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Panel on “The Cross-Strait Military Balance”

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Chairman Bartholomew, co-chairs Senator Goodwin and Senator Talent, distinguished Commissioners and staff, thank you for inviting me to appear before you to discuss the cross-Strait military balance.

## **Executive Summary**

I have been asked to comment on the Taiwanese military's ability to deter, delay, and defeat a cross-Strait attack. My overarching assessment is that the Republic of China's (ROC) armed forces are not yet *optimally* manned, trained, equipped, and motivated to defend against an attack on Taiwan. I want to emphasize "optimally," because I do not think it is inevitable that an attack by the Peoples' Liberation Army (PLA) will succeed at a price that Beijing is willing to pay. After all, Taiwan enjoys formidable natural defenses.<sup>2</sup> Amphibious assaults and large-scale naval blockades are complex military operations under the best of circumstances, and the PLA has no experience conducting either under combat conditions. Taiwan's defensive preparations—even if not ideal—are still substantial and capable of imposing heavy costs on an invader. Attacking Taiwan therefore remains a risky gamble.

Taiwan can nevertheless do more to enhance its defenses. Deterrence will rest on less-than ideal foundations until it does.<sup>3</sup> Nor is time on Taiwan's side. The qualitative and quantitative military balance has already tipped in China's favor, and the PLA's advantages are growing.<sup>4</sup> For years, defense experts suggested that Taiwan should redress this imbalance by embracing asymmetry—in other words, by investing in large numbers of low cost weapons and adopting warfighting concepts that prioritize anti-access and denial operations over decisive battles to maintain or regain control of the air, sea, and land.<sup>5</sup>

President Tsai is thankfully pushing Taiwan's military in this direction. Unfortunately, she faces two obstacles. First, defense reforms take time. It will take years to procure new weapons. Meanwhile, Taiwan's military must also update its doctrine, training, maintenance, logistics, supply systems, and culture in order to ensure that these weapons can be effectively employed. Second, the Tsai Administration's reform efforts are encountering resistance as some senior generals, admirals, and defense officials attempt to coopt, dilute, and "slow roll" the transition.

For the rest of my testimony, I proceed as follows. First, I discuss why we should focus on Taiwan's military preparations for a full-scale invasion instead of its ability to defend against an attack on an outlying island, missile strikes, or a naval blockade, even if the Chinese military only seems able to undertake combat operations short of a worst-case scenario invasion and occupation. Next, I identify problems and shortcomings in how Taiwan's military forces are currently trained, manned, equipped, and motivated to defend against a full-scale invasion. I then discuss both the Tsai Administration's defense reform efforts and the obstacles that could prevent it from being quickly realized, after which I suggest that prioritizing sea denial and ground combat operations will do more to enhance deterrence than investments in any other area. I conclude with three policy recommendations for Congress to consider.

## **Why Taiwan should focus on the threat of full-scale invasion**

My assessment of Taiwan's military preparations for attack is based on how I think the ROC Army, Navy, and Air Force are likely to perform in a worst-case, full-scale invasion scenario. There are undoubtedly other ways China could attack if Beijing decides to resolve the "Taiwan issue" by force. For example, the PLA could seize Kinmen, Matsu, or one of Taiwan's other outlying islands.<sup>6</sup> It could

initiate a decapitation operation, a cyber-attack, missile strikes, or some combination of the three. Alternatively, the PLA Navy (PLAN) and PLA Air Force (PLAAF) could impose an air and naval blockade.

In theory, these possibilities suggest that China might find a way to forcibly annex Taiwan “on the cheap”. After all, if grabbing an island, launching missiles, or isolating Taiwan from the rest of the world can break the will of the Taiwanese people (and convince the United States to remain on the sidelines), it means Beijing can compel Taiwan into submission without needing to undertake a costly and risky full-scale invasion. Without downplaying the risk that the PLA might try to undertake one or more of these “sub-invasion” options, I am nevertheless skeptical that they should serve as the pacing threat against which we assess the adequacy of Taiwan’s military preparations. There are at least three reasons I believe we must remain focused on the worst-case, full-scale invasion scenario.

First, physical occupation remains the only surefire way to achieve Beijing’s ultimate goal: political control. The only way to physically occupy Taiwan is to mount a full-scale invasion. Although I discuss social resilience below, the fact is that if the Taiwanese people are so irresolute as to give in to Chinese demands after losing an outlying island, or suffering damage from long-range strikes, then there are deeper issues at play than the most effective military defenses in the world alone can resolve. Moreover, as Mark Stokes, Yang Kuang-shun, and Eric Lee aptly point out, “the credibility of an invasion threat shores up the effectiveness of coercion.”<sup>7</sup> A Chinese military campaign short of a full-scale invasion can only succeed at breaking the will of the Taiwanese people to the degree that they believe that Beijing can follow-up an initial attack with something far worse. Conversely, it stands to reason that the more the Taiwanese people believe their military forces can and will defend them against physical occupation, the less likely it is that an island grab, kinetic strike, or blockade alone will cause them to submit.

Second, the seizure of outlying islands, long-range strikes, and blockades are arguably “lesser included” threats. In other words, despite concerns that focusing on the invasion threat leaves Taiwan vulnerable to these “sub-invasion” scenarios, the fact is that PLA would need to successfully accomplish all three of these operations before it could invade and occupy Taiwan.<sup>8</sup> Therefore, the same defensive capabilities and preparations that will help Taiwan defend against a full-scale invasion will also prove useful for dealing with island grabs, fire strikes, and blockades. For example, hardening, dispersing, and concealing command and control (C2) sites, logistics nodes, and combat forces limits damage from Chinese missile strikes, regardless if they occur as part of a stand-alone campaign or a full-scale invasion. Coastal defense cruise missiles (CDCM) are useful against PLAN ships whether they are trying to grab an island, enforce a blockade, or support an amphibious landing. Well-trained, well-equipped, flexible, mobile, and autonomous ground combat units can defend beaches on outlying islands and those on Taiwan itself.

