boats in return for the money it had paid the shipyard, effectively negating the embargo. The authorities also received documents

from the owner of the shipyard, who was party to Limon's plot, and from Siemm (both letters drafted by Limon) showing that the Norwegian had purchased the boats from the shipyard to service offshore oil rigs. Two days before Christmas, the three men met in Paris to sign a new set of documents undoing all they had agreed to in the earlier documents and restoring the status quo ante. In other words, Israel still legally owned the boats. These documents were not sent to the French authorities.

As the media got its teeth into the story of the missing Israeli patrol boats rumors began circulating; the boats were headed for Oslo, for Israel, for Alaska, even for Panama (a Panamanian law firm had drawn up documents creating a fictitious Norwegian company that was ostensibly involved in the sale).

The Norwegian government, fearful of the impact on the Arab world where Norwegian oil tankers were widely used, publicly refuted any connection to the missing boats. As the Israeli ruse became clear, the French defense minister urged that the air force "interdict" the fleeing boats but cooler heads prevailed. (Polls showed that a large majority of the French public applauded Israel for pulling it off.) "Where are they?" asked a chipper banner headline in one of Cherbourg's dailies. As the story took on momentum, television teams flew out over the Mediterranean and the North Sea to look for the boats.

Most Israelis today probably remember the escape, if at all, as a "cheeky caper," in the words of a British newspaper at the time. But the public would remain unaware of a broader context — the boats' role in a bold project that would transform naval warfare.

It had begun a decade before when Israel's Defense Ministry rejected the navy's request for funds to update its aging fleet. Israel's wars, the ministry said, would be decided by tanks and planes, not ships. In a desperate bid to remain relevant, the navy command decided to explore development of a new kind of warship — small, affordable boats armed with missiles. Heavy guns could not be placed on small boats because of their recoil, but missiles had no recoil. Their warheads, on the other hand, could pack as much punch as those of a heavy warship. Furthermore, if the missile was guided by radar it could pursue its prey and thus be more accurate than shellfire.

As persuasive as these arguments were, there was one formidable counter-argument — such boats did not exist in any Western navy; nor did sea-to-sea missiles. The navy nevertheless decided to pursue the idea despite its lack of an innovative tradition. A think tank made up of naval officers as well as experts from Israel's fledgling military industries, particularly Israel Aircraft Industries, began to discuss the concept. Before long the concept evolved into a project involving hundreds of engineers, scientists, naval architects and others.

Admiral Shlomo Erell, the commander of the navy, was the driving force behind the project, a forerunner of Israel's emergence as the "startup nation." The intensity was unrelenting. Twelve to 14 hour working days were common and for a period, key personnel worked every day of the year except Yom Kippur. The innocuous-looking boats that had fled Cherbourg — together with the seven which had preceded them — would be converted in Haifa into the first missile boats in the west.

Midway through the project Israel learned that the Soviet Union had also developed missile boats, and had begun distributing them to Egypt and Syria. Israel had little information about them but was inclined to skepticism about the accuracy of the Soviet sea-to-sea missile, the Styx, because the Soviet Union had been laggard in the development of radar in the Second World War. Four months after the Six Day War, the Israeli flagship, the destroyer Eilat, was on routine patrol off Sinai when an Egyptian missile boat emerged from Port Said and fired four missiles from a distance of 13 kilometers. Three hit; the fourth missed only because there was nothing remaining on the surface to hit. Of the Eilat's 200-man crew, 47 were killed and 100 wounded. The Eilat was the first vessel ever sunk by a missile.

Admiral Erell asked his chief electronics officer, Capt. Herut Tsemach, whether anything could be done to block the Styx. Tsemach estimated what his opposite number in the Soviet fleet headquarters in Leningrad had likely put radar into the design of the Styx. On the basis of this educated guess, he shaped electronic and other counter-measures aimed at diverting incoming missiles. His systems were installed on the Israeli boats but their efficacy could be determined only in a real-time confrontation.

This would come on the first night of the Yom Kippur War. Four Israeli missile boats were approaching the Syrian port of Latakia when three Syrian missile boats emerged. The Styx had twice the range of Israel's Gabriel missile and the Syrians duly got in the first volleys. Israeli bridge officers could see fireballs arc into the sky and then descend directly towards them. In the final seconds, the fireballs appeared to wobble and then exploded in the sea. The Israeli boats closed to Gabriel range and sank two of the Syrian boats with missiles. The captain of the third Syrian vessel, out of missiles, beached his boat and managed to escape with his crew but the vessel was set ablaze by gunfire. Two other Syrian warships — a torpedo boat and a minelayer — were also sunk.

Sailing back to Haifa after the battle, the flotilla commander, Capt. Michael Barkai, decided to forego tying brooms to the mast in the traditional naval symbol of a "clean sweep." They had left a lot of Syrian sailors at the bottom of the sea, he told his men. To flaunt victory "wouldn't be respectful to them or to ourselves."

Two nights later, a similar scenario was played out on the approaches to Alexandria, with three Egyptian missile boats sunk. From the next morning until the end of the war, two weeks later, the Arab fleets did not venture out of harbor, leaving the sea lanes to Haifa open to vital cargos.

The Israeli missile boats — the five Cherbourg boats and their seven sisters — came through the war intact despite the 54 Styx missiles fired at them.

Capt. Tsemach, whose electronic umbrella had proved decisive, would say that the first missile-boat battle in history, the one off Latakia, deserved ranking with the battles of Midway and Trafalgar in the annals of naval warfare, small in scale and strategically marginal as it was.

Israel, whose population at the time was three million — half that of New York City — had bested the weapon system of a superpower and fundamentally changed the way battles at sea are fought.

Last Christmas day, naval veterans who had participated in the escape from Cherbourg gathered in an auditorium near Haifa to mark the 50th anniversary of the event. Among them was their commander, Hadar Kimche, who had retired as an admiral, and the son of Admiral Limon, who died in 2009. Also present were several hundred veterans who participated in the battles at sea during the Yom Kippur War

12. Navy to Fully Integrate Laser into Aegis Combat System

15/02/2021

National Defense

<https://www.nationaldefensemagazine.org/articles/2021/2/15/navy-to-fully-integrate-laser-into-aegis-combat-system>

The Navy this year will be firing a high-energy laser weapon that is fully integrated with one of its destroyers, which proponents say is a major step toward fielding directed energy technology.

Joe Ottaviano, Lockheed Martin business development director for advanced product solutions, said he has heard the adage that battlefield lasers always seem to be “one year away” from fielding, but asserted that this time is different.

The High Energy Laser with Integrated Optical-dazzler and Surveillance, or HELIOS, this year is slated to be permanently deployed aboard a Flight IIA DDG Arleigh Burke destroyer and integrated with its Aegis combat system.

“We’re delivering a full-end system that actually brings defense capabilities to an area where there currently isn’t any and exceeds the capability I think we all had in our mind going forward,” Ottaviano said in a press briefing.

HELIOS is a 60-kilowatt solid-state laser capable of scalable effects, which can “dazzle” and blind sensors, but at high power it can “put a hole” through unmanned aerial vehicles, low flying aircraft, and in some cases, missiles, Ottaviano said.

Jason Wrigley, Lockheed’s business development director for naval combat and missile defense systems, said: “People have been talking about the promise and the possibility of laser weapon systems for decades. So it’s really exciting for us to finally have reached this milestone, delivering an integrated laser weapons system into the hands of sailors and as part of the Aegis weapon system.”

Lockheed Martin went under contract to deliver the integrated system in 2018. It spent 2020 carrying out a critical design review and factory qualification tests.

After decades of company research and development surrounding solid-state lasers, the system was primed to be delivered in such a short time, Ottaviano said. The Navy contributed much of the software needed to integrate the system into Aegis, he added.

A bonus for the Navy is the high-powered optical tracker that comes with the system and can double as an intelligence, reconnaissance and surveillance sensor when the laser isn’t being fired, the Lockheed executives said.

“It will be the most accurate [electro-optical] sensor on the ship,” Ottaviano added.

As for firepower, directed energy weapons feature an almost unlimited magazine.

Ottaviano said: “As long as the ship has got power, the system can fire. You don’t run out of bullets. You don’t run out of lasers. You just keep going. ... I’ll call it a transformational capability.”

Rear Adm. Seiko Okano, the Navy’s program executive officer for integrated warfare systems, said integrating HELIOS into Aegis is “a pretty big deal.”

Tests carried out in 2020 on land at Lockheed Martin's Moorestown, New Jersey, facility, surprised her.

"We've realized over time that the capability that we're giving to the fleet is actually more capable than what we initially had thought," she said at the Surface Navy Association's annual conference.

