Foreign Policy at BROOKINGS



**Mind the Capabilities Gap:** How the Quest for High-End Capabilities Leaves the Australian Defence Force Vulnerable to Mission Failure

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The views expressed in this monograph are those of the author and do not reflect the official policy or position of the Department of the Army, Department of Defense, or the U.S. Government.

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## **EXECUTIVE SUMMARY**

The current direction that the Australian Defence White Paper 2009 (Defence 2009) sets for the Australian Defence Force's (ADF) modernization does not correspond with the realities of Australia's security situation. The policies and strategies set forth prepare the ADF for contingencies that are the least likely to happen and dedicate large portions of the nation's limited resources to missions that exceed the ADF's capability. Australian policymakers continue to adhere to a "Defense of Australia" concept that has become obsolete and fail to link their strategy to a multilateral mechanism which treats the Asia-Pacific region as a complete system. As Australian defense policymakers strengthen the ADF 2030's capabilities to become self-reliant at the higher end of the military operations continuum, they have made the ADF 2030 more dependent on U.S. military assistance in order to perform low- and mid-intensity operations. The likely result will be an inadequate, ad hoc, and weak multilateral response, necessitating direct U.S. involvement in stabilizing a crisis. This will require more resources than if the issue had been addressed early on with the right mix of capabilities and cooperative security unity. The consequence for the United States would be either to accept an increased defense burden for operations on the lower and middle continuum of military operations within the Asia-Pacific region or to retrench from the region.

To make the U.S.-Australian alliance more effective in providing for both nations' security needs, the U.S. Department of Defense should support: 1) publicly discarding the Guam Doctrine in conjunction with the establishment of the U.S.-Australian defense industry community, 2) establishing joint basing for submarine repair, maintenance, and training facilities, 3) endorsing a Southeast Asia and South Pacific regional multilateral cooperative security arrangement to address regional security and stability challenges, while pressing for constructive and transparent Chinese participation in regional security matters, and 4) urging the U.S. Department of State to draft Defense Trade Cooperation Treaty rules to publicly create a seamless U.S.-Australian defense industry community, while shepherding this concept in support of future joint U.S-Australian operational activities.

Australian policymakers must integrate the *Defence 2009* and future White Papers' objectives into Australian foreign policy in the Asia-Pacific region as a part of a broader hemispheric approach – clearly establishing a framework for multilateral and cooperative security mechanisms to deal with such regional issues as disputed islands in the South China Sea; maritime resource claims; mass migration; conflict resolution and conflict prevention, with corresponding confidence-building measures, capacity building, and defense modernization transparency. Australian policymakers could recapitalize unaffordable and excess air and sea capabilities currently focused to deal with high intensity conflict into ground and amphibious capabilities to deal with the more likely middle- and lower-intensity regional scenarios on the continuum of military operations. A shift of Australia's defense capabilities towards greater utility in the most likely regional contingencies would significantly contribute to stability and security in Australia's *primary operational environment*, as well as make a valuable contribution to the U.S.-Australian alliance.

Regarding recommendations to rebalance Australia's defense capabilities, the Australian Defence Department could consider: 1) leasing U.S. submarines as a part of the larger joint base arrangement, 2) augmenting the F-35 and F-18 air fleet with unmanned reconnaissance and unmanned combat aerial vehicles, 3) basing of the U.S. F-22 Raptors in Australia as part of U.S. flexible deterrent options for regional crisis, 4) increasing the size of the Australian Army by 2,000 to 4,000 soldiers and provide the funding to train and sustain amphibious assault operations, and 5) establishing a tactical-level COP acquisition program for units at brigade and below, feeding the operational and strategic COP.

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### Reflecting on the U.S-Australian Alliance

If you were to walk the long, maze-like corridors of the Pentagon you would eventually come across the Australia, New Zealand, and United States Security Treaty (ANZUS) Corridor. The displays in this hall commemorate over 100 years of U.S.-Australian military history, from the sailing of the Great White Fleet into Sydney Harbor in August 1908 to the first major engagement of American Doughboys fighting side by side with Australian Diggers against the German ground offensive at the battle of Le Hamel, France on 4 July 1918 under the command of Australian General John Monash. Since this modest alliance in World War I, Australia has joined the United States in every major conflict that we have fought – World War II, the Korean War, the Vietnam Conflict, the Cold War, the Persian Gulf War, the Iraq War, the Afghanistan War, and the Global War on Terrorism: always there, always at each other's side, always able to count on one another, always capable.

About halfway down the A-Ring of the ANZUS corridor, the display cases trail off after the "Contemporary Operations" showcase into a series of random photographs and sketches, symbolically implying "more to come." But the ANZUS Corridor, half filled, leaves one to ponder "What's next?" Where do we go from here? How do the United States and Australia take our defense relationship to the next level? The future – marked by volatility, uncertainty, complexity, and ambiguity – presses the United States to seek strong partners and not to take for granted our closest allies who have been there through the most trying of times.

The Australians are a great military ally and democratic partner to the United States, across all domains of national power. This loyalty and shared sense of strategy has earned them significant standing and influence within the Pentagon. The American military benefits from their frank and direct dialogue. Australians, as well as the British, are on the inside of U.S. defense thinking and planning. They provide invaluable perspectives, constructively challenge U.S. assumptions, and improve our defense approaches towards mutual interests.

It is in the spirit of mutually supportive dialogue that this paper examines the *Australian 2009 Defence White Paper (Defence 2009)*<sup>1</sup> and addresses where we should go from this point to take the alliance to the next level. Deeply concerned

<sup>&</sup>lt;sup>1</sup> Department of Defence, *Defending Australia in the Asia Pacific Century: 2030*, Australian Government (2009), updated every five years, is the Australian government's equivalent to the U.S. Quadrennial Defense Review (QDR). Hereafter, it is referred to as the *Australian 2009 Defence White Paper (Defence 2009)*.

about the rise of China and the emergence of India, Defence 2009 seeks to move the Australian Defence Force (ADF) 2030 from today's counter-insurgency operations to the higher end of the military spectrum of conflict. Based on the threat perceptions demonstrated in Defence 2009 and its defense policy guidance, Australian defense policymakers have overemphasized the development of new capabilities designed for conventional high-intensity warfare - as a hedging strategy in case of a conventional military threat to the Australian homeland or major-power war in Asia - and given too little attention to mid-level irregular threats such as non-conventional conflicts, stabilization or emergency operations around the world. This acute hedging strategy skews Australia's defense priorities, resulting in capabilities less suited to deal with the low- to mid-level operations the ADF will more likely face in the 2030 timeframe. The subsequent loss or erosion of Australia's military capabilities will add additional burden to U.S. defense planning, increasing costs and limiting operational options to preserve Asia-Pacific regional stability and security. This monograph recommends a range of actions that the Australian Defence Department and the U.S. Defense Department can take in order to ensure an interoperable and capable ADF, and actions that the United States should take to assure Australia that we are here to stay in the Asia-Pacific region.

### **CHAPTER ONE** *Defense Policies and Strategies*

#### **Defence 2009: The Prologue**

During the past three decades, Australian governments have commissioned several defense white papers intermixed with various strategic reviews. These papers are as much political statements as they are defense documents, reflecting the views, policies, and priorities of the political parties in power at the time.<sup>1,2</sup> This is no less true for *Defence 2009*. Upon its release, critics assessed the merits and shortcomings of the policies, strategies, strategic outlook, and allocations of resources discussed. *Defence 2009* was much more than an academic exercise: it serves as the foundation of Australia's defense policies and strategies. It drives the ADF's long-term course by assessing future threats and challenges and prioritizing the ADF's defense capability requirements through the year 2030.

From an American perspective, the heart of the Australian defense debate centers on whether or not the Southeast Asia and Pacific region, including Australia, can continue to rely on the United States as the guarantor and underwriter of regional defense and security. Prior to the release of *Defence 2009*, Prime Minister Kevin Rudd and Defence Minister Joel Fitzgibbon cited China's economic and military rise as the emerging dominant power in the Asia-Pacific region. While Defence 2009 is not aimed or directed at any specific country,<sup>3</sup> Rudd and Fitzgibbon – two major influencers of the writing of *Defence* 2009 – most certainly had China's growing political and military influence in mind. For example, in Rudd's 9 September 2008 speech to the Returned Services League (RSL) National Congress in Townsville, Australia, he outlined his rationale for *Defence 2009*, with China topping his list of Australia's strategic risks.<sup>4</sup> Prime Minister Rudd itemized emerging security challenges for Australia - population, food, water, and energy pressures; demographic shifts; technology innovations; terrorism; and transnational crime – but zeroed in on a mix of "existing military and political fault lines." These include North Korea and South Korea; China and

<sup>&</sup>lt;sup>1</sup> Patrick Walters, "The Making of the 2009 Defence White Paper," Security Challenges, Vol. 5, No.2 (Winter 2009), pp. 1-4.

<sup>&</sup>lt;sup>2</sup> Matthew Barton, "The US Alliance under the Hawke and Keating Government: Withered on the Vine?," Flinders University of South Australia (August 2000).

<sup>&</sup>lt;sup>3</sup> Stephen Smith, "Joint Press Conference with Admiral Robert Willard," Minister of Defence, Perth, 10 December 2010.

<sup>&</sup>lt;sup>4</sup> Gregory P. Gilbert and Nick Stewart, Editors, Australian Maritime Issues 2008 SPC-A Annual (2009), pp. 4. Available at: <<u>http://www.navy.gov.au/w/images/PIAMA27.pdf</u>>.

Taiwan; unresolved border disputes between China and India; and China and its maritime neighbors in the South China Sea.

Noting both growth in Asian and U.S. military expenditures and modernization in the Asia-Pacific region, Rudd cited Australia's need for increased defense spending in air combat and naval forces, including advanced submarines. Rudd explicitly proclaimed that his government was serious about being a maritime power to defend Australian sea lines of communication and that they wanted to "indicate very clearly...a major priority is to ensure that we have got enough naval capability in the future, enough naval assets, enough naval personnel, and therefore enough funding put aside to invest in that longterm." He reiterated there was an "arms build-up in the Asia-Pacific Region and that Australia, therefore, must take appropriate preparations for the long-term future, at the same time advancing [Australia's] diplomacy."<sup>5</sup>

During the drafting of *Defence 2009*, Rudd's government sought to shift Australia's strategic focus closer to home by reemphasizing the self-reliant defense of Australia.<sup>6</sup> Added to the central principle of self-reliance, Rudd outlined other enduring principles to advance Australia's national security interests.<sup>7</sup> The Rudd government charged the Australian Department of Defence to meet the full spectrum of threats, acknowledging "defense has been overstretched for a long time."<sup>8</sup> Explaining the necessity for a new white paper, then-Minister of Defense Joel Fitzgibbon remarked:

The White Paper from which John Howard and Brendan Nelson were working was developed in the late 1990s and released in the year 2000. The world has changed so much since then.

- September 11, and subsequent terror events in Bali, Jakarta, London and Madrid;
- The wars in Iraq and Afghanistan;
- The emerging risk of WMD landing in the hands of non-state actors;
- Advances in space and cyber-warfare technologies;

<sup>&</sup>lt;sup>5</sup> Gilbert, pp. 9-12.

<sup>&</sup>lt;sup>6</sup> Kevin Rudd, "The First National Security Statement to Parliament," 4 December 2008. Available at: <<u>http://www.iseas.edu.sg/aseanstudiescentre/ascdf3 Rudd NatSec 041209.pdf</u>>.

<sup>&</sup>lt;sup>7</sup> Ibid. Prime Minister Rudd reaffirmed the U.S. alliance remains fundamental to Australia's national security, both globally and in the Asia-Pacific region; linked Australian security to the region, declaring regional engagement is crucial; recommitted to multilateral institutions, particularly the United Nations; advocated the use of creative middle power diplomacy; directed a risk-based approach to national security; and pledged to work with the Australian states and territory on operational security responsibilities. <sup>8</sup> Gilbert, pp. 4-5.

- The threat of nuclear capability in the hands of states of concern like Iran; and,
- Huge shifts in the global distribution of power including the rise and rise [sic] of China and the emergence of India.

The new White Paper will take these developments into account and deliver options to help Government make fully informed and cost-effective decisions about the military capabilities we need to defend Australia and its interests out to 2030. It will align defense strategic guidance, force structure and capability priorities, and resource strategies by taking the most comprehensive view yet of the Defence enterprise.<sup>9</sup>

Additionally, Fitzgibbon and Rudd signaled a move away from former Prime Minister John Howard's personality-based approach to defense and alliance management while still retaining many of the Australian Ministry of Defence's capabilities recommended or approved by the Howard government.<sup>10</sup> It is evident that both Rudd and Fitzgibbon took an active role in shaping the direction of the white paper in an attempt to provide the Australian Defence Department with a more rigorous political framework in an era of capped budgets and limited missions.<sup>11</sup>

#### Australia's Defense Policy

Upon the 2 May 2009 release of *Defence 2009*, the Rudd Government reaffirmed Australia's strategic posture "to be a policy of self-reliance in the direct defense of Australia, as well as ability to do more when required, consistent with [Australia's] strategic interests and within the limits of [Australia's] resources."<sup>12</sup> During the *Defence 2009* policy review, Australian defense policymakers reevaluated Australia's U.S. defense relationship with regard to Canberra's self-reliance posture and elected to continue a close relationship through at least 2030. Additionally, the government set the policy that "the main role of the ADF should continue to be an ability to engage in conventional combat against other

<sup>&</sup>lt;sup>9</sup> Joel Fitzgibbon, "Speech to the National Press Club of Australia: Labor's Defence Reform Project – Meeting the Strategic Challenges of the 21<sup>st</sup> Century," 30 July 2008. Available at: <<u>http://www.minister.defence.gov.au/FitzgibbonSpeechtpl.cfm?CurrentId=8020</u>>.

<sup>&</sup>lt;sup>10</sup> Ibid. Fitzgibbon criticized John Howard Government's for failing to review Australian strategic outlook, causing "disconnect between strategic guidance and force structure planning." Fitzgibbon went onto say, "worse, I strongly suspect that this suited the former Prime Minister [Howard]. It allowed him to operate on political instinct without the inconvenience of any accepted framework which might spoil his political agenda."

<sup>&</sup>lt;sup>11</sup> Stephen Smith, "Press Conference, Parliament House," Minister of Defence, Canberra, Australia, 14 December 2010.

<sup>&</sup>lt;sup>12</sup> Defence 2009, pp. 46.

armed forces."<sup>13</sup> The central concept to Australian defense policy is the ability to deter and defeat attacks on Australia without relying on foreign combat and combat support forces. Based on the country's strategic interests, the Rudd government wanted a force that could act independently, lead military coalitions, and make tailored contributions to military coalitions. At the same time, *Defence 2009* explains several caveats Rudd's government placed onto the "self-reliant" principle: continued expectations for the Americans to come to Australia's aid if threatened by a major power whose capabilities exceed Australia's means to resist; continued reliance on intelligence and technology support from the United States; and continued reliance on U.S. nuclear deterrence.<sup>14</sup>

*Defence* 2009 reiterated that Australia's "primary focus" for the ADF is to operate within the "*primary operational environment*," which encompasses the vast oceans and seas surrounding the Australian continent and Australian territories.<sup>15</sup> Within the primary operational environment, *Defence* 2009 focused on the strategic center – the air-sea gap to the north of Australia, generally tracing the archipelago line and surrounding waters from northern Australia to Southeast Asia. Indicating future force structure requirements, *Defence* 2009 authors embraced the strategy to project military power from northern Australian bases and offshore territories into the strategic center of the *primary operational environment*. They concluded that this strategy required "an expeditionary orientation on part of the ADF at the operational level, underpinned by requisite force projection capabilities."<sup>16</sup>

#### Australia's Military Strategy

The Rudd Government assigned four prioritized tasks to the ADF to secure Australia's strategic interests:<sup>17</sup> first, deterring and defeating attacks on

<sup>&</sup>lt;sup>13</sup> Ibid., pp. 11.

<sup>&</sup>lt;sup>14</sup> Ibid., pp. 50.

<sup>&</sup>lt;sup>15</sup> Ibid., pp. 51. Defence 2009 defines the ADF's primary operational environment as the area "extending from the eastern Indian Ocean to the island states of Polynesia, and from the equator to the Southern Ocean. That area contains all Australian sovereign, offshore and economic territories, such as Cocos (Keeling) Islands, Christmas Island, Heard and McDonald Islands, Macquarie Island, Norfolk Island and also waters adjacent to the Australian Antarctic Territory."

<sup>&</sup>lt;sup>16</sup> Ibid., pp. 51-52.

<sup>&</sup>lt;sup>17</sup> Ibid., pp. 41-45. Defence 2009 detailed the following Australia's strategic interests in descending order of importance: 1) "Secure Australia – defend Australia from direct attack, which includes armed attacks by other states and non-state actors with the means to employ strategic capabilities, including weapons of mass destruction; 2) A secure immediate neighborhood – security, stability and cohesion of Australia's [nearabroad, defined] as Indonesia, Papua New Guinea, East Timor, New Zealand, and the South Pacific island states; 3) Strategic stability in the Asia-Pacific region – stability of the wider Asia-Pacific region, which stretches from North Asia to the Eastern Indian Ocean with a deep stake in the security of Southeast Asia; and 4) A stable, rules-based global security order – preserving an international order that restrains aggression by states against each other, and can effectively mange other risks and threats, such as the

Australia; second, contributing to the stability and security of the South Pacific and East Timor; third, contributing to military contingencies in the Asia-Pacific region; and last, contributing to military contingencies in support of global security. Interwoven throughout all of these ADF tasks are the consistent themes of joint and coalition participation, with heavy reliance on capabilities providing robust situational awareness and command and control. These prioritized ADF tasks demonstrated Rudd's decision to deemphasize Australia's expeditionary operations outside the primary operational area in the future and concentrate Australia's defense efforts in the near-abroad and South Pacific region.

Defense planners elected a strategy utilizing the maritime and air domains to achieve the principle ADF tasks – *deterring and defeating attacks on Australia*. This strategy emphasizes a maritime and air capability in an attempt "to control the air and sea approaches to Australia, and denying an adversary the ability to operate, without disruption, in [Australia's] immediate neighborhood, to the extent required to ensure the security of [Australia's] territory and people."18 The Rudd government adopted a unilateral approach to defend Australia's nearabroad by undertaking proactive combat operations to preempt adversaries' operations in the northern approaches by interdicting their military bases, staging areas, and forces in transit as far from Australia as possible. The preemption strategy runs contrary to the espoused theme of joint and coalition participation by assuming Australia's neighbors will provide unqualified support for Australia's military aims. Further afield from Australia's northern approaches, the Rudd government adopted a multilateral approach, espousing the use of international institutions to mitigate future effects of potential redistribution of power in the Asia-Pacific region or shifts in the balance of power within the current international system.

The next subordinate ADF tasks – contributing to stability and security in the South Pacific and East Timor – envisions military operations protecting Australian citizens, providing disaster relief and humanitarian assistance, and conducting stabilization interventions, such as those undertaken in East Timor in 1999 and 2006 and in the Solomon Islands in 2003.<sup>19</sup> The 1999 East Timor operation represented ADF's largest commitment of ground forces since Vietnam. The operation significantly strained the ADF's personnel, equipment, and logistic capability - and in some cases exceeded the ADF capability, mainly in Army personnel and logistics.

proliferation of WMD, terrorism, state fragility and failure, intra-state conflict, and security impacts of climate and resource scarcity."

 <sup>&</sup>lt;sup>18</sup> Ibid., pp. 48.
 <sup>19</sup> Ibid., pp.54.

Regarding the third military task – *the ADF military contributions in the Asia-Pacific region* –the Rudd government's goal was to provide assistance on an as-needed basis to Southeast Asian partners to meet "external challenges" and alliance obligations to the United States, as determined by the Australian government at the time it takes the decision. The former challenge is most likely a reference to China's maritime disputes with its neighbors in the South China Sea and the latter most likely refers to a China-Taiwan or a North Korea-South Korea scenario, as mentioned in Rudd's 9 September 2008 speech to the RSL National Congress.

Several contrasting points stand out in Australia's plans to contribute to contingencies in the Asia-Pacific region. First, the Defence 2009 authors stated that Australia needs to be prepared to make substantial contributions inside and outside the Asia-Pacific region, yet Defence 2009 explicitly assumes Australia "will make appropriately sized contributions to such contingencies" and narrows the type of contributions to select capabilities - submarine forces, special forces, surface combatants, and air combat capabilities.<sup>20</sup> Second, the Defence 2009 authors err by stating low-intensity operations are "less demanding" than higher-intensity operations.<sup>21</sup> For unambiguous examples to the contrary, look to the "low-intensity" operations conducted in Afghanistan, Iraq, East Timor, the Balkans, and in response to the Sumatra tsunami, among many other examples. To be successful, all of these low-intensity operations involved detailed planning, significant resources, numerous boots on the ground, and, in some cases, casualties and political commitment. Arguably, one of the perceived advantages of low-intensity conflict is its low human and political cost - but recent examples belie that too.<sup>22</sup>

The lowest-priority ADF task – *contributing to military contingencies in support of global security* – is characterized more by the Rudd government's constraints on Australian defense policy than by what Australia intends to contribute. *Defence 2009* outlined Australia's contributions as enforcement of U.N. and international community sanctions, coalition operations and counter-terrorism, and evacuation of Australian citizens. In the immediately following paragraph, the Rudd government stated it "might provide small, tailored contributions to such operations, utilising specialist elements such as command teams for the United Nations, logistics or communications capabilities, or mine clearance expertise."<sup>23</sup> Again, the Rudd government's caveats on ADF deployments in support of global

<sup>&</sup>lt;sup>20</sup> Ibid., pp. 55.