Third, although island grabs, missiles and cyber strikes, and blockades might be easier for the PLA to undertake than a full-scale invasion, they are still challenging and risk-laden operations in their own right. There is no guarantee the PLA will be able to successfully execute any of them under fire. Moreover, far from presenting Taiwan—or the United States—with a morale-breaking *fait accompli*, a Chinese island grab, missile strike, or blockade could instead create a range of political and military opportunities for Taiwan, the United States, regional, and international partners to exploit. Politically, the seizure of an island, missile strikes that harm civilians, or an economically devastating blockade would serve as an unambiguous “wake up” call about Beijing’s true intentions. There is, of course, a chance that Chinese aggression will deter the United States and its regional allies and partners from

intervening. However, to the degree that the strong international reaction to China's crackdown in Hong Kong, or revelations about Chinese concentration camps in Xinjiang, serves as an indicator, it seems more likely that violent aggression against Taiwan will galvanize public support for a firm response instead of dividing it.<sup>9</sup> Militarily, blockades and island grabs have serious downsides. Enforcing a blockade will likely force the PLAN to put ships within range of Taiwanese anti-ship missiles. Blockades are rarely decisive by themselves.<sup>10</sup> And they take time to bear fruit in any case—time that the United States and its partners can use to calibrate an effective response.<sup>11</sup> A blockade will also put China in the unenviable position of having to decide what to do about third-party civilian vessels—and the military ships sent to escort them—that defy the blockade. Firing on an American or Japanese civilian or military ship risks escalation. Letting them through undermines the credibility of the entire endeavor. The quick seizure of an outlying island runs similar risks. Their symbolic value notwithstanding, these islands are de facto strategic outposts that serve as a “defense in depth” of sorts. A PLA operation to seize one could fail, damaging Chinese credibility and exposing the PLA's methods and vulnerabilities. Even if the PLA succeeds, the operation will still serve as an early warning, giving Taiwan a chance to mobilize and position its forces, while buying time for the United States to flow forces into theater if it so chooses. Indeed, even an overwhelmingly successful attack against one of Taiwan's outlying islands could well run into the same problems as any bite-and-hold operation: it will not prove military decisive in its own right, but it will give the other side a chance to move reserve forces into place.

### **Existing problems, shortfalls, and gaps**

Taiwan's armed forces would likely face a number of shortfalls and gaps if the PLA launched an all-out invasion today. Again, this is not to say such an attack would succeed. The Department of Defense does not think the PLA is currently capable of mounting such an ambitious operation.<sup>12</sup> Taiwan is naturally defensible. Amphibious assaults are extraordinarily difficult; invading Taiwan would require the largest and most complex amphibious assault in history.<sup>13</sup> Whatever its shortcomings, Taiwan's military still has the wherewithal to impose heavy casualties on a landing force.

Even so, recruiting, doctrine, training, equipment, and motivation remain suboptimal in Taiwan's armed forces. Intangible factors like chance, resolve, and whether the United States decides to intervene make it impossible to predict how long Taiwan's military can hold out against an all-out invasion. Nevertheless, it seems safe to assume that, all things equal, Taiwanese soldiers, sailors, and air personnel will fight more effectively, suffer fewer casualties, and hold out for longer if these problems and shortcomings are addressed.

#### *Personnel*

Taiwan does not have enough active duty personnel. As of 2018, Taiwan's armed forces had 153,000 soldiers, sailors, air personnel, and marines, representing roughly 80% of its authorized end-strength of 188,000 active duty billets.<sup>14</sup> The problem is particularly acute in frontline ground combat units, some of which are allegedly at 60% of their authorized end strength.<sup>15</sup> Analysts offer a number of reasons for this shortfall. Taiwan has struggled to attract enough men and women to the armed forces since it began to transition from conscription to an all-volunteer force (AVF).<sup>16</sup> Compounding matters, the Ministry of National Defense (MND) must spend an ever-growing share of its budget on pay, benefits, and incentives to recruit volunteers. As a result, personnel costs now account for 45% of the defense budget, up from 26% before the AVF transition.<sup>17</sup> While conscription still exists to help cover the shortfall, conscripts now only spend four months on active duty.<sup>18</sup> Among those who

do volunteer to remain on active duty, many try to transfer to non-combat units.<sup>19</sup>

### *Equipment*

Taiwan's military might look imposing on paper. Comprised of both foreign purchased and indigenously produced platforms, this arsenal includes 565 main battle tanks, nearly 100 attack helicopters, over two dozen destroyers and frigates, 44 missile boats, 479 combat capable aircraft, and at least 1,100 anti-ship missiles.<sup>20</sup> Unfortunately, maintenance, logistics, and supply issues could prevent many of these platforms from getting into action in an invasion scenario. For example, Taiwan's armed forces are struggling to find replacement parts for many of its foreign-acquired systems. As a result, less than half of the tanks, armored personnel carriers, and self-propelled artillery vehicles acquired from abroad are fully operational at any given point in time. Paradoxically, the pending arrival of 108 American M1A2 main battle tanks could exacerbate the problem.<sup>21</sup> Shortages also plague Taiwan's rotary and fixed wing fleet, especially its inventory of AH-64 *Apaches*, OH-58D *Kiowa Warriors*, F-5 *Tigers*, F-16A/B *Fighting Falcons*, and *Mirages*.<sup>22</sup> That a lack of critical parts is making it hard for units to train and operate in a permissive, peacetime environment suggests the difficulties Taiwan will face if confronted with a prolonged blockade or conflict, especially if it does not have time to stockpile beforehand.