Ottaviano said the Navy is looking at possibly integrating HELIOS into other platforms, particularly aircraft carriers. A larger footprint could result in higher powers capable of taking out larger targets.

Okano said: "I think certainly we can build a bigger laser, but it is how does that work, and how do we integrate that into the ship, and what other [tradeoffs] do we have to think about?"

As for the laser taking down hypersonic missiles traveling at speeds above Mach 5, that is still a ways off. Sensors will have to improve, she said.

Correction: A previous version of this story had the incorrect location of the tests on the system.

13. BrahMos missile was demonstrated to the Minister of Defence of Russian Federation

16/02/2021

BrahMos Aerospace

<http://brahmos.com/newscenter.php?newsid=220>

The Hon'ble Minister of Defence of the Russian Federation (RF), Mr. S.K. Shoygu, recently visited JSC MIC Research and Production Association of Machine Building (NPO Mashinostroyenia) (which is a Russian co-designer of BrahMos missiles and a member of the Russian Engineering Union). He was informed about the progress in the project development.

Since the inception of the missile development, the project has made itself an international name and has been repeatedly noted by the leaders of both countries. The technical features of the BrahMos cruise missile are continuously updated in the process of development and operation and presently they fully meet the parameters specified in the technical assignment. The BrahMos

weapon systems have been successfully delivered to the Navy, Army and Air Forces of the Republic of India, and the missile enhancement is an ongoing process.

During his visit the Minister of Defence of RF was accompanied by Mr. V.V. Gerasimov, the Chief of General Staff of the Armed Forces of RF and the First Deputy Minister of Defence, Mr. A.Yu. Krivoruchko, the Deputy Minister of Defence, Mr. S.V. Surovikin, the Commander-in-Chief of the Aerospace Forces, Mr. N.A. Yevmenov, the Commander-in-Chief of the Navy, Mr. A.V. Golovko, the Commander of the Space Forces, Mr. S.I. Poroskun, the Deputy Commander of the Strategic Missile Forces, Weapon Dept., and the other heads of the Ministry of Defence.

14. US Air Force's 'Golden Horde' swarming munitions program to get second chance

04/02/2021

Defense News

<https://www.defensenews.com/air/2021/02/04/air-forces-golden-horde-swarming-munitions-program-to-get-a-second-chance-this-month/>

WASHINGTON — Now that the U.S. Air Force's first test of "Golden Horde" swarming bombs was deemed a partial success, the service is giving the technology a second shot later this month, the commander of the Air Force Research Laboratory said Thursday.

The Golden Horde program is one of AFRL's three top priorities. The effort involves networking a swarm of munitions together and equipping them with an operational playbook, which gives them a set of predetermined rules for autonomous operations.

The Air Force conducted its first Golden Horde test Dec. 15. AFRL Commander Brig. Gen. Heather Pringle characterized that event as a "great learning opportunity."

"We're looking forward to two more flights this month, in fact, with four Collaborative Small Diameter Bomb weapons, and I'm looking at time on target to try to up the game a little bit,"

Pringle said during a Feb. 4 event hosted by the Mitchell Institute for Aerospace Studies. “This program is still progressing, and we’re really excited about where it’s going in 2021.”

Although the program met nine of 13 objectives during the December event, Pringle acknowledged that not everything in the first test went according to plan.

During the flight, an F-16 dropped two Collaborative Small Diameter Bombs, or CSDB, a version of Boeing’s laser-guided Small Diameter Bomb I upgraded with a collaborative autonomy payload. According to an Air Force news release, the bombs were able to establish communication links with each other and detected an initial target — a GPS jammer.

However, the munitions are designed with an autonomy module that allows them to respond to changes on the battlefield, and the bombs sighted two higher-priority targets, which had been determined by Air Force mission planners before the flight and programmed into the weapons’ rules of engagement.

Unfortunately, due to software issues, the swarm was unable to transmit guidance commands to the navigation system, and the weapons struck a fail-safe target location instead.

“We had uploaded an [operational flight plan] that couldn’t accept updated flight profile information from the autonomous onboard processor. And so ultimately the initial flight profile that was in it is where it ended up,” Pringle explained. “There was no update, and the flight never changed. But we have done the forensics on it, we’ve corrected what needed to happen.”

Despite the setbacks during the first test, the Golden Horde concept still shows promise, Pringle said.

Next week, she intends to meet with Brig. Gen. Heath Collins, the Air Force’s program executive for weapons, to discuss the future of the program and how to eventually turn the technology into a product that can be used operationally.

“Gen. Collins and I have been reassessing what the overall, long-term scope is of this program and what the end deliverable will be,” Pringle said. “A major component of that is building a digital architecture that will allow more testing of various kinds of collaborative technologies and building in some containerized solutions that could be more plug and play across weapons. And I think ultimately that will allow a lot more flexibility.”

Along with the CSDB, the Air Force is creating a second swarming munition under the Golden Horde program — the Collaborative Miniature Air-Launched Decoy, based on Raytheon’s Miniature Air-Launched Decoy.

Col. Garry Hasse, director of AFRL’s Munitions Directorate, told Defense News last year that the CMALD would be ready for its flight tests onboard a B-52 aircraft in the summer of 2021.

AFRL plans to use the two systems together in an integrated swarm during a more complex scenario, currently scheduled around 2022, Norma Taylor, the program manager for Golden Horde, said during an interview in June.

The integration of hardware and software on the Golden Horde program is performed by Scientific Applications and Research Associates — which won a \$100 million contract in 2019 for CSDB-1 — and Georgia Tech Applied Research Corporation — which won \$85 million for CMALD.

15. Setting a course away from the intercontinental ballistic missile

16/02/2021

War on the Rocks

<https://warontherocks.com/2021/02/setting-a-course-away-from-the-intercontinental-ballistic-missile/>

As the new administration reassesses U.S. nuclear policy, it will be forced to make decisions about the future of the country’s ground-based, nuclear-armed intercontinental ballistic missile (ICBM) arsenal. Many advocates of maintaining the nuclear status quo have argued that it is essential to completely replace America’s aging Minuteman ICBMs with a new set of missiles, commonly referred to as the Ground Based Strategic Deterrent. And yet, to justify this approach, advocates have falsely presented the decision as a binary choice. They claim the United States must either fully replace its ICBMs or jettison them entirely. There is, however, an alternative approach: Extend the lifespan of the Minuteman ICBMs and use arms control to reduce the deterrence requirements that ostensibly justify them.

We argue that extending the lifespan of the currently deployed Minuteman missiles is preferable to replacing them with a new arsenal of ICBMs. Silo-based ICBMs are ultimately ill-suited to counter

the emergence of regional nuclear — and especially non-nuclear — threats to U.S. national security. Doubling down on ICBMs would in fact create additional risks to U.S. security. Rather than committing to ICBMs for the next five decades or more, the United States should begin to move its nuclear force structure away from silo ICBMs and look to reduce the comparable elements of Russia's nuclear forces in tandem through arms control.

Adding to the Minuteman's current life span is technically feasible, and would be a reasonable political compromise between Democrats and Republicans as both parties seek to support U.S. nuclear modernization and additional arms limitations on Russia (and China). Finally, U.S. negotiators seeking to shape the development of Russia's strategic forces by limiting the deployment of large, multi-warhead silo ICBMs will be better served by trading away currently deployed Minutemen missiles instead of waiting for new missiles to be deployed in ten years.

Don't Double Down on the Past

The first question is whether ICBMs are still the best weapons to address the strategic challenges America faces today. There is little reason to think they are.

When the United States and Soviet Union began to deploy ICBMs in the 1960s, the deterrence rationale was clear. Because the missiles, when on alert, could launch within minutes of the president's authorization, they ensured that a Soviet surprise attack to wipe out America's leadership and nuclear arsenal would fail. Today, the threat of a massive "bolt-out-of-the-blue" attack is extremely low, and Russia is the only country that could conceivably attempt one.

Instead, the central challenge for U.S. nuclear policy today is managing escalation risks arising from limited conflicts with nuclear-armed adversaries — not just Russia, but also China or North Korea. Such conflicts could stem from crises in Eastern Europe, the East or South China Sea, or the Korean Peninsula. The early phases of such conflicts would likely involve a mix of information warfare, gray zone operations, and conventional war. Nuclear weapons are unsuitable to deter or defeat these activities, because the stakes are not high enough to warrant running the risk of nuclear retaliation. ICBMs, with high-yield warheads, are especially unsuitable for deterring low-intensity aggression.

