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AUSTRALIA'S STRATEGIC EDGE IN 2030

Ross Babbage

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PREFACE

This project would not have been possible without the encouragement, support and assistance of many senior leaders in the Australian national security community. It was they who proposed the research and spoke frankly in four closed workshops. These senior people were all keen for the priority security challenges now confronting Australia to be analysed and for a range of alternative approaches to be discussed. It was also these senior personnel who reviewed the draft conclusions of this report and suggested additional thoughts for inclusion. They were insightful, innovative and exceptionally helpful. While different views were expressed at various stages, a clear consensus emerged on nearly all of the key conclusions. The senior national security leaders who participated deserve warm thanks.

This project has also benefited greatly from close cooperation with a parallel research project being undertaken by the United States Naval War College on *Developing Competitive Strategies for the 21st Century*. Special thanks are due to Dr Thomas Mahnken, the leader of that project.

While this project involved extensive processes of high level consultation, responsibility for the views expressed in this report lies solely with the author.

The financial wherewithal to undertake this research was generously provided by The Boeing Company. The Kokoda Foundation wishes to express its deep appreciation to The Boeing Company for its strong encouragement for this demanding, forward-looking work. Particular thanks are due to Dr Ian Thomas, the President of Boeing Australia, who perceived very quickly the importance of this research and who contributed willingly his independent analytical insights.

Professor Leszek Buszynski, the Editor of the Kokoda Paper series, has played a key role in editing the paper and preparing its publication in such a quality manner. David

Schmidtchen has also contributed his expertise in formatting and preparing the paper for publication.

This report is not intended to be the last word on Australia's future strategic edge. Readers who wish to discuss and debate aspects are encouraged to do so by preparing either a short commentary or a longer article for the Kokoda Foundation's professional journal, *Security Challenges*. For details on how this can be done, please visit:

<http://www.securitychallenges.org.au/Author.html>

Ross Babbage

EXECUTIVE SUMMARY

This report addresses a key question for Australia's future security. What should be Australia's strategic edge in 2030? What capabilities will give the level of strategic and campaign superiority that will be needed to ensure Australia's security in 20 years time?

In order to determine priorities for developing Australia's strategic edge it is essential first to identify what the country's national security capabilities will be required to do in 2030-2040. This report argues that, as now, the Australian Defence Organisation (ADO) will need to deal with a range of security demands in the 2030 timeframe. They will likely include assisting recovery from civil disasters, helping to resuscitate fragile countries and regions, contributing to border security, undertaking counterinsurgency campaigns in distant theatres, launching counter-terrorist operations and preparing to fight in the direct defence of Australia.

However, this paper argues that while the range of priority tasks in 2030 will be similar to those of recent years, the security environment is likely to be markedly different. This will largely be a consequence of the very rapid rise of China's People's Liberation Army (PLA) and China's more assertive behaviour which directly challenges United States and allied forces in the Western Pacific. These changes to Australia's security environment generate an urgent need to refocus ADO development for the next two decades on the direct defence of Australia to offset and deter the rapidly-expanding PLA in Australia's approaches.

There are many areas in which Australia has a strong and enduring interest in working cooperatively with China. Australia can and should partner with China in trade and investment, technological development, counter-terrorism, counter-proliferation and in many other endeavours. However, Australia cannot overlook the way that the scale, pattern and speed of the PLA's development is altering security in the Western Pacific. This rapidly shifting strategic balance has

profound consequences for Australia's security priorities and also for those of the United States and other allies and friends in this theatre.

It is the contention of this paper that Australia and its close allies should not seek to confront China unless forced to do so by extreme PLA actions. Rather, the intent should be to offset and balance the PLA's more threatening force developments and operations, deter adventurism and work to restore regional confidence.