<sup>&</sup>lt;sup>21</sup> Ibid., pp. 55. Defence 2009 authors references to low-intensity and high-intensity operations correspond to the respective ends of the Continuum of Military Operations. For example, *Defence 2009* authors are referring to security assistance operations and humanitarian operations as "low-intensity operations."

 $<sup>^{22}</sup>$  Assessment made during roundtable discussion with U.S. and Australian defense officials, hosted by author.

<sup>&</sup>lt;sup>23</sup> Defence 2009, pp. 56.

security signaled a higher threshold than the Howard government used to deploy Australian troops to Iraq. This higher threshold makes it clear that the principal focus of the ADF is to operate in the *primary operational environment*, which includes the Australian territories, its waters and airspace.

#### **Threat Environment: Hedging and Concerns**

While there is a perennial debate on which way Australia's defense posture should lean – towards a more continental orientation, expeditionary orientation, or a mixture of both – the reassuring news is that Australians understand and agree on the first- and second-order questions: "Does Australia need a defense force at all?" and "Why does Australia need a defense force?"<sup>24</sup> They must understand the need to protect and defend their broad and deep national interests in the region and around the world, which include economic wellbeing, democratic values, rule of law, human rights, and protection of their sovereignty. They must value an alliance with the United States that affords Australia significant advantages, including prolonged and sustained regional stability, protection from other great powers, economic prosperity, and diplomatic influence. A deep appreciation for these first two basic questions leaves the third question at hand: "What sort of defense capabilities does Australia actually need?"

*Defence* 2009 declares that the strategic outlook will underpin the defense priorities. But what assumptions underpinned the strategic outlook? Chief among the assumptions framing debate is whether or not Australia can and should continue to rely on the United States as the guarantor and underwriter of regional defense and security. If one assumes that Australia could not count on America, then *Defence* 2009 capability priorities start to make some sense when combined with a fear that a rising China and an emerging India will threaten Australian national interests. The United States' National Intelligence Estimate, 2025 Global Trends, provides the frank assessment that:

[By] 2025 a single "international community" composed of nation-states will no longer exist. Power will be more dispersed with the newer players bringing new rules of the game while risks will increase that the traditional Western alliances will weaken. Rather than emulating Western models of political and economic development, more countries may be attracted to China's alternative development model.

<sup>&</sup>lt;sup>24</sup> Robert Ayson, "Understanding Australia's Defence Dilemmas," Security Challenges, Vol. 2, No. 2, (July 2006), pp. 25-42.

China is poised to have more impact on the world over the next 20 years than any other country. If current trends persist, by 2025 China will have the world's second-largest economy and will be a leading military power.<sup>25</sup>

While frequently used to justify and reprioritize military strategy and ADF structure and acquisitions, a simple rise in Chinese and Indian influence and relative power do not explain Australian defense planners' substantial maritime and air capabilities increases.<sup>26</sup>

The rationale behind Australia's greater hedge and its shift in defense posture to principally focus on its *primary operational environment* is influenced in substantial part by Australian defense planners' perception of the U.S.-Australian alliance. Their fears include late, weak, or no U.S. response to alliance requests. For example, Australian policymakers perceived that the United States arrived late to assist them in the 1999 East Timor operations. Former Deputy Prime Minister Tim Fischer expressed dismay when he said "the truth was that Washington could not have been weaker in its initial response to Australia's request for assistance with East Timor during September 1999." During a radio interview at that time, Prime Minister John Howard was heard to "plead" for American boots on the ground. The Americans' initial response, relayed through National Security Affairs Advisor Sandy Berger's comments to the media, was that "the United States had no more responsibility for solving East Timor than he did for cleaning the mess his daughter created in her own apartment."<sup>27</sup>

In the end, while the United States gave significant assistance to Australia by deterring Indonesia from moving against ADF in Timor to support an insurgent campaign, and providing much-needed sealift, transport, and logistic support to the ADF, the Americans' initial resistance to involvement had a great impact on Australian policymakers and defense planners. The Australians took two major lessons from the 1999 East Timor experience. The first was a realization of their own lack of personnel, strategic lift, and equipment. Additionally, the Australians concluded that they must develop capabilities to become self-reliant

<sup>&</sup>lt;sup>25</sup> National Intelligence Council, "2025 Global Trends: A Transformed World," U.S. Government (November 2008), pp. vi-vii.

<sup>&</sup>lt;sup>26</sup> Geoff Miller, "Some Contradictions in the Defence White Paper," The Interpreter, Lowy Institute for International Policy (18 May 2009). Available at: <u>http://www.lowyinterpreter.org/post/2009/05/18/Somecontradictions-and-gaps-in-the-Defence-White-Paper.aspx</u>. Geoff Miller writes, "in my view, the White Paper only makes the case for the huge expenditure it projects by focusing on the stated principal task of 'deterring and defeating attacks on Australia without relying on the combat or combat support forces of other countries', while ignoring its own conclusions about the limits to self-reliance and about the likelihood of Australia having to defend against a major power adversary on its own."

<sup>&</sup>lt;sup>27</sup> Graeme Dobell, "The 'Arc of Instability' and the Future of the U.S. Alliance," The Strategic and Defence Studies Centre, Australian National University, August 8, 2006. Available at: <<u>http://epress.anu.edu.au/sdsc/hap/mobile\_devices/pr01.html</u>>.

rather than depending upon the United States to provide combat support in their *primary operational environment*.

Australian defense planners are still concerned that Washington will waver in coming to their aid and fear the same cool response that the British received when they requested American support for operations during the Falklands War. Australian reporter and Lowy Institute contributor Graeme Dobell quotes the British Defense Secretary, John Nott, regarding the U.S.-UK special relationship at the beginning of the Falklands campaign: stating that "it is a frightening thing that our greatest ally is not wholly on our side."<sup>28</sup> Dobell's assessment includes the official British historian of the Falklands campaign Lawrence Freedman's conclusion that:

A close alliance and close personal relationships between political leaders are no guarantee of Washington's support in a conflict: The policies adopted by the United States are a product of shifting power balances within a particular administration as much as a product of any built-in ideological disposition.<sup>29</sup>

Dobell offers the war in the Falklands as a baneful example of probable U.S. response to alliance requests. In the end, the United States provided substantial assistance to the British after we prorogued the Rio Treaty obligations to the Latin American countries and backed off on the Monroe Doctrine (in spirit, that is).<sup>30</sup> Regardless, Australian policymakers' perception of the uncertainty of U.S. commitment has driven their defense planners to over-hedge toward acquiring cost-prohibitive defense capabilities. And in devoting so many resources to this end they may end up unable to field more appropriate means for the lower-intensity conflict situations they are most likely to confront.

Next, Australian defense planners often frame Australia's strategy of selfreliance in the context of the 1969 Guam Doctrine (aka the Nixon Doctrine), using it to rationalize and justify defense requirements. However, the Guam Doctrine was not meant to be a new U.S. policy. Its meaning remains unclear, and neither President Richard Nixon nor subsequent U.S. administrations consistently enforced Nixon's key principle: no deployment of U.S. ground forces to fight internal subversion. Canberra often interprets the doctrine to mean that U.S. allies have to take primary responsibility for their own defense.<sup>31</sup> American

<sup>&</sup>lt;sup>28</sup> Ibid.

<sup>&</sup>lt;sup>29</sup> Ibid.

<sup>&</sup>lt;sup>30</sup> John E. Angevine, "Americas Command: Promoting Regional Stability in the Western Hemisphere," U.S. Army War College, 15 January 2005, pp. 25.

<sup>&</sup>lt;sup>31</sup> Graeme Dobell, "Deciphering Presidential Touchdowns," Lowy Institute for International Peace, 18 March 2010. Available at: <<u>http://www.lowyinterpreter.org/post/2010/03/18/Deciphering-presidential-touchdowns.aspx</u>>.

foreign affairs and media pundits construe the doctrine's "key principle [to mean] the United States would call on its allies and friends to supply their own manpower to 'defend' themselves against 'Communist aggression,' while America provided only advice, aid, and arms."<sup>32</sup> However, when Nixon made his impromptu and ambiguous remarks to the press, he did not intend to present a new policy at the time, and his comments had not been coordinated with any of his key advisors.<sup>33</sup> The U.S. has never officially disavowed the doctrine, which leaves doubts in some Australian defense planners' minds that Washington would put U.S. troops on the ground to help Australia defend itself or its national interests.

So what was Nixon's intent, if not to serve notice on U.S. allies in the Pacific and around the world? It was to seek a face-saving way to withdraw American forces from the Vietnam War, supplanting them through "accelerated training, equipping, and enlarging of the South Vietnamese Army."<sup>34</sup> President Nixon also wanted to communicate to the U.S. allies in the Asia-Pacific region that America was not abandoning the region.<sup>35</sup> President Obama's administration has made it clear that the United States is a Pacific power with vital national interests in the Asia-Pacific region, which is evident by recent military expansions in Guam. The continuing confusion surrounding the Guam Doctrine begs for U.S. clarification to assuage Asia-Pacific partners' ongoing concerns about U.S. resolve and commitment to the region.

*Defence* 2009 planners assume that Australia will be an "isolated island" left on its own to fight failing and fragile states off its coast. Their anxiety portends that the region is drifting toward a U.S.-China war, and Australia, needing to pick between one of the two powers, will certainly side with the United States. Their second concern is that U.S. economic and military strength will gradually weaken, and there will be a U.S. retrenchment in the Asia-Pacific region. These fears justify Canberra's defense approach and the large expenditures found in *Defence* 2009 in order to hedge against an anticipated weakening and retrenchment of the United States in the face of a Chinese economic and military rise.<sup>36</sup> A serious challenge to Australia from China would occur only if the United States were to withdraw from the region and if South Korea, Japan, and

<sup>&</sup>lt;sup>32</sup> Jeffrey Kimball, "Nixon Doctrine: A Saga of Misunderstanding," Presidential Studies Quarterly (March 2006), Vol. 36, Iss. 1, retrieved from ProQuest.

<sup>&</sup>lt;sup>33</sup> Ibid.

<sup>&</sup>lt;sup>34</sup> Ibid.

<sup>&</sup>lt;sup>35</sup> In fact, following Nixon's 25 July press conference, the United States' defense actions have been in direct contradiction to the Guam Doctrine. For example, since July 1969, the United States has expanded the Vietnam War to Cambodia (1970), Laos (1971), North Vietnam (1972); and committed U.S. forces on the ground in Lebanon (1982), Grenada (1983), Panama (1989), the Persian Gulf War (1990), Somalia (1992), Haiti (1994), Bosnia (1995), Kosovo (1999), Afghanistan (2001), Global War on Terrorism (including Philippines, Horn of Africa, Trans-Sahel, etc.), and Iraq War (2003).

<sup>&</sup>lt;sup>36</sup> Author's interviews with senior Australian military officers.

Indonesia stood aside. So Australian policymakers are using China's rise to justify and reprioritize Canberra's military strategy and the ADF's structure and acquisitions contrary to the reality at hand; namely, that the United States and other allies are not withdrawing and China currently lacks the power projection capability and strategic rationale to threaten Australia.<sup>37</sup>

#### **Defence 2009 Failings**

Beyond the faulty strategic assessment, the key policy failing of the white paper is its lack of strategy to deal with intra-state conflict – failing and fragile states – as an enduring feature and the most common form of conflict or instability.<sup>38</sup> *Defence 2009* is nearly silent on Australia's need for cooperative and collective security with other neighborhood players – Indonesia, Japan, South Korea, Vietnam, the Philippines, India – to address broader security concerns. In particular, regional states have the potential to strengthen fragile states, making them less susceptible to extremism, organized crime, proliferators of weapons of mass effect, or acting as proxies for China.<sup>39</sup> Hence a "defense with" Indonesia, Japan, South Korea, India, and others should be an important consideration for the future ADF 2030 operations. This cooperative security approach is better suited to address a broader definition of national security, which includes global and regional factors, as expressed in the Australian Joint Operations for the 21<sup>st</sup> Century Concept.<sup>40</sup> Equally important, a cooperative security approach is a

<sup>&</sup>lt;sup>37</sup> John Langmore, Calum Logan, and Stewart Firth, "The 2009 Australian Defence White Paper: Analysis and Alternatives," Nautilus Institute (15 September 2010), pp. 15. "In the White Paper the preferences for reviewing the world in terms of highly dangerous yet unlikely scenarios has been used as the basis for justifying astonishing plans for military equipment purchases. This approach is adopted in absence of sophisticated analysis. The path of preparing for the worst diverts resources and attention from efforts to engage in attempts to create a more secure and stable environment. Moreover the consequences of undertaking a military build up risks pushing neighbours towards pursuing military capabilities, risking a spiraling expansion of arms and a preference for military paradigms."

<sup>&</sup>lt;sup>38</sup> Greg Sheridan, "Defence Force Dying for Cure," The Australian, (18 April 2009). Sheridan's concluded, "the only explosion in defence expenditure in our region is by China. Rudd and the white paper are too focused on it. However, it would be extremely dumb to regard the possibility of China-centric conflict as the only big strategic factor that the ADF should be structured for."

<sup>&</sup>lt;sup>39</sup> Mark Thomson, e-mail to author, "Australian Defence White Paper 2009," (23 November 2010). Making sense of Australian policy is complicated by the dogged persistence of the 'defence of Australia' doctrine in official writing. That is, the policy that the Australian Defence Force (ADF) should be structured principally for the 'self-reliant defence' of Australia via control of its air and maritime approaches. To my mind this is way past its use-by-date. A more cogent approach would be to acknowledge and prepare for the three real tasks that could arise: (a) helping maintain a favourable balance of power in the Asia Pacific in collaboration with the United States, (b) undertaking stabilisation operations in the South Pacific and East Timor, (c) assisting with security operations as part of UN or US coalitions (e.g. Afghanistan today). The reason I have not included defence of Australia on the list is because any threat of an attack on Australia is contingent on a breakdown of item (a) – so that's what we should be worried about.

<sup>&</sup>lt;sup>40</sup> Department of Defence, "Joint Operations for the 21<sup>st</sup> Century," Australian Government, May 2007, pp. 4. Available at: <<u>www.defence.gov.au/publications/FJOC.pdf</u>>. The ADF defines "Global factors to include terrorism, pandemic disease, resource deletion and security impacts of climate change and regional factors to include state fragility, poor governance and economic underdevelopment."

more effective hedge against a growing aggressive or assertive China than an isolationist strategy. Creating a regional concert of powers in partnership with the United States would maintain a more favorable Asia-Pacific balance of power.<sup>41</sup> Defence 2009 supports a reactive, self-reliant, and near-isolationist approach. The goal of the current strategy would inflict enough pain on a potential great-power aggressor to dissuade an attack on Australia and its interests, but unfortunately Australian capabilities would not provide enough power to decisively deter such an attack.

Such a strategy of self-reliant denial of the northern air-sea gap has become almost impossible as emerging technologies are readily and cheaply available to weak nation-states and empowered non-state groups. Australia's air-sea gap is "narrowed" by cyberwarfare, long-range missiles, persistence surveillance, and proliferation of weapons of mass effect. Additionally, for example, "the Gap is narrowed by Sri Lankan boat people, not Chinese frigates. The main threat coming from the Gap, at least as successive Australian governments have seen in the past decade, are non-traditional threats. Asylum seekers have become the Royal Australian Navy's primary military task in the northern approaches since at least 2001, and have become another non-state, non-traditional threat and ADF task."<sup>42</sup>

#### An Alternative Cooperative Security Policy

As a proactive alternative that takes into account the proliferation of emerging technologies and the "narrowing" of Australia's northern approach, *Defence 2009* policymakers could consider a multilateral and cooperative security arrangement with Australia's regional partners. Australia and its partners would work and train together to address regional security, stability challenges, and transnational threats which would build trust, develop procedural interoperability, and create a common purpose for collective action. Australia should frame its defense as a part of a "complete system" integrated into the region rather than isolated from it. This single and holistic system, supported by the United States, could collectively engage and shape China, challenging Beijing to be a more responsible and transparent regional actor and partner.

<sup>&</sup>lt;sup>41</sup> See for example, Coral Bell, "The end of the Vasco da Gama Era: The Next Landscape of World Politics," Lowy Institute (2007), pp. 15-34.

<sup>&</sup>lt;sup>42</sup> Assessment made during roundtable discussion with U.S. and Australian defense officials, hosted by author.

### CHAPTER TWO Capabilities

The Australian military strategy seeks to direct the location and timing of future conflicts by controlling the sea approaches to Australia and establishing air superiority over those approaches. The ADF will actively engage adversaries' home bases, staging areas, and forces in transit. In addition, Australia reserves the right to use strategic strike and to conduct land operations, precluding any hostile forces from reaching the continent. *Defence 2009* capability priorities reflect a heavy emphasis on the dramatic increases in developing both "expanded maritime" and "enhanced air" capabilities over the next 20 years.<sup>1</sup> As proposed by the Rudd and Howard governments via a succession of Defence Capability Plans, *Defence 2009* aspires to update nearly every current capability in the ADF at the end of the respective equipments' life cycle.<sup>2</sup> The Australian Defence Materiel Organisation (DMO) estimates the cost to acquire the capabilities outlined in *Defence 2009* at between US\$248.479 billion<sup>3</sup> (AUS\$245 billion) and US\$278.905 billion (AUS\$275 billion), in 2009-10 dollars, out to 2030.<sup>4,5</sup>

The most significant *Defence 2009* capability priorities include the following (see Appendix A for a detailed matrix of the major *Defence 2009* capability priorities):

- Acquisition of 12 new Future Submarines, including maritime-based land-attack cruise missile and unmanned underwater vehicle mission payloads, to replace the six Collins- class submarines;
- Procurement of three Spanish-designed Air Warfare Destroyer hulls (with an option for a fourth destroyer), fitted with a U.S. Aegis combat system and SM-6 long-range surface-to-air missiles;
- Replacement of the current ANZAC-class frigates (3,600 tonnes)<sup>6</sup> with eight Future Frigates (6,000+ tonnes), which have maritime-based land-attack cruise missile strategic strike and anti-submarine capabilities;

<sup>&</sup>lt;sup>1</sup> Department of Defence, "Defence Capability Plan 2009," Australian Government (December 2010 Update), pp. 58-69. Available at: <<u>http://www.defence.gov.au/dmo/id/dcp/DCP\_Dec10.pdf</u>>.

<sup>&</sup>lt;sup>2</sup> Mark Thomson, E-mail to author, 23 November 2010.

 $<sup>^{3}</sup>$  Used the conversion rate of 1 AUD = 1.0142 USD, The Wall Street Journal, "Currencies," 7 February 2011, pp. C5.

<sup>&</sup>lt;sup>4</sup> Defence Materiel Organisation, "Building Defence Capability: A Policy for a Smarter and More Agile Defence Industry Base," Australian Government (2010), pp. 15. Available at: <<u>http://www.defence.gov.au/dmo/id/dips/dips\_2010.pdf</u>>.

<sup>&</sup>lt;sup>5</sup> Angus Houston and Ian Witt, "The Chief of Defence Force and the Secretary of Defence Strategic Reform Program Media Roundtable," Department of Defence, Australian Government, 16 April 2010. Available at: <<u>http://www.defence.gov.au/media/SpeechTpl.cfm?CurrentId=10155</u>>.

<sup>&</sup>lt;sup>6</sup> One tonne (or metric ton) = 2,204 pounds.

- Replacement of the Navy's current fleet of Sea Kings and the Army's fleet of Black Hawks with 46 new European-built multi-role helicopters;
- Replacement of the four existing vessel classes currently conducting offshore resource protection, border security, hydrographic and oceanographic environmental assessments, and clearing sea mines into a single multi-role class (2,000 tonnes) that uses a modular mission payload system concept, replacing the current fleet of 26 vessels with 20 new corvette-size Offshore Combatant Vessels;
- Acquisition of two landing helicopter dock amphibious ships and six new oceangoing heavy landing craft;
- Continued support for two additional infantry battalions, totaling 10 battalions, as well as changing the Australian Army's doctrine to embrace the concepts of adaptive action and mission command as part of the Adaptive Army Initiative;
- Procurement of 24 Super Hornet F/A-18Fs, equipped with the Joint Air-to-Surface Standoff Munitions, as a bridge to the Joint Strike Fighter (JSF);
- Acquisition of 100 JSFs, forming three operational squadrons of not fewer than 72 JSFs, to replace current air combat aircraft;
- Acquisition of seven large high-altitude, long-endurance unmanned aerial vehicles and replacement of the current AP-3C Orion aircraft with eight new maritime patrol aircraft (P-8 Poseidon under consideration) to provide greater maritime surveillance; and
- Acquisition of five KC-30A air-to-air refueling-transport aircraft and six new airborne early warning and control (AEW&C) aircraft.