Some analysts also worry about potential supply shortages in the event of war. In particular, the MND may not have enough munitions for a prolonged conflict, especially one in which the island is cut off for long periods of time. To be fair, militaries often underestimate their wartime supply requirements. The history of modern warfare is littered with examples of armies that consumed their entire peacetime stockpile of shells in the opening phases of a conflict.<sup>23</sup> Yet at least one open source report suggests that Taiwan might only have one-third to one-half of the munitions it will need for just two days of air combat.<sup>24</sup> Taiwan's ground forces may face similar shortages in terms of small arms and small arms ammunition.<sup>25</sup>

Maintenance and corrosion control issues present another challenge, especially for the navy and air force. In fact, the military now outsources repair and maintenance for at least some of its airframes to private sector companies.<sup>26</sup> Outsourcing may save money in the short run. However, relying on civilian contractors might not prove viable under combat conditions. Operationally, intercepting PLA intrusions, which have spiked dramatically over the past year<sup>27</sup>, is also straining maintenance and readiness.<sup>28</sup>

### *Doctrine*

Many American analysts think that Taiwan's military doctrine—in other words, the concepts that guide how its armed forces train and fight<sup>29</sup>—will prevent it from generating as much combat power as it otherwise could. For decades, Taiwanese doctrine focused on countering an invasion force *symmetrically*. In other words, it envisioned waging a decisive “none shall pass” battle for control over Taiwan's airspace, sea-lanes, and beaches. This doctrine also shaped the military's force posture and procurement plans by spending Taiwan's already constrained military investment and force modernization budget on acquiring small numbers of “expensive, high-end platforms that are high on prestige, but of limited utility in an actual conflict.”<sup>30</sup> Given that the cross-Strait military balance is tipping against Taiwan, the fact is that the PLA will soon be able to overwhelm Taiwanese defenders both quantitatively and qualitatively.<sup>31</sup> Although the Tsai Administration is now embracing what many defense experts have long considered a more appropriate, *asymmetric* deterrence posture—a topic I

discuss in more detail below—old habits are hard to change. Even in a best-case scenario, it will take years to reorient Taiwan’s military toward asymmetric battle concepts after it spent generations planning and preparing for a symmetric war. Therefore, if China attacks in the near future, it is unlikely that Taiwan’s soldiers, sailors, and air personnel will be ready, equipped and trained to fight in accordance with these new concepts.

### *Training*

Taiwanese military training, at least within the army, leaves much to be desired. Conscripts spend five weeks in basic training, followed by another eleven weeks undergoing follow-on training for their military occupational specialty. These sixteen weeks constitute the entirety of their time on active duty. Worse yet, the training is not sufficiently rigorous. Recruits spend more time listening to administrative briefs, practicing close order drill, and doing yard work than they do learning basic combat tactics, techniques, and procedures, first aid, or land navigation.<sup>32</sup> Unit-level field training among active duty units is not much better. Exercises are highly scripted.<sup>33</sup> Junior officers fear failure and try to avoid passing “bad news” up the chain of command. Senior officers micromanage their subordinates, often obsessing over tasks that Western militaries delegate to non-commissioned officers. In fact, seasoned American observers—as well as some retired Taiwanese officers—are skeptical that the army is capable of changing this top heavy, highly centralized command culture anytime soon.<sup>34</sup>

Taiwan’s navy and air force appear better trained. For a variety of reasons, these services do not face the same challenges as the army. Although hierarchical relations and centralized command and control are endemic to Taiwanese military culture, ship captains and jet pilots invariably exercise more latitude and autonomy when operating than their peers on the ground. These services are also smaller than the army (about half the size) and have fewer conscripts to train and manage.<sup>35</sup> Finally, because the navy and air force handle the PLA’s “grey zone” intrusions, the increased demand for air and naval intercepts has likely provided both services with invaluable operational experience and exposure to PLA tactics, techniques, and procedures.<sup>36</sup>

### *Reserves*

I have thus far focused on Taiwan’s active duty army, navy, and air force. While active duty units will do most of the initial fighting in a worst-case invasion scenario, the cross-Strait military balance is such that if PLA assault units make it onto the beach—or beyond—Taiwanese reservists will need to quickly augment their active-duty counterparts on the ground. Taiwan’s reserve force is therefore of critical importance to both Taiwanese war plans and cross-Strait deterrence.<sup>37</sup>

Unfortunately, there is a strong consensus among analysts and expert observers that absent a major reform, Taiwan’s reserve force will prove ineffective against all-out invasion. Of the 2 million reservists Taiwan can theoretically mobilize in a crisis,<sup>38</sup> only 300,000 or so are actually required to participate in regular refresher training under current regulations.<sup>39</sup> Moreover, this training is grossly insufficient to ensure Taiwan’s reservists will be ready to rapidly mobilize and fight under combat conditions. At present, those reservists who are required to attend refresher training are only obligated to do so for five days every two years. Worse yet, reservists waste most of this training attending “Power Point” briefings and filling out administrative paperwork.<sup>40</sup> Many reservists do not even know if they are subject to this training requirement, nor is it hard to acquire a waiver on the rare occasion they are “called up”. Perhaps most troubling of all, it is not clear that the MND takes its reserve force seriously.

There are rumors that the army does not even have enough rifles to arm all of its reservists. It is therefore doubtful that more than a fraction of its reservists will prove combat credible in a worst-case invasion scenario.

Reserve reform is thankfully a top priority for the Tsai Administration. President Tsai prominently referenced reserve reform in her second inaugural address. Five months later, the MND reorganized Reserve Command directly under the Army (and created corresponding reserve commands for each theater commands), organized a new Defense Mobilization Bureau, increased the number of reservists recalled for annual training by 140,000 per year, and instituted policies to create an annual training requirement and to increase the length of each annual training period to 14 days.<sup>41</sup> President Tsai has also promised that frontline reserve units will receive the same equipment as active duty units. The administration hopes these reforms can be fully implemented by 2023.<sup>42</sup>

### *Morale*

Taiwan, and its armed forces, also has a morale problem. Military service is not prestigious and does not confer the same social status in Taiwan that it does in the United States. Many older Taiwanese people, especially those who identify as pan-Green, associate the military with Kuomintang (KMT) rule. High profile hazing incidents have turned many younger Taiwanese off to military service. Far too many see the military as a career last resort rather than a respected path to social mobility and opportunity. It is little wonder that Taiwan is still struggling to meet its recruiting quotas even as a growing percentage of Taiwanese claim that they would be willing to defend Taiwan in the event of war.<sup>43</sup>

Contrary to the opinion that today's youth in Taiwan are "too soft", the lack of rigorous and realistic training may actually be making the problem *worse*. Many conscripts and reservists think their training is so lacking in rigor that it is a waste of time. Such views may reflect—or drive—a broader skepticism about the degree to which Taiwan's military is ready to protect the island against invasion. For example, one recent public opinion survey by National Chengchi University found that over 70% of those surveyed doubted that Taiwan's armed forces could successfully defend Taiwan.<sup>44</sup> The 2019 Taiwan National Security Survey similarly found that only 15% of the 1,120 respondents said that they would either "fight" or "join the army" in response to an invasion.<sup>45</sup> By comparison, 25% said that they would "let it be." 13% claimed they would flee the island.<sup>46</sup> Such views are deeply problematic, because they suggest that Taiwanese resolve could "break" before its military forces are actually defeated—or even have a chance to get into the fight. They also raise the stakes if China tries to resort to coercive military action short of all-out invasion despite the fact that missile strikes, a blockade, or the seizure of an outlying island are, by themselves, an existential threat to Taiwan's autonomy.