What's more, ICBMs are still unsuitable to deter the risk of massive escalation which might arise from these regional conflicts. U.S. bomber and submarine-based weapons far overmatch the nuclear forces of China and North Korea. Moreover, to reach Chinese and North Korean targets, U.S. ICBMs would have to pass over Russian territory, potentially provoking a political crisis or even Russian nuclear launch in response. This effectively rules out ICBMs in attacks against China or North Korea. Deterring Russia from a massive first strike remains the only conceivable reason to maintain

ICBMs, but is a new ICBM necessary to deter Russian nuclear attacks against the United States or its allies?

A new, silo ICBM provides no unique offensive capability, and it invites risk. It is also inflexible compared to bombers and ballistic missile submarines. Today's submarine-launched ballistic missiles, the life-extended Trident D5s, are more accurate than the Minuteman III, with warheads capable of taking out the hardest targets. Since they can be fired from closer to adversaries' territories and from variable locations, these sea-based systems would be more likely to succeed in counterforce attacks. Bombers have other advantages as well. In addition to carrying out conventional missions, they can be used as a form of visible signaling, be forward deployed and even be recalled before they have launched their weapons.

Faced with these arguments, proponents of the Ground Based Strategic Deterrent often claim the ICBM leg of the nuclear triad is a hedge against an uncertain future — where nuclear-armed states may grow in relative military power and new technologies may make submarines and bombers more vulnerable. Of course, it is prudent for the United States to hedge against these situations. Modernizing the air and sea legs of the U.S. strategic triad is critical to meeting these threats, as are nuclear risk reduction efforts. But given the uncertainty of these scenarios, in the unlikely and far-off case America did face multiple adversaries striving for nuclear parity, it would still be better served by constructing a force purpose-built for these circumstances.

Moreover, relying on ICBMs can carry additional risks. The early warning systems and command, control, and communications assets that make a "launch under attack" posture viable are increasingly entangled with conventional military assets and have become more vulnerable to conventional and cyber attack. If Russia or China were to attack some aspect of these systems, for example military communications satellites, U.S. leaders could easily interpret this as an attempt to disable U.S. defenses in order to launch a nuclear attack without fear of reprisal. The resulting heightened risk of inadvertent escalation could lead to a massive, escalatory launch of U.S. ICBMs, inviting an equally destructive retaliation. U.S. attacks against Russian command-and-control could produce the same result, since Russia maintains a similar alert posture for its ICBMs.

Where We're Going, We Don't Need a Sponge

This leaves one final justification for building a new generation of ICBMs — that they are needed as a warhead "sponge." The argument is that their existence would force Russia to use multiple nuclear weapons to destroy each U.S. ICBM in an attack. To destroy 450 ICBM silos, in other words, Russia would require at least 900 warheads out of the approximately 1,600 it deploys on a day-to-day basis. Nuclear policy analyst Vince Manzo estimated in a recent report that Russia would need

to expend even more, leaving the United States with a numerical advantage in surviving submarine- and bomber-delivered nuclear weapons after an exchange of Russian and American ICBMs.

There are three main problems with this argument.

First, if the Kremlin were willing to carry out a first strike against U.S. ICBMs, Russian leaders probably would not be deterred by an unfavorable balance in surviving nuclear weapons for a potential second nuclear exchange. Instead, they probably would assume that both sides would be launching everything they have at each other. Massive strikes by one country against the other's homeland would only occur in a general nuclear war, and both militaries and societies would largely be destroyed. That's why Russian leaders are unlikely to attempt a first strike against the United States in the first place, which is why the United States does not need ICBMs (given the other problems they pose).

Second, even without ICBMs to act as a sponge, the United States would still be left with more than enough surviving submarine and bomber-based weapons after a hypothetical Russian nuclear first strike. A nuclear exchange is much more likely to occur as the result of a growing crisis rather than simply out of the blue. Survivable bombers and at-sea submarines will be "generated" — alert and available for nuclear operations — long before Russia would attempt a nuclear attack on the U.S. homeland (and the ICBMs based there). The hundreds of deployed nuclear weapons on air and sea delivery systems would be more than sufficient to destroy valuable targets in Russia and thereby deter such an initial attack.

Third, new technologies — increasingly accurate conventional weapons, new warhead delivery systems, and emerging cyber weapons — mean that Russia will need fewer nuclear warheads to target immobile U.S. ICBMs. If the U.S. sponge absorbs fewer warheads, its overall deterrence value is reduced. So even if the numerical disparity in surviving nuclear forces matters today, it is less likely to deter Russia as these technologies improve. Which is all to say, instead of worrying about the size of the U.S. sponge, logic suggests Washington simply use arms reduction talks to lessen the number of warheads that the sponge is expected to soak up.

For these reasons, the United States could meet its nuclear deterrence requirements without land-based missiles, and the resulting force structure would be more stabilizing. However, unilaterally eliminating the ground leg of the triad is not politically feasible. Entrenched domestic interests will mobilize in opposition to unilateral ICBM cuts. Unilateral elimination would also create confusion and fear among allies who, thanks to decades of U.S. diplomatic messaging, view the triad as essential for extended deterrence. Finally, unilateral ICBM elimination could throw away an

opportunity to bargain for commensurate reductions from Russia and perhaps China. The question then is how to manage the U.S. ICBM force in such a way to reduce the associated risks.

A Responsible Way Ahead

Assuming the United States will retain some number and type of ICBMs for the foreseeable future, the smartest way forward would be to pause production of the Ground Based Strategic Deterrent and extend the lifespan of the Minuteman. This pause will buy time for arms control negotiations with Russia to further reduce deployed strategic nuclear warheads and delivery systems. Doing so will assure military officials, deterrence strategists, theorists and practitioners that the United States is not going “too fast” in force posture changes. It will avoid creating new disquiet among allies wary of other potential Biden administration nuclear policy moves. And it will motivate U.S. and Russian arms control delegations to have straightforward, substantive discussions surrounding deeper reductions in deployed strategic nuclear forces. At the same time, as part of a broader diplomatic conversation focused on enhancing bilateral strategic stability the two countries may pursue other negotiating priorities — increasing transparency, eventually limiting nonstrategic nuclear weapons, and addressing disagreements over space security and missile defense.

Is it technically feasible to extend the Minuteman’s lifespan? Proponents of Ground Based Strategic Deterrent assert it is not. The head of U.S. Strategic Command, Adm. Charles Richard, made this point succinctly:

You cannot life-extend Minuteman III. ... It is getting past the point of [where] it’s not cost-effective to life-extend Minuteman III. You’re quickly getting to the point [where] you can’t do it at all.

There are, however, good reasons to doubt Adm. Richard’s claim. First, the objectivity of his assessment is questionable given an unusual, ongoing Air Force public relations campaign clearly aimed at limiting the flexibility of the new administration so as to ensure the development of a new ICBM. This media outreach is occurring well in advance of any broad-based, Department of Defense-led nuclear strategy review and before the appointment and confirmation of civilian defense advisors. Given Secretary of Defense Lloyd Austin’s commitment to civilian oversight and “ensuring strategic and operational decisions are informed by policy,” civilian policymakers should carefully scrutinize the Air Force’s claims.

Adm. Richard’s assessment is also doubtful on technical merits. In 2014, the Air Force conducted a study — termed an “analysis of alternatives” — that considered various options for ICBM modernization. The conclusion was that a replacement was the most desirable. However, the study was premised on an Air Force requirement to maintain 400 deployed ICBMs through 2075. Both

the number of missiles and the target date were essentially arbitrary. The United States reduced its deployed ICBM force to 400 to comply with the numerical ceiling set by the New START treaty. But given the possibility of substituting highly capable submarine- or bomber-launched weapons, the treaty does not set a floor to the size of the Minuteman force. Public explanations of the 2075 requirement, in turn, have been severely lacking. Air Force personnel only reiterate that the Ground Based Strategic Deterrent program office was asked to “build a system that’s going to last [until] 2075.”

As a result of the 400/2075 requirements, the Air Force did not examine whether a life extension could add “just” two or three decades to the Minuteman’s lifespan, especially if there were fewer total missiles. Since safely extending the Minuteman’s lifespan until 2075 may indeed be impossible, this meant the study concluded that developing the Ground Based Strategic Deterrent program was inevitable and it would be more cost-effective to start it sooner rather than later.

Experts suggest that a two- or three-decade Minuteman life extension is technically possible. In a 2019 *War on the Rocks* article, nuclear policy analysts Kingston Reif and Steve Fetter outlined how modest efforts, such as replacing solid rocket propellant and guidance systems and reducing destructive testing, would enable Washington to retain a substantial deployed ICBM force for years (see Figure 1). A new study without the 2075 requirement would demonstrate this. Unfortunately, the House of Representatives chose not to conduct such a study in 2019. Were the president to delay deploying the Ground Based Strategic Deterrent until 2050, then choose between extending the life of the Minuteman and shifting to a dyad in the intervening years, presumably Adm. Richard would say the life extension is indeed possible and preferable.