#### **Funding Gap**

If this plan is fully funded and implemented, *Defence 2009* planned capabilities will make for an impressive array of combat power, especially in the maritime and air domains. These acquisitions, when combined with the right strategic posture and strategy, could significantly broaden ADF's potential to remain a major influence in the region and make considerable contributions to global security. It is important to put in context how far ADF planning has progressed since the mid-1980s, when the Australian Defence Department lost 20,000 permanent positions; had no coherent modernization program or funding to replace rapidly obsolescing equipment; possessed equipment that was fitted for capabilities but not installed; and lacked sufficient logistic and sustainment means to keep forces ready for operations.<sup>7</sup> On the heels of the ADF's deployment to East Timor in 1999, its largest since the Vietnam War, the 2000 Defence *White Paper* set out to remedy the previous two decades of defense decline. According to Mark Thomson, senior defense analyst with the Australian Strategic Policy Institute,

*Defence* 2000 sought to achieve four things: (1) modernise the ADF by replacing or upgrading ageing assets and introducing new capabilities

<sup>&</sup>lt;sup>7</sup> Mark Thomson, "Cost of Defence ASPI Defence Briefing 2010-11: \$73,689,219.83 per Day," Australian Strategic Policy Institute (2010) pp. 97.

in select areas; (2) improve the preparedness of the ADF so that it was made up of 'fully developed capability' rather than hollow units and fitted-for-but-not-with platforms<sup>8</sup>; (3) boost the capability of the ADF to undertake expeditionary operations in the immediate region; and (4) sustainably align Defence plans and funding.

Of the four goals, the modernisation of the ADF was the least successful. Persistent and widespread delays in the approval and execution of defence acquisitions delayed the delivery of many capabilities, with delays of 4-5 years not uncommon. In part, this reflected a systematic underestimation of costs which ensured that there was never going to be enough money to deliver all that was planned. Further delays arose due to insufficient industry capacity, tardy approval of new acquisitions, and all too frequent technical problems with equipment under development. In fact, the combination of delayed approvals and delayed projects saw Defence unable to spend all the money it had been given to buy new equipment. Over the period covered by *Defence 2000*, we estimate that at least \$4.4 billion of planned investment was deferred. The actual figures are probably higher, but we cannot be sure because the government ceased disclosing the full extent of the deferrals in the 2009-10 Budget.<sup>9</sup>

Indications are that history will repeat itself with *Defence 2009*. The Australian government has already deferred US\$8.92 billion (AUS\$8.8 billion) of the first several years of the *Defence 2009* funding, which is not expected to be returned until after the eighth year of the program.<sup>10</sup> Adding to the budget pressure, there is an expected decrease in net defense spending<sup>11</sup> as a percentage of GDP, from the current 1.94% in 2009-2010 to 1.91% in 2010-2011 to 1.66% in 2013-2014.<sup>12</sup> The percentage of defense spending to GDP is anticipated to spike at 1.79% in 2017, followed by a steady projected decline for the next 10 years to about 1.64% in 2029.<sup>13</sup>

<sup>&</sup>lt;sup>8</sup> The reference to "fitted-for-but-not-with platforms" means a weapons system is prewired for selected additional equipment that is not yet installed in the major weapon's platform. For example, The RAAF will purchase 10 FA-18F that are prewired to be EA-18s but these aircraft do not have the electronic countermeasure systems install on-board the aircraft.

<sup>&</sup>lt;sup>9</sup> Mark Thomson, "Cost of Defence ASPI Defence Briefing 2010-11: \$73,689,219.83 per Day," Australian Strategic Policy Institute (2010) pp. 98.

<sup>&</sup>lt;sup>10</sup> Ibid., pp. 100.

<sup>&</sup>lt;sup>11</sup> Ibid., pp. 18. Australian Strategic Policy Institute (ASPI) uses a Net Defense Funding figure to account for monies directly appropriated to DMO, as well as unspent monies held in Defence Materiel Organisation (DMO) special accounts, and deducts from the Australian Defence Department's Total Departmental Funding passing of monies between DMO and Defence which does not deliver any military capability or outcome. ASPI assesses that the Net Defense Funding figure "gives a more accurate picture of how much is being spent on delivering defence capability and outcomes."

<sup>&</sup>lt;sup>12</sup> Ibid., pp. 20.

<sup>&</sup>lt;sup>13</sup> Ibid., pp. 102.

An equally important factor contributing to rising cost is the expected and habitual program delays to deliver ADF 2030 on time. The first and second review and approval process for major acquisition programs listed in the Australian Defence Capability Plan 2009 are already behind schedule. Of the 14 projects planned for a second-pass review and scheduled for 2009-2010, 10 were achieved. Even more alarming is the low rate of first-pass reviews – two achieved out of 16 planned for first-pass review during 2009-2010. Consequently, these reviews have to roll over into 2010-2011 scheduled reviews to make up for the backlog, and will likely lead to program delays of three to five years.<sup>14,15</sup>

Questions linger about whether or not Defence 2009's pledge for 2.2% increases in real growth in the Australian defense budget from 2018 to 2030 will be enough to keep Defence 2009 acquisition affordable. Mark Thomson maintains that the Australian Defence Department would need at least an average annual growth above inflation of around 2.6% to "tread water."<sup>16</sup> For example, to illustrate the magnitude of the total cost of the Defence 2009 capabilities, let's compare it to the Australian defense budget for the next 20 years with a simple extrapolation of 3% annual growth. Beginning with the Australian Defence Department's 2010-2011 funding of US\$27.144 billion (AUS\$26.764 billion) and then projecting it out to 2030, the cumulative nominal defense spending would be over US\$685.6 billion (AUS\$676 billion). The Defence Materiel Organisation (DMO) estimated cost - US\$248.479 to US\$278.905 billion - for Defence 2009 capabilities over the next 20 years would then represent a range of 36% to 41% of the total Defence Department's net defense spending (see Figures 1 and 2). To illustrate the point, prorating the white paper's costs equally over the 20-year period would mean that over 40% of Australian defense spending would provide for nothing but *Defence* 2009-related acquisitions for the first 10 years, followed by an average of 25%-33% (depending on which DMO estimate used) of defense spending for the subsequent 10 years. As a point of reference, the U.S. Defense Department in FY 2011 will spend 27% of its total annual defense budget on procurements and research, development, test, and evaluations.<sup>17</sup> These are rough calculations only meant to highlight the very questionable fiscal feasibility of acquiring all of the Defence 2009 capabilities based on the current funding scheme.<sup>18</sup> The below nominal projections do not account for program delays and cost

<sup>&</sup>lt;sup>14</sup> Ibid., pp. 101-105.

<sup>&</sup>lt;sup>15</sup> Jason Clare, "Address to the Australian Defence Magazine Conference," Australian Government, 16 February 2011. The biggest challenges the Defence Materiel Organisation faces are schedule slippages. The Australian National Audit Office reports that "DMO's biggest 22 projects are on average about 30% over schedule," risking delays in delivering these new capabilities to the warfighter.

<sup>&</sup>lt;sup>16</sup> Mark Thomson, "Cost of Defence ASPI Defence Briefing 2010-11: \$73,689,219.83 per Day," Australian Strategic Policy Institute (2010) pp. 106-109.

<sup>&</sup>lt;sup>17</sup> U.S. Army TRADOC Congressional Activities Office, "Legislative Summary, FY11 Defense Appropriations," SAC-D FY2011 DoD Appropriations Bill Mark Summary (2010). The FY 11 defense spending bill would provide US\$669.87 billion, including \$US157.7 billion for operations in Iraq and Afghanistan. The top line amounts for procurement are: US\$104.8 billion and research, development, test and evaluation and US\$76.2 billion, totaling US\$181 billion.

<sup>&</sup>lt;sup>18</sup> Mark Thomson, "Cost of Defence ASPI Defence Briefing 2010-11: \$73,689,219.83 per Day," Australian Strategic Policy Institute (2010) pp. 100. Defence 2009 called for a "'3 per cent real growth in the Defence budget to 2017-18'; '2.2 per cent real growth in the Defence budget from 2018-19 to 2030'; '2.5 per cent fixed indexation

overruns, which most certainly will occur in complex programs, such as Future Submarine, Joint Strike Fighters, Future Frigates, etc.



#### **Exclusions and Limitations**

Interestingly, in a carryover from the Rudd government, the current Australian government has three explicit policies to restrict the ADF 2030 capabilities. As expected, Australia will not develop nuclear-powered submarines but will instead develop its future submarines with conventional propulsion for use as a strategic hedge in addition to the Joint Strike Fighters.<sup>19</sup> The *Defence 2009* authors stated that the strategic hedge of 12 future submarines with long-range land-attack missiles and 100 Joint Strike Fighters could be needed due to "heightened risk of inter-state war" and for stabilization tasks in the near-abroad that may become increasingly common in the *primary operational environment*.<sup>20</sup>

The *Defence 2009* authors asserted that the Australian government will require the above strategic hedge to conduct "more complex operations." They defined these more complex operations as land strike operations on strategic and operational military targets such as operating bases, staging areas, and critical military infrastructure.<sup>21</sup> A strategic hedge of this nature is most effective against nation-states. Capable ground forces are the most effective in stability and security operations. And according to *Defence* 2009, these stability and security operations as a response to irregular threats will dominate the future operating environment.

The second *Defence 2009* pronouncement declared that it was not a principal task for the ADF to engage in ground operations against heavily armed adversaries located in

<sup>19</sup> Defence 2009, pp. 70.

<sup>20</sup> Ibid., pp. 29.

to the Defence budget from 2009-10 to 2030'; 'that Defence will reinvest savings from its [AUS\$20 billion decadelong] Strategic Reform Program back into priority Defence capabilities as agreed by the Government'; and 'shortfalls against the White Paper funding plan will be offset by Defence'."

<sup>&</sup>lt;sup>21</sup> Ibid., pp. 61.

crowded urbanized environments around the world, including South Asia.<sup>22</sup> This somewhat surprising declaration seemingly relieves the ADF from any future preparation or investment in Australian forces to be prepared for high-intensity close combat in built-up areas. Wars are human endeavors, fought where humans live and, as Brookings Institution scholar Michael O'Hanlon adds, "where the anger is at." It is very likely that future battlespace will include urbanized and semi-urbanized terrain, requiring highly trained soldiers engaged in close combat to dominate the environment. As of 2009, the United Nations reported that over 50% of the world's population lives in an urbanized environment, projecting increased urbanization to be 59% by 2030 and 69% by 2050.<sup>23</sup> This future battlespace, a highly urbanized environment, would increase risk to ground forces even using today's technologies, tactics, and operational concepts. Declaring a policy to avoid fighting in an urbanized environment would hinder development of mitigation strategies and technological solutions that could potentially address manpower limitations and the risk of casualties. Consider, for example, a renewed conflict on the Korean Peninsula, which would be fought in highly urbanized terrain. The ADF could also be committed to urbanized humanitarian intervention in Indonesia and the surrounding South Pacific region during crises, such as the December 2004 Boxing Day tsunami, which killed over 230,000 people, or the October 2010 Mount Merapi volcano eruption, which displaced more than 70,000 people.<sup>24</sup> Wherever Australian leaders send their military forces to protect Australia's national interests, those future deployments could include urbanized environments. While this policy may not be intended to limit ADF capabilities, it certainly conveys the message of an ADF limited to conducting operations in a narrowly defined operational environment.

Not unexpectedly, the third restrictive policy seeks to maintain the status quo of global nuclear deterrence and the viability of a second-strike capability by opposing a unilateral national missile defense system. The Australian government has left open the possibility of changing course by developing a ballistic missile defense following future annual reviews. The current missile defense policy does support the development of an in-theater ballistic missile defense for the ADF, population centers, and key infrastructure.

When the Australian government's defense policy, as articulated by Defence 2009, is evaluated in totality, it expands maritime and air capabilities while essentially hamstringing land capability. The policy overreaches with maritime and air capabilities and substitutes these for land forces. An overreliance on maritime and air domains signals Australia's lack of commitment to work cooperatively with the region's countries to secure stability and security, while at the same time, plans for the use of ground forces communicate a commitment and need to work cooperatively. A

<sup>&</sup>lt;sup>22</sup> Ibid, pp. 56.

<sup>&</sup>lt;sup>23</sup> United Nations Urbanization Prospects: The 2009 Revision Population Database. Available at: <u>http://esa.un.org/unpd/wup/unup/p2k0data.asp</u>.

<sup>&</sup>lt;sup>24</sup> Australian Council for International Development, "Humanitarian and Emergency Response," available at: <<u>http://www.acfid.asn.au/what-we-do/humanitarian-emergencies</u>>.

weakened land force undermines Australia's deterrence and dissuasion of would-be aggressors. And as recent history demonstrates, tyrants – such as Bosnia's Milosevic, Libya's Gaddafi, Iraq's Hussein, and the Afghan Taliban's Mullah Omar – can easily go into hiding and wait out missile and air strikes.

It appears that *Defence 2009* restricts Australian land forces' deployments beyond the air-sea gap and intentionally avoids making ground contributions to out-of-area operations. To maintain an alliance with the United States, Australia offers maritime and air contributions that are significant to the ADF's order of battle, but remain only token when compared to the United States' contributions. This is a myopic approach because the most likely low- and mid-intensity scenarios confronting Australia and the United States will require robust land forces, enabled by technology to gain situational awareness, in appropriate numbers to withstand initial contact with the enemy forces, and maintain that contact over a long enough period of time to sort through the situation. These land forces, enabled by "mission command" authorities and technologies, then decide on the most appropriate course of action without alienating the very people they are trying to influence. While both maritime and air capabilities are important and needed, only troops on the ground engaged in security, stability, peacekeeping, peacemaking, counterinsurgency, and humanitarian operations will be able to determine where and why a target is holed up in a hut amongst many other families' homes, consider the effects of possible actions, and then responsibly act.<sup>25</sup> The Defence 2009's strategy was designed to make just enough of a military contribution to preserve the U.S. alliance, without bearing any risk to Australian lives on the ground.

#### What's Not Addressed?

The return to a multi-polar state system and the shift in the regional distribution of state power could potentially generate tension and instability in the Asia-Pacific region. Where competing powers' national interests intersect, conflict will often occur on the seams, taking place by proxy in fragile and failing states. This competition portends an enduring future pattern of irregular conflict. In such a system, the region would face a changing, uncertain environment characterized by newly emerging irregular threats which have ready access to technologies once reserved for nationstates. The proliferation of weapons of mass effects, low-cost technologies made available to fragile and failing states, super-empowered groups, and individuals who may enjoy sponsorship from states such as China, North Korea, and Iran may also cause asymmetric threats to become more prevalent. As illustrated below in Figure 3, defense planners will be confronted with emerging irregular and asymmetric threats as the predictable constant, not the anomaly.

<sup>&</sup>lt;sup>25</sup> Australian Army, "Army's Future Land Operating Concept," September 2009, pp. xiii and 36. The Australian Army defines Mission Command as "a philosophy of command and a system for conducting operations in which subordinates are given a clear indication by a superior of their intentions. The result required, the task, the resources and any constraints are clearly enunciated, however, subordinates are allowed the freedom to decide how to achieve the required results."

#### Nature of Asia-Pacific Challenges

Scale: 0--Least Challenging; 10--Most Challenging





The conventional threat to Australia is low, and will remain so for the foreseeable future.<sup>27</sup> For example, because of China's global economic interdependence, there is significant disincentive for Beijing to resort to conventional war with Australia. By contrast, emerging irregular threats will use every means and every creative approach to advance their respective ends – with or without state sponsorship. These irregular threats – the ever-present fragile and failing states, as well as states of concern such as North Korea and Iran – will flaunt norms and the rule of law, act unpredictably in their selected insidious activities, and will be more inclined to belligerent acts than China. With the right mix of capabilities to counter these threats, the ADF will additionally be better prepared for and more likely to perform non-traditional military tasks that do not counter a conventional threat, such as humanitarian and disaster relief, non-combatant evacuation operations, and diplomatic operational support.<sup>28</sup>

<sup>&</sup>lt;sup>26</sup> Adapted from Paul K. Davis's changes in the nature of threats, which the American, British, Canadian, and Australian (ABCA) Armies Program has adopted for its capabilities-based planning, drawn from "Analytic Architecture for Capabilities-Based Planning, Mission-system Analysis, and Transformation," RAND National Defense Research Institute, pp. 17.

<sup>&</sup>lt;sup>27</sup> Defence 2009 came to the same conclusion that conventional threat remains low for Australia.

<sup>&</sup>lt;sup>28</sup> Assessment made during roundtable discussion with U.S. and Australian defense officials, hosted by author.

In Canberra's effort to shift from today's predominantly counter-insurgency and counter-terrorism operations to the higher end of the spectrum of military operations (see Figure 4), Australian defense policymakers have overcompensated. They have allocated the preponderance of their resources to capabilities least likely needed through 2030, and consequently generated capability gaps toward the lower and center portion of the spectrum of military operations. The renewed emphasis on maritime and air capabilities is most suited to effectively meet challenges at the higher end of the spectrum of combat, as depicted in Figure 4 (adapted from the 1996 U.S. Army's Vision 2010 study in support of the U.S. Department of Defense's Joint Vision). Also of note is the fact that the maritime and air domains have moderate effectiveness for operations at the center of the continuum of military operations, whereas land power's high effectiveness spans nearly the full spectrum, stopping short of tactical and strategic nuclear war.



**Continuum of Military Operations** 

Figure 4.

Noticeable suitability gaps become apparent when comparing the applicability of *Defence* 2009 capabilities to scenarios that span the breadth of the continuum of military operations. As shown in Tables 2 and 3, *Defence* 2009 capabilities are exceptionally suitable for the higher end on the combat spectrum – limited conventional war and major theater war. However, many of these same high-cost capabilities are not readily applicable to the middle and lower continuum of military operations.<sup>29</sup> With *Defence* 

<sup>&</sup>lt;sup>29</sup> Based on the author's best military judgment, the assessments in Table 2 (*Defence 2009* Planned Capabilities' Applicability to Specific Contingencies) and Table 3 (Enablers) assume the *Defence 2009*'s capability priorities possess full idealized capability. Further, each system is assumed to contribute only to its "primary" function given the Table 2 and 3 scenarios in each of the operational planning phases, defined in U.S. Joint Publication 3-0, pp. IV-

2009, Australian policymakers came to the same erroneous conclusion as the U.S. defense planners did in the aftermath of the Cold War, embracing the prominent theory "that there is no longer a need for large land forces" and "that power projection and national military strategy could primarily be carried out through precision strikes using technologically advanced air and naval forces."<sup>30</sup> The U.S. Defense Department in the 1990s had accepted the premise that a force designed and equipped to conduct high-intensity conflict, as envisaged during the height of the Cold War, would be wholly suitable for all lower-level operations such as peace building, counter-terrorism and counter-insurgency. These theories proved to be incorrect.<sup>31,32</sup> To perform lower and middle spectrum operations, the U.S. Army had to restructure and transform its Cold War-era heavy divisions and heavy brigade into units capable of expeditionary operations while continuing to have enough weight and networked systems to remain relevant.<sup>33</sup>

Australian policymakers have perhaps mistakenly embraced the erroneous theory that technologically advanced naval and air forces, projecting power via precision strikes, can supplant the Land Forces. An alternative supposition is that the Rudd government adopted this theory to preclude future deployments of the ADF in scenarios such as Iraq and Afghanistan. By developing high-end naval and air capabilities and limiting land capabilities, Rudd and subsequent Australian governments may have been attempting to ensure that the ADF could not deploy out of its *primary operational environment*.<sup>34</sup>

<sup>26 –</sup> Phase 0, Shaping; Phase I, Deterring; Phase II, Seizing the initiative; Phase III, Dominating (decisive operations); and Phase IV, Enabling civil authorities.

 <sup>&</sup>lt;sup>30</sup> U.S. Army, "Army Vision 2010: The Geostrategic Environment and Its Implications for Land Forces," Department of Defense (1996). Available at: <<u>www.army.mil/2010/geostrategic\_environment.htm</u>>.
 <sup>31</sup> Ibid.

<sup>&</sup>lt;sup>32</sup> For example, during the Cold War, the United States conducted 10 notable deployments. From the Cold War to the present, the United States has deployed its military forces 27 times: 88% (24 of 27 operations) of these operations occurred at the middle to lower end of the continuum of military operations, with the U.S. Army constituting the highest percentage of the committed U.S. joint force, illustrated in Appendix B. Most recently, U.S. ground forces (U.S. Army and U.S. Marine Corps) are the largest force contributor to joint operations in Iraq and Afghanistan, ranging from 63% to 84%.

<sup>&</sup>lt;sup>33</sup> During his tenure as Chief of Staff of the U.S. Army, from 1999 to 2003, General Eric K. Shinseki worked to modernize the U.S. Army following the Cold War. His prescient initiative made the U.S. Army more strategically deployable and mobile in urban terrain by transitioning the U.S. Army from a Cold War Era heavy forward deployed force to an expeditionary Army of today. At the time, his vision was controversial. As quoted by Tom Peters, General Shinseki encapsulated why the U.S. Army had to change in order to perform the full continuum of military operations when he remarked, "If you don't like change, you're going to like irrelevance less."