As is the case with reserve reform, the Tsai Administration is taking steps to address social resilience. For example, the DPP organized a series of public seminars on national defense in four major cities this past December.<sup>47</sup> Prominent defense experts, such as former Chief of the General Staff Admiral Lee Hsi-min, and up and coming politicians like Enoch Wu, have likewise been going around the island sponsoring talks and panels on civil defense and emergency response. The need to improve public awareness of Taiwan's military preparations likely explains why, as Professor Shelley Rigger points out, President Tsai spends so much time wearing a helmet and flak jacket in public.<sup>48</sup>

### **Is hope on the horizon?**

With the introduction of the Overall Defense Concept (ODC) in 2017, it looked like Taiwan’s military was belatedly shifting toward a posture that was both more appropriate to Taiwan’s threat environment and which might start to address many of the aforementioned gaps and shortfalls. In broad terms, the ODC seeks to adopt a multi-layered, asymmetric strategy and a corresponding posture consisting of large numbers of small things.<sup>49</sup>

The Tsai Administration has thrown its full support behind the ODC.<sup>50</sup> Unfortunately, the concept’s future is in doubt. A number of high-ranking uniformed officers and senior defense officials are not “on board” with the ODC.<sup>51</sup> This resistance, for lack of a better term, seems to stem from a combination of interpersonal animosity, principled disagreement, and bureaucratic inertia. Regardless, it appears increasingly unlikely that the MND will implement ODC—or another genuinely asymmetric alternative force posture<sup>52</sup>—with the sort of urgency that Taiwan’s threat environment might otherwise indicate. These senior officers and officials (most of whom are retired officers) are undermining the shift by creatively interpreting the term asymmetric so as to justify their pursuit of clearly symmetric weapons—like M109 Paladins—or the acquisition of small numbers of very expensive asymmetric platforms, such as the indigenous diesel submarine (IDS). Chinese “grey zone” provocations likewise serve as a reason to focus on high-profile intercept and surveillance missions despite the burden such intercept missions impose on budgets, maintenance, and readiness.<sup>53</sup>

Despite its vocal and public support for defense reform, the Tsai Administration also seems unwilling or unable to force the MND to adopt the ODC—or another genuinely asymmetric alternative—with greater urgency than it has thus far. As a practical matter, the DPP does not have a deep “bench” of military experts and defense officials who can translate President Tsai’s top-level political guidance into a concrete and actionable plan; monitor its implementation; and overcome internal resistance among senior officers and defense officials (many of whom lean KMT).<sup>54</sup> Nor does Taiwan’s defense establishment have the institutional equivalent of the U.S. Department of Defense’s Office of the Secretary of Defense, which might otherwise allow the Tsai Administration to more effectively monitor and supervise the MND. As a political matter, it is not clear that the Tsai Administration has strong incentives to expend the political capital necessary to force many of these changes. President Tsai must satisfy domestic constituents who either may not support some of the more radical (and costly) steps needed to rapidly shore up Taiwan’s defense posture (such as a return to conscription, a significant increase in annual reserve training, or a major increase in defense spending) or who profit from the production of high-end platforms (such as the Taiwanese shipbuilding firms working on the indigenous diesel submarine program). Nor does it help matters that the United States habitually sends mixed signals and generates moral hazard, both in terms of U.S. defense firms lobbying for the sale of inappropriate conventional platforms (such as amphibious assault vehicles and main battle tanks), and proposed legislation to offer Taiwan explicit security guarantees without establishing clear expectations about what Taiwan must do to provide for its own defense.<sup>55</sup>

### **A question of time**

Even if the Tsai Administration somehow manages to overcome these obstacles so as to swiftly reorient the MND and the armed forces towards a more effective warfighting posture, there is still the issue of time. It will take years just to acquire platforms and capabilities *already in the production and/or foreign purchase pipeline*. To offer just a few prominent examples:<sup>56</sup> the air force will not receive the last of its F-16A/B upgrades until 2023. (The Obama Administration notified Congress notified about the deal in 2011). Although the sale of 100 Harpoon Coastal Defense Missile Systems was announced in October 2020, they will not start to arrive until 2022. In a best-case scenario, the first



IDS will not set sail until 2025. The last M1A2 main battle tank will reach Taiwan in 2027. Truly innovative capabilities, including as micro-missile boats, semi-submersibles, and drone swarms, will take even longer to research, to design, to build, and to field in large numbers. Therefore, even with a “full court” press to acquire a range of genuinely asymmetric capabilities, most are unlikely to come online until the middle of the decade at the earliest.

It is also important to remember that procuring and fielding the “right” weapons is only the first step in the transformation process. Doctrine, training, logistics, maintenance, and command culture must also change—radically in some cases—to ensure that Taiwan’s servicemen and women will not put their new weapons to old uses (and that their weapons will work and have plenty of ammunition). These necessary, but hard to observe, changes take years to implement. Nor can we assume that Taiwan’s military services are proactively “leaning forward” into these sorts of reforms, given the degree to which active duty units are already struggling with training, maintenance, logistics, and decentralized command and control.

In light of these time and resource constraints, I believe Taiwan can generate the greatest “return on investment” in terms of enhancing deterrence by prioritizing sea denial and its ground combat doctrine.

### *Sea denial*

Focusing on sea denial capabilities exploits a key requirement for any amphibious invasion: in order to invade and occupy Taiwan, China must send most of its troops and equipment by sea. Sea denial capabilities will, at best, keep PLA assault units from reaching Taiwan. At worst, they can buy time for Taiwan—and the United States if it decides to intervene—by complicating China’s landing plans, forcing it to divide its invasion fleet, and increasing the chance that assault units will arrive scattered and disorganized.

