

**MITCHELL INSTITUTE**  
for Aerospace Studies



# **Strategic Attack: Maintaining the U.S. Air Force's Capacity to Deny Enemy Sanctuaries**

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# Why this study?

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## **The U.S. Air Force is losing its ability to deny operational sanctuaries to China's PLA in a Pacific conflict**

- The Air Force now lacks sufficient capacity to conduct effective long-range strategic attacks against China's centers of gravity
- No other U.S. or allied service can compensate for this shortfall

## **Allowing the PLA to operate from sanctuaries during a defense-of-Taiwan campaign or similar contingency would:**

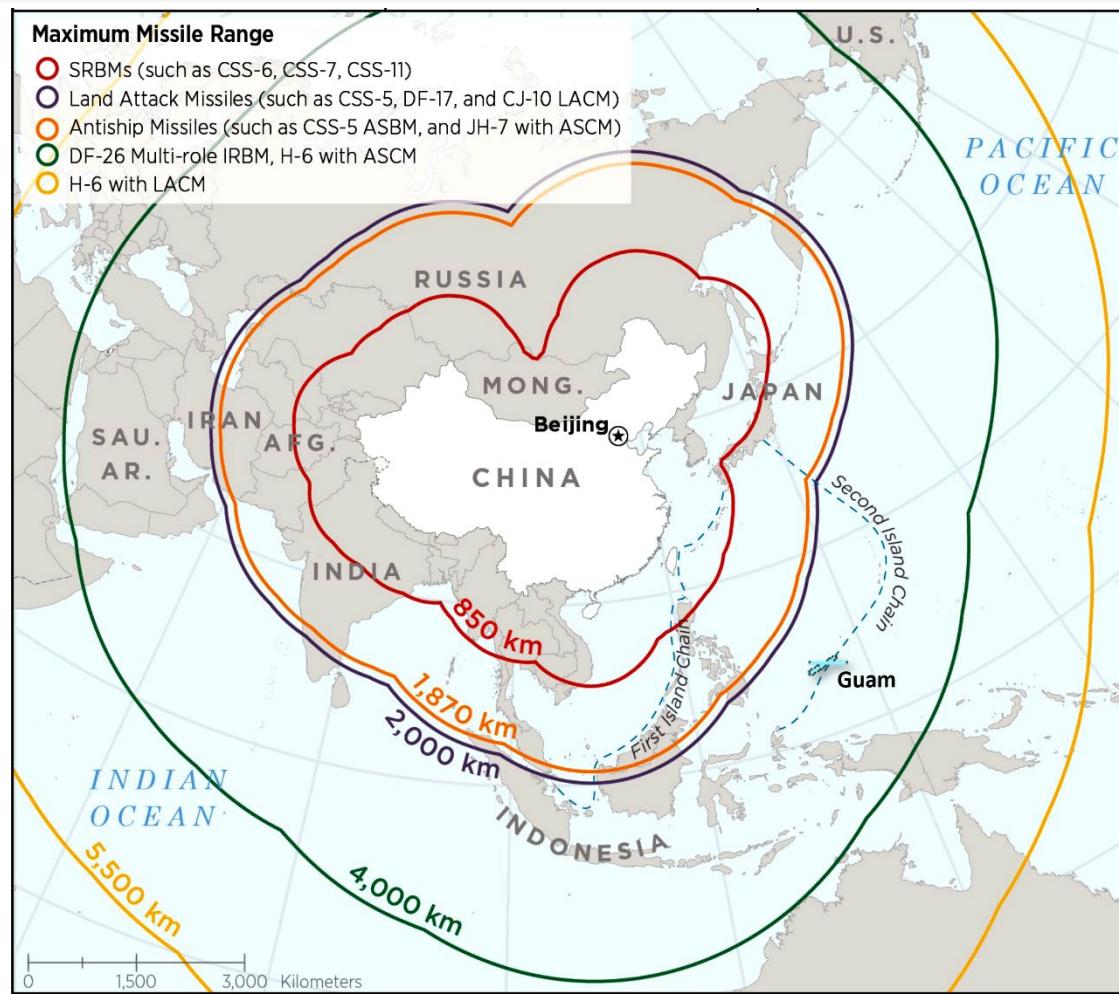
- Fatally erode our ability to deter China and win in the Pacific should deterrence fail
- Cede to the PLA a combat mass advantage inside the first island chain that U.S. and allied forces cannot match
- Play into China's long-term strategy to push U.S. forces out of the Western Pacific and become the dominant power in the region