<sup>&</sup>lt;sup>34</sup> Timothy I. Sullivan, "The Abrams Doctrine: Is It Viable and Enduring in the 21<sup>st</sup> Century?," U.S. Army War College Strategy Research Paper, U.S. Army War College (2005). Available at: <http://www.strategicstudiesinstitute.army.mil/pdffiles/ksil125.pdf>. This is somewhat analogous to the U.S. Army's 1968 operational predicament when President Lyndon Johnson refused to mobilize the National Guard and Reserves during the Vietnam War. This decision limited ground operations, hamstringing the U.S. Army in successfully carrying out presidential and Congressional directives and resulting in the U.S. Defense Department increasing U.S. Navy and U.S. Air Force operations over North Vietnam. In 1970, General Creighton Abrams, then-Chief of Staff, Army, implemented the [U.S. Army] Total Force Policy - informally known as the Abrams Doctrine - which reorganized the U.S. Army's capabilities across all of its components - Regular Army, U.S. Army Reserves, and National Guard. This reorganization of Army capabilities ensured that civilian authorities could no

If *Defence 2009* policymakers' intent is to preclude future deployments beyond Australia's *primary operational environment*, then curtailing ground forces would serve this purpose. However, the strategic outlook and the most likely threats confronting Australia *will* call for the ADF – specifically the Australian Army – to conduct operations on the middle- to lower spectrum of operations in its near abroad. As Australian defense policymakers strengthen the ADF 2030's capabilities to become selfreliant at the higher end of the military operations continuum, they have made the ADF 2030 more dependent on U.S. military assistance in order to perform low- and midintensity operations.

Since 1990, the ADF has conducted 70 named operations, 65 of which are on the middleto lower end of the continuum of military operations.<sup>35</sup> Similar to the U.S. Army, the Australian Army makes the largest force contributions – 63% – to the current Australian joint operations, as depicted in Table 1.<sup>36</sup> Past Australian joint operations indicate a continued heavy reliance on Land Forces to successfully conduct future joint operations through 2030 and beyond. These future mid- and low-intensity operations will be similar to ongoing ADF operations listed in Table 1.

Operations	Approximate	Navy	Navy Army		Civilians
	Personnel	(%)	(%)	(%)	(%)
OP SLIPPER	1550	1.5	87	10	1.5
(Afghanistan)					
OP SLIPPER	800	36	14	47	3
(Middle East)					
<b>Operation PALATE</b>	1	N/A	100	N/A	N/A
II					
OP RESOLUTE	400	60	25	15	N/A
OP ASTUTE	400	1	94	5	N/A
OP TOWER	4	N/A	75	25	N/A
OP MAZURKA	25	N/A	100	N/A	N/A
OP KRUGER	33	N/A	88	12	N/A

#### Table 1. Australian Defence Force Current Operational Deployments by Service

longer go to war or sustain combat operations without broad political support and the mobilization of the Guard and Reserves.

<sup>&</sup>lt;sup>35</sup> Raspal Khosa, "Australian Defence Almanac 2010-2011, Australian Strategic Policy Institute, June 2010, pp. 102-108. Available at: <<u>http://www.aspi.org.au/publications/publication details.aspx?ContentID=263&pubtype=-1</u>>. The 70 named operations since 1990 included 15 humanitarian, 40 non-warlike, and 15 warlike operations residing on the lower and middle portion of the continuum of military operations; and 5 warlike named operations in support of either the 1990 Gulf War, 2003 Iraq War, or the 2001 Afghanistan War which began as a limited conventional conflict and then transitioned to counter-insurgency operations.

<sup>&</sup>lt;sup>36</sup> Australian Department of Defence e-mail to author, "Australian Defence Response: Numbers Breakdown for Aust Deployed," Australian Government, 27 January 2011.

OP RIVERBANK	2	N/A	100	N/A	N/A
OP PALADIN	11	N/A	92	8	N/A
OP ANODE	80	N/A	100	N/A	N/A
OP AZURE	17	10	60	30	N/A
OP HEDGEROW	8	N/A	80	20	N/A

An examination of Defence 2009 capabilities as shown in Tables 2 and 3 reveals that Australian defense leadership heavily invested its proposed acquisitions in the higher end of the military continuum. There are 17 major Defence 2009 capability priorities, composed of 45 primary sub-capabilities. Of the 45 significant sub-capabilities, 23 (51%) are marginally-unsuitable or unsuitable – in their primary function – to the middle and lower spectrum of the continuum of operations. On the other hand, the vast majority of the sub-capabilities, 41 of the 45 (91%), are either exceptionally suitable or sufficiently suitable for the higher end of the continuum. Showing the greatest utility, nine of the 11 enabling sub-capabilities, listed in Table 3, are exceptionally suited for all of the selected scenarios, spanning the full continuum of low- to high-intensity operations. The sub-capabilities rated "suitable" lack breadth on the continuum of military operations, indicating that Defence 2009 made a poor planning assumption. Falling into the same intellectual trap as U.S. defense policymakers of the 1990s, Australian defense planners have erred in assuming the *Defence* 2009 capabilities that are exceptionally suited for operations at the higher end of the spectrum of war will suffice for "lesser" contingencies on the spectrum. Essentially, they have designed an Australian Defence Force for 2030 that will sit on the shelf until called on to conduct operations on the higher end of the spectrum. However, these expensive systems will be too small in number to support higher-end operations independently. The lack of a full spectrum of capabilities will weaken the ADF's capacity to build regional partnerships and formulate flexible options to secure Asia-Pacific security and stability. In order to use the ADF for the more likely "low-end" contingencies, Australian defense planners will have to resort to expensive and time-consuming ad hoc restructuring.

#### Table 2. Defence 2009 Planned Capabilities' Applicability to Specific Contingencies

Red: Unsuitable Capability, 0-2, Yellow: Moderately Unsuitable Capability, 3-5 Green: Sufficiently Suitable Capability, 6-7, Blue: Exceptionally Suitable Capability, 8-10

Scenarios		Humanitarian Assistance	Counter- Terrorism	Counter- Insurgency	Peace Enforcement	Limited Convention-	Major Threat of War
		(Sumatra	(Bali,	(Afghanistan,	(East Timor,	al Conflict	(North Korea-
	Sub-	Tsunamı, Queensland	Afghanistan	Iraq post-2004)	Solomon Island, Somalia)	(Iraq (2003), South China	South Korea, China-Taiwan)
Capabilities	capabilities	Flood 2010/11)	,		Somana)	Sea Dispute)	China-Taiwan,)
Future Submarines							
	Anti-ship	0	1	4	4	10	10
	Anti- submarine	0	0	2	3	10	10
	Strategic strike		5	5	5	10	10
	Mine detection	0	1	0	5	8	8
	Mine-laying operations	0		0		8	8
	Intelligence collection	2	2	2	6	10	9
	Supporting Special Forces	3	3	3	7	9	9
	Gathering battlespace data	6	5	5	7	10	10
Amphibious Ship (with full embarka-tion force)							
	Amphibious assault	0	4	4	10	10	10
	Amphibious raid	0	4	4	9	9	9
	Amphibious demonstra- tion	0	3	4	9	9	9
	Amphibious withdrawal	10	4	4	9	9	9
	Amphibious support to other operations	10	7	7	7	5	5
Joint Strike Fighter							
	Air-to-Air	0	0	0	3	10	10
	Intelligence, Surveillance, Reconnaiss- ance (ISR)	2	2	5	5	9	9
	Deep strike	0	6	6	2	10	10
	Close air support	0	5	5	2	10	10
	Electronic	0	1	2	2	9	9
	Suppression of Enemy Air Defense/Destr uction of Enemy Air Defense (SEAD / DFAD)	0	0	2	2	9	9

### Table 2 (Continued). Defence 2009 Planned Capabilities' Applicability to Specific Contingencies

Scenarios Capabilities	Sub- capabilities	Humanitarian Assistance (Sumatra Tsunami, Queensland Flood 2010/11)	<b>Counter-</b> <b>Terrorism</b> (Bali, Afghanistan )	Counter- Insurgency (Afghanistan, Iraq post-2004)	Peace Enforcement (East Timor, Solomon Island, Somalia)	Limited Convention- al Conflict (Iraq (2003), South China Sea Dispute)	Major Threat of War (North Korea- South Korea, China-Taiwan,)
Future Frigates							
	Anti- submarine	0	0	2	3	10	10
	Strategic strike	0	5	5	5	10	10
Bridging Air Combat Capability		1					
	Air-to-air	0	0	0	3	10	10
	Intelligence, Surveillance, Reconnaiss- ance (ISR)	2	2	5	5	9	9
	Close air aupport	0	5	5	2	10	10
Air Warfare Destroyer w/SM-6							
	Air defense (aircraft)	0	0	5	5	10	10
	In-theater missile defense	0	1	1	3	10	10
	Coordinated air aicture	3	5	4	8	10	10
ANZAC Ship Upgrade							
	Anti-ship Anti-	0	0	0	4	10	10
	submarine	0	0	0	3	10	10
Offshore Combatant Vessels		I		1	l.		
	Offshore/ littoral patrolling	10	3	3	9	8	7
	Mine counter measures	1	2	2	9	8	7
	Hydro- graphic	4	0	0	2	2	2
	Oceano- graphic	0	0	0	2	2	2
Future Naval Aviation Combat System (ASW)	Benkur						
	Anti- submarine	0	0	2	3	10	8
	Air-to-surface Missile (ASM) strike	0	3	3	3	7	7
# Table 3. Enablers: Defence 2009 Planned Capabilities' Applicability to Specific Contingencies

Scenarios		Humanitarian Assistance	Counter- Terrorism	Counter- Insurgency	Peace Enforcement	Limited Convention-	Major Threat of War
	Sub-	(Sumatra Tsunami, Queensland	(Bali, Afghanistan)	(Afghanistan, Iraq post-2004)	(East Timor, Solomon Island	al Conflict (Iraq (2003), South China	(North Korea-South Korea, China- Taiwan.)
Capabilities	capabilities	Flood 2010/11)			Somalia)	Sea Dispute)	Turvun,)
Multi-role Helicopters							
	Troop & supply lift	10	10	10	10	10	10
Multi-role Tanker- Transport Aircraft							
	Air-to-air refueling	8	8	8	8	10	10
	Troop transport	8	9	9	10	10	10
Airborne Early Warning and Control Aircraft							
	Control / coordinate aircraft	7	8	8	9	10	10
	Air situational awareness	8	8	8	9	10	10
	Weapons system cueing	0	8	8	9	10	10
Multi-Mission Unmanned Aircraft System							
	Persistence surveillance	10	10	10	10	10	10
Battlefield Airlift—additional C-130J							
	Intra- theater lift	8	8	8	9	9	9
Light Tactical Fixed-wing Transport Aircraft							
	Intra- theater lift	8	7	7	8	7	7
Land Combat Vehicles	· ·	· ·			··		
	Armored mobility	7	10	10	8	10	10
Overland – Field Vehicles							
	Protected transport	9	8	8	9	7	7

## **Bejeweled Wants or Beleaguered Needs?**

If fully acquired, the envisaged *Defence* 2009 capability priorities will provide a decided advantage for ADF 2030, particularly at the higher end of the continuum of military operations. The versatility of the ADF 2030 to address the entire operational continuum is somewhat broadened when combined with the other capabilities listed in the Defence Capability Plan and ongoing Australian Defence Materiel Organisation (DMO) projects, such as those listed in their Top 30 Acquisition Projects List.<sup>37</sup> However, the realities of system affordability, manning of capabilities, inter-system interoperability, and employment suitability play as important a role as the acquisition of Defence 2009 capability priorities in developing the means to protect Australian national interests and achieve ADF operational and strategic tasks. In considering how to add more impact to ADF 2030's capabilities with only modest changes to current defense programs, four significant capabilities stand out for closer examination - Future Submarines, Joint Strike Fighters, amphibious assault capability, and common operating picture (COP). Updating these capabilities would expand the ADF's ability to span more of the operational continuum and provide a more versatile force for carrying out the tasks assigned to the ADF to fulfill the Australian policy objectives outlined in Defence 2009.

### Future Submarine

The follow-on to the six Collins-class (3,000-tonne) submarines – Future Submarine (SEA 1000) – is an ambitious program to afford Australia strategic deterrence, which would provide stealthy access to denied areas, contribute to security of sea commerce and energy supplies, and give an array of strategic capabilities such as land strike, anti-ship, anti-submarine, intelligence collection, and Special Forces operations.<sup>38</sup> The anticipated US\$31 billion-plus program seeks to replace the six Collins-class subs with an indigenously designed and built submarine, doubling the submarine fleet to 12 long-range, non-nuclear propulsion boats (estimated 4,000-tonne).

The growth in the fleet to 12 boats would permit up to eight Future Submarines to be available for concurrent missions at any given time, assuming better maintenance availability than the Collins due to expected design and materiel improvements. Based on experiences with the problem-plagued Collins-class submarine program, several issues present potential hurdles to an indigenously designed and built boat, which could threaten the DMO's and Royal Australian Navy's (RAN's) ability to deliver and sustain the full complement of 12 platforms. These issues include an increase in cost due to likely program design and construction delays, refitting of the current Collins-class repair and maintenance facilities to handle larger and more sophisticated submarines, increased maintenance for more complex Future Submarine systems, and

<sup>&</sup>lt;sup>37</sup> See DMO's Top 30 Acquisition Projects List at <<u>http://www.defence.gov.au/dmo/tap/index.cfm</u>>.

<sup>&</sup>lt;sup>38</sup> Peter Briggs, "A Brief on the Issues Arising from Consideration of the Requirements for a Future Submarine Capability for Australia," Submarine Institute of Australia, 1 April 2007. Available at: <<u>http://www.submarineinstitute.com/userfiles/File/07REP2150\_Conclusions%20Regarding%20a%20Future%20Submarine%20Capability%20for%20Australia 1 04 07.pdf</u>>.

recruiting and retention of crews.<sup>39</sup> For example, there will be added costs to refit the current repair and maintenance facilities and expand those facilities to accommodate larger boats in addition to the cost of six extra submarines, as well as associated updating of the training facilities. Also, there are persistent doubts that the RAN will be able to maintain operational readiness rates at the required levels to keep eight to 10 larger and more technologically complex boats at sea. For instance, the RAN has only been able to make two of its six Collins-class boats available for missions because of maintenance problems, and based on press reports and interviews with Australian government officials, the availability could be as low as one boat.<sup>40,41</sup> Adding to cost and maintenance challenges, the RAN is unable to fully man more than two Collinsclass boats based on a crew of 43 personnel for each boat, and it is likely that the Future Submarines will require an even larger crew.<sup>42,43</sup>

As the SEA 1000 program is still being scoped and designed, now is an ideal time to examine alternatives to provide more mission flexibility and lower the cost of the program. By reducing acquisition from 12 to ten submarines, estimated cost would decrease by about US\$5 billion. A portion of this savings could be reinvested back into the amphibious assault capability to resource the addition of 2,000 to 4,000 soldiers and offset the cost increase of reconfiguring the Canberra-class vessels to handle the heavier Australian Army vehicles.

Additional Australian defense cost mitigation could occur by establishing a joint U.S.-Australian naval repair and maintenance facility at HMAS Stirling, located in Western Australia's coastal city of Perth. The joint naval facility, leased by the United States, would greatly increase the United States' strategic depth into the Indian Ocean and western side of Southeast Asia and increase both strategic and operational options for U.S. operations in the region by augmenting the U.S. presence beyond Guam. The U.S. Navy's construction of a submarine repair, maintenance and training facility would mitigate many of the challenges Australia has experienced with its Collins-class submarine program, as well as greatly enhancing the interoperability of the U.S.-Australian submarine forces through the conduct of joint maintenance and repairs.

For Australia's part, making the Australian real estate available to the U.S. Navy in partnership with the RAN at a joint facility would either provide cost avoidance for or reduced cost of the Future Submarine program by leveraging U.S. technical expertise on commonly used systems and platforms; providing access to U.S. training and weapons testing facilities; and gaining economies of scale for maintenance and repairs, which

<sup>&</sup>lt;sup>39</sup> Andrew Davies, "Keeping our Heads Below Water: Australia's Future Submarine," Australian Strategy Policy Institute, 30 January 2008.

<sup>&</sup>lt;sup>40</sup> Andrew Davis, "Navy Capability Review 2010," Australian Strategic Policy Institute, 29 June 2010. Available at: <http://www.aspi.org.au/publications/publication\_details.aspx?ContentID=261>.

<sup>&</sup>lt;sup>41</sup> Author's non-attribution interviews of senior Australian government officials.

<sup>&</sup>lt;sup>42</sup> Cameron Stewart, "Joel Fitzgibbon Admits 'Challenge' Manning Collins-class Submarines," The Australian, 25 Available at: <http://www.theaustralian.com.au/news/nation/minister-admits-subs-serious-February 2009. problem/story-e6frg6nf-1111118958313>. <sup>43</sup> Author's interviews of senior Australian government officials for non-attribution.

could increase the operational readiness of the Future Submarines. Similar to Australia's consideration of leasing British Bay-class large amphibious landing dock vessels, the U.S. Defense Department and Australian Defence Department could consider leasing U.S. submarines as a part of the larger joint base arrangement, further reducing cost and increasing interoperability.<sup>44</sup> Finally, this proposed joint facility would signal to Australia the United States' resolute commitment to the ANZUS alliance and to the Asia-Pacific Region.

### Joint Strike Fighter

Since World War II, Australian defense planners have become increasingly reliant on the air domain, and *Defence 2009* strategy is even more dependent on it. In the wake of the retirement of the last of the 22 F-111s, the Royal Australian Air Force (RAAF) is attempting, as an interim measure, to bridge the strike and interdiction gap with a squadron of 24 F-18Fs, which achieved initial operational capability in December 2010.<sup>45</sup>

Meanwhile, the beleaguered fifth generation Joint Strike Fighter (JSF) program has endured program delays, restructuring, and intense cost scrutiny, with Australian critics also disputing the effectiveness of its anticipated combat capabilities. The growing handwringing over Asia-Pacific countries' acquisitions of Russian-made MiG-29s and Su-30s, as well as the unveiling of the Chinese J-20 stealth aircraft, add pressure to deliver the JSF on time at an affordable price in order to mitigate the risk of gaps in strategic deterrence, interdiction, and strategic strike within Australia's *primary operational environment*.<sup>46,47</sup>

Additionally, concerns continue to swirl around Australia's acquisition of up to 100 F-35A Conventional Takeoff and Landing (CTOL) aircraft, despite Acting Minister of Defence Jason Clare's expression of confidence in U.S. Defense Secretary Robert Gates' confirmation that the F-35A CTOL "was on schedule and proceeding satisfactorily."<sup>48</sup> In November 2009, Canberra approved the F-35A CTOL acquisition for the first 14 aircraft, anticipating delivery of the first two aircraft in 2014 and planning to achieve an initial operational capability by 2018.<sup>49</sup>

Cost continues to remain the singular issue.<sup>50</sup> Lockheed Martin Aeronautics Company reaffirmed that its Unit Recurring Flyaway (URF) cost will fall somewhere between

<sup>&</sup>lt;sup>44</sup> Stephen Smith, "Doorstop Interview, Adelaide: Security cooperation with the United Kingdom, Defence Investment in South Australia," Department of Defence, Australian Government, 19 January 2011.

<sup>&</sup>lt;sup>45</sup> Stephen Smith, "Super Hornet Ready for Duty," Australian Government Media Release, 8 December 2010.

<sup>&</sup>lt;sup>46</sup> Peter Criss, "There is Nothing Super About This Hornet," The Sydney Morning Herald, 15 March 2007. Available at: <<u>http://www.smh.com.au/news/opinion/there-is-nothing-super-about-this-hornet/2007/03/14/1173722557984.html?page=fullpage</u>>.

<sup>&</sup>lt;sup>47</sup> Nathan Hodge, "Chinese Plane Spurs Interest in U.S. Fighter," The Wall Street Journal, 18 January 2011. Available

<sup>&</sup>lt;a href="http://online.wsj.com/article/SB10001424052748704029704576088230120934902.html?mod=dist\_smartbrief">http://online.wsj.com/article/SB10001424052748704029704576088230120934902.html?mod=dist\_smartbrief</a>>.

 <sup>&</sup>lt;sup>48</sup> Jason Clare, "Australia Welcomes JSF Restructure," Australian Government Media Release, 6 January 2011.
 <sup>49</sup> Ibid.

<sup>&</sup>lt;sup>50</sup> Ibid.

US\$50 and US\$60 million, which includes the cost of the government-furnished aircraft engine.<sup>51</sup> Currently, the F-35A aircraft produced in the low-rate-initial-production phases do not include the engine cost, adding about another US\$19 million.<sup>52</sup> Also of note, the projected Lockheed Martin URF cost is for the F35A in full production, and critics continue to maintain that the average production cost will exceed Lockheed Martin's current projections.<sup>53,54</sup>

The U.S. Defense Department often cites the Average Procurement Unit Cost of US\$92 million per F-35A.<sup>55,56</sup> However, according to the U.S. Air Force's Fiscal Year 2011 Budget Estimates, the FY 2010 URF cost for the F-35A is US\$121.562 million. The U.S. Air Force's FY 2010 budget estimates show projected cost decreasing in the out years as production rates increase, averaging program costs across the entire production of about 3,100 aircraft. What remains in question is whether the corresponding increase in production will lower average production cost to the US\$50 million to US\$60 million levels, as Lockheed Martin claims.<sup>57</sup> For example, there are increased delays in the JSF development and test program to verify F-35A sub-system capabilities. Deferring verification of sub-system capabilities to the later stages of the development and testing program or after the fielding of operational F-35As will result in higher costs to remedy any deficiencies than if the shortcomings were discovered earlier in the process.<sup>58</sup> As of March 2010, the U.S. Government Accounting Office reported that "only 62 of 2,879 capabilities have been verified through labs, flight tests or both."<sup>59</sup> According to information provided by Lockheed Martin, the production F-35A will be affordable,

<sup>&</sup>lt;sup>51</sup> Author's interview with Keith P. Knotts, F-35 International Business Development, Australia and Canada, Lockheed Martin Aeronautics Company, 11 January 2011.