I am not in a position to predict how long it will take Taiwan to acquire enough of these weapons—and to undertake the doctrinal, organizational, and training reforms needed to ensure Taiwanese military units can use them effectively in combat—so as to deter aggression.<sup>57</sup> However, it seems clear that Taiwan can build its existing sea denial capabilities *faster* than it can achieve similar improvements in the air or on the ground. Taiwan already has many such weapons (including its existing inventory of over 1,100 Harpoon and Hsiung Feng III missiles anti-ship missiles, or its *Tuo Jiang/An Ping*-class corvettes) and is already in the process of acquiring more.<sup>58</sup> Moreover, sea denial weapons are relatively inexpensive. For example, Taiwan could buy roughly 1,600 Harpoon anti-ship missiles for the same (likely inflated) price that it paid for 66 F-16V fighter jets. Taiwan is also able to build almost all of these weapons on its own, saving money and stimulating domestic manufacturers in the process.

### *Ground combat doctrine*

If sea denial represents Taiwan’s first line of defense, it stands to reason that denying an invader the ability to take and hold ground represents the island’s last line of defense. Unfortunately, in addition to the aforementioned issues with Taiwan’s ground combat forces, neither the ODC, nor its plausible alternatives, outlines a plan for what the army should do if the PLA makes it off the beach<sup>59</sup> (which itself assumes that the first large-scale insertion of PLA ground forces will occur on the beaches). Even if a Chinese invasion force gains a foothold on Taiwan, China still cannot attain its ultimate goal—political control over the island—until it establishes physical control over the Taiwanese people.

A properly organized and employed ground defense can prevent the PLA from *rapidly* establishing and exercising population control, thereby presenting Taiwan’s government—and the United States—with a *fait accompli*. Again, at best, the prospect of waging a drawn-out ground campaign will buttress deterrence, convincing Beijing not to attack in the first place. At worst, a prolonged ground defense will buy time for the United States to intervene. It will also force China to surge additional forces across the Taiwan Strait, creating opportunities for interdiction and horizontal escalation—for example, by supporting unrest in areas where China must inevitably divert or pull paramilitary units to support its efforts in Taiwan.

Taiwan should prioritize a wholesale reform in how its ground combat units (active duty and reserve) train and fight so as to prepare them to wage a prolonged campaign against an invader across the depth of the island. It may want to also consider creating a Territorial Defense Force similar to those found in Estonia, Lithuania, and other countries that face a proximate invasion threat.<sup>60</sup> Preliminary analysis suggests that such forces can deter aggression.<sup>61</sup> Regardless, the MND should begin working on the problem-set now, since it will take a long and sustained effort to revise doctrine, improve training, and instill the sort of decentralized command and control culture necessary to redress this longstanding Achilles’ heel in Taiwanese defensive planning.

### **Policy recommendations**

A robust Taiwanese deterrence posture benefits Taiwan and the United States. Although there are limits to what the United States can do to help improve the island’s defenses against invasion, Congress should nevertheless consider at least three measures:

*First, insist on contingent arms sales.*

In other words, the United States should only sell Taiwan weapons that are congruent with a genuinely asymmetric posture (as defined by the United States); and all such sales should be contingent on Taiwan’s continued progress toward adopting a genuinely asymmetric posture. Taiwan is of course free to adopt its preferred defense posture, and to buy whatever weapons it wants. But the United States is likewise free to say no. The Taiwan Relations Act simply requires that the United States “provide Taiwan with arms of a defensive character” and that such defensive articles and services be made available “in such quantity as may be necessary to enable Taiwan to maintain a sufficient self-defense capability.”<sup>62</sup> It does not specify that the arms recipient can define what is necessary for self-defense. Moreover, because the United States might one day decide that it is necessary to defend Taiwan from attack by sending American troops into harm’s way, it is in our interest to ensure that Taiwan is doing everything in its power to provide for its own defense. Conditional arms sales will also help the Tsai Administration take the bureaucratically painful and politically costly steps associated with reform. The annual Department of Defense report on Taiwan arms sales and asymmetric capabilities required by section 1260A of the 2021 National Defense Authorization Act can serve as a useful metric for calibrating such conditionality.<sup>63</sup>

*Second, stop sending mixed messages to Taipei.*

Conversations between deeply intertwined and vibrant democratic partners are inevitably “noisy.” Nevertheless, the United States can and should do a better job of clearly signaling its unified and unambiguous support for asymmetric reform. As it stands, Taiwanese elected officials and senior offices have every right to be irritated by the fact that the United States seems to keep changing its

mind, moving the goal posts, and sending contradictory signals about the types of reforms it wants. Clear signaling will also help prevent reform opponents from “cherry picking” the messages they want to hear while ignoring the ones they do not. Moves like the recent decision to sell Taiwan Mk-48 torpedoes, which the Tsai Administration immediately held up as clear evidence of US support for IDS, exemplify the problem.<sup>64</sup> To this end, Congress should do what it can to coordinate clear and consistent messaging—especially regarding arms sales—at the highest-level possible. It may therefore be desirable to ask the Biden Administration to undertake a comprehensive, top-down policy review of U.S.-Taiwan relations. Of course, the United States must send positive signals as well. Congress can also provide support for grassroots non-governmental organizations, such as Forward Alliance, which are trying to build public support for national security reform and improve social preparedness and resilience.<sup>65</sup>

*Third, recommend that the U.S. military develop operational plans that complement Taiwan’s asymmetric posture.*

One source of internal resistance to the ODC comes from the understandable concern that an asymmetric posture is overly passive and reactive, such that if Taiwan adopts the ODC, but the United States subsequently proved unable or unwilling to intervene on its behalf, Taiwan might struggle to escalate or to retaliate.<sup>66</sup> The United States can assuage these concerns by making it clear that its war plans are designed to serve as a counterpart to Taiwan’s asymmetric posture. Specifically, by holding out and absorbing as much Chinese military power as possible, Taiwan can buy time for U.S. forces to intervene while exposing vulnerabilities that U.S. forces can exploit. Combined exercises and war planning can help. In fact, the risk of divulging or leaking operational plans could actually prove more of a feature than a bug. The entire point of an asymmetric posture is to let China know what it will face if it attacks, while convincing it that there is little it can do to preempt or neutralize thousands of anti-ship missiles and tens of thousands of well-trained and well-equipped ground troops.