# China designed its A2/AD complex to prevent the U.S. from intervening against the PLA

Will conduct offensive and defensive operations to gain sanctuaries and push U.S. forces out of the 1<sup>st</sup> island chain

**Offensive:** Create high-density threat areas in the air, ground, and sea along and within the 1st island chain

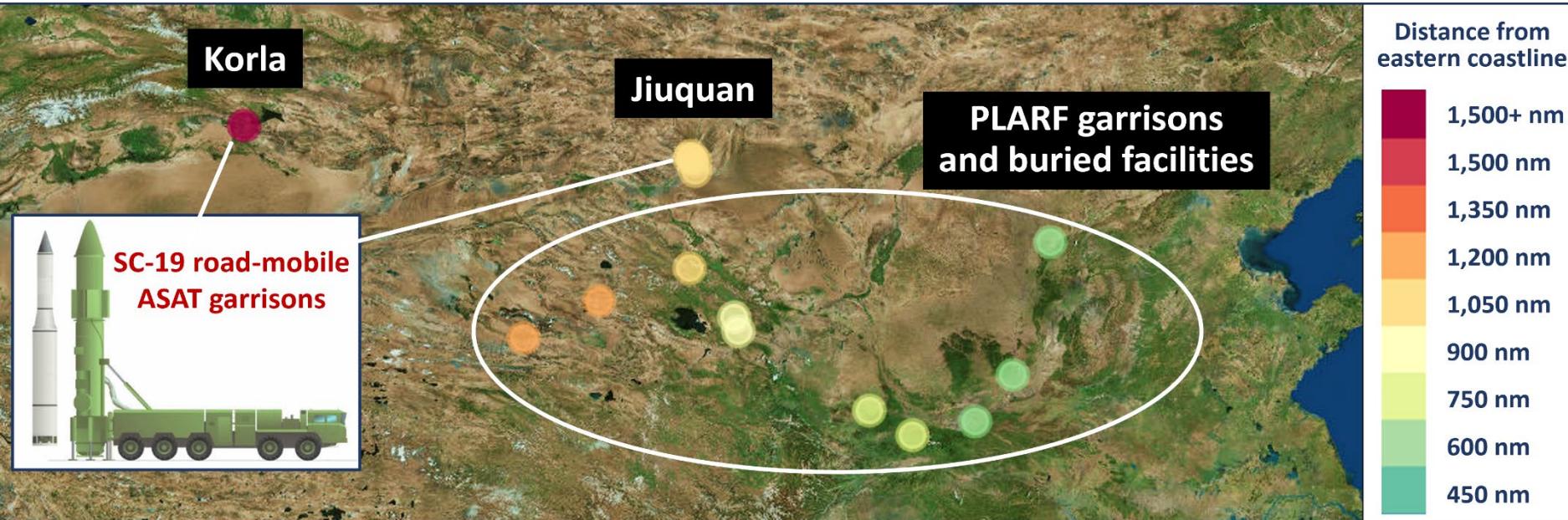
- Will launch air and missile strikes on U.S. bases, forces, and other targets critical to generating combat sorties
- Operating U.S. air forces from the 2nd island chain and beyond would decrease their sortie rates, reach, and persistence in the battlespace



# China designed its A2/AD complex to prevent the U.S. from intervening against the PLA

**Defensive:** Deny access, create sanctuaries for PLA forces

- Outer and inner layers of air/sea defenses to screen the Taiwan Strait
- Mainland defenses to create sanctuaries for the PLA inside China
- China uses the depth of its landmass to posture many of its air, missile, antisatellite, and other high-value forces in its defended interior



# Allowing adversary forces to operate from sanctuary is a prescription for defeat

**Korean War:** Communist China exploited operational sanctuaries created by U.S. warfighting policy constraints



October 1950, 38th, 39th, and 40th Chinese Field Armies crossing the Yalu River into Korea

- Truman administration policies prohibited U.S. airstrikes and pursuit of enemy fighter aircraft north of the Yalu river
- Allowed China to support & intervene in favor of North Korea's military operations nearly unhindered