Figure 1

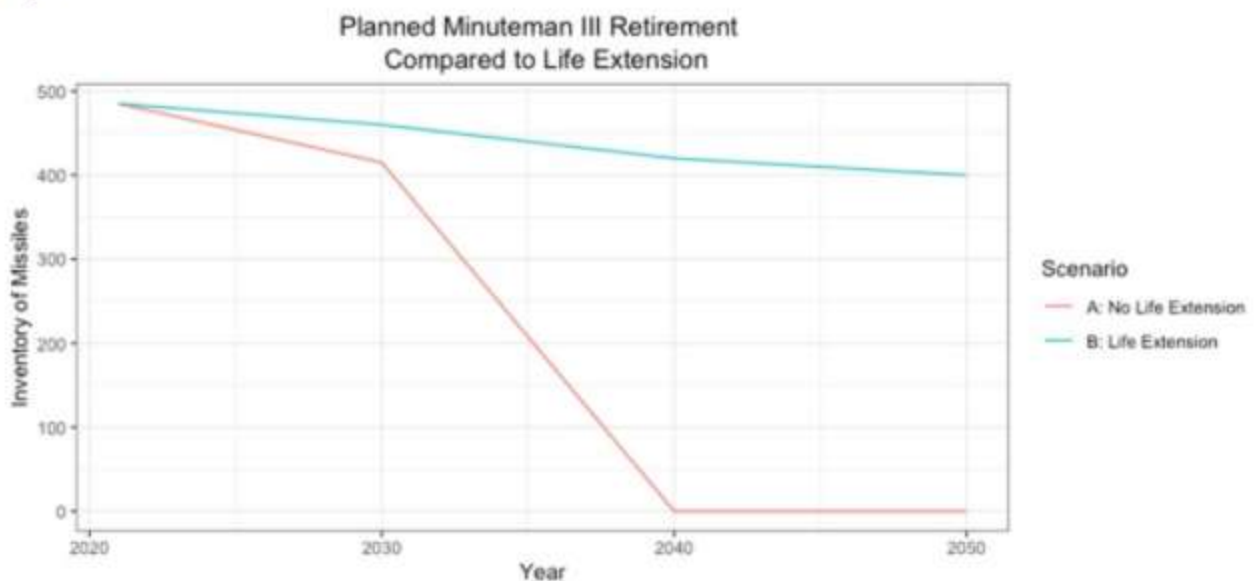


Figure 1: In scenario A, the Minuteman III ICBM will remain available in declining numbers after the projected 2029 deployment date for Ground Based Strategic Deterrent. In scenario B, a Minuteman life extension and lowering of the current test rate (from 4.5 missiles per year to 3 missiles per year) will maintain 400 Minuteman ICBMs until 2050. Source: Todd Harrison, "Options for the Ground Based Leg of the Nuclear Triad," 2017 CSIS, pp. 18–19.

Importantly, extending the life of Minuteman would be even more feasible if the overall size of the ICBM force were reduced. The Biden administration should review whether the United States could meet its deterrence requirements with a lower number of deployed warheads. The Defense Department's 2013 review of nuclear employment strategy suggests that it could. If a review now reaches a similar conclusion, it would be prudent to achieve these reductions in the Minuteman force. This would create a stockpile of additional nondeployed missile bodies to be used as spare components to refurbish ICBMs as they age. Even if the Department of Defense determined the current number of deployed warheads (1,457) is preferable, it could still reduce the Minuteman force and move some warheads to currently deployed Trident D5 submarine-launched ballistic missiles.

Previewing the Review

There is, in short, good reason for President Joe Biden to extend the life of the Minuteman with the goal of eventually decreasing our reliance on ICBMs through arms reduction agreements. Reif and Fetter's analysis raises the question: How should Biden go about doing so? A well-structured Nuclear Policy Review could build support among the entire U.S. defense establishment — and relevant international and congressional stakeholders — to endorse this middle approach. As part of this review, President Biden should task the Defense and State Departments, along with National Nuclear Security Administration and Intelligence Community, to examine three major technical and policy issues.

First, the administration should order a review of Minuteman life extension options based on a wider range of parameters, considering the feasibility of deploying 100, 200, 300, or 400 ICBMs for a service life extending until 2040, 2075, or a date in between. The purpose of this study would be to examine the technical viability of Minuteman life extension in a range of force structures, while establishing the cost for refurbishment in scenarios where the eventual purchase of the Ground Based Strategic Deterrent was not assumed. Ideally, the Biden administration would seek input from an independent technical commission and make their work publicly available alongside the Defense Department's own analysis.

Second, following this technical review, the administration should commission a study of alternative U.S. force structures and arms control policy similar to the 2009 Nuclear Posture Review. The Department of Defense and Strategic Command should examine the risks of moving U.S. strategic nuclear forces to a dyad composed only of bombers and ballistic missile submarines based on the current rate of Minuteman retirement (that is, all missiles retiring between 2030 and 2040). Another force structure worthy of examination would be a triad with fewer — 300, 200, or 100 — deployed ICBMs.

This review should also examine posture changes which could offset any potential drawbacks of reducing or eliminating the arsenal of deployed ICBMs from the perspective of strategic stability, nuclear security and safety, and the concerns of allies in Europe and Asia. Such changes could include: increasing procurement of ballistic missile submarines and/or bombers, revising the number of ballistic missile submarines on day-to-day patrol, augmenting warhead loadouts on deployed submarine launched ballistic missiles, increasing bomber readiness, and forward-deploying additional conventional or nuclear forces.

Third, the State Department should examine how various forms of arms control could make each force structure option more viable. Policymakers should consider whether reductions in Russia's silo ICBM force could further enable U.S. movement toward a dyad, and what the trade-offs may be for U.S. negotiators. One priority for the United States should be to seek Russian reductions in silo-based, heavy ICBMs — such as the new Sarmat — and push for reducing the total number of Russia's deployed warheads on existing multi-warhead ICBM systems. Arms control agreements that shape Russia's nuclear posture toward more stabilizing weapons and policies will do a great deal to mitigate the risks of reducing America's ICBM arsenal. As was the case in 2009, the administration should consider force structure changes and arms control policy in an integrated fashion.

Biden's review of nuclear policy offers a rare opportunity to make long-overdue changes in America's force structure and deterrence strategy. Crucially, this review should be structured in a nuanced, pragmatic way that avoids the false choice between completely replacing the Minutemen and eliminating the ground-leg of the triad immediately. This will better enable Washington to build on the recently extended New START treaty in order address the problem of aging U.S. ICBMs through a pause and trade strategy with Russia. The result will be a better, more flexible strategic deterrent.

16. Is the department of defense making enough progress in wargaming?

17/02/2021

War on the Rocks

<https://warontherocks.com/2021/02/is-the-department-of-defense-making-enough-progress-in-wargaming/>

Much of what the Department of Defense calls wargaming is not actually wargaming. This is a problem for reasons you can imagine — done right, gaming is one of the few ways to test out battle plans and designs for a military that can match China's — and some you might not. The Nintendo generation is coming and, still, most games happen on physical tables, around which conventional wisdom is reaffirmed. Too many games are one-off exercises when the situations for which they purport to prepare will be anything but. The flood of interest in wargaming that started when Pentagon leaders leaned in to the idea five years ago shows no signs of abating, but we still don't know if the department's wargames are working.

In 2015, then-Deputy Secretary of Defense Bob Work and Vice Chairman of the Joint Chiefs Gen. Paul Selva pushed to revitalize wargaming in order to better prepare the nation for future wars. They drew parallels to the interwar years, when the pace of technological change and disruption caused some militaries to fall behind, and others to innovate. A few months before that, in December 2014, several of us within the wargaming community met to discuss wargaming education. One person brought warning of Work's impending interest in wargaming, adding additional urgency to the situation. There were only so many experienced wargamers who were prepared to instruct at the time, and presumably a flood of interest was coming. We then spent a few frantic years organizing conference after conference to "feed the newbies," as we called it, trying to give hands-on wargaming experience to the large number of action officers suddenly being sent out to wargame (or "wargame") to the best of their abilities. Surely, at some point, interest would die down.

ive years into its reinvigoration, the military's interest in wargaming remains strong. Strategy writing teams in the Pentagon extensively wargamed candidates for the 2018 National Defense Strategy. Demand has only increased for approaches that can help senior leaders think through everything from technologies such as artificial intelligence and cyber to fully fledged concepts such as the joint warfighting concept and joint all-domain command and control. Wargaming plays a key role in these activities and, despite its limitations, few practical alternatives exist.

Yet, if wargaming continues to be one of the few tools available to better prepare the U.S. military for the future, is wargaming, as conducted by the Department of Defense, up to the task? There are four questions the department needs to answer before it will know.