Thank you again for the opportunity to testify before you today. I look forward to discussing ways the Commission can enhance deterrence in the Taiwan Strait.

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<sup>1</sup> I would like to thank Matthew Stinson for his research assistance, as well as Dr. Alexander Lanoszka and Mark Christopher for feedback on earlier drafts. All views—and errors—in this written testimony are mine alone.

<sup>2</sup> Ian Easton, *The Chinese Invasion Threat: Taiwan’s Defense and American Strategy in Asia* (Arlington, VA: Project 2049 Institute, 2017): 147–167.

<sup>3</sup> By deterrence I mean the ability to impose—or to credibly threaten to impose—more pain and suffering on an adversary than it is willing to bear so as to convince that adversary to maintain the status quo (as defined by the deterring side) when the adversary would rather change the status quo. By credibly, I mean convincing the adversary that you have the *ability* to impose such pain, and the *willingness* to impose it; and that you are also willing to absorb the costs and risks associated with imposing such pain.

<sup>4</sup> Brendan Taylor, *Dangerous Decade: Taiwan’s Security and Crisis Management* (London: The International Institute for Strategic Studies, 2019): 43–65.

<sup>5</sup> The earliest such work seems to trace back to Dr. Lin Chong-Pin’s work on “concrete jungles” in the early 2000s. See also, William S. Murray, “Revisiting Taiwan’s Defense Strategy,” *Naval War College Review* 61, No. 3 (2008): 2—28; Jim Thomas, John Stillion, and Iskander Rehman, *Hard ROC 2.0: Taiwan and Deterrence Through Protraction* (Washington D.C: Center for Strategic and Budgetary Assessments, 2014); Michael A. Hunzeker and Alexander Lanoszka, *A Question of Time: Enhancing Taiwan’s Conventional Deterrence Posture* (Arlington, VA: Center for Security Policy Studies, 2018).

<sup>6</sup> Here I am referring to a *fait accompli* “island grab” as a standalone operation—a type of so-called coercive “risk” strategy in which Beijing seizes something of value from Taiwan as a way to credibly demonstrate that China can take even more so as to convince Taipei to capitulate without further resistance. This sort of operation is conceptually and practically distinct from an operation to seize one of Taiwan’s outlying islands as a militarily necessary prelude to a full-scale invasion.

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<sup>7</sup> Mark Stokes, Kuang-shung Yang, and Eric Lee, *Preparing for the Nightmare: Readiness and Ad Hoc Coalition Operations in the Taiwan Strait* (Arlington, VA: Project 2049, 2020): 3.

<sup>8</sup> Hunzeker and Lanoszka, *A Question of Time*, 50; Easton, *The Chinese Invasion Threat*, 94—141.

<sup>9</sup> James Holmes, “Could China Successfully Blockade Taiwan?” *The National Interest*, August 28, 2020.

Holmes, “Could China Successfully Blockade Taiwan?,” available at <https://nationalinterest.org/feature/could-china-successfully-blockade-taiwan-168035?page=0%2C1>

<sup>10</sup> John J. Mearsheimer, *The Tragedy of Great Power Politics* (New York: W.W. Norton, 2014): 83-137; Holmes, “Could China Successfully Blockade Taiwan?”

<sup>11</sup> Julian Corbett, *Principles of Maritime Strategy* (London: Longmans, Green and Co., 1911; reprint, New York: Dover 2004): 187.

<sup>12</sup> Office of the Secretary of Defense, *Military and Security Developments Involving the People’s Republic of China, 2020: Annual Report to Congress* (Arlington, VA: Department of Defense, 2020), 114.

<sup>13</sup> Tanner Greer, “Why I fear for Taiwan,” *Scholars Stage* (September 11, 2020). Available at <https://scholars-stage.blogspot.com/2020/09/why-i-fear-for-taiwan.html>. By way of comparison, the allied landing on D-Day involved 7000 landing ships and craft inserting 130,000 soldiers by sea, with another 24,000 arriving by air, against 40,000 defenders in the area of operations. According to at least one unofficial estimate, the PLA currently only has enough amphibious capacity to land roughly 15,000 soldiers and their vehicles in a single lift, while delivering an equal sized force by air at the same time. Gav Don, “Persuade, Invade, Blockade: What Is Beijing’s Best Strategy to Reunify Taiwan,” *BNE Intellinews*, November 30, 2020. Available at <https://www.intellinews.com/persuade-invade-blockade-what-is-beijing-s-best-strategy-to-reunify-taiwan-197533/>. Using publicly available data from the 2020 *Military Balance* report and other sources, “back of the envelope” math suggests that the PLAN could lift twice that number of troops (assuming every amphibious ship is fully operational; has either adequate landing craft for ship-to-shore operations, the ability to “self-beach”, or access to a suitable seaport of debarkation; *and is carrying its maximum capacity of troops, which likely means not carrying any vehicles*). In any case, even this number of troops is likely still too few to for an initial wave given the size and complexity of the mission, and the fact that not all will make it ashore.

<sup>14</sup> Paul Huang, “Taiwan’s Military is a Hollow Shell,” *Foreign Policy*, February 15, 2020. Available at

<https://foreignpolicy.com/2020/02/15/china-threat-invasion-conscription-taiwans-military-is-a-hollow-shell/>

<sup>15</sup> Off the record discussion, August 2020. See also, Huang, “Taiwan’s Military is a Hollow Shell.”

<sup>16</sup> Whitney McNamara, “Challenges to Taiwan’s Shift to All-Volunteer Force,” in Bonnie Glaser and Matthew P. Funaiolo eds., *Perspectives on Taiwan* (Washington, D.C.: Center for Strategic and International Studies, 2018): 48-51.

<sup>17</sup> Stokes, Yang, and Lee, *Preparing for the Nightmare*: 22.