Ceding sanctuaries give adversaries time and space needed to *regroup, resupply, and reattack*

# Allowing adversary forces to operate from sanctuary is a prescription for defeat

**Vietnam Conflict:** U.S. policy constraints created operational sanctuaries for North Vietnam's leadership and forces



Russian S-75 "Dvina" surface-to-air-missile (NATO designator SA-2) in North Vietnam

- Allowed Russia, China, and other state sponsors to support and resupply North Vietnam nearly unhindered
- Placed American airmen in harm's way, increased U.S. attrition, and extended the conflict

Limited, force-on-force campaigns of interdiction allow adversaries the sanctuaries they need to gain the initiative

# The Russia-Ukraine conflict is the most recent example

- Neither have air forces capable of achieving air superiority and penetrating deep into adversary territory to deny sanctuaries
- Conflict has devolved into a stalemated war of attrition that is exacting a terrible cost on both



1918 frontline Allied forces in France



2022 frontline Ukrainian soldiers in the Lugansk region



# Denying sanctuaries is critical to victory

**European theater WW-2:** Allied Combined Bombing Offensive eroded Germany's ability and will to sustain effective combat operations



1943 USAAF B-17 attack on a Focke-Wulf aircraft plant in Marienburg, Germany

Allied air and sea power “put unbearable pressure on Germany and Japan’s entire war-fighting machine ... and allowed the Allies to destroy over half of the Axis’s equipment before it had even reached the traditional battlefield.”

Phillips Payson O’Brien, *How The War Was Won: Air-Sea Power and Allied Victory in World War II*

**Decisive victory requires penetrating air defenses to directly target and destroy enemy centers of gravity**

# Long ranges, large payloads, and penetrating strikes are a lethal combination

**Pacific theater WW-2:** USAAF long-range bombers denied sanctuaries to Japanese forces and hastened Japan's collapse



April 1942, Doolittle Raider B-25B Mitchell bombers onboard the USS Hornet



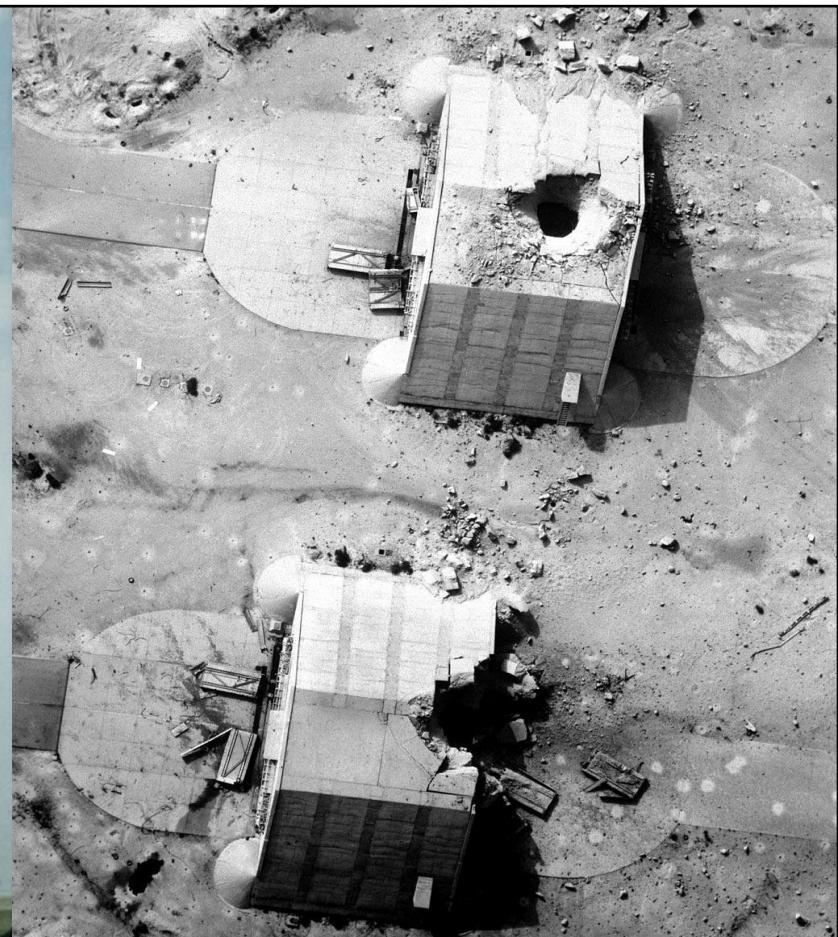
May 1945, 500th Bomb Group B-29 bombers drop incendiaries on Japanese installations in Yokohama