First: Is the quality of existing defense wargaming sufficient? Is the overall defense wargaming enterprise able to support the present challenges in concept development, analysis, capabilities development, and professional military education? Best practices in wargaming include adjudicated wargames instead of unadjudicated tabletop exercises and series of games rather than individual one-off events. Assessing the quality of wargaming at the department level involves assessing whether these best practices are followed rather than simply identified. Senior leaders have also identified quality problems in wargaming such as insufficient initial research, flawed game designs, and unsound basis for adjudication. A frank and objective look at such issues is necessary to spot problems that should be corrected. The quality of other important wargame inputs — such as scenarios, dynamic adversary players, and courses of action — can also vary widely but are rarely evaluated.

The quality of information available on wargames that the department has already run can also be an issue. Analysis of the Pentagon's existing wargame repository shows that three-fourths of repository users viewed wargame entries that their organizations did not sponsor, which certainly indicates significant progress in sharing insights across the department. However, basic information on wargame design, scenario, insights, and lessons is often missing.

The department needs to better understand the quality of its entire wargaming portfolio. A pessimistic view would predict games that cluster around a few usual, expected scenarios rather than exploring unexpected cases. Repetitive courses of action across games would also be an indication that the department is content to rerun accepted approaches rather than explore new ones. If a large percentage of exercises are unadjudicated, with participants merely taking a static scenario and providing their plan, what the department is actually engaged in is planning, rather than wargaming against a thinking adversary. Do service wargames invariably "validate" the service concept or provide additional justification for programs of record? It would seem best to trust, but verify. Wargames should additionally be assessed for how well they include domains such as space, cyber, and information assurance, as well as how often allied and partner perspectives are adequately represented.

A second key question for the department to answer is whether wargaming does in fact improve learning and innovation. The truth is that we have little to no empirical research that shows wargaming promotes learning, creative thinking, or problem solving — at either the individual or organizational levels. While wargamers believe wargaming works, the department still lacks

empirical research confirming wargaming's ability to positively impact cognitive processes, knowledge formation, individual and group problem solving, organization learning, individual creativity, and organizational innovation. For example, even though wargamers often repeat the stories of Naval War College wargaming in the interwar years, the department lacks basic case study research on the organizational learning models that permitted some countries to learn from wargames but not others. Although military planners, operations research analysts, political scientists, and hobby wargamers dominate defense wargaming, these are not the best research backgrounds to assess whether wargaming works. Instead, the fields with the methodological tools to answer this extremely important question include educational psychology, experimental psychology, industrial and organizational psychology, social cognition, social intelligence, communications, and the study of creativity. All these fields are notably absent from wargaming.

Squarely within this topic of learning from wargames is assessing the possibility of negative learning. Negative learning is learning erroneous concepts from unwarranted information and developing faulty mental models and reasoning. Wargamers often discuss the benefits of experiential learning from wargames, but those same games are also opportunities to reinforce conventional wisdom from the last war, pre-existing biases, and consensus (but perhaps incorrect) assumptions about the adversary, as well as to once again discount crucial factors such as logistics or allies. In order to correct and prevent negative learning from wargames, this topic must also be studied.

A third question for the department to answer is whether there is sufficient wargaming capability and capacity across the defense enterprise to support current and future wargaming needs. A partial review of wargaming centers shows a fair amount of facility capability and capacity, and more is being added through facilities under development such as the Marine Corps Wargaming and Analysis Center. For example, this new center in Quantico will host more than a dozen games a year. The Joint Staff's Studies, Analysis, and Gaming Division can run approximately three dozen tabletop exercises a year in conjunction with its other mission areas. The Naval War College Wargaming Department, the flagship wargaming center in the defense community, runs at least 50 a year.

But is there enough staff capacity and capability? The 2016 Military Operations Research Society's wargaming special meeting report noted the consensus that capacity was insufficient within the existing wargaming community to meet demand. A 2018 query of combatant command wargame staff also indicated challenges to capacity and capability, yet only one of ten responding organizations had plans to build a wargaming cell. Rather than devoting specialized staff to wargaming, they reported rebuilding their wargaming capacity "out of hide," adding wargaming as collateral duty and bringing in contractors for expertise. Defense wargaming capacity also resides within contracting companies, federally funded research and development centers, and academic

departments (both civilian and military), making it difficult to fully account for total capacity and capability.

One approach may be to assess whether specific organizations access enough wargames with enough capabilities to support their needs. For example, does U.S. Indo-Pacific Command believe it has adequate wargaming capacity of sufficient quality to address its requirements — including its virtual and distributed requirements? Does the Joint Staff have access to sufficient capacity to support developing the Joint Warfighting Concept and all of its supporting concepts? Are the service wargaming centers consistently oversubscribed, and, if certain wargames are not prioritized, can sponsors find wargamers elsewhere? Are there enough specialized performers in wargaming to ensure quality? Significant costs, skill sets, and other requirements need to support quality wargaming, and distributing the same amount of resources among organizations that do not specialize in wargaming will naturally lead to lower quality and sophistication overall.

This leads us to the fourth question the department needs to answer: What is the state of the wargaming workforce, and does it need to modernize this workforce, in terms of backgrounds, skillsets, and professional practices? Professional wargaming can be a fiercely competitive business, with some wargamers reluctant to share information about opportunities with other wargamers inside their own organization. Yet, the department has an institutional interest in raising the quality of wargaming throughout its enterprise. Does the level of expertise throughout the wargaming community meet the complex demands on wargaming? Professional development opportunities such as the Military Operations Research Society certificates in wargaming are often oversubscribed and are only meant to train in the basics.

Given the lack of civilian educational degree programs to produce wargamers, and the retirement of hobby gamers who have historically formed the backbone of defense wargaming, where are new wargaming experts coming from? There are significant generational differences between retiring wargamers and those coming up — the commercial gaming experience for Generation X (the “Nintendo Generation”), millennials, and Generation Z are largely digital and not manual. This coincides with urgent pressures from the department for wargaming to incorporate more digital capabilities, represent advanced capabilities such as artificial intelligence and quantum technologies, and address everything from peer competition to cyber to misinformation. There is also concern that the wargaming community lacks diversity and is therefore missing out on many other perspectives. What should the expertise of the next generation of wargamers look like? This is a vital topic. So, too, is whether the department has any role to play in shaping the next generation of wargamers.

Only after answering these questions —

- 1) Is the quality of defense wargaming sufficient?
- 2) Does wargaming actually work?
- 3) Is there enough wargaming capability and capacity to meet the department's needs?
- 4) What is the state of the defense wargaming work force?

— can the department understand whether it is making the progress it needs to re-invigorate wargaming.

These are the questions that keep us — longtime wargamers — up at night. So much rides on wargaming, and whether wargaming is done well or done poorly at this moment will impact departmental decisions for years.

17. Why America needs a layered homeland missile defense

02/01/2021

Defense News

<https://www.defensenews.com/opinion/commentary/2021/01/19/why-america-needs-a-layered-homeland-missile-defense/>

Earlier this week, during the 8th congress of the Workers' Party in Pyongyang, North Korea, as reported by North Korea's Central News Agency, Kim Jong Un referred to the U.S. as "our biggest enemy" and outlined plans to upgrade the country's nuclear forces, develop hypersonic weapons and solid-fuel intercontinental ballistic missiles, and build the ability to strike targets out to 15,000 kilometers, which would encompass the entire United States.

The Party meeting culminated with North Korea unveiling a new submarine-launched ballistic missile, which it termed the "world's mightiest." This is on the heels of a parade last October, when North Korea unveiled a new ICBM — its largest ever.

We shouldn't be surprised. These development efforts are consistent going back to at least December 2011, when Kim Jong Un succeeded his father as the leader of North Korea.

The ballistic missile threat to our homeland is real, and we need a continual dialogue on how to address it, including a layered approach. How much missile defense should we pursue when, as a department, we have many defense requirements and are faced with a flattening budget? This will be an important discussion in the coming year, as in the fiscal 2021 National Defense Authorization Act, Congress has directed the Defense Department to develop and report requirements for a proposed layered homeland defense architecture.

As a young naval officer during the Cold War, in studying my profession, I learned basic naval tactics including defense in depth. In every warfare area, it is best to establish defenses against any threat at extended ranges to give you multiple opportunities to defeat it all the way through point defense — the last-ditch effort before you suffer significant damage.

The more complex the threat, the more advanced options you wanted at your disposal to counter it. It would be irresponsible if leaders did not strive for some defense in depth, particularly if the lives of U.S. citizens are at stake. This is especially true in homeland missile defense, when the missile threat is growing in number and capability.