<sup>&</sup>lt;sup>52</sup> Amy Butler, "JSF LRIP IV Cost Targets Released," Aviation Week, 17 December 2010. Available at: <<u>http://www.aviationweek.com/aw/generic/story\_channel.jsp?channel=defense&id=news/awx/2010/12/16/awx\_12\_16\_2010\_p0-277980.xml&headline=JSF%20LRIP%20IV%20Cost%20Targets%20Released>.</u>

<sup>&</sup>lt;sup>53</sup> Bill Sweetman, e-mail to author, "F-35 Cost," (24 January 2011). Sweetman's cost analysis of the URFs from the F-35 and F/A-18 in current years found the "annual procurement cost is about 1.4-1.45 times the URF. The procurement cost is what matters to the budget and determines affordability." Additionally, he concluded the likelihood of keeping the F-35A affordable is problematic because the U.S. Department of Defense's Cost Assessment and Program Evaluation (CAPE) "doesn't yet take into account the "death spiral" effect - they assume that the planned production ramp will be sustained, which is not going to happen, and that the US will be able to afford 80 As and 50 B/Cs per year."

<sup>&</sup>lt;sup>54</sup> Bill Sweetman, "Wikileaks, Weaklings, And Weasels," Aviation Week Blog, 3 December 2010. Available at: <<u>http://www.aviationweek.com/aw/blogs/defense/index.jsp?plckController=Blog&plckBlogPage=BlogViewPost&newspaperUserId=27ec4a53-dcc8-42d0-bd3a-01329aef79a7&plckPostId=Blog%3a27ec4a53-dcc8-42d0-bd3a-01329aef79a7Post%3a6d0f2cc5-b8b8-4b45-ae5d-</u>

bf5da47e8cb5&plckScript=blogScript&plckElementId=blogDest>.

<sup>&</sup>lt;sup>55</sup> U.S. Air Force, "FY 2011 Budget Estimate: Aircraft Procurement Volume 1, Air Force," U.S. Government, February 2010. Available at: <<u>http://www.saffm.hq.af.mil/shared/media/document/AFD-100128-072.pdf</u>>.

<sup>&</sup>lt;sup>56</sup> U.S. General Accounting Office, Joint Strike Fighter: Additional Costs and Delays Risk Not Meeting Warfighter Requirements on Time," U.S. Government, March 2010, pp. 9. GAO reports an increase in "the expected average price for each aircraft to \$112 million compared to \$95 million in the current baseline approved in March 2007." Additionally, the negotiated unit price for the F-135 CTOL engine is \$17.7 million, which is up from \$12.5 million. <sup>57</sup> Bill Sweetman, e-mail to author, "F-35 Cost," (24 January 2011).

<sup>&</sup>lt;sup>58</sup> U.S. General Accounting Office, Joint Strike Fighter: Additional Costs and Delays Risk Not Meeting Warfighter Requirements on Time," U.S. Government, March 2010, pp. 22-30.

<sup>&</sup>lt;sup>59</sup> Ibid., pp. 26.

include capabilities not incorporated into the F-15 and F-18E/F, and feature an improved global sustainment system that would reduce the life-cycle cost.<sup>60</sup>

If the cost cannot be kept at Lockheed Martin's quoted URF cost, and assuming Canberra does not allocate additional funding to its JSF program, then Australia will be able to purchase only 50 to 60 F-35A aircraft instead of the originally planned 72 to 100 aircraft. The reduced acquisition, absent other acquisitions or operational mitigations, could put the RAAF's ability to achieve its assigned strategic and operational tasks in jeopardy. This would consequently threaten the *Defence 2009* strategy to provide a credible deterrence and to defeat attacks on Australia in a worst-case scenario as inferred in *Defence 2009* – meaning large conventional war. To gain depth in the air domain requires both quality and quantity of airframes. The RAAF would not have the quantity of F-35s needed to establish concurrent mission rotations to cover the *primary operational environment* or the necessary density to match an overwhelming air attack by a great regional power as alluded to in *Defence 2009's* strategic outlook. In other words, swarms of less capable Chinese MiG-21s could overwhelm a small number of highquality and capable Australian F-35A aircraft.

The F-35A provides the enduring qualitative edge, leapfrogging ahead of all Asia-Pacific regional powers. Yet the potential reduced quantity of Australia's F-35A acquisition could fail to produce the air dominance needed to credibly deter an attack in a major theater war. Increasing the number of aircraft with an economical platform, even one less capable than the F-35A, will provide depth to the air domain to ensure full mission coverage. If the F-35A cost were to balloon to the point that it greatly exceeded the F-18F cost, then the F-18F with AGM-158 JASSM (and refueling support) would be an adequate quantitative augmentation to the F-35A qualitative edge in order to provide air dominance and strategic strike capability. This hypothetical acquisition would provide the margin needed to preserve a self-reliant, credible deterrent against major powers in the Asia-Pacific region.

Augmenting the composite air fleet with unmanned reconnaissance and unmanned combat aerial vehicles to reinforce RAAF's credibility to deter and defeat an attack should also be given further consideration. The F-18F offers a "just-good-enough capability" for the money, and unmanned aerial vehicles are the best value for the gain in expanded mission capabilities. Regarding questions about the JSF capability, the multi-role, net-centric F-35A is assessed to be four to eight times more effective than the legacy aircraft it will replace, using accredited and unaccredited lab and simulations tests.<sup>61,62</sup> Lockheed Martin Aeronautics Company based its assessments on sophisticated lab tests and simulations, derived in part from Lockheed's development

<sup>&</sup>lt;sup>60</sup> Keith P. Knotts, e-mail to author, "Cost Comparison," (13 January 2011).

<sup>&</sup>lt;sup>61</sup> Charles B. Kearney, Strategic Studies Group – Combat Air, Lockheed Martin Aeronautics Company, e-mail to author, "ALIS Success Story," (18 January 2011).

<sup>&</sup>lt;sup>62</sup> U.S. General Accounting Office, Joint Strike Fighter: Additional Costs and Delays Risk Not Meeting Warfighter Requirements on Time," U.S. Government, March 2010, pp. 24-26.

work on the F-22 Raptor, to model the F-35A against most of the future threats.<sup>63</sup> Joint Strike Fighter multinational partners' pilots, who have flown the advanced, man-in-the-loop simulations, "were not disappointed in the outcomes, and no [foreign] air force has questioned the F-35 capabilities against advanced threats."<sup>64</sup> The modeling and advanced, man-in-the-loop simulations use U.S. Air Force-approved TAC-BRAWLER aerodynamic modeling to measure the F-35A effectiveness against legacy and threat aircraft, as well as air defense systems.<sup>65,66</sup>

At the same time, every aviation system has operating boundaries and capabilities limits, which can be mitigated by modifying employment tactics, techniques, and procedures. For example, in operations on the higher end of the military continuum, the RAAF F-35As and the U.S. Air Force F-22s could partner to complement one another. In a partnering situation, the F-22 would be able to gain air superiority and eliminate air defense systems, while the F-35A would exploit its exceptional air-to-ground capabilities to deliver precision strikes on assigned targets. In a high-threat environment, the teaming would make use of each platform's strengths and offset the other's limitations. While the F-35 is not invisible in all spectrums, it is good enough to get close enough to its intended target, deliver its weapons and then egress. The F-35A's sensor fusion, providing 360-degree situational awareness, would permit it to detect an adversary before the adversary could detect the F-35, which in turn facilitates options to either attack or take other courses of action.

If circumstances warrant, based on strategic indicators and warning of an impending regional crisis, the U.S. Defense Department and the Australian Defence Department could consider the forward basing of the U.S. F-22 Raptors in Australia as part of U.S. flexible deterrent options needed to deal with the crisis; such basing would complement F-35A capabilities and mitigate the JSF limitations.

### Amphibious Assault Capability

Australian defense planners are seeking to reestablish an amphibious assault capability thatwould allow the ADF to conduct combat, peacekeeping, and humanitarian operations in permissive or non-permissive environments. Australian defense planners envisage the amphibious assault concept as applying across the full spectrum of the military continuum of operations. However, as currently envisioned, the amphibious

<sup>&</sup>lt;sup>63</sup> Keith O. Tucker and Charles B. Kearney, Lockheed Martin Aeronautics Company, interview with author, 18 January 2011.

<sup>&</sup>lt;sup>64</sup> Ibid.

<sup>&</sup>lt;sup>65</sup> Andy Nativi, "F-35 Air Combat Skills Analysis," Aviation Week, 5 March 2009. Available at: <<u>http://www.aviationweek.com/aw/generic/story\_channel.jsp?channel=defense&id=news/F35-030509.xml</u>>.

<sup>&</sup>lt;sup>66</sup> U.S. General Accounting Office, Joint Strike Fighter: Additional Costs and Delays Risk Not Meeting Warfighter Requirements on Time," U.S. Government, March 2010, pp. 24-26. The JSF test program relies heavily on modeling and simulation labs and desk studies to verify 83% of aircraft capabilities. The reminder capabilities will be verified via flight tests. GAO concluded that possible increase in program risk is incurred with 11 physical labs and 23 models and simulation still needing accreditation. If capability deficiencies are discovered late in the program based on the conclusions of these labs, models and simulations, then additional test flights would be required, leading to possible added expense.

assault capability is not powerful enough to conduct high-intensity operations in a contested environment, and it is not optimally suited to operations at the mid- and lower spectrum on the military continuum.

The amphibious capability would be built around the two new Canberra-class 27,000tonne landing helicopter dock (LHD) amphibious ships. Plans call for each amphibious ship to carry a crew and embark a 2,000-man force, 100 armored vehicles (including tanks), 200 other types of vehicles, and 12 helicopters with hangar space and landing space, while being able to conduct simultaneous air and watercraft operations in up to sea state 4 conditions. Additionally, the LHD must have provisions for the crew and the embarked force, supporting 45 days' endurance plus 10 days of operations while ashore. Lastly, the LHD should be able to serve as a command and control platform for a Joint Task Force. If properly designed and fully manned, vessels under this amphibious assault concept would extend the breadth of ADF capabilities, mitigating *Defence 2009's* overemphasis on the higher end of the continuum of military operations.

However, with over three dozen other DMO projects linked to the amphibious ship project (JOINT PROJECT [JP] 2048), equipment and system interoperability becomes critical to the overall program if the full potential of amphibious capabilities are to be realized. For example, the ship would have to be able to accommodate the size and weight of the Australian Army's combat vehicles readily enough to facilitate combat offloading in a non-permissive or contested environment. There is also a need to raise and maintain an amphibious assault force that is trained and rehearsed to assault the beaches while employing combined arms operations (massing firepower with supporting combat support and logistics at decisive points to achieve assigned objectives), This force would need to be practiced at sequencing equipment offloads in contested environments, supporting the assault commander's tactical maneuvers ashore. The ability to successfully create such an amphibious assault capability is threatened by the issues illustrated above – lack of manning, the mismatch in LHD-Army land vehicle interoperability – as well as others, such as the absence of amphibious force doctrine and training.

The Canberra-class LHD was designed for the Australian Army's legacy combat vehicle fleet. Yet DMO's LHD modernization program is not interoperable with the Australian Army's new Overland-Field Vehicle Project (LAND 121, Phase 4) and Land Combat Vehicle Project (LAND 400, Phase 2). Together, these two LAND projects will replace the current legacy fleet consisting of the Land Rover vehicle series (averaging 4 tons), M113AS3/4 (10-ton curb weight), Bushmaster PMV (13.7-ton curb weight), and ASLAV (12.9-ton curb weight).<sup>67</sup> According to *Australian Defence Business Review*, the Australian Army Development and Plans Office briefed that the new vehicle fleets, drawing on lessons learned from Iraq and Afghanistan, "would include: 40-tonne [44-ton] fighting vehicle; a 30-tonne [33-ton] protected mobility vehicle; a 35–70-tonne [38.6–77.1-ton] specialist vehicle; and a 10-tonne [11-ton] protected mobility vehicle-light type vehicle."

<sup>&</sup>lt;sup>67</sup> Australian Army, <<u>http://www.army.gov.au/</u>>.

The new combat vehicle fleet is heavier by about 50%, and the footprint is larger than the legacy fleet.<sup>68</sup> Consequently, the LHD will have less available lane space and more weight to bear on its decks than initially planned, rendering the current Canberra-class design less capable without redesign and reinforcement.

The Australian Army will have to reduce the size of its amphibious assault force unless DMO procures a third LHD or redesigns the current LHD, which is under construction. Fearing political rebuke due to the expected increases in cost and delays for JP 2048, DMO has not updated the LHD requirements to accommodate the increased vehicle size and weight, according to Trevor Thomas of *Australian Defence Business Review*.<sup>69</sup> Additionally, with the greatly increased vehicle weights, the ship's shifted center of gravity may make the LHD top heavy, thus reducing the sea state in which it can operate.

Amphibious assault missions are also complex and require extensive training and practice to maintain readiness and proficiency. Australian defense planners intend to use Australian Army battalions, adding significant un-resourced manning requirements onto the already busy Australian Army. If not fully resourced, the amphibious assault concept would give marginal return on Australia's investment and capability. Australian Army units could familiarize themselves with amphibious assault operations, but would habitually be challenged to become proficient at this specialized, complex combat mission because of lack of training and exercises, disruption to land combat training rotations, and increased maintenance for their equipment due to seawater exposure.<sup>70</sup>

In an interview, a senior Australian officer rhetorically asked, "If you don't have the money [and manning] to do this, then why are you buying it?"<sup>71</sup> This is reminiscent of Mark Thomson's budget characterization of *Defence 2000 White Paper* as "fitted-for-but-not-with platforms." The corollary characterization of the LHD's ability to conduct amphibious assault missions would be summed up as "capability-built-but-not-manned-with-or-trained-for."

To develop an amphibious force that is fully proficient at amphibious assault operations and fully exploiting the LHD's capabilities Australian policymakers should increase the size of the Australian Army by 2,000 to 4,000 soldiers and provide the funding to train and sustain amphibious assault operations. This personnel increase would be in addition to the two battalions already endorsed in *Defence 2009*. The proficiency needed to implement the Australian Amphibious Concept and missions – which includes Ship

<sup>&</sup>lt;sup>68</sup> Trevor Thomas, "RIMPOAC 2010: Australia Tests Its Theories for Amphibious Assault," Australian Defence Business Review, Vol. 29, No. 04/05, 2010, pp. 11-24.

<sup>&</sup>lt;sup>69</sup> Ibid.

<sup>&</sup>lt;sup>70</sup> Jonathan Hawkins, "The Amphibious Amphitheatre," Projecting Force: The Australian Army and Maritime Strategy, Land Warfare Studies Centre (June 2010), pp 35-56. Available at: <<u>http://www.army.gov.au/lwsc/docs/sp317.pdf</u>>.

<sup>&</sup>lt;sup>71</sup> Author's interview of a senior Australian officer for non-attribution.

to Objective Maneuver, Distributed Operations, and Sea Basing – necessitates specialist amphibious units with command and control and joint enablers (combat support and combat service support) – logistics, aviation, intelligence, fire support, engineers, and armor. The additional 2,000 to 4,000 soldiers would add the manning depth to establish two U.S. Marine Corps-like Marine Expeditionary Unit-sized formations (or an Australian Amphibious Ready Group [ARG]) and a Commander Landing Force (CLF) headquarters in order to create a self-sustaining training-deploying-readiness cycle.<sup>72</sup> The DMO should immediately remedy the interoperability disconnects between LHD (JP 2048) and vehicle modernization (LAND 121 and 400) to fully exploit LHD capabilities, which would in turn facilitate the ADF's ability to conduct the full breadth of military operations.

### Common Operating Picture (COP)

The COP may not be as sexy as a new jet, but it could be more important. In a recent Joint Australian-British Communiqué, Australian Defence Minister Stephen Smith reaffirmed his country's commitment to the American, British, Canadian, Australian, and New Zealand (ABCA) Armies' Program, stressing the importance to "pursue a substantial program of Defence cooperation through exchanges on Defence science and technology, and joint training and exercises that support [ABCA members'] interoperability."<sup>73</sup>

Australia's enduring commitment has resulted in improved interoperability to exchange data and information, standardize operating procedures, and promote system commonality that accepts and provides services among other systems. Partnering with ABCA members, the Australian Defence Department has focused its past and current efforts at the strategic and operational levels on improving the exchange of data and information to create a common operating picture. Nonetheless, recent exercises demonstrated several ABCA partners' inability to aggregate data and information at brigade- and lower-level units to create a combined tactical-level COP, which in turn feeds the operational and strategic COP.

Critical to the ABCA is the ability to create a coalition COP by connecting digitally, passing command and control information, and enhancing situational awareness .<sup>74</sup> Lacking a tactical-level COP has proved deadly in the past, as evidenced by several friendly fire incidents, including the USS *Eisenhower's* F/A-18A/C pilot who mistakenly strafed British Royal Marines' fighting positions during a 10-hour battle with Taliban

<sup>&</sup>lt;sup>72</sup> See also recommendations of Lieutenant Colonel Jonathon Hawkins for the development of an Australian Army amphibious specialized capability. Available at: <<u>http://www.army.gov.au/lwsc/docs/sp317.pdf</u>>.

<sup>&</sup>lt;sup>73</sup> Stephen Smith and Liam Fox, "Second Joint Statement on Australia-United Kingdom Defence Cooperation," Australian Government, 18 January 2011. Available at: <<u>http://www.minister.defence.gov.au/smith/static/files/AUKMIN%20Second%20Joint%20Statement Strategic%20</u> Policy%20Partnership.pdf>.

<sup>&</sup>lt;sup>74</sup> Author's interview with LTC Alicia G. Weed, U.S. Army, U.S. National Coordination Officer, ABCA Armies Program, The Pentagon, Washington, D.C., 7 December 2010.

fighters in the Helmand province of Afghanistan on December 8, 2006.<sup>75</sup> The friendly fire incident resulted in the death of one British Royal Marine. Also, lessons learned from operations in East Timor and Solomon Islands noted the lack of a COP, which created stovepipes of information that significantly impeded inter-agency interoperability with the military and inhibited all operations from being integrated and mutually reinforcing.<sup>76</sup>

The number-one tactical-level interoperability issue for Australia, as well as the other members of ABCA, is the lack of an integrated tactical-level COP and the distribution of the COP by echelon.<sup>77</sup> These deficiencies were noted during the ABCA-authorized exercise COOPERATIVE SPIRIT 2008, hosted by the United States at the Joint Multinational Readiness Center, Hohenfels, Germany, from 11 September to 10 October 2008. Chief among the Australian battle group's concerns was its inability to automatically populate friendly forces' location; the inability of the Australian tactical operation center's information systems to handle the larger volume of data; and the inability to transfer COP data to higher headquarters. While the Australian Command and Control Information System (C2IS) performed above expectations in terms of coalition interoperability, the overall observation was that the Australian C2IS was not developed to support a COP.78 The findings of the COOPERATIVE SPIRIT 2008 exercise were revalidated in a multinational test - named "Multinational Experiment 4.5" – held at White Sands Missile Range, New Mexico, over two days in October 2010. The American, Australian, Canadian, and British militaries tested advanced communications equipment during "a live, radiating fire mission to address operational and interoperability requirements for a communications network at brigade level and below."<sup>79</sup> The Multinational Experiment 4.5 revealed "Army commanders at every echelon lack a tailorable, integrated, and continuously updatable common operating picture for use across the full spectrum of Army operations."80

This lack of situational awareness would severely inhibit coalition disaggregated combat operations in complex environments. Creating a common operational picture facilitates Mission Command, reducing the level of control higher-level commanders have to exert on their subordinate commanders by enabling small units to see overall operations and the effects of their contributions.<sup>81</sup> The capability to exchange data and

<sup>&</sup>lt;sup>75</sup> Bruce Rolfsen, "F-18C linked to British Marine's Death," Navy Times, 8 December 2006. Available at: <<u>http://www.navytimes.com/legacy/new/1-292925-2412022.php</u>>.

<sup>&</sup>lt;sup>76</sup> John Hutcheson, "Australian Army Operations in East Timor and Solomon Islands in 2006," Australian Army Journal (Winter 2007), Vol. IV, No. 2., pp. 93-106.

<sup>&</sup>lt;sup>77</sup> Author's interviews of mid-level Department of the Army and America, British, Canadian, Australian, and New Zealand (ABCA) Armies' Program staffs.