# Operation Desert Storm unleashed airpower to deny sanctuaries to Iraqi forces



## Operation Desert Storm first strike

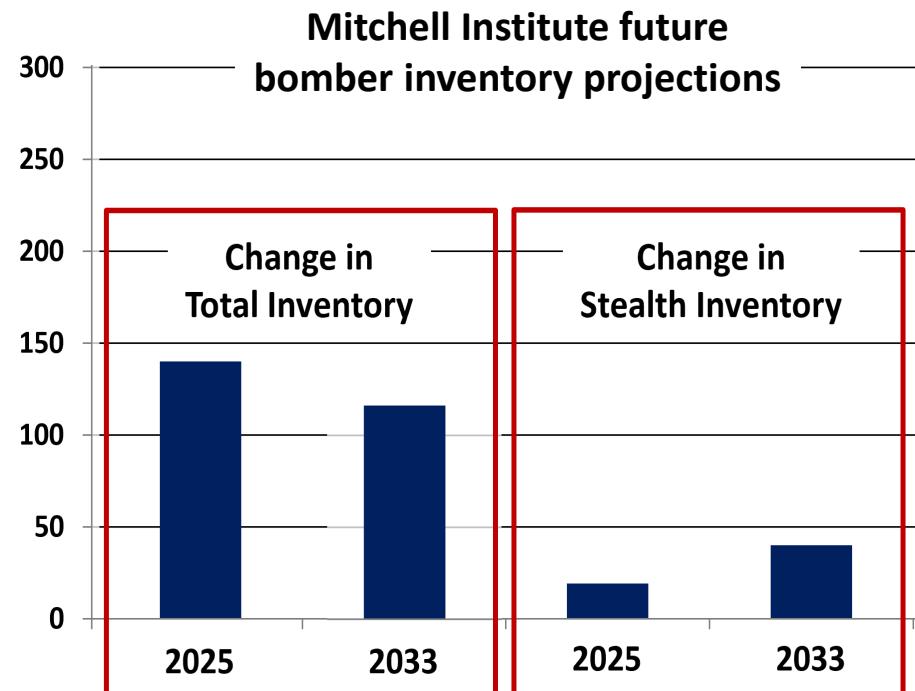
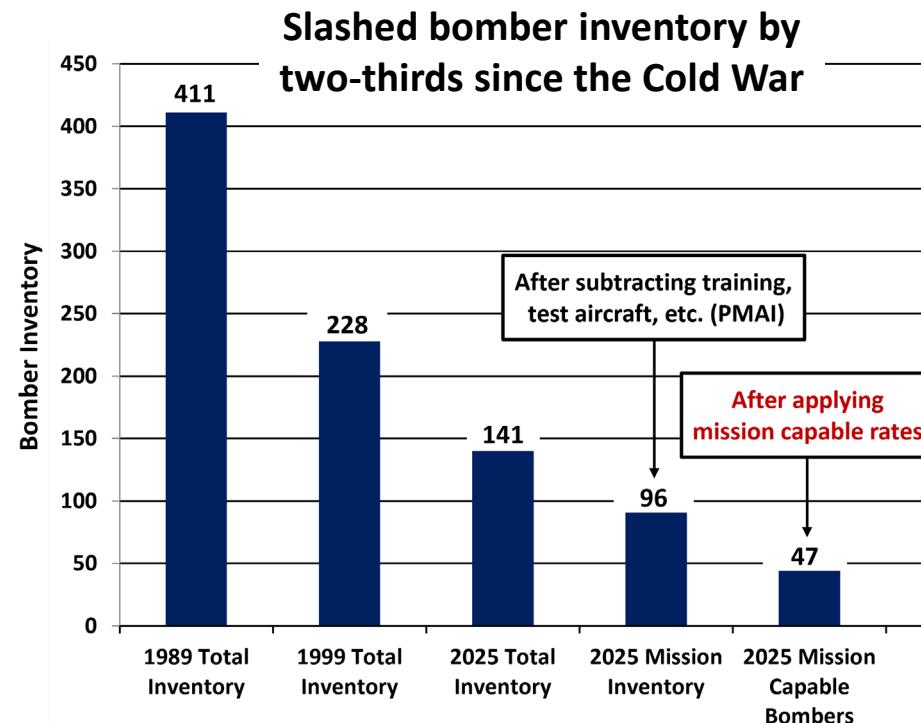
Seven B-52Gs flew round-robin from Barksdale AFB and launched 35 CALCMs on 17 Jan 1991 against Iraqi C2 facilities