While we are confident we can defend the homeland against today's missile threats from North Korea, the future threat foretold by Kim Jong Un this month is dynamic and, when you factor in Iran, unpredictable. Launch after launch, test after test, these potential adversaries are learning, adapting and improving their capabilities. Iran is gaining valuable information and learning from its space-launch program, which contributes directly to an effort to develop an ICBM, should it choose to do so.

Just as adversaries are adapting their missile capabilities to suit their objectives, we too must adapt our missile defense posture to stay ahead of the threat, address potential aggression and diminish any perception that a strategy based on the threat of long-range ballistic missiles could succeed.

If we do not adapt, we become vulnerable to coercion by the mere threat of attack, which would significantly complicate our relationships and credibility with allies and partners, and limit our options during a crisis. Stronger, reinforced defenses give us leverage that enables our leaders and diplomats to more effectively negotiate disputes.

A number of programs are in various stages of maturity and progress to stay ahead of the threat now and in the future. Today, the United States has 44 Ground-Based Interceptors, which undergo regular testing and performance upgrades to ensure they are reliable and can pace an evolving and more challenging ballistic missile threat consisting of countermeasures, like decoys. The Next

Generation Interceptor, when fielded between 2028 and 2030, will introduce at least 20 more capable missiles to enhance the defense of the United States.

To augment Ground-Based Interceptor capabilities and provide a complementary layer of protection between now and 2028, the Missile Defense Agency recently conducted a successful intercept test with an SM-3 Block IIA — originally designed to engage medium- or intermediate-range threats — against an ICBM-class threat; a wonderful and important achievement by the MDA and the Navy. As the SM-3 IIA missile can be ship- or land-based, the United States now can explore options for it to supplement the homeland defense mission, adding defense in depth. The benefits to this potential addition are extremely important.

By adding capability and depth, U.S. missile defense becomes more effective and therefore more credible, adding a level of uncertainty to any adversary's calculus of a successful attack, which has a deterrent value. This added credibility is also an insurance policy should diplomacy and deterrence fail — read "North Korea" — thereby strengthening diplomatic leverage. And it addresses any perception by regional players that any form of appeasement may be required to mitigate the threat. This is the complex nature of any deterrence construct.

Where do we go from here? We should consider testing an upgraded version of the Army's Terminal High Altitude Area Defense missile system, or THAAD, to determine if it can also contribute to the mission (likely in the important terminal phase of a ballistic missile's flight). The threat is only becoming more stressing and complex, and we need to gain a deeper understanding of, evolve and maximize the capabilities in our current systems. This is in fact true for all mission areas, but particularly for the most stressful areas like ballistic missile defense. It is also prudent in an era of flattening budgets.

18. Pakistan says it successfully test-fired short-range missile

02/03/2021

IISS

<https://www.defensenews.com/training-sim/2021/02/03/pakistan-says-it-successfully-test-fired-short-range-missile/>

ISLAMABAD — Pakistan on Wednesday successfully test-fired a short-range surface-to-surface ballistic missile capable of carrying nuclear and conventional warheads up to about 180 miles, the

military said. In a statement, it said the launch of the Ghaznavi missile was the “culminating point” of an annual field training exercise by Pakistan’s Army Strategic Forces Command.

The statement said Lt. Gen. Muhammad Ali, who leads the command, commended the force’s “operational preparedness” and its “handling and operating the weapon system.” Pakistan’s nuclear and missile program is primarily aimed at countering threats from neighboring India, which routinely conducts missile tests. Both nations have nuclear arms and have fought two of their three wars over Kashmir since gaining independence from Britain in 1947.

The disputed Himalayan region is split between them and claimed by both in its entirety.

19. Bolsonaro reduz número de operações de Garantia da Lei e da Ordem

08.02.2021

Defesanet

<https://www.defesanet.com.br/mout/noticia/39567/Bolsonaro-reduz-numero-de-operacoes-militares-de-Garantia-da-Lei-e-da-Ordem/>

BRASÍLIA — O presidente Jair Bolsonaro tem utilizado as operações de Garantia da Lei e da Ordem (GLO) com menos frequência do que seus antecessores diretos. Nos dois primeiros anos de mandato, Bolsonaro autorizou sete GLOs. O número é a metade das 14 operações autorizadas por Dilma Rousseff (PT) no mesmo período de governo.

Já Luiz Inácio Lula da Silva (PT) e Michel Temer (MDB) utilizaram o mecanismo 12 vezes cada um. Bolsonaro só fica atrás de Fernando Henrique Cardoso (PSDB), que autorizou cinco operações em seus dois primeiros anos. Durante uma GLO, as Forças Armadas ganham temporariamente o poder de polícia. A decretação é de competência exclusiva do presidente da República.

O número reduzido de operações no governo Bolsonaro tem um motivo: o presidente diz que evita adotar o mecanismo por não haver excludente de ilicitude (isenção de possibilidade de punição) para os militares que participam delas. Em 2019, Bolsonaro enviou um projeto de lei ao Congresso que isenta militares de punições em determinadas situações durante as GLOs. A proposta, contudo, segue na gaveta. Agora, com a eleição dos novos presidentes da Câmara e do Senado, Bolsonaro espera conseguir pautar o texto.

— Praticamente não tivemos GLO no corrente ano. E eu pretendo usar a GLO, se tiver que usar, com excludente de ilicitude — disse o presidente, em transmissão ao vivo no último dia 31 de dezembro. — Quem assina o decreto de GLO é o presidente da República. O presidente fica numa boa, e a tropa que se vire. O que a gente pretende é colocar em votação (o excludente de ilicitude) para a gente poder ter paz para trabalhar.

Dias antes, Bolsonaro já havia dito: “Se Deus quiser, com a nova presidência da Câmara e do Senado, nós vamos botar em pauta o excludente de ilicitude”. Além da proposta que trata exclusivamente da GLO, outros projetos abordam o excludente de ilicitude de forma mais ampla.

Deputados aliados do governo reclamam do atual presidente da Câmara, Rodrigo Maia (DEM-RJ), por ter engavetado pautas ligadas à segurança pública e esperam que Arthur Lira (PP-AL), candidato favorito do Palácio do Planalto, coloque-as em votação. Lira tem dito que irá pautar qualquer projeto que tenha acordo no colégio de líderes.

— Todas as pautas de segurança com o Lira vão andar. O que a bancada de segurança quer é o debate e a votação. Não pode fazer como o Rodrigo Maia, que engavetou todas as pautas de segurança — afirma o deputado federal Coronel Tadeu (PSL-SP), que integra a chamada bancada da bala da Câmara.

Ao todo, a GLO já foi empregada 143 vezes desde o primeiro decreto, em 1992. Fernando Collor empregou-a apenas uma vez, e Itamar Franco, quatro. Fernando Henrique Cardoso teve, em todo o seu mandato, uma média de 5,8 operações por ano (47, no total). As médias de Temer e Dilma foram semelhantes (5,6 e 5,4, respectivamente), enquanto a de Lula foi cinco.

De acordo com um balanço do Ministério da Defesa, a maioria das GLOs foi para garantir a segurança de eventos (27%). Foram 39 operações desse tipo desde a primeira, autorizada para garantir a segurança da Eco 92, passando pela Copa do Mundo e pela Olimpíada.

O segundo motivo mais comum são greves da Polícia Militar (PM), que motivaram 26 operações (18%), seguido por outras situações de violência urbana (23 vezes, ou 16%), que foram contabilizadas de forma separada. As GLOs também foram utilizadas outras 23 vezes para garantir a segurança das eleições.

Trinta e duas operações foram classificadas pela Defesa na categoria “Outros”. Fazem parte dessa lista as operações Verde Brasil 1 e 2, decretadas pelo atual governo para combater o desmatamento na Amazônia.

Além das duas GLOs ambientais, as outras operações autorizadas por Bolsonaro foram: uma para reforçar o policiamento do Ceará durante uma greve da PM, duas para garantir a segurança de presídios federais, uma durante a cúpula dos Brics em Brasília, em 2019, e outra durante as eleições municipais.

Poucos pedidos aceitos

Bolsonaro já relatou ter rejeitado pedidos de governadores para a decretação de GLOs, sem dar detalhes de quais foram as solicitações:

— Vocês viram que até o momento tivemos apenas uma pequena GLO em Rondônia, quando o (traficante preso) Marcola foi (transferido) para lá. Já houve pedidos de alguns estados para mim e eu não dei, e pretendo não dar — disse, em junho de 2019, acrescentando que isso mudaria com a aprovação do excludente de ilicitude.