<sup>&</sup>lt;sup>78</sup> Author's non-attribution interviews and review of ABCA Armies' Program, "ABCA Activity: COOPERATIVE SPIRIT 2008 11 September – 10 October 2008," ABCA Report 69, 10 December 2008.

<sup>&</sup>lt;sup>79</sup> Drew Hamilton, "Multinational Test Held at White Sands," U.S. Army, 16 November 2010. Available at: <<u>http://www.army.mil/-news/2010/11/16/48184-multinational-test-held-at-white-sands/</u>>.

<sup>&</sup>lt;sup>80</sup> Ibid.

<sup>&</sup>lt;sup>81</sup> U.S. Army, *Field Manual 3-0, Operations*, Department of the Army (February 27, 2008), pp. 5-15.

information to enhance situational awareness and to share a common operating picture needs to extend beyond the strategic and operational levels.

The Australian DMO, in collaboration with ABCA, considers a specific tactical-level COP acquisition program for units at brigade and below, feeding the operational and strategic COP. Such a system must provide high-resolution situational awareness for small units performing disaggregated joint and coalition operations. With this real-time tactical picture integrated with the strategic COP, land forces at all levels would have unique situational awareness to "use lethal and nonlethal actions more effectively than the enemy can."<sup>82</sup>

Collectively, these four capabilities will prove useful for the Australian Defence Force in 2030. <sup>83,84</sup> However, the bejeweled Future Submarine program is likely to be financially infeasible due to a newly constrained Australian defense budget for the foreseeable future, which changes the fiscal assumptions made in *Defence 2009*.<sup>85</sup> Creative ways to ensure an affordable submarine program need to be examined. Equally, the Amphibious Assault capability will suffer from the same fiscal constraints if not adjusted to accommodate the Army and other joint operations. Australia is already exploring leasing options with the United Kingdom for LHDs, but needs to take care that any candidate LHD vessels will need to be able to inject combat forces into a contested environment in a manner that would support the commander's scheme of maneuver. Failing either to deliver interoperability with the Australian Army's requirements or to establish a trained amphibious assault force to exploit the new amphibious capability would result in an adorned transport instead of a combat capability that could contribute across the full continuum of military operations.

<sup>&</sup>lt;sup>82</sup> Ibid., pp. 4-3.

<sup>&</sup>lt;sup>83</sup> Author's interview with Hugh White, 2 December 2010, at the East-West Center, Washington, D.C. When asked about Defence 2009 capabilities, Hugh White offered what the ADF needed in order to deal with emerging threats, recommending additional land forces, special operations forces, intelligence, information fusion, building partner capacity, and building regional alliances.

<sup>&</sup>lt;sup>84</sup> Mark Thomson, e-mail to author, "Australian Defence White Paper 2009," (23 November 2010). Regarding Defence 2009 capability priorities, Thomson identified the following as apparent ADF gaps: heavier armor fighting vehicles with adequate protection against anti-armor weapons; proper digitization to allow information and targeting to be quickly shared; intelligence, language, and cultural skills relevant to the environment; and adequate scale of forces to allow an independent area-of-operation to be sustained over an extended period.

<sup>&</sup>lt;sup>85</sup> Stephen Smith, "Doorstop Interview, Adelaide: Security cooperation with the United Kingdom, Defence Investment in South Australia," Department of Defence, Australian Government, 19 January 2011. Mr. Smith noted Australia has to operate in a new fiscal constrain procurement environment, which differs from the Defence 2009 fiscal assumptions when he stated: "Australia in the Defence area has been subject to fiscal restraints since the introduction of our white paper in 2009 and our Force 2020 posture and our Strategic Reform Program. In the old days the anecdotal analysis used to be that there was perhaps a limitless cheque or an ongoing large cheque for defence assets. This is no longer the case in Australia, no longer the case in the United Kingdom, no longer the case in the United States as you would have seen from some of the reforms that Secretary of Defense Gates has effected in the United States recently." He also stated that "we all live now in the defence arena in a time of tight fiscal restraint, and we need to make sure that the things that we do in terms of Defence procurement and Defence capability and Defence assets give taxpayers and nations value for money and value for effort."

The beleaguered Joint Strike Fighter Program will enhance ADF capabilities on the high end of the spectrum, as well as offer close air support capabilities in counter-insurgency operations when employing precision guidance munitions under the control of ground forces. However, potential spiraling cost could curtail the number of Joint Strike Fighters Australia will be able to procure, which puts at risk the RAAF ability to adequately cover Australia's northern air-sea gap. If Australia is unable to acquire the requisite numbers of F-35A aircraft, it will be unable to provide credible air deterrence against countries equipped with advanced fighters or large numbers of less-capable fighters. To mitigate the potentially reduced acquisition of the F-35, Australian defense planners could consider augmenting their JSF squadrons with unmanned combat and reconnaissance aerial vehicles and lower-cost fighters, such as the F-18F.

Seemingly an afterthought to the development of a joint, interagency, and coalition COP, Australian C2IS needs to be a networked, interoperable system to support the operations in all domains of the future operating environment – land, air, sea, cyber, and space. Failure to do so will result in ad hoc approaches to remedy the need for a tactical-level COP, which would not likely be fully integrated with the operational and strategic levels, leaving a "blind spot" for disaggregated operations regardless of where these operations fall on the military continuum. As a final point, unless the Australian Defence Department commits to a regular regime of training and exercises for the full spectrum of tasks, including rotations of units and sustained maintenance of systems, the *Defence 2009* capabilities will offer only marginal return on investment. The underresourcing of ADF training, exercise, and maintenance has historically plagued the ADF, making it unable to take advantage of all of its legacy systems capabilities, and the same could hold true for ADF 2030.

# **CHAPTER THREE** *Moving Forward*

# Implications

The Australian defense white paper attempts to bridge two competing possible realities: in the first, the United States continues in its traditional role as guarantor and underwriter of Asia-Pacific regional security, and in the second, the United States is displaced as the dominant actor in the region by a major power which is less benevolent from an Australian perspective. Australian policymakers and defense policy pundits have expressed apprehension that the retention of the former scenario, or the transition to the latter, will lead to regional conflict between the United States and China, either by proxy as played out during the Cold War or more directly over Taiwan, North Korea, or the South China Sea dispute. Australia fears that the United States will become distracted in the years leading up to 2030 by a crisis or war outside of the Asia-Pacific region, and seeks to create the defense capabilities to become more militarily powerful. In theory, this would serve two purposes: Australia would secure its desire for a selfreliant defense while remaining connected to the global supply chain and other enablers (intelligence, logistics, strategic lift, and technology access); and it would present its increased military power as its contribution to the U.S.-Australian alliance. The planned increase of Australia's military means would potentially free the United States militarily from having to become directly involved in the Oceania region, leaving a more powerful Australian Defence Force as the primary force to deal with crises and other security issues in Australia's near-abroad. This would be a positive development for the United States.

However, the Australian *Defence 2009* policy carefully parcels its alliance maintenance and contributions. It gives more weight to Australia's near-abroad than to the broader Asia-Pacific Region and to the rest of the world. *Defence 2009* sets a path to create a hedge by developing capabilities that address the higher end of the spectrum as a deterrent. It also describes a strategy to avoid negative consequences if Australia were to support the United States in a confrontation or war with China, as well as military capabilities available to deter China in the event of U.S. weakening or withdrawal from the region after 2030. *Defence 2009's* operational environment demarcation portends only a token ADF contribution outside of Australia's immediate region in order to preserve Canberra's deterrence posture. However, the successful implementation of this strategy relies on Australia's ability to develop and field the equipment, systems, forces, and doctrine itemized in *Defence 2009*. Failing to do so will shift the burden back onto the United States and its systems of regional bilateral defense alliances or relationships to serve as an ad hoc "first responder." It would even more greatly limit any future ADF contributions to coalition operations in North Asia and elsewhere in the world even when those operations served Australia's vital national interests. Additionally, assuming that America's power waned after 2030, Australia would face greater exposure to diplomatic, economic, and military coercion because of its lack of military means.

Defence 2009's strategic approach for the years leading up to 2030 attempts to subtly reframe the nature of the U.S.-Australian alliance to one in which the Australians' principal contributions to the alliance would predominantly occur in their *primary* operational environment. This reframing would ideally posture Australia for the years after 2030, when it becomes less likely that the United States will remain the dominant power in the region. Specifically, if there were a U.S. retrenchment from the Asia-Pacific region, Australian policymakers intend for its high-end military capabilities to increase the cost to any regional power that seeks to coerce an isolated Australia. These military means, which would boost Australia's deterrence effect, are not entirely suited for military operations that Australia will most likely conduct over the next 20 to 30 years and beyond. ADF's primary operational environment is more likely to involve humanitarian assistance, peace keeping, nation building, capacity building, support to civil domestic authorities, and other operations on middle and lower levels of the military continuum of operations. Consequently, Defence 2009 planners create potential capability gaps in the very mission areas that Australia most commonly offers as its principal contribution to a U.S.-Australian alliance. As experienced during the 2006 operations in East Timor, the United States would then have to redirect its military forces to support activities that Canberra had sought to undertake.

*Defence 2009's* geographic tiering of its contributions to the U.S.-Australian alliance indicates a shift from the practice of the past 10 years, and seems to ignore at worst or minimize at best the interdependent, fundamental building blocks for stability in the Asia-Pacific region: the U.S.-Japanese alliance, the U.S.-South Korean alliance, and the U.S-Australian alliance.<sup>1</sup> The 2000 Defence White Paper placed primacy on the U.S. alliance, whereas *Defence 2009* raises doubts about the U.S. alliance while still holding it as a central pillar of Australian security policy. *Defence 2009* also develops an unaffordable defense capability hedge – either for an anticipated day when China supplants America, or for a great-power war.<sup>2</sup> Attempting to separate Australia from consequences of the other alliances' actions to preserve and maintain regional security and stability. Defence 2009 takes a narrowed, isolating approach to Australia's defense, as if Australia could create a maritime and air capability bulwark for its continent as a substitute for a more comprehensive security policy in the Asia-Pacific region. What's needed in place of this is regional leadership, mutually supported by the United States,

<sup>&</sup>lt;sup>1</sup> Aston Calvert, "Secretary's Speech: The United States Alliance and Australian Foreign Policy – Past, Present, and Future," Australian Government, 29 June 2001.

 $<sup>^{2}</sup>$  Hugh White's presentation given at the East-West Center in Washington D.C., 2 December 2010. White described the cost of hedging as unacceptable because the cost of building the Defence 2009 capabilities are unaffordable. He suggested a "concert of Asia power" arrangement where the United States would share power with China in the Asia-Pacific region to avoid conflict and to place in-check Chinese power.

to construct a multilateral and cooperative security structure that will build capacity in fragile and failing Asia-Pacific states, act collectively to deal with regional humanitarian and security crises, and be able to collaborate with interdependent fundamental alliances and others to constructively engage and shape Beijing's participation and activities in the Asia-Pacific region.

But Defence 2009 reflects the Rudd government's attempts to curtail Australia's broadened ANZUS alliance participation and return the U.S.-Australian alliance's primary focus back to a pre-9/11 paradigm. It also stratifies Australia's military alliance contributions by geographic boundaries, wrongly inferring that far-flung regions would have little or no impact on Australian national interests in an era of globalization. Canberra's national interests have grown beyond its immediate region because of the global economy, broad interests in human rights, and implications of fragile and failing states actually failing. In addition, the most important security alliance – ANZUS – is central to Australia's defense strategy, partnering it with an ally with global interests. The U.S. security relationships with Japan and South Korea, as well as numerous other U.S. bilateral Asia-Pacific defense relationships, depend on Australia's continued engagement with these regional partners to ensure a continued functional U.S.-led regional security framework. If this U.S.-led security framework becomes fractured - either by withdrawal and isolationist policies, coercion and enticements from other major powers, or the absence of unity of purpose - it would lead to a reordered security structure. The *Defence 2009's* geographic bifurcation creates a perceived vulnerability which China may attempt to exploit – stripping off, isolating, or coercing Asia-Pacific countries one by one in an effort to weaken the current security framework and displace U.S. leadership in the Asia-Pacific region.

A functional U.S.-Australian alliance depends on the United States having good regional defense relations. It is equally important for Australia to have the same good relationships. Australian defense policy that endeavors to obtain a self-reliant defense would have a chilling effect on the region. This would inhibit a coherent regional approach to a rising China, making it more difficult for the United States, as well as Australia, to build a multilateral cooperative security mechanism to engage and to shape China's activities with mutual transparency. If Washington fails to assuage Australian concerns that the U.S. alliance will remain an "indispensable element of Australia security" for the long term, the next Australian Defence White Paper may signal a more neutral approach toward China, and consequently Australia may become less inclined to participate in U.S. operations or support U.S. diplomatic positions perceived to be in conflict with Chinese core interests.<sup>3</sup> Australian policymakers must tie the *Defence* 2009 and future white papers' objectives into Australian foreign policy in the Asia-Pacific region as a part of a broader hemispheric system – clearly establishing a framework approach to multilateral and cooperative security mechanisms to deal with such regional issues as disputed island claims in the South China Sea, maritime

<sup>&</sup>lt;sup>3</sup> See for example, Paul Dibb, "Is the U.S. Alliance of Declining Importance to Australia?," Security Challenges, Vol.5, No. 2 (Winter 2009), pp. 31-40.

resource claims, mass migration, conflict resolution and conflict prevention, with corresponding confidence-building measures, capacity building, and defense modernization transparency.

## Taking Our Defense Relationship to the Next Level

Defence 2009's impressive array of planned ADF defense capabilities would do well to protect Australia's northern approaches from regional powers. It would be of value in making a contribution to a coalition effort and would deter the South Pacific neighbors. Additionally, the emerging defense capabilities indicated in *Defence* 2009 would afford a basis for defense cooperation with regional partners, such as Indonesia, Vietnam, the Philippines, Japan, and Singapore. Yet the current Defence 2009 policies and strategies still fall short of enabling Australia to be self-reliant against China. This would result in limited utility for the bulk of the ADF 2030's new defense acquisitions when confronted with the most likely security scenarios. Some hedging against rising regional powers is good, but too much is unaffordable, and will leave capability gaps to handle the most likely scenarios. As previously suggested in this monograph, Australian policymakers could recapitalize resources for some unaffordable and excessive air and sea capabilities into ground and amphibious capabilities to deal with the more likely middle- and lower-intensity regional conflict scenarios on the continuum of military operations. A shift of Australia's defense capabilities toward greater utility in the most likely regional contingencies would significantly contribute to stability and security in Australia's primary operational environment and make a valuable contribution to the U.S.-Australian alliance. Equipping an ADF for the most likely scenarios would reconcile the disconnect between Defence 2009's desire for higher-intensity operations weapons platforms with policy constraints to limit the use of these systems to within the South Pacific region.<sup>4</sup>

If the U.S. alliance remains the cornerstone of Australia's security, then Canberra's likely contributions in the event of a U.S.-Chinese war would include intelligence, diplomatic support, and a token military force – consisting at most of two Aegis cruisers and two Future Submarines as part of a U.S. flotilla; a Joint Strike Fighter Squadron for a six-month rotation; and one infantry brigade rotated every six months. This contribution represents a fraction of the total *Defence 2009* capability priorities, but – even if it is able to be summoned – would severely test the ADF's force-generation and sustainability capability. The remainder of the ADF planned capabilities would presumably operate only in the South Pacific or be committed to homeland defense as a very expensive hedge.

<sup>&</sup>lt;sup>4</sup> To remind, Defence 2009 authors stated Australia needs to be prepared to make substantial contributions; yet, explicitly assumes Australia "will make appropriately sized contributions to such contingencies" while narrowing the type of contributions to select capabilities – namely, submarine forces, special forces, surface combatants, and air combat capabilities.

Australia has the potential to make an even greater contribution – encompassing the full continuum of military operations – to the U.S.-Australian alliance in the form of joint basing. Joint facilities and bases would provide strategic and operational depth for the United States and offer the most tangible form of assurance that any country can receive from Washington: having U.S. forces on the ground. Even in this case, taking the U.S.-Australian defense relationship to the next level goes beyond joint basing. It will also require deeper stake in one another's defense acquisitions.

Since the Australian government's issuance of the *Defence 2009* paper, a new gamechanging prospect has come into play, opening potential opportunities for unprecedented levels of cooperation between the United States and Australia. Given the Defense Trade Cooperation Treaties between the United States, Australia, and the United Kingdom, ratified on 29 September 2010, Australia now has an even greater stake in the U.S.-Australian bilateral defense relationship.<sup>5</sup>

The treaties eliminated the International Traffic in Arms Regulations for most exports to and imports from Australia and the United Kingdom of defense articles, services, and technical data.<sup>6</sup> In other words, Australian and British defense companies, within the "approved community," will essentially be treated like American companies, creating joint and combined defense industry architectures for the first time. According to a Defense News interview with U.S. Senator John Kerry, "The treaties will help make cooperation between the U.S. and Britain and Australia more streamlined, efficient, and effective by removing bureaucratic delays."7 The treaties allow two meaningful prospects to be realized and will lead to changes in how the defense industries interact. First, defense systems produced by joint ventures can alleviate politicians' reoccurring concerns about losing jobs when equipment is purchased abroad. For Australian businesses, the treaties offer "reduced delivery times for new defense projects and improved business opportunities for Australian companies to participate in U.S. contracts."8 American, Australian, and British companies can now readily select approved community business partners that offer the best solutions to develop and to build defense systems or subsystems. Secondly, the streamlining of sensitive technical data exchanges moves interoperability and commonality in the international defense acquisition process from an afterthought to the immediate forefront.9

<sup>&</sup>lt;sup>5</sup> William Matthews, "U.S. Senate Ratifies U.K., Australian Treaties," Defense News, 4 October 2010, pp. 9. <sup>6</sup> Covington and Burling, "Foreign Trade Controls: Senate Ratifies Defense Trade Cooperation Treaties with the United Kingdom and Australia," 8 October 2010. Available at: <<u>http://www.cov.com/files/Publication/d86adab0-</u> 273b-48d3-bde7-672c492b5f7d/Presentation/PublicationAttachment/09bc0760-670a-4eb6-b525-730bf78b19a1/Senate%20Ratifies%20Defense%20Trade%20Cooperation%20Treaties%20with%20United%20King dom%20and%20Australia.pdf>.

<sup>&</sup>lt;sup>7</sup> William Matthews, "U.S. Senate Ratifies U.K., Australian Treaties," Defense News, 4 October 2010, pp. 9.

<sup>&</sup>lt;sup>8</sup> Kevin Rudd, "Australia Welcomes US Senate's Agreement to Ratify Australia-US Defence Trade Cooperation Treaty," 1 October 2010. Available at: <<u>http://www.foreignminister.gov.au/releases/2010/kr\_mr\_101001b.html</u>>.

<sup>&</sup>lt;sup>9</sup> Treaty between the Government of Australia and the Government of the United States of America Concerning Defense Trade Cooperation, signed 5 September 2007 and ratified 29 September 2010. Available at: <<u>http://www.austlii.edu.au/au/other/dfat/treaties/notinforce/2007/31.html</u>>.

Within the scope of the treaties, the unified defense architecture enables development and delivery of capabilities based on shared data that is fully accessible to American and Australian companies. Once the U.S. Department of State finalizes the associated rules, the Defense Trade Cooperation Treaties will create a new pathway to gain access to partner countries' defense technologies and industries, significantly enhancing systems and information collaboration and interoperability. However, the U.S. Defense Department will need to shepherd the concept of a seamless U.S.-Australian defense industry community through the U.S. State Department's treaties rule-making process in order to provide maximum flexibility and clarity in support of future joint U.S-Australian operational activities.

# CONCLUSION

It is no longer possible for any one country to remain isolated from the whole of the world, and to act in such a way signals to the international community a disregard for its collective concerns. The instability of Southeast Asia and South Pacific countries is persistent and serious to the extent that no single nation can address the causes of or resource responses alone. The enduring threats in Australia's immediate region will remain irregular and asymmetric, aggravated by the shift to a multi-power state system and the redistribution of state power. Irregular threats, failing fragile states, and super-empowered individuals will have access to technological resources once reserved for great powers. Mitigating these threats relies on unity of effort, which can only be achieved by responsible states' multilateral and cooperative actions.

The current direction that *Defence 2009* establishes for the Australian Defence Force's modernization does not correspond with present or future realities of Australia's security situation. The policies and strategies set forth prepare the ADF for contingencies that are least likely to happen and dedicate large portions of the nation's limited resources to missions that exceed the ADF's capability. Australian policymakers continue to adhere to a "Defence of Australia" concept that has become obsolete, failing to link their strategy to a multilateral mechanism which treats the Asia-Pacific region as a complete system. If Australia continues to over-hedge with capabilities best suited for the upper end of the operational spectrum at the expense of capabilities best suited to deal with persistent irregular threats and other sources of insecurity, it will need to resort to ad hoc responses like those of the past, and will risk rising instability and insecurity. The likely result will be an inadequate, reactive, and weak multilateral response. This will necessitate direct U.S. involvement in stabilizing the crisis with more resources than if the issue had been addressed early on with the right mix of capabilities and cooperative security unity. The reliance on ad hoc response procedures would in turn increase operational risk, prolong the suffering of the innocents, and expose weak and fragile states to political exploitation by competing powers. Without a better strategy in place, the United States is put in a position to either accept an increased defense burden for Asia-Pacific operations on the lower and middle spectrum of the military operations continuum or to curtail its presence in the region.