## Stealth plus precision

Hardened Iraqi shelters destroyed by GBU-27s launched by USAF F-117 stealth fighters

# After the Cold War, DOD repeatedly directed the Air Force to downsize its bomber force



- The total inventory is at an all-time low
- Also halted continuous modernization of the force to outpace emerging threats

- Only 14% of today's bombers are stealthy
- B-21s will slowly increase long-range, penetrating strike capacity

The USAF's bomber inventory is now a raid force, not a campaign force—lacks the sortie capacity and survivability to deny sanctuary to the PLA



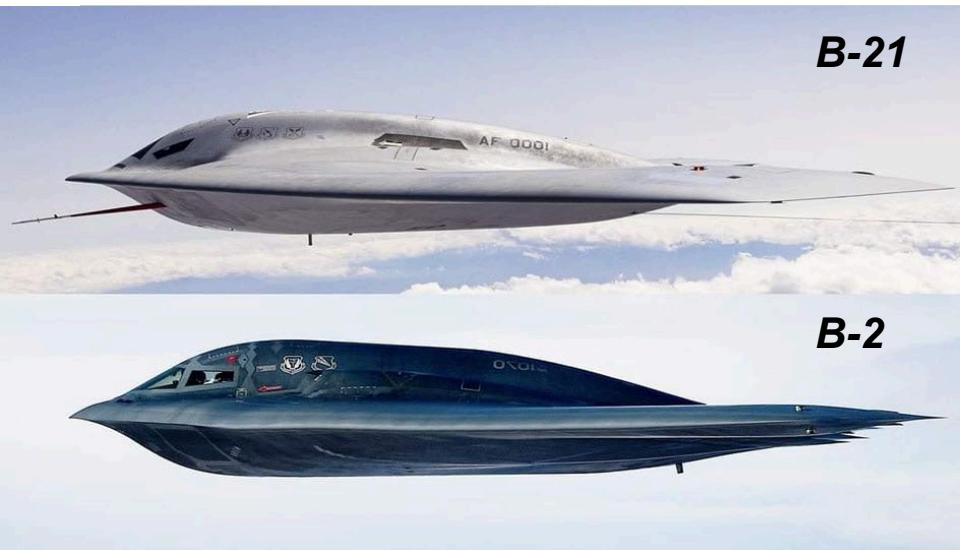
# The same policies cratered the USAF's fighter force

Fighter inventory has reached a record high average age and lacks the sortie capacity & survivability needed to deny sanctuary to the PLA

	Total Aircraft Inventory (TAI) Fighters	Combat-Coded Fighters
1991	3,912	2,540
2018 actual	2,031	1,305
2018 "The Air Force We Need" by 2030	2,290	1,473
2026	1,414	<b>Historic lows</b> 918
2035 Air Force Fighter Roadmap (aspirational)	1,964	1,275

**The Air Force must modernize and rebuild its penetrating strategic attack combat forces**

# Long-range, penetrating combat aircraft are the foundation of a future USAF sanctuary denial force



*B-21*

*B-2*



*F-47 (USAF artist rendering)*

- Unmatched range and survivability (all-aspect, wideband low observability for highly contested environments)
- Larger munitions payloads
- Multi-mission capable: counterair, maritime strikes, electronic warfare, penetrating sensor platforms
- Uninhabited CCA will augment—but not replace—5th and 6th generation crewed bombers and fighters