<sup>18</sup> By comparison, South Korean conscripts serve for 19 months. Israeli conscripts remain on active duty for 24.

<sup>19</sup> Huang, “Taiwan’s Military is a Hollow Shell.”

<sup>20</sup> These numbers are taken from The International Institute for Strategic Studies, “Chapter Six: Asia,” *The Military Balance*, 120, no.1: 311-313; Office of the Secretary of Defense, *Military and Security Developments Involving the People’s Republic of China*, 164-166; Central News Agency, “Taiwan to Extend Defensive Perimeter to 300-500 km by 2025: Think Tank,” *Focus Taiwan*, January 10, 2021. Available at <https://focustaiwan.tw/politics/202101100009>

<sup>21</sup> Paul Huang, “Taiwan’s Military Has Flashy American Weapons But No Ammo,” *Foreign Policy*, August 20, 2020. Available at <https://foreignpolicy.com/2020/08/20/taiwan-military-flashy-american-weapons-no-ammo/>

<sup>22</sup> Stokes, Yang, and Lee, *Preparing for the Nightmare*: 37 & 39.

<sup>23</sup> For example, before to the First World War the British government told munitions manufacturers they should be prepared to produce 7 million bullets per week. When the war started, the British government’s first requisition was for 176 million bullets. Similarly, British artillery units deployed to France with one thousand shells per gun. Artillery commanders quickly discovered that their guns could fire this entire allotment in just over an hour of combat. See Paul Kennedy, “Britain in the First World War,” in *Military Effectiveness*, Vol. 1, ed. Allan R. Millett and Williamson Murray (Boston: Allen & Unwin, 1988), 34; War Office, *War Establishments: Part I, Expeditionary Force, 1914* (London: HMSO, 1914), 6, Z216, Joint Services Command and Staff College Archives, Shrivenham; and Jonathan B. A. Bailey, *Field Artillery and Fire Power* (Abingdon, UK: Routledge, 2004), 118.

<sup>24</sup> Wendell Minnick, “How to Save Taiwan From Itself,” *The National Interest*, March 19, 2019. Available at <https://nationalinterest.org/feature/how-save-taiwan-itself-48122>

<sup>25</sup> Off the record discussion, February 2019.

<sup>26</sup> *Ibid.*, 39.

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- <sup>27</sup> Staff Writer, “Chinese incursions highest since 1996,” *Taipei Times*, January 4, 2021. Available at <https://taipeitimes.com/News/front/archives/2021/01/04/2003749901>
- <sup>28</sup> Ben Blanchard, “Taiwan’s Armed Forces Strain in Undeclared War of Attrition with China,” *Reuters*, September 26, 2020. Available at <https://www.reuters.com/article/us-taiwan-security/taiwans-armed-forces-strain-in-undeclared-war-of-attrition-with-china-idUSKCN26H08X>
- <sup>29</sup> Barry R. Posen, *The Sources of Military Doctrine: France, Britain, and Germany between the World Wars* (Ithaca, NY: Cornell University Press, 1986): 13–14; Austin Long, *The Soul of Armies: Counterinsurgency Doctrine and Military Culture in the US and UK* (Ithaca, NY: Cornell University Press, 2016), 21; Benjamin Jensen, *Forging the Sword: Doctrinal Change in the U.S. Army* (Palo Alto, CA: Stanford University Press, 2016), 4.
- <sup>30</sup> Greer, “Why I fear for Taiwan.”
- <sup>31</sup> Hunzeker and Lanoszka, *A Question of Time*, 20.
- <sup>32</sup> Greer, “Why I Fear for Taiwan”; Off the record discussions, February 2019 and February 2021.
- <sup>33</sup> This and what follows are from off the record discussions conducted in February 2019, January 2021 and February 2021.
- <sup>34</sup> When I asked one subject matter expert whether Taiwanese army units would be capable of employing decentralized command and control, they replied that it might be realistic to expect the army to allow general-officer level commanders to exercise such discretion.
- <sup>35</sup> The International Institute for Strategic Studies, “Chapter Six: Asia,” 311.
- <sup>36</sup> Whether this experience and exposure is worth the price in terms of maintenance and readiness is another matter.
- <sup>37</sup> Michael Mazza, “Time to Harden the Last Line of Defense: Taiwan’s Reserve Force,” *Global Taiwan Brief* 5, no. 8 (April 22, 2020). Available at <https://globaltaiwan.org/2020/04/vol-5-issue-8/>
- <sup>38</sup> Open source estimates as to the actual size of Taiwan’s reserve force vary dramatically, typically ranging from 1.5 to 2.5 million. See Ian Easton, Mark Stokes, Cortez A. Cooper, Author Chan, *Transformation of Taiwan’s Reserve Force* (Santa Monica, CA: Rand, 2017); Minnick, “How to Save Taiwan From Itself”; The International Institute for Strategic Studies, “Chapter Six: Asia,” 311.
- <sup>39</sup> Stokes, Yang, and Lee, *Preparing for the Nightmare*: 22.
- <sup>40</sup> Minnick, “How to Save Taiwan From Itself.”
- <sup>41</sup> <https://www.cna.com.tw/news/firstnews/202010070041.aspx>
- <sup>42</sup> Off the record discussion, February 2021.
- <sup>43</sup> Wu Su-wei, “More than 77 percent willing to Fight in the Event of an Invasion by China: Poll” *Taipei Times*, October 25, 2020. Available at <https://www.taipeitimes.com/News/taiwan/archives/2020/10/25/2003745764>. Not every public opinion survey is as sanguine about Taiwanese resolve. For example, an August 2020 survey by the blue-leaning Chinese Association for Public Opinion found that less than half of those surveyed were willing to fight in a war against China. See Michael A. Hunzeker and Dennis L. Weng, “The Painful, But Necessary, Next Steps in the U.S.-Taiwanese Relationship,” *War on the Rocks*, September 24, 2020. Available at <https://warontherocks.com/2020/09/the-painful-but-necessary-next-steps-in-the-u-s-taiwanese-relationship/>
- <sup>44</sup> Stokes, Yang, and Lee, *Preparing for the Nightmare*: 12.
- <sup>45</sup> We must take these results with a grain of salt, as the responses were open ended. The prompt was “What will you do if war breaks out between Taiwan and the Mainland?” 2019. Accessed at <http://www.taiwansecurity.org/app/news.php?Sn=15761>. Opened ended responses translated by Dr. Lu-Chung Weng.
- <sup>46</sup> Other surveys paint a more optimistic picture. For example, a July 2018 poll by National Chungchi University found that roughly 30% of respondents said they were willing to tolerate more than 50,000 casualties in a war against China. Yao-Yuen Yeh, Charles K.S. Wu, Austin Wang, and Fang-Yu Chen, “Are Taiwan’s Citizens Willing to Fight Against China?” *The Diplomat*, March 22, 2019. Available at <https://thediplomat.com/2019/03/are-taiwans-citizens-willing-to-fight-against-china/>. That said, asking someone “how many casualties are you willing to accept” may not accurately tell us whether the interviewee is her or himself willing to be one of those casualties. We must take all of these surveys with a grain of salt, given the role that Chinese disinformation may be playing; and the fact that respondents know that China is paying attention to the results.
- <sup>47</sup> Central News Agency, “DPP to Hold National Security Seminars in Four Major Cities,” *Focus Taiwan*, November 29, 2020. Available at <https://focustaiwan.tw/politics/202011290007>
- <sup>48</sup> Shelley Rigger, “Hearing: Taiwan and the United States: Enduring Bonds in the Face of Adversity,” U.S. House of Representatives, Committee on Foreign Affairs, Subcommittee on Asia, the Pacific, and Non-proliferation, December 10, 2020. Available at <https://docs.house.gov/Committee/Calendar/ByEvent.aspx?EventID=111118>
- <sup>49</sup> For an in-depth overview and analysis of the ODC, see Drew Thompson, “Hope on the Horizon: Taiwan’s Radical New Defense Concept,” *War on the Rocks*, October 2, 2018. Available at