Em outros momentos, o presidente aceitou pedidos, mas com críticas. Em fevereiro de 2020, quando autorizou a GLO no Ceará, avisou que a medida não deveria vigorar “eternamente”:

— GLO no Ceará vence amanhã, os oito dias da GLO, e a gente espera que o governador resolva esse problema da PM do Ceará e bote um ponto final nessa questão, porque GLO não é para ficar eternamente atendendo um ou mais governadores. GLO é uma questão emergencial.

20. Ministério da Defesa inaugura Centro de Comunicação Social

11.02.2021

Defesanet

<https://www.defesanet.com.br/defesa/noticia/39607/Ministerio-da-Defesa-inaugura-Centro-de-Comunicacao-Social/>

O Ministério da Defesa (MD) inaugurou, na terça-feira (09FEV2021), o Centro de Comunicação Social da Defesa (CCOMSOD). A criação do novo centro fortalece a comunicação com a sociedade, que tem apresentado crescente interesse pelos assuntos de Defesa e das Forças Armadas. A iniciativa permitirá maior transparência e agilidade na divulgação das informações e no atendimento à imprensa. Nos últimos anos, houve crescimento exponencial das demandas de imprensa, que saltaram de 83, em 2017, para 1.228, em 2020.

A cerimônia foi presidida pelo Ministro de Estado da Defesa Fernando Azevedo e contou com a presença do Ministro-Chefe de Gabinete de Segurança Institucional (GSI) da Presidência da República, Augusto Heleno; do Chefe do Estado-Maior Conjunto das Forças Armadas (EMCFA), Tenente-Brigadeiro do Ar Raul Botelho e de autoridades civis, militares e eclesiásticas.

Os Chefes dos Centros de Comunicação Social da Marinha (CCSM) e do Exército (CCOMSEX) e do Vice-Chefe do Centro de Comunicação Social da Aeronáutica (CCOMSAER) e de representantes da Secretaria de Comunicação da Presidência da República (SECOM), da Vice-Presidência e das assessorias ministeriais também estiveram, juntamente com diretores, editores, chefes de sucursal e repórteres, sediados em Brasília, representando os principais veículos de comunicação do País.

Na ocasião, o Chefe do Centro de Comunicação Social da Defesa, Vice-Almirante (FN) Carlos Chagas, apresentou a estrutura do Centro, as atividades desenvolvidas, destacando o relacionamento do Ministério com a imprensa. O Almirante enfatizou o desempenho dos militares nas Operações Conjuntas e a importância da aproximação com a sociedade civil. “As Forças Armadas possuem uma capilaridade muito grande, muitas vezes chegam em locais onde ninguém mais chega. Então buscamos informar da melhor forma nossas ações, para que a sociedade tenha a compreensão do trabalho das suas Forças Armadas, que pertencem ao Brasil e à população brasileira”.

Em seguida, foi exibido o filme por meio do qual os convidados puderam visitar virtualmente as instalações do novo setor.

Encerrando a cerimônia, o Ministro Fernando Azevedo destacou que o MD é responsável por três marcas muito fortes que devem ser valorizadas. “São chamadas de Marinha do Brasil, Exército Brasileiro e Força Aérea Brasileira. Além de ser um representante político do governo, represento essas três marcas. Como instituições de Estado, elas merecem uma comunicação verdadeira e a altura delas”.

Logo em seguida, os profissionais de imprensa presentes puderam conversar com o Ministro e foram convidados a conhecer a estrutura do CCOMSOD. O Arcebispo Militar, Dom Fernando Guimarães, também foi convidado a realizar uma oração ecumênica e uma bênção ao novo Centro.

21. Brasil e Estados Unidos realizam exercício combinado entre Forças Armadas

03.02.2021

Defesanet

<https://www.defesanet.com.br/cul/noticia/39518/Brasil-e-Estados-Unidos-realizam-exercicio-combinado-entre-Forcas-Armadas/>

Militares de uma Companhia Paraquedista do Exército Brasileiro participam da Operação Culminating, treinamento combinado inédito entre o Brasil e os Estados Unidos da América (EUA). Para acompanhar a capacitação, o Ministro da Defesa, Fernando Azevedo, esteve em Fort Polk, no estado de Louisiana, nos Estados Unidos. Ele foi recebido pelo Comandante do Comando do Sul

dos EUA, Almirante Craig Faller, e pelo Comandante-Geral das Forças do Exército dos Estados Unidos, General Michael Garrett.

Fernando Azevedo emocionou-se ao dirigir-se aos paraquedistas, recordando a importância do momento e a parceria entre as Forças Armadas dos dois países. "A nossa história começa na II Guerra Mundial. A Força Expedicionária Brasileira ombreou com os americanos, nos campos da Itália, contra o nazi-facismo. Em seguida, uma equipe de paraquedistas pioneiros veio para a 82ª Divisão Aerotransportada colher os ensinamentos da tropa aeroterrestre e iniciou a atividade do paraquedismo militar no Brasil. Em 2021, voltamos ombro a ombro neste exercício, inédito para uma tropa sul-americana", discursou o Ministro.

Durante a visita do ministro à tropa, o Almirante Craig Faller dirigiu-se aos militares. "Vocês serão testados. Tenho plena confiança nas suas lideranças e habilidades", afirmou. O Comandante do JRTC, Brigadeiro-General David Doyle, explicou que os militares passam por intenso processo de avaliação junto com os combatentes norte-americanos.

Os brasileiros fazem parte da Brigada de Infantaria Paraquedista (Bda Inf Pqdt) e, ao se unirem a equipe americana, passaram a integrar o 1-505 Regimento de Infantaria Paraquedista da 82ª Divisão Aerotransportada, organização militar norte-americana. Militares do Comando de Operações Terrestres (COTER) do Exército Brasileiro também participam da Operação Culminating.

As autoridades militares acompanharam o início das atividades, que se deu com o salto noturno dos paraquedistas, lançados pela aeronave brasileira KC-390 Millennium. Essa é a primeira participação da aeronave em um exercício operacional.

Depois do salto, os militares realizaram uma marcha para o combate e conquistaram a fictícia Vila Pennsylvania, protegendo a população local contra o inimigo. O Comandante da Companhia brasileira da Operação Culminating, Capitão Falcão, destacou a preparação da tropa para cumprir a missão. "Nos preparamos, tendo diversas instruções específicas para qualificação dos nossos militares. Fizemos oito exercícios de nível companhia, envolvendo atividades que nos preparassem para o momento que estamos vivendo agora", afirmou.

Integraram a comitiva do Ministro da Defesa, o Comandante Militar do Leste, General de Exército José Eduardo Pereira, o Chefe do Preparo da Força Terrestre, General de Divisão Affonso da Costa, e o Comandante da Brigada de Infantaria Pára-quedista, General de Brigada Helder Braga. Em solo americano, uniram-se às autoridades os adidos do Exército nos Estados Unidos, General de Divisão Josias Pedrotti, e da Aeronáutica e de Defesa, Brigadeiro do Ar Ramiro Pinheiro; o Subcomandante

de Interoperabilidade do Exército Sul (ARSOUTH), General de Brigada Alcides Faria Junior; e o Vice-Diretor do Diretório de Estratégia Política e Planos do Comando Sul (SOUTHCOM), Brigadeiro do Ar David Alcoforado.

Exercício Conjunto

A Operação Culminating é um treinamento com elevada simulação de combate e aplicação de modernas técnicas de simulação dos exercícios para operações reais que uma Grande Unidade militar - Brigada - pode realizar. O exercício combinado iniciou dia 3 de janeiro e termina dia 21 de fevereiro, no JRTC, em Fort Polk, nos Estados Unidos. A Operação Culminating finaliza o Plano Conjunto de atividades realizadas entre os Brasil e Estados Unidos ao longo de cinco anos.

22. KC-390 realiza lançamento de paraquedistas em treinamento com C-17 e C-130 da USAF

03.02.2021

Defesanet

<https://www.defesanet.com.br/cul/noticia/39517/KC-390-realiza-lancamento-de-paraquedistas-em-treinamento-com-C-17-e-C-130-da-USAF/>

O avião multimissão KC-390 realizou, na madrugada desta terça-feira (02/02), o lançamento de paraquedistas em voos em conjunto com as aeronaves C-17 e C-130 da Força Aérea Americana, durante o Exercício Operacional "Culminating", em Alexandria – Louisiana, Estados Unidos. A missão foi um marco no projeto de desenvolvimento do KC-390, pois a aeronave teve a oportunidade de operar, cumprindo todos os objetivos traçados, com aviões militares de transporte já consagrados e empregados em cenários de combate ao redor do mundo.

"Era um sonho imaginar que um produto da indústria aeronáutica nacional, fruto de décadas de desenvolvimento, poderia atuar lado a lado, em pé de igualdade, com aeronaves historicamente consagradas. Acabamos de provar que alcançamos, sim, esse tão desejado nível de maturidade técnica e operacional", ressaltou o Oficial de Operações do 1º Grupo de Transporte de Tropa (1º GTT), Tenente-Coronel Aviador Daniel Silva Fortes.