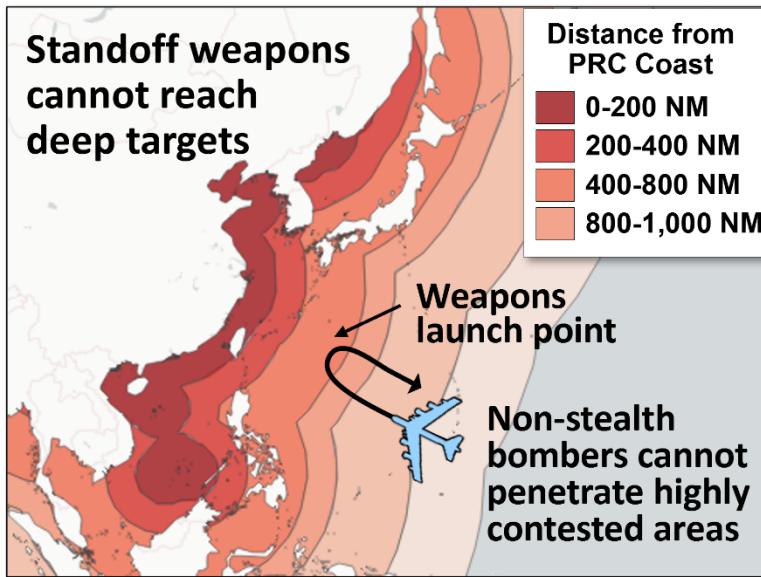
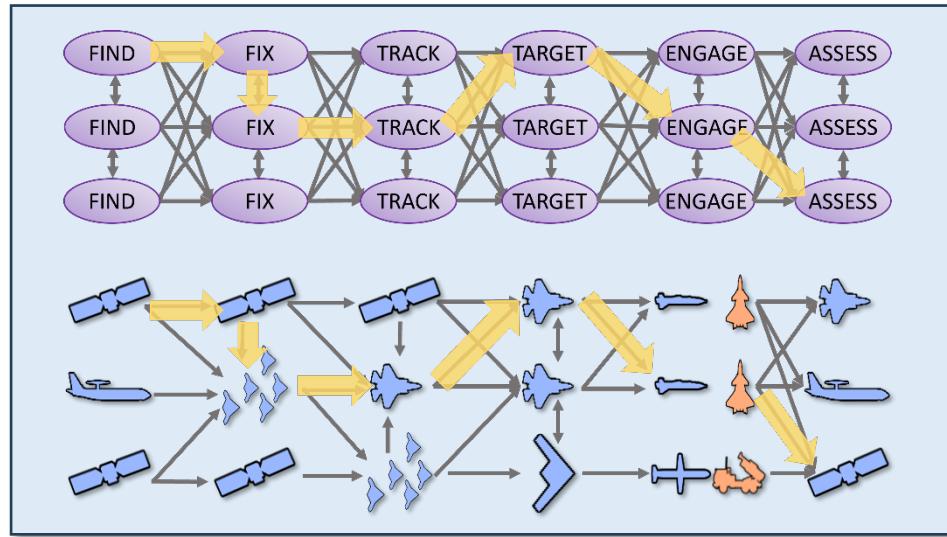
*CCA*

**The combination of B-21s and F-47s will provide options to attack China's centers of gravity and deny sanctuaries anywhere in the battlespace**

# Overbalancing toward stand-off strike forces would risk creating an Air Force that cannot deny sanctuaries

## Complexity of long-range kill chains creates challenges

- Penetrating and overhead sensors are needed to provide target cues
- Latency and lag in data linked-target updates can cause target misses
- Kill chain dependencies present PLA with counter-C4ISR-T opportunities