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<https://warontherocks.com/2018/10/hope-on-the-horizon-taiwans-radical-new-defense-concept/>; Hsin-Biao Jiang, “The Logic of the Strategic Thinking and Defensive Measures of the Overall Defense Concept of Taiwan,” *Institute for National Defense and Security Research Defense Security Brief* 9, No. 2, December 2020: 77-79; and Lee Hsi-min and Eric Lee, “Taiwan’s Overall Defense Concept, Explained,” *The Diplomat*, November 3, 2020. Available at <https://thediplomat.com/2020/11/taiwans-overall-defense-concept-explained/>

<sup>50</sup> Tsai Ing-wen, “Second Inaugural Address,” May 20, 2020. Available at <https://english.president.gov.tw/News/6004>; See also Tsai Ing-wen, “Transcript: President Tsai Ing-wen Discusses the Diplomatic, Security, and Economic Challenges Facing Taiwan,” August 12, 2020. Available at <https://www.hudson.org/research/16300-transcript-president-tsai-ing-wen-discusses-the-diplomatic-security-and-economic-challenges-facing-taiwan>

<sup>51</sup> Off the record discussions, August 2020, January 2021, and February 2021.

<sup>52</sup> The MND will reportedly publish a new Quadrennial Defense Review in March 2021, and a new National Defense Report in October 2021.

<sup>53</sup> Off the record discussion, August 2020.

<sup>54</sup> Off the record discussions, August 2020 and January 2021.

<sup>55</sup> Michael A. Hunzeker and Brian Davis, “The Defense Reforms Taiwan Needs,” *Defense One*, August 10, 2020. Available at <https://www.defenseone.com/ideas/2020/08/defense-reforms-taiwan-needs/167558/>

<sup>56</sup> This and what follows is from U.S.-China Economic and Security Review Commission, *2020 Report to Congress* (Washington, D.C.: U.S. Government Printing Office, 2020): 464; Stokes, Yang & Lee, *Preparing for the Nightmare*: 25-26; Central News Agency “18 F-16A/B Jet Fighter Upgrades Completed” *Focus Taiwan*, December 3, 2020. Available at <https://focustaiwan.tw/politics/202012030023>.

<sup>57</sup> At least one subject matter expert estimates that it could take up to three years for Taiwan to acquire a sufficient inventory of sea denial capabilities in light of budgetary and procurement cycles. Off the record discussion, August 2020

<sup>58</sup> Matt Yu and Joseph Yeh, “Taiwan Aiming to Buy Coastal Defense Missile System from US: Official,” *Focus Taiwan*, May 28, 2020. Available at <https://focustaiwan.tw/politics/202005280011>; Matteo Scarano, “Update: Taiwan Launches First ‘Fast Minelayer’ for ROCN,” *Janes*, August 7, 2020. Available at <https://www.janes.com/defence-news/news-detail/update-taiwan-launches-first-fast-minelayer-for-rocn>; Off the record discussion, August 2020

<sup>59</sup> Mazza, “Time to Harden the Last Line of Defense.”

<sup>60</sup> Hunzeker and Lanoszka, *A Question of Time*, 94—102.

<sup>61</sup> Lionel Beehner and Liam Collins, “Can Volunteer Forces Deter Great Power War? Evidence from the Baltics,” *Journal of Strategic Security* 12, no. 4 (2019): 50-68.

<sup>62</sup> 1979 Taiwan Relations Act, Section 2, b, 5 and Section 3. Available at <https://www.ait.org.tw/our-relationship/policy-history/key-u-s-foreign-policy-documents-region/taiwan-relations-act/>

<sup>63</sup> <https://www.govinfo.gov/content/pkg/BILLS-116hr6395enr/pdf/BILLS-116hr6395enr.pdf>

<sup>64</sup> Kelvin Chen, “Foreign Minister Says Arms Sales Symbolize US Commitment to Taiwan,” *Taiwan News*, May 22, 2020. Available at <https://www.taiwannews.com.tw/en/news/3938728>

<sup>65</sup> <https://nong.tw/events/>

<sup>66</sup> It is admittedly hard to see how Taiwan’s current defensive posture solves this problem either, since many of its existing high-cost, high-visibility platforms are vulnerable to first strike and/or it does not have enough of them to engage in a prolonged conflict without help from the United States.