O KC-390 integrou um voo de pacote, que é quando aeronaves decolam em um curto espaço de tempo para cumprir ações de Força Aérea complementares, visando a um objetivo comum. Nesse

caso, a meta foi realizar o lançamento de paraquedistas para conquistar uma posição por meio aéreo.

Cerca de 120 paraquedistas do Exército Brasileiro, que participam do exercício em conjunto com o Exército dos Estados Unidos, foram lançados do KC-390 na Zona de Lançamento do Joint Readiness Training Center, unidade do Exército Americano especializada em receber esse tipo de treinamento conjunto.

De acordo com o coordenador da missão, Major Aviador Daniel Elias Souza, a coordenação teve uma complexidade maior, porque as diversas aeronaves que integravam o voo de pacote partiram de localidades diferentes e se encontraram em um ponto comum. "Dentro desse desafio, nós percebemos que nosso planejamento foi adequado às metas que tínhamos e conseguimos atingir todas elas", ressaltou.

Além do KC-390, participaram dos voos nove aeronaves C-17 e quatro aeronaves C-130, todas da Força Aérea Americana. Foram lançados cerca de 1.600 paraquedistas, além de 22 plataformas com equipamento pesado. "Nós percebemos que o KC-390 é uma aeronave que está compatível com esse tipo de cenário, assim como, a doutrina da FAB", complementou.

Outra etapa conquistada pelos militares do 1ºGTT durante o exercício foi a operacionalidade completa da tripulação em lançamentos de paraquedistas. Pela primeira vez, o KC-390 realizou a missão de salto de militares com tripulação operacional 100% composta por militares da Força Aérea.

Em visita ao exercício, o Ministro da Defesa, Fernando Azevedo e Silva, ressaltou a interoperabilidade das Forças Armadas Brasileiras ampliada pela participação conjunta, no Exercício Operacional "Culminating", do KC-390 da FAB e da Brigada Paraquedista do Exército Brasileiro.

"É um dia histórico para as Forças Armadas Brasileiras nesse exercício inédito, o 'Culminating', com o lançamento dos paraquedistas da Brigada de Paraquedistas, também utilizando a nova aeronave da FAB: o KC-390" ressaltou.

KC-390

O primeiro KC-390 Millennium foi entregue à Força Aérea em setembro de 2019. E, após cerca de um ano e meio operando a aeronave multimissão, a FAB atualmente conta com quatro KC-390 em sua frota realizando missões fundamentais para o país, como a Operação COVID-19, de apoio no

enfrentamento à pandemia do novo coronavírus, e na missão de assistência humanitária à República Libanesa.

A participação do KC-390 em treinamentos como o exercício "Culminating" é fundamental para o aprimoramento da utilização da aeronave. A capacidade operacional e de atuação do KC-390 são obtidas mediante o acúmulo de experiências em exercícios conjuntos, o que também possibilita o desenvolvimento doutrinário para a utilização segura da aeronave.

23. IDEX-SAAB entregou a terceira aeronave *GlobalEye* aos Emirados Árabes Unidos

20.02.2021

Defesanet

<https://www.defesanet.com.br/id/noticia/39721/IDEX---SAAB-entregou-a-terceira-aeronave-GlobalEye-aos-Emirados-Arabes-Unidos/>

A terceira unidade entregue segue as entregas anteriores do *GlobalEye* pela SAAB, em abril e setembro de 2020. Os Emirados Árabes Unidos encomendaram um total de cinco aeronaves *GlobalEye*.

“Concluir três entregas de uma solução tão avançada como a *GlobalEye* em menos de um ano prova a sólida experiência da SAAB como fornecedora de soluções de alta tecnologia e nosso foco em cumprir nossos compromissos, especialmente dadas as circunstâncias atuais. Ao lidar com todo o processo, incluindo o desenvolvimento e integração do sensor, estamos exclusivamente no controle de cada parte crítica deste programa complexo”, disse Micael Johansson, presidente e CEO da SAAB.

GlobalEye é a solução mais recente de controle e alerta antecipado aerotransportado da Saab. Oferece vigilância aérea, marítima e terrestre excepcional em uma única plataforma. A *GlobalEye* combina o radar de longo alcance *Erieye* da Saab e uma gama de sensores avançados adicionais com a aeronave *Global 6000* de alcance ultralongo da Bombardier.

24. Embraer apoia decisão do governo brasileiro em lançar negociações sobre subsídios aeronáuticos

19.02.2021

Defesanet

<https://www.defesanet.com.br/ppw/noticia/39700/Embraer-apoia-decisao-do-governo-brasileiro-em-lancar-negociacoes-sobre-subsidios-aeronauticos/>

A Embraer recebe com satisfação as ações do governo brasileiro no sentido de encerrar o contencioso sobre subsídios aeronáuticos contra o Canadá na Organização Mundial do Comércio (OMC) e de lançar negociações de disciplinas mais efetivas aplicáveis ao apoio governamental no setor de aviação comercial.

Na OMC, o Brasil questionava os mais de US\$ 3 bilhões em subsídios ilegalmente concedidos pelos governos do Canadá e do Quebec à Bombardier para o lançamento, desenvolvimento e produção do programa C-Series. Esses subsídios distorceram as condições de concorrência no mercado global de jatos comerciais, ocasionando prejuízo grave à Embraer, em clara violação das regras de comércio internacional da OMC.

Apesar da solidez dos argumentos apresentados pelo Brasil no Painel, o contencioso na OMC não será capaz e produzir os resultados esperados pelo Brasil e pela Embraer, em função das transformações por que passou o setor desde o início do contencioso, em 2017.

Com a saída da Bombardier do mercado da aviação comercial e a transferência do programa C-Series (agora A220) para a Airbus, que dispõe de uma segunda linha de montagem final nos Estados Unidos, a disputa comercial contra o Canadá na OMC deixou de ser o caminho mais efetivo para se alcançar o objetivo do Brasil e da Embraer: o reestabelecimento de condições equilibradas de concorrência no mercado de aviação comercial.

A Embraer apoia a iniciativa do Brasil de lançar negociações de novas disciplinas mais efetivas para o apoio governamental no setor de aviação comercial, como melhor forma de se alcançar condições justas e equilibradas de competição nesse mercado, conforme a experiência bem-sucedida do Entendimento Setorial Aeronáutico (ASU) sobre créditos à exportação, assinado em 2007 no âmbito da Organização para a Cooperação e o Desenvolvimento Econômico (OCDE).

A Embraer acredita que fabricantes de aeronaves comerciais devem competir com base na qualidade de seus produtos e não no volume de incentivos que recebem de seus governos.

25. ABIMDE recebe comitivas no segundo dia da IDEX

22.02.2021

Defesa Aérea e Naval

<https://www.defesaaereanaval.com.br/defesa/abimde-recebe-comitivas-no-segundo-dia-da-idex>

O segundo dia da International Defence Exhibition And Conference (IDEX), em Abu Dhabi, foi de muita atividade para a ABIMDE e as empresas que exibem no “Pavilhão Brasil”. A entidade recebeu a visita de diversos grupos nesta segunda-feira (22).

O estande da ABIMDE recebeu as visitas do presidente da Apex-Brasil (Agência Brasileira de Promoção de Exportações e Investimentos), Almirante Sergio Ricardo Segovia Barbosa, do embaixador do Brasil em Abu Dhabi, Fernando Igreja, e o representante do Escritório da Câmara de Comércio Árabe-Brasileira (CCAB), em Abu Dhabi, Rafael Solimeo.

“As visitas de autoridades e parceiros à ABIMDE mostra a relevância do nosso trabalho em prol das indústrias de Defesa e Segurança”, afirma o diretor de projetos, Paulo Albuquerque.

A IDEX acontece no Centro Nacional de Exposições de Abu Dhabi (ADNEC), nos Emirados Árabes Unidos, até a próxima quinta-feira (25). É o primeiro grande evento presencial de Defesa a ser realizado desde o início da pandemia do Coronavírus.

O evento apresenta os últimos desenvolvimentos, tecnologias e inovações na indústria de defesa. Além de apoiar o desenvolvimento do setor, o evento estabelece novas relações entre grandes empresas internacionais. Também participam da exposição as associadas Atech, Avibras, Avionics, CBC, Condor, Embraer, Gespi, Kryptus, MacJee, M&K Logistics, Siatt e Taurus.

O “Pavilhão Brasil” é promovido pela ABIMDE e Apex-Brasil, com o apoio dos MD, MRE e da CCAB.



ASTROS 2020

PROCAD DEFESA