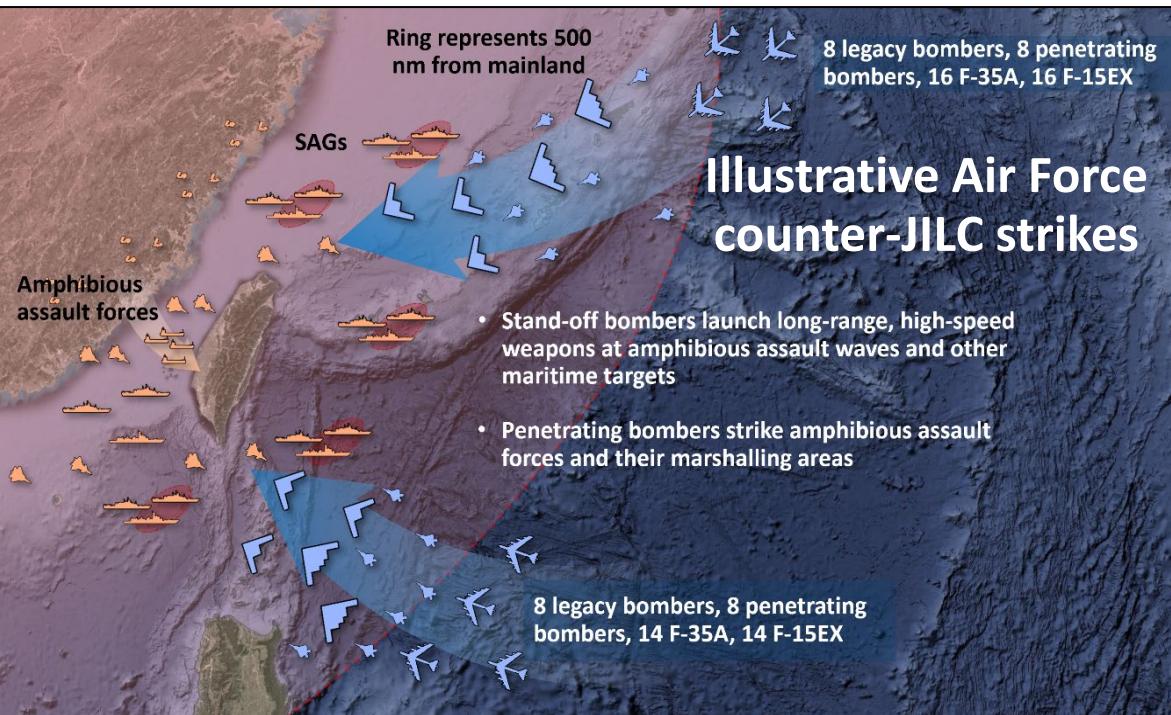
## Long-range weapons have limitations

- Cannot reach targets located deep in contested areas when launched from stand-off distances
- Longer weapon flight times provide time for PLA to counter incoming attacks
- Ranges limit warhead kinetics and end-game maneuver energy
- Long-range weapons are more expensive

# A “strategy of denial” focused only on countering joint island landing campaign forces is not enough

Would risk engaging in a campaign of interdiction and attrition the U.S. cannot win

- PLA advantages would include greater combat capacity in the battlespace, higher sortie rates, shorter logistics lines



- Would give PLA forces uncontested ability to launch missile attacks from China's interior at U.S. bases
- Would also allow China to move forces from its Western and Central Theater Commands to reinforce its JILC

U.S. forces must also collapse China's will and ability to sustain the fight – and this means targeting its centers of gravity



# Recommendations

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- 1. Provide the Air Force with funding to further accelerate B-21 acquisition and size the bomber force to deny sanctuaries to the PLA**

Analysis strongly supports growing DOD's bomber inventory to 300 or more aircraft, including at least 200 penetrating B-21s, as rapidly as possible to deter Chinese aggression, and if necessary, reduce the risk losing a conflict with China

- 2. Congress and the Department of War should support the acquisition of at least 300 F-47 fighters to rebalance the USAF's force design**

The F-47's longer ranges, larger payloads, and all-aspect, wideband low observability combined with B-21s will allow the USAF to strike anywhere in the battlespace

- 3. Refrain from retiring stealthy B-2s until the B-21 force surpasses at least 100 aircraft and is fully operational**

Retiring B-2s prematurely would erode deterrence and increase risk the PLA or other capable militaries will launch air and missile attacks that greatly degrade the effectiveness of U.S. joint force operations



## Recommendations (continued)

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### 4. The Air Force should acquire 74 F-35A and 24 F-15EX fighters per year to reverse decades of force cuts and hedge against future risk

Will help create a balanced penetrating and stand-off force mix and increase the Air Force's capacity to team piloted aircraft with CCA to achieve affordable mass that offsets the PLA's combat capacity advantage

### 5. The Air Force should conduct cost per effect analysis to inform its development of a balanced mix of long-range penetrating and stand-off combat aircraft and munitions

Such an analysis should factor in the whole system-of-systems that long-range kill chains require to be resilient and effective at the scale needed in a peer conflict

**We *MUST* rebalance and grow the Air Force's long-range combat forces and munitions inventory for strategic attacks**



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