Australia's continued pursuit of self-reliant "Defence of Australia" and its interests has also resulted in modernization plan that is simply unaffordable. In planning to greatly increase its maritime and air capabilities, the Australian Army continues to shoulder the largest burden of ADF operations and will probably bear the burden of expected future increases in its operational activities, including contested and non-permissive regional operations. Redirecting some of the *Defence 2009* capability priorities would address suitability gaps that currently exist on the middle and lower spectrum of the continuum of military operations. The Australian Army would be better postured and equipped for coalition expeditionary operations against persistent irregular threats anywhere in the Asia-Pacific region with the addition of 2,000 to 4,000 more troops. Troops should be specifically trained in amphibious assault operations, with the associated combat support; combat service support enablers; and an integrated command and control information suite that would provide situational awareness at every echelon. Because of its concern about a U.S.-China conflict, Australia has heavily skewed its defense procurements and plans to deter an attack by China and to increase the cost of any such adventure. A rebalancing of this approach requires the United States to assuage Canberra's fears that the United States will remain in the region, committed on the ground, and collaborative in defense acquisitions.

To make the U.S.-Australian alliance more effective in providing for both nations' security needs, the U.S. Department of Defense should support: 1) publicly discarding the Guam Doctrine in conjunction with the establishment of the U.S.-Australian defense industry community; 2) establishing joint basing for submarine repair, maintenance, and training facilities; 3) endorsing a Southeast Asia and South Pacific regional multilateral cooperative security arrangement to address regional security and stability challenges, while pressing for constructive and transparent Chinese participation in regional security matters; and 4) urging the U.S. Department of State to draft Defense Trade Cooperation Treaty rules to publicly create a seamless U.S.-Australian defense industry community, shepherding this concept to support future joint U.S-Australian operational activities.

Regarding recommendations to rebalance Australia's defense capabilities, Australian policymakers should add emphasis on ground and amphibious capabilities to deal with the more likely middle- and lower-intensity scenarios on the continuum of military operations. Specifically, the Australian Defence Department could consider: 1) leasing U.S. submarines as a part of the larger joint base arrangement; 2) augmenting the F-35 and F-18 air fleet with unmanned reconnaissance and unmanned combat aerial vehicles; 3) basing of the U.S. F-22 Raptors in Australia as part of U.S. flexible deterrent options for regional crisis; 4) increasing the size of the Australian Army by 2,000 to 4,000 soldiers and providing funding to train and sustain amphibious assault operations; and 5) establishing a tactical-level COP acquisition program for units at the brigade level and below, feeding the operational and strategic COP.

Since 1918, the United States and Australia have fought side by side. The alliance has developed into one of the fundamental building blocks for continued stability in the Asia-Pacific region, if not the world. Consequently, the health of this alliance cannot be taken for granted. To do so puts the alliance at risk. A greater understanding of one another's defense and security needs will lead to mutually supporting capabilities to collectively manage the regional challenges at hand. By complementing each other's

strengths, the U.S.-Australian alliance will remain vibrant, adaptable, and capable – acting in concert with the other allies in the region – of jointly facing any future challenge.

### Appendix A. DEFENCE 2009 MAJOR CAPABILITY PRIORITIES

CAPABILITY	PURPOSE	QUANTITY	PROGRAM COST	STATUS
Maritime Forces				
Future Submarines	To replace six Collins Class submarines and to perform Anti-ship and anti-submarine warfare; strategic strike; mine detection and mine-laying operations; intelligence collection; supporting special operations; and gathering battlespace data in support of operations <sup>10</sup>	12	US\$31.26 billion <sup>11,12,13</sup>	SEA 1000—study and scoping project ongoing; allocated \$15.4 million <sup>14</sup> Planned IOC is 2025. <sup>15</sup>
Air Warfare Destroyers with Standard Missile 6	Spanish designed, Hobart Class, and equipped with a U.S. Aegis combat system (SEA 4000) to provide long- range air warfare defense for navy task groups, to contribute to a coordinated air picture for the air force, and to land forces in coastal area out to a range of 200 Nautical miles <sup>16,17</sup>	3 (and a possible 4 <sup>th</sup> AWD)	US\$6.1-7.6 billion <sup>18</sup>	SEA 4000—on schedule and budget to deliver HMAS Hobart in December 2014, HMAS Brisbane in March 2016 and HMAS Sydney in June 2017 <sup>19</sup>
Future Frigates	To replace the ANZAC Class frigates (3,600-ton) with future frigates (6,000+ ton displacement) (SEA 5000) and to perform enhanced anti- submarine operations, equipped with sonar suite, long-range towed sonar, naval helicopters and maritime Unmanned Aerial Vehicles, as well as maritime based land attack cruise missiles. <sup>20,21</sup>	8	US\$11.2 billion <sup>22</sup>	SEA 5000; IOC 2023-2030

<sup>&</sup>lt;sup>10</sup> Defence 2009, pp. 70.

<sup>13</sup> Nicole Brangwin, "Budget 2010-11: Defence Major Capital Equipment Projects," Australian Government, 20 <http://www.aph.gov.au/library/pubs/RP/BudgetReview2010-2010. May Available at: <u>11/DefenceEquipProjects.htm</u>>. <sup>14</sup> Ibid.

<sup>&</sup>lt;sup>11</sup> Andrew Davies, "Keeping Our Heads Below Water: Australia's Future Submarine," Australia Strategic Policy Available Institute. January 30. 2008. at: <http://www.aspi.org.au/publications/publication\_details.aspx?ContentID=150>. Cost estimate is based on simplistic extrapolation of the current cost of one Collins-class submarine, AUS\$1Billion, multiplied by a factor of 1.2 to 2.5 in order to account for increased development and design costs. While no one has contradicted ASPI estimate, no one knows the real cost.

<sup>&</sup>lt;sup>12</sup> Trevor Thomas, Australian Defence Business Review, "2010/11 Australian Defence Budget Analysis," pp. 7. Available at: <a href="http://www.adbr.com.au/download/2010/ADBR">http://www.adbr.com.au/download/2010/ADBR</a> 2010-11 Defence Budget Analysis.pdf>.

<sup>&</sup>lt;sup>15</sup> Department of Defence, "Defence Capability Plan 2009," Australian Government (December 2010 Update), pp.245-252. Available at: <<u>http://www.defence.gov.au/dmo/id/dcp/DCP\_Dec10.pdf</u>>.

Defence Materiel Organisation, 21 February 2008. Available at: <http://www.defence.gov.au/dmo/awd/sea4000/sea4000.cfm>.

<sup>&</sup>lt;sup>17</sup> Defence Materiel Organisation, October 2010. Available at: <<u>http://www.defence.gov.au/dmo/awd/sea4000/</u>>.

<sup>&</sup>lt;sup>18</sup> Department of Defence, "Defence Capability Plan 2009," Australian Government (2009), pp. 19.

<sup>&</sup>lt;sup>19</sup> Defence Materiel Organisation, October 2010. Available at: <a href="http://www.defence.gov.au/dmo/awd/sea4000/">http://www.defence.gov.au/dmo/awd/sea4000/</a>>.

<sup>&</sup>lt;sup>20</sup> Defence 2009, pp. 71.

<sup>&</sup>lt;sup>21</sup> Trevor J. Thomas, "Defending Australia: Defence 'Treads Water' on Course to the Next White Paper," Australian Defence Business Review, Vol. 28, No. 3. July-October 2009, pp. 24-25, Available at: <http://www.adbr.com.au/download/2009/ADBR V28 No 03.pdf>.

CAPABILITY	PURPOSE	QUANTITY	PROGRAM COST	STATUS
Maritime Forces				
Naval Combat Aviation (Multi- Role Helicopter (MRH))	To replace the Navy's Sea Kings and the Army's Blackhawks (AIR 9000, Phase 6) with MRH-90 helicopters to carry troop and supplies. <sup>23</sup>	46: 6 to Navy, 33 to Army, and 7 shared Navy/Army Trainers <sup>24</sup>	US\$4.25 billion (Air 9000, Phases 2, 4, & 6) <sup>25</sup>	Behind scheduled deliveries. Experiencing low flight utilization rates, "caused by an immature support system and poor reliability of a number of the systems on the aircraft." <sup>26</sup>
Naval Combat Aviation (ASW)	24 Naval Combat Helicopters (AIR 9000, Phase 8), equipped with advanced Anti-submarine warfare (AWS) suite: active dipping sonar; air-launched (anti-submarine) torpedoes & new naval strike missile <sup>27</sup>	24	US\$2.53-3.55 billion <sup>28</sup>	Running a competitive tender process with an expected final decision in 2011 and IOC in 2014. <sup>29</sup>
Offshore Combatant Vessel (OVC)	Combining four existing classes of vessels into a single modular multirole vessel of 20 OVC (SEA 1180) to perform patrol boat, mine counter measures, hydrographic and oceanographic operations. <sup>30</sup>	20	US\$2.84 billion <sup>31</sup>	Undergoing feasibility study for SEA 1180, Phase 1, expecting IOC beyond 2019. <sup>32</sup>
Maritime Operational Support Capability (MOSC)	Replace the capability provided by HMAS Success with MOSC (10000- ton) ship (SEA 1654) to serve as a supply ship, enabling deployed ships to extend time at sea. <sup>33</sup>	1	US\$456-608 million <sup>34</sup>	Development work to begin after 2016 <sup>35</sup>

<sup>22</sup> Department of Defence, "Defence Capability Plan 2009," Australian Government (December 2010 Update), pp. 303-308. Available at: <a href="http://www.defence.gov.au/dmo/id/dcp/DCP\_Dec10.pdf">http://www.defence.gov.au/dmo/id/dcp/DCP\_Dec10.pdf</a>>.

<sup>23</sup> Defence 2009, pp.72.

<sup>24</sup> Defence 2009, pp. 72.

Defence Materiel Organisation, October 2010. Available at: <http://www.defence.gov.au/dmo/hsd/air9000/index.cfm>.

<sup>27</sup> Defence 2009, pp. 72.

<sup>28</sup> Thomas, pp. 2.

<sup>&</sup>lt;sup>25</sup> Defence Materiel Organisation, "2008-2009 Major Project Report," Australian Government, 24 November 2009, 153. Available at: pp.

<sup>&</sup>lt;a href="http://www.anao.gov.au/download.cfm?item\_id=0A228BE11560A6E8AAC6D17AA9A14A50&binary\_id=1DF79">http://www.anao.gov.au/download.cfm?item\_id=0A228BE11560A6E8AAC6D17AA9A14A50&binary\_id=1DF79</a> 59F1560A6E8AA1487CD7F5FD48C>. "[Air 9000] Phase 2 is the acquisition of an additional Squadron of troop lift aircraft for the Army. [Air 9000] Phase 4 will replace Army's Black Hawk helicopters in the Air Mobile and Special Operations roles, and [Air 9000] Phase 6 will replace Navy's Sea King helicopters in the Maritime Support Helicopter role."

<sup>&</sup>lt;sup>29</sup> Australian Aviation, "It's MH-60R v NFH 90 Air 9000 Phase 8 Competition Confirmed," 25 February 2010. <a href="http://australianaviation.com.au/2010/02/its-mh-60r-v-nfh90-with-air-9000-phase-8-competition-">http://australianaviation.com.au/2010/02/its-mh-60r-v-nfh90-with-air-9000-phase-8-competition-</a> Available at: confirmed/>. <sup>30</sup> Defence 2009, pp. 73.

<sup>&</sup>lt;sup>31</sup> Thomas, pp. 2.

<sup>&</sup>lt;sup>32</sup> Ibid.

<sup>&</sup>lt;sup>33</sup> Department of Defence, "Defence Capability Plan 2009," Australian Government (2009), pp. 18.

<sup>&</sup>lt;sup>34</sup> Thomas, pp. 2.

<sup>&</sup>lt;sup>35</sup> Defence 2009, pp. 18.

CAPABILITY	PURPOSE	QUANTITY	PROGRAM COST	STATUS
Amphibious Ships	To acquire two new Landing Helicopter Dock (LHD) (27,000 tonne) amphibious ships (JP 2048, Phase 4A/B) to carry a crew and embark a 2,000-man force, 100 armor vehicles (including tanks), 200 other types of vehicles, and 12 helicopters with hangar space and landing space. LHDs will have provisions for crew and the embarked force, supporting 45 days endurance plus 10 days of operations while ashore. Also the LHD will serve as a command and control platform for a Joint Task Force while conducting simultaneous helicopter and watercraft operations (four LMC-1E Watercraft per LHD). <sup>36,37</sup>	2	US\$3.2 billion <sup>38</sup>	Planned IOC is 2015. <sup>39</sup>
Strategic Sealift Capability	To acquire a large strategic sealift ship, based on a proven design (10,000- 15,000 tonne) (JP 2048, Phase 4C), with landing spots for helicopters and ability to land vehicles and cargo without requiring port infrastructure. <sup>40</sup>	1	US\$304-507 million <sup>41</sup>	Planned IOC is 2022-2024. <sup>42</sup>
Heavy Landing Craft Replacement	To acquire six Heavy Landing Craft Replacement (LCH) (JP 2048, Phase 5) with improved ocean-going capability to transport armored vehicles, trucks, stores and personnel in intra-theater lift tasks to augment the larger amphibious vessels. <sup>43</sup>	6	US\$101-304 million <sup>44</sup>	Planned IOC is 2022-2024. <sup>45</sup>

<sup>&</sup>lt;sup>36</sup> Defence 2009, pp. 73

<sup>&</sup>lt;sup>37</sup> Defence Materiel Organisation, "2009-2010 Major Projects Report," Australian Government, 4 November 2009, 169-170. Available at: pp.

<sup>&</sup>lt;a href="http://www.anao.gov.au/download.cfm?item\_id=95145AF01560A6E8AAC8993CA458BA85&binary\_id=9F36B2">http://www.anao.gov.au/download.cfm?item\_id=95145AF01560A6E8AAC8993CA458BA85&binary\_id=9F36B2</a> AC1560A6E8AA5A8678B2413A81>. <sup>38</sup> Ibid., pp. 185.

<sup>&</sup>lt;sup>39</sup> Ibid., pp. 191.

<sup>&</sup>lt;sup>40</sup> Defence 2009, pp. 73.

<sup>&</sup>lt;sup>41</sup> Department of Defence, "Defence Capability Plan 2009," Australian Government (December 2010 Update), pp. 132-133. Available at: <a href="http://www.defence.gov.au/dmo/id/dcp/DCP">http://www.defence.gov.au/dmo/id/dcp/DCP</a> Dec10.pdf>.

<sup>&</sup>lt;sup>42</sup> Ibid.

<sup>&</sup>lt;sup>43</sup> Defence 2009, pp. 73.

<sup>&</sup>lt;sup>44</sup> Department of Defence, "Defence Capability Plan 2009," Australian Government (December 2010 Update), pp.133-134. Available at: <<u>http://www.defence.gov.au/dmo/id/dcp/DCP\_Dec10.pdf</u>>.

CAPABILITY	PURPOSE	QUANTITY	PROGRAM COST	STATUS
Land Forces				
Land Combat Vehicles	Replace M113, ASLAV, and Bushmaster vehicles with an enhanced combat system (Land 400), providing improved firepower, protection, and mobility. <sup>46</sup>	1100	US\$1.01-1.52 billion <sup>47</sup>	Development work to begin after 2016 <sup>48</sup>
Overland – Field Vehicles	Acquire a fleet of light protected vehicles and trailers for command, liaison, utility and reconnaissance roles, replacing one third of ADF Land Rover fleet in Phase 4 of Land 121. <sup>49</sup>	1300	US\$3.04 billion <sup>50</sup>	Down-size selection to three companies made in April 2010. <sup>51</sup>
Battlespace Communications System (Land)	Multi-phased joint project (JP 2072, Phases 2 and 3) designed to enhance communications for ADF land elements in coordination with LAND 75, Phase 4). <sup>52</sup>	TBD	PH 2A US\$507 m- US\$1.52b; PH 2B US\$101.4 - US\$507m; PH 3 US\$507 m- US\$1.52b <sup>53</sup>	Request for Tender expected mid- 2011 <sup>54</sup>
Battlefield Command Support System (BCSS)	BCSS (LAND 75, Phase 4) major software release to enhance the Army's Battlefield Management System for two Brigades, Special Forces and the RAAF with a focus on interoperability up to the Joint level. <sup>55</sup>	TBD	US\$203-254 million <sup>56</sup>	Planned IOC is 2016 to 2018 <sup>57</sup>
ADF Identification Friend or Foe (IFF)	To meet Mark XII IFF (JP 90 Phase 1) standard, used by U.S. and NATO forces	TBD	US\$152-203 million <sup>58</sup>	Planned IOC is 2016 to 2018 <sup>59</sup>

<sup>&</sup>lt;sup>46</sup> Defence 2009, pp. 77.
<sup>47</sup> Thomas, pp. 2.
<sup>48</sup> Defence 2009, pp. 18.
<sup>49</sup> Thomas, pp.2.
<sup>50</sup> Defence Industry Daily, "Overlander is On! Australia's A\$3B+ Vehicle Program," 19 April 2010. Available at:
<a href="http://www.defenseindustrydaily.com/overlander-is-on-australia-issues-a-3bn-rft-01628/">http://www.defenseindustrydaily.com/overlander-is-on-australia-issues-a-3bn-rft-01628/</a>>.
<sup>51</sup> Ibid.

<sup>&</sup>lt;sup>52</sup> Defence Materiel Organisation, "JP 2072 Phase 2B Industry Brief #2 15 November 2010." Available at: <a href="http://www.defence.gov.au/dmo/esd/jp2072/JP2072ph2b\_Ind\_Brief2.pdf">http://www.defence.gov.au/dmo/esd/jp2072/JP2072ph2b\_Ind\_Brief2.pdf</a>>. <a href="http://www.defence.gov.au/dmo/esd/jp2072/JP2072ph2b\_Ind\_Brief2.pdf">http://www.defence.gov.au/dmo/esd/jp2072/JP2072ph2b\_Ind\_Brief2.pdf</a>>. <a href="http://www.defence.gov.au/dmo/esd/jp2072/JP2072ph2b\_Ind\_Brief2.pdf">http://www.defence.gov.au/dmo/esd/jp2072/JP2072ph2b\_Ind\_Brief2.pdf</a>>.

<sup>&</sup>lt;sup>55</sup> Defence 2009, pp.151.
<sup>56</sup> Thomas, pp.2.
<sup>57</sup> Defence 2009, pp. 153.
<sup>58</sup> Thomas, pp.2.
<sup>59</sup> Defence 2009, pp. 67.

CAPABILITY	PURPOSE	QUANTITY	PROGRAM COST	STATUS
Soldier Enhancement (C4I, Survivability, Lethality, ISS)	Multi-phase LAND 125 project to provide new voice and data network from battalion to fire team (Phase 3A); improved body and eye protection (Phase 3B); improve F88 rifle with enhancement for target acquisition, probability of hit (Phase 3C), and cooperative engagement; and provide an effective integrated soldier system within joint and interagency task force for day/night all-weather disaggregated combat and various operations (Phase 4). <sup>60</sup>	TBD	US\$1.62-2.23 billion <sup>61</sup>	Planned IOCs: Phase 3A, 2010- 2012; Phase 3B, 2011- 2013; Phase 3C, 2011- 2013; Phase 4, 2014- 2016 <sup>62</sup>
Additional Heavy Lift Helicopters	Replace six CH-47D capability with upgraded seven CH-47F (AIR 9000, Phase 5C) with Full Authority Digital Electronic Control, electronic warfare self protection, and upgraded engines. <sup>63</sup>	7	US\$766 million <sup>64</sup>	Planned IOC 2016- 2018 <sup>65</sup>
Artillery Replacement (155mm Howitzer)	To enhance the indirect fire support capability by replacing 105mm Hamels and M198 Howitzers with a mix of towed 155mm Howitzers (4 batteries) and self-propelled 155mm Howitzers (two batteries) (LAND 17). The project will also examine advanced high precision munitions and a networked command and fire control system. <sup>66</sup>	Towed: 35 Self-propelled: 18-24	US\$406-609 million <sup>67</sup>	Self-Propelled howitzers selection is delayed. <sup>68</sup>
Land Force Mortar Replacement	To replace and enhance the current infantry battalion mortar with robust and sustainable mortar capability, networked within the joint fires environment (LAND 136). <sup>69</sup>	TBD	US\$81 million <sup>70</sup>	Planned IOC is 2014-2016 <sup>71</sup>

<sup>61</sup> Thomas, pp 2.
 <sup>62</sup> Defence 2009, pp. 162.

<sup>&</sup>lt;sup>60</sup> Defence 2009, pp. 162.

<sup>&</sup>lt;sup>63</sup> Ibid., pp. 54.

<sup>&</sup>lt;sup>64</sup> Army Technology.Com, "Australia's New Chinooks to Enter Service in 2014," 1 March 2010. Available at: <u>http://www.army-technology.com/news/news78049.html</u>>.
<sup>65</sup> Department of Defence, "Defence Capability Plan 2009," Australian Government (2009), pp. 55.

<sup>&</sup>lt;sup>66</sup> Ibid., pp. 146.

<sup>&</sup>lt;sup>67</sup> Defence Industry Daily, "Australia's A\$450M-600M LAND 17 Artillery Replacement." Available at: <a href="http://www.defenseindustrydaily.com/australias-a-450m600m-land-17-artillery-replacement-gets-goahead-">http://www.defenseindustrydaily.com/australias-a-450m600m-land-17-artillery-replacement-gets-goahead-</a> 01928/>.

<sup>68</sup> Ibid.

<sup>&</sup>lt;sup>69</sup> Department of Defence, "Defence Capability Plan 2009," Australian Government (2009), pp. 163.

 <sup>&</sup>lt;sup>70</sup> Trevor Thomas, Australian Defence Business Review, "2010/11 Australian Defence Budget Analysis," pp. 11.
 Available at: <<u>http://www.adbr.com.au/download/2010/ADBR\_2010-11\_Defence\_Budget\_Analysis.pdf</u>>.
 <sup>71</sup> Department of Defence, "Defence Capability Plan 2009," Australian Government (2009), pp 164.

CAPABILITY	PURPOSE	QUANTITY	PROGRAM COST	STATUS
Direct Fire Support Weapon	To deliver two new types of direct fire support weapons: the M3 Carl Gustaf medium direct fire support weapons fitted with a thermal sight and the Light Weight Automatic Grenade Launcher (LWAGL) <sup>72</sup>	<ul> <li>437 heavy weapon thermal sights;</li> <li>60 LWAGLs<sup>73</sup></li> </ul>	US\$152-203 million <sup>74</sup>	Delays since 2007, expecting contract in 2011. <sup>75</sup>
Armed Reconnaissance Helicopter Upgrades	To maintain Tiger helicopter capability effectiveness, upgrading weapons, engines, software, aircraft mission management and ground support systems (AIR 87) <sup>76</sup>	22	US\$101-507 million <sup>77</sup>	Development work to begin after 2016 <sup>78</sup>
Ground Based Air Defense	To enhance or replace the existing GBAD capability. It may include new technologies and weapon systems that are also capable of countering rockets, artillery and mortars (LAND 19, Phase 7). <sup>79</sup>	TBD	US\$507 million- 1.52 billion <sup>80</sup>	Development work to begin after 2016. <sup>81</sup>
Tactical Unmanned Aerial Vehicle Upgrade/Enhance- ments	In addition to five new geospatial imagery analyst teams, JP129 is to upgrade and enhance tactical UAVs for ground forces' real-time situational awareness (JP129, Phase 3) and is to provide organic ISR (JP 129, Phase 4) support primarily for ground forces operating in urbanized environments to provide situational awareness and enhanced force protection. <sup>82,83</sup>	TBD	US\$203 million <sup>84</sup>	Phase 3, IOC: 2023-2026; Phase 4, IOC: 2013-2016. Of note—Phase 2 is on Defence's Project of Concern List

<sup>&</sup>lt;sup>72</sup> Defence Materiel Organisation, October 2010. Available at: <<u>http://www.defence.gov.au/dmo/lsd/land40/></u>. <sup>73</sup> Ibid.

<sup>&</sup>lt;sup>74</sup> Australian Defence Magazine, "Whatever Happen to Land 40 Ph.2?", 1 July 2010. Available at: <a href="http://www.australiandefence.com.au/archive/weapons-whatever-happened-to-land-40-ph-2-adm-jul-2010">http://www.australiandefence.com.au/archive/weapons-whatever-happened-to-land-40-ph-2-adm-jul-2010</a>>.
 <sup>75</sup> Defence Materiel Organisation, October 2010. Available at: <a href="http://www.defence.gov.au/dmo/lsd/land40/">http://www.defence.gov.au/dmo/lsd/land40/</a>>.
 <sup>76</sup> Department of Defence, "Defence Capability Plan 2009," Australian Government (2009), pp. 16.

<sup>77</sup> Ibid.

<sup>78</sup> Ibid.

<sup>&</sup>lt;sup>79</sup> Ibid., pp. 17.

<sup>&</sup>lt;sup>80</sup> Ibid.

<sup>&</sup>lt;sup>81</sup> Ibid.

<sup>&</sup>lt;sup>82</sup> Tom Muir, Surveillance: Tactical UAV-The Quest Continues – ADM May 2010," Defence Supplier.Com.Au, May 1, 2010. Available at: <a href="http://defencesuppliers.net.au/archive/surveillance-tactical-uav-the-quest-continues-">http://defencesuppliers.net.au/archive/surveillance-tactical-uav-the-quest-continues-</a>

adm-may-2010>. <sup>83</sup> Department of Defence, "Defence Capability Plan 2009," Australian Government (December 2010 Update), pp. 90. Available at: <a href="http://www.defence.gov.au/dmo/id/dcp/DCP">http://www.defence.gov.au/dmo/id/dcp/DCP</a> Dec10.pdf>.

<sup>&</sup>lt;sup>84</sup> Ibid.

CAPABILITY	PURPOSE	QUANTITY	PROGRAM COST	STATUS
Joint Non-Lethal Capability	To expand ADF's capability beyond lethal forces, spanning several classes of technology – chemical, electrical, electromagnetic, kinetic, and mechanical – and to address policy and concept of use issues (JP 3011). <sup>85,86</sup>	TBD	<us\$101 million<sup>87</sup></us\$101 	In early stage of project development.
REDFIN— Enhancement to Special Operations Capability	To enhance special operations (SO) capabilities (JP 2097, Phase 1B): providing three fleets of vehicles to support SO tactical maneuver and replace obsolete vehicles and provide a Networked SO Capability, enhancing data management and battlespace awareness. <sup>88</sup>	TBD	US\$431 million <sup>89</sup>	IOC moved to 2013-2015. <sup>90</sup>
Chemical, Biological, Radiological and Nuclear Defense (CBRND)	To provide an enhanced CBRND capability to conventional forces of the ADF (JP 2110, Phase 1B)	TBD	US\$101-304 million <sup>91</sup>	Planned IOC 2015- 2017.
NINOX Night Fighting Equipment Technology Refresh	To provide a suite of night fighting equipment (LAND 53), surveillance and target acquisition systems, which is integrated into the soldier enhancement (LAND 125). <sup>92</sup>	TBD	US\$304-507 million <sup>93</sup>	Planned IOC is 2015-2018 <sup>94</sup>
Deployable Incident Response Regiment Capability	To improve the CBRNE response capability within the ADF, including recon and search support to Special Operations. (JP 3025). <sup>95</sup>	TBD	<us\$101 million<sup>96</sup></us\$101 	Planned IOC 2016- 2018. <sup>97</sup>

<sup>96</sup> Ibid.

<sup>&</sup>lt;sup>85</sup> Ibid., pp. 186.

 <sup>&</sup>lt;sup>86</sup> Tony Luke, Briefing, "Major Projects, Land Combat Development," Australian Government, Department of Defence. Available at: <<u>http://www.dsto.defence.gov.au/attachments/4%20LEWG%200ct%2008%20DLCD.ppt</u>>.

 <sup>&</sup>lt;sup>87</sup> Department of Defence, "Defence Capability Plan 2009," Australian Government (December 2010 Update), pp. 187. Available at: <a href="http://www.defence.gov.au/dmo/id/dcp/DCP\_Dec10.pdf">http://www.defence.gov.au/dmo/id/dcp/DCP\_Dec10.pdf</a>>.

<sup>&</sup>lt;sup>88</sup> Ibid., pp. 178-180.

 <sup>&</sup>lt;sup>89 89</sup> Trevor Thomas, Australian Defence Business Review, "2010/11 Australian Defence Budget Analysis," pp. 11.
 Available at: <<u>http://www.adbr.com.au/download/2010/ADBR 2010-11 Defence Budget Analysis.pdf</u>>.
 <sup>90</sup> Ibid.

<sup>&</sup>lt;sup>91</sup> Department of Defence, "Defence Capability Plan 2009," Australian Government (December 2010 Update), pp. 184-185. Available at: <a href="http://www.defence.gov.au/dmo/id/dcp/DCP">http://www.defence.gov.au/dmo/id/dcp/DCP</a> Dec10.pdf>.

<sup>&</sup>lt;sup>92</sup> Ibid., pp. 210-211.

<sup>93</sup> Ibid.

<sup>&</sup>lt;sup>94</sup> Ibid.

<sup>&</sup>lt;sup>95</sup> Ibid., pp. 194-195.

<sup>&</sup>lt;sup>97</sup> Ibid.

CAPABILITY	PURPOSE	QUANTITY	PROGRAM COST	STATUS
Air Power				
Bridging Air Combat Capability	To acquire 24 F/A-18F Super Hornets and associated support systems and services (AIR 5349) as a transition capability to the Joint Strike Fighter. <sup>98</sup>	24	US\$6.7 billion <sup>99</sup>	IOC 2010 achieved in December 2010 with 12 Super Hornets. Expected delivery of reminder of aircraft is at the end of 2011, which will be pre-wired as an electronic warfare 'Growler'' variant. <sup>100</sup>
Joint Strike Fighter (JSF)	To procure up to 100 multi-role F35 JSF (AIR 6000, Phase 2A/B) and to establish three squadrons of no fewer than 72 F35s with associated support and enabling capabilities. The three F35 squadrons will be complemented by one F/A-18F Super Hornet squadron. Phase 2C is the acquisition of the fourth F-35 squadron in the 2015-2018 timeframe, depending if the government withdraws the F/A-18F squadron. <sup>101</sup>	100	US\$10.1-16.2 billion <sup>102</sup>	Planned IOC is 2018. Program is experiencing program delays and cost overruns – especially noting the increase in cost per aircraft from the original 2005 estimate of \$37M to current \$112 million. <sup>103</sup>

 <sup>98</sup> Defence
 Materiel
 Organisation,
 October
 2010.
 Available
 at:

 <<u>http://www.defence.gov.au/dmo/asd/air5349/index.cfm</u>>.
 99
 Defense
 Industry
 Daily "Australia
 Buying
 24
 Super
 Hornets
 As
 Interim
 Gap
 Filler."
 Available
 at:

 <sup>&</sup>lt;sup>99</sup> Defense Industry Daily "Australia Buying 24 Super Hornets As Interim Gap Filler." Available at:
 <a href="http://www.defenseindustrydaily.com/australia-to-buy-24-super-hornets-as-interim-gapfiller-to-jsf-02898/">http://www.defenseindustrydaily.com/australia-to-buy-24-super-hornets-as-interim-gapfiller-to-jsf-02898/</a>>.
 <sup>100</sup> Department of Defence, "Last Batch of FA-18F Super Hornets Touch Down at Amberley," Australian

<sup>100</sup> Department of Defence, "Last Batch of FA-18F Super Hornets Touch Down at Amberley," Australian<br/>Government, 8 December 2010. Available at:<br/><htp://www.defence.gov.au/media/download/2010/Dec/20101208b/index.htm>

chttp://www.defence.gov.au/media/download/2010/Dec/20101208b/index.htm>.
<sup>101</sup> Department of Defence, "Defence Capability Plan 2009," Australian Government (December 2010 Update), pp.57-65. Available at: <<u>http://www.defence.gov.au/dmo/id/dcp/DCP\_Dec10.pdf</u>>.
<sup>102</sup> Lisa Millar, "F-35 Hits Further Cost Blow-outs: Report," Australian Broadcast Corporation News, 5 November

 <sup>&</sup>lt;sup>102</sup> Lisa Millar, "F-35 Hits Further Cost Blow-outs: Report," Australian Broadcast Corporation News, 5 November
 2010. Available at: <<u>http://www.abc.net.au/news/stories/2010/11/05/3057869.htm</u>>.
 <sup>103</sup> Amy Butler, "JSF LRIP IV Cost Targets Released," Aviation Week, 17 December 2010. Available at:

<sup>&</sup>lt;sup>103</sup> Amy Butler, "JSF LRIP IV Cost Targets Released," Aviation Week, 17 December 2010. Available at: <<u>http://www.aviationweek.com/aw/generic/story\_channel.jsp?channel=defense&id=news/awx/2010/12/16/awx\_12\_16\_2010\_p0-277980.xml</u>>.

CAPABILITY	PURPOSE	QUANTITY	PROGRAM	STATUS
Multi-role Tanker- Transport Aircraft (MRTT)	Continue to acquire five multi-role KC-30B refueling aircraft (Airbus A330) and transport aircraft (AIR 5402) for air-to-air refueling or transport of about 270 troops. <sup>104</sup>	5	US\$2.03 billion <sup>105</sup>	This project is on the Defence Department's Project of Concern list, IOC achieved late 2010 with the conversion of three KC-30B aircraft. <sup>106</sup> Expected FOC is late 2012.
Airborne Early Warning and Control Aircraft (AEW&C)	To acquire six new AEW&C aircraft (AIR 5077) in order to improve situational awareness and ability to control and coordinate aircraft and potentially upgrading with CEC to more effectively cue weapons systems. <sup>107</sup>	6	US\$3.9 billion <sup>108</sup>	On the Defence Department's Project of Concern list for 49-month delay in program, reaching IOC in DEC 2010 and expecting FOC in DEC 2012. <sup>109</sup>
Maritime Patrol Aircraft	To procure eight new maritime patrol aircraft (AIR 7000, Phase 2B) that will replace the current AP-3C Orion fleet with the P-8 Poseidon. The new maritime patrol is to provide advanced ASW capability, air-launched torpedoes, and eventual upgrade of firing stand-off anti-ship missiles. <sup>110</sup>	8	US\$5.07 billion <sup>111</sup>	Planned IOC is 2017. <sup>112</sup>

<sup>&</sup>lt;sup>104</sup> Defence 2009, pp. 79.

<sup>&</sup>lt;sup>105</sup> Defence Materiel Organisation, "2008-2009 Major Projects Report," Australian Government, 4 November 2009, 82. Available at: pp. -http://www.anao.gov.au/download.cfm?item\_id=0A228BE11560A6E8AAC6D17AA9A14A50&binary\_id=1DF79 59F1560A6E8AA1487CD7F5FD48C>.

<sup>&</sup>lt;sup>106</sup> Australian Aviation, "Third KC-30 Completed," <<u>http://australianaviation.com.au/2010/10/third-kc-30-completed/></u>. 13 October 2010. Available at:

<sup>&</sup>lt;sup>107</sup> Department of Defence, "Defence Capability Plan 2009," Australian Government (December 2010 Update), pp. 25-29. Available at: <<u>http://www.defence.gov.au/dmo/id/dcp/DCP\_Dec10.pdf</u>>. <sup>108</sup> Stockholm International Peace Research Institute, "SIPRI Arms Transfer Database," accessed on 28 December

<sup>2010.</sup> Available at: <<u>http://www.sipri.org/databases/armstransfers</u>>.

<sup>&</sup>lt;sup>109</sup> Defence Materiel Organisation, "2008-2009 Major Projects Report," Australian Government, 4 November 2009, 165. Available at: pp. <a href="http://www.anao.gov.au/download.cfm?item\_id=0A228BE11560A6E8AAC6D17AA9A14A50&binary\_id=1DF79">http://www.anao.gov.au/download.cfm?item\_id=0A228BE11560A6E8AAC6D17AA9A14A50&binary\_id=1DF79</a>

<sup>59</sup>F1560A6E8AA1487CD7F5FD48C>. <sup>110</sup> Defence 2009, pp. 80.

<sup>&</sup>lt;sup>111</sup> Joel Fitzgibbon, "Memorandum of Understanding Signed with United States Navy for Cooperative Development of P-8A Long Range Maritime Patrol Aircraft," Australian Government, 5 May 2009. Available at: <http://www.minister.defence.gov.au/2009/06909.doc>.

<sup>&</sup>lt;sup>112</sup> Department of Defence, "Defence Capability Plan 2009," Australian Government (December 2010 Update), pp.66-69. Available at: <a href="http://www.defence.gov.au/dmo/id/dcp/DCP">http://www.defence.gov.au/dmo/id/dcp/DCP</a> Dec10.pdf>.

CAPABILITY	PURPOSE	QUANTITY	PROGRAM COST	STATUS
Multi-Mission Unmanned Aircraft System	To acquire up to seven large high- altitude, long endurance UAVs (AIR 7000, Phase 1B), which will supplement manned maritime patrol aircraft, in order to provide surveillance coverage of the maritime approached to Australia. <sup>113</sup>	7	US\$1.01-2.03 billion <sup>114</sup>	Early stage of project development with first pass review scheduled for 2016. <sup>115</sup>
Battlefield Airlift—additional C-130J	To increase air transport capability with the addition of two C-130J (AIR 8000, Phase 1), complementing current transport fleet of 4 C-17s and 12 C- 130Js. <sup>116</sup>	2	US\$507 million <sup>117</sup>	Planned IOC is in the 2015 to 2018 timeframe. <sup>118</sup>
Light Tactical Fixed-wing Transport Aircraft	To replace the DHC-4 Caribou aircraft up to ten new light tactical fixed-wing aircraft (AIR 8000, Phase 2). <sup>119</sup>	10	US\$1.01-2.03 billion <sup>120</sup>	Planned IOC is 2015 to 2017. <sup>121</sup>
Joint Air to Surface Standoff Munition (JASSM)	To develop Joint Air to Surface Standoff Munition (JASSM) (AIR 5418) – AGM-158 stealthy cruise missile – with extended range of over 200 nautical miles for employment with the JSF, Super Hornet, and Maritime Patrol aircraft. <sup>122</sup>	260 <sup>123</sup>	US\$304 million <sup>124</sup>	Project is on the Defence Department's Project of Concern list for lengthy delays. <sup>125</sup> Expected IOC is 2012.

<sup>&</sup>lt;sup>113</sup> Ibid.

<sup>&</sup>lt;sup>114</sup> Ibid.

<sup>&</sup>lt;sup>115</sup> Ibid.

<sup>&</sup>lt;sup>116</sup> Department of Defence, "Defence Capability Plan 2009," Australian Government (December 2010 Update), pp.70-71. Available at: <<u>http://www.defence.gov.au/dmo/id/dcp/DCP\_Dec10.pdf</u>>.

<sup>&</sup>lt;sup>118</sup> Ibid.

<sup>&</sup>lt;sup>119</sup> Ibid., pp. 72-73.

<sup>&</sup>lt;sup>120</sup> Ibid.

<sup>&</sup>lt;sup>121</sup> Ibid.

<sup>&</sup>lt;sup>122</sup> Defence 2009, pp. 81.

 <sup>&</sup>lt;sup>123</sup> Gregor Ferguson, "Smart Stand-off Weapons Coming Soon," Australian Defence Magazine, 10 January 2008.
 Available at: <<u>http://www.australiandefence.com.au/C53A56D0-F806-11DD-8DFE0050568C22C9</u>>.
 <sup>124</sup> Defense Industry Daily, "Australia Chooses JASSM Missiles on F-18s for Long-Strike," 11 September 2006.

Available at: <http://www.defenseindustrydaily.com/australia-chooses-jassm-missiles-on-f18s-for-longrange-strike-

updated-01966/>. <sup>125</sup> Jason Clare, "Projects of Concern – Update", Department of Defence, Australian Government, 26 November 2010. Available at: <a href="http://www.minister.defence.gov.au/Claretpl.cfm?CurrentId=11134">http://www.minister.defence.gov.au/Claretpl.cfm?CurrentId=11134</a>>.

CAPABILITY	PURPOSE	QUANTITY	PROGRAM COST	STATUS
Maritime-Based Land-Attack Cruise Missile	To broaden Australia's strike option by acquiring a Maritime-Based Land- Attack Cruise Missile capability, employed on Air Warfare Destroyer (SEA 4000, Phase 4), Future Frigates (SEA 5000, Phase 3), and Future Submarines (SEA 1000, Phase 4) in order to conduct long-range precision strikes against harden, defended, and difficult to access targets. <sup>126</sup>	TBD	SEA 1000, Phase 4 – US\$507M- 1billion; SEA 4000, Phase 4 –US\$304-507 million; SEA 5000, Phase 3 –US\$304-507 million <sup>127</sup>	Maritime-based land-attack cruise missiles are integrated into three maritime programs – SEA 1000, Phase 4 – IOC 2025; SEA 4000, Phase 4 – IOC 2022 to 2025; and SEA 5000, Phase 3 – IOC 2027 to 2030. <sup>128</sup>

 <sup>&</sup>lt;sup>126</sup> Department of Defence, "Defence Capability Plan 2009," Australian Government (December 2010 Update), pp.245-252, 300-301, 307-308. Available at: <<u>http://www.defence.gov.au/dmo/id/dcp/DCP\_Dec10.pdf</u>>.
 <sup>127</sup> Ibid.
 <sup>128</sup> Ibid.

#### Appendix B. U.S. MILITARY OPERATIONAL DEPLOYMENTS BY SERVICE<sup>129,130</sup>

# **Role Of The Army In Joint Operations**



<sup>&</sup>lt;sup>129</sup> Department of Defense, "Active Duty Military Personnel Strengths by Regional Area and by Country (309A)." Available at: <<u>http://siadapp.dmdc.osd.mil/personnel/MILITARY/miltop.htm</u>>.

<sup>&</sup>lt;sup>130</sup> OIF, OEF, and OND 2008 and 2010 charts calculated and constructed by Christopher E. Angevine, Physics and Mathematics student, Virginia Commonwealth University.



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