THE PLA'S RAPID RISE

The PLA capabilities of concern to Australia's national security planners are:

- The fielding of highly sophisticated wide-area surveillance and targeting systems that are designed to give senior commanders of the PLA the capacity to monitor in real-time and, if desired, strike adversary spacecraft, aircraft, ships and submarines across large expanses of the Western Pacific.
- The deployment of modern cruise and ballistic missile systems with the capability to attack both fixed and mobile targets in large parts of the Western Pacific.
- New classes of both nuclear and conventionally-powered submarines with over 40 new boats being commissioned since 1995.
- The commissioning of several new classes of surface combatants armed with exceptionally capable stealthy, supersonic cruise missiles and other advanced weaponry.
- The modernisation and expansion of China's fighter-bomber and airborne strike capabilities.
- The substantial modernisation, expansion and hardening of China's missile and fighter air defences.
- Growing capabilities for space warfare, including those for the interception and destruction of satellites.
- Exceptionally strong investments being made in cyber capabilities.

- A sophisticated, modern and well protected command and control network.
- The modernisation, expansion and protection of strategic nuclear forces.

The trajectory of these PLA developments suggests that many of the fundamental assumptions on which Australia's and our Western allies' security planning have been based since the Second World War are now being challenged.

- The assumption that the United States and its close allies will continue to enjoy an operational sanctuary in space is in serious doubt.
- The assumption that United States' operational bases in Guam, Japan and elsewhere will enjoy high levels of security in future crises is crumbling.
- The assumption that US and allied naval surface vessels can operate with high security in all parts of the Western Pacific is no longer valid.
- The assumption that United States and allied air forces enjoy uncontested access to airspace in the Western Pacific is now also invalid.
- The assumption that in a crisis United States and allied surveillance, situational awareness, logistic and other information networks would remain inviolate is invalid.
- The assumption that in the event of a major security crisis in the Pacific Australia could rely on speedy and tailored military resupply from the United States is also almost certainly invalid.

These developments have fundamental implications for Australia's defence strategy, planning and priorities. Some of the consequences are immediate and are affecting current operations. However, defence planners also face the more demanding task of selecting those capabilities that will be required for 2030-2040, because it will take up to 20 years to bring into service any major new capabilities chosen now. By 2030 the PLA's capabilities are expected to be even more formidable and will have become predominant in parts of the Western Pacific.

THE UNITED STATES' RESPONSE

This rapid growth of PLA capabilities comes at a difficult time for the United States. The US economy remains seriously damaged by the global financial crisis, with economic growth persistently slow, unemployment high, debt levels still climbing and a heavy political focus on domestic issues. When the US Government looks abroad, it is inclined to focus on regions other than the Asia Pacific and it is very hesitant to take firm stances that might lead to new or expanded international commitments.

The United States Department of Defense has, however, recognised a clear need to counter the rapidly growing anti-access area-denial capabilities of China and Iran. It is working to formulate an integrated range of counters within a framework called Air-Sea Battle. Some initial unclassified research papers¹ published on the application of this concept in the Western Pacific suggest that key features of the United States campaign strategy may include operations to:

- Blind the opponent
- Defend priority defence bases and military assets
- Suppress the PLA's medium-range land-based ballistic and cruise missile forces
- Strike PLA command and control, wide-area surveillance, and air defence systems
- Attack PLA surface and sub-surface capabilities
- Place serious strains on the Chinese economy, society and leadership.

AUSTRALIA'S OPTIONS

Australia does not have the option of standing aloof from these developments because they threaten a number of the country's most critical interests. Indeed, by 2030 the PLA's

¹ See, for example: Jan van Tol *AirSea Battle: A Point of Departure Operational Concept* (Center for Strategic and Budgetary Assessments, Washington DC, 2010) and Andrew Krepinevich *Why AirSea Battle?* (Center for Strategic and Budgetary Assessments, Washington DC, 2010).

capabilities will probably pose an even more direct challenge to Australian sovereignty.

Moreover, many of the troubling military capabilities being introduced into service by the PLA are starting to proliferate into other countries, including several in South and Southeast Asia. The challenges of conducting military operations in these environments in the 2030 timeframe will clearly be markedly different to those of the past.

One important consequence is that in future the Australian Defence Force (ADF) will not be able to count on a numerical advantage let alone superiority, and its technological edge will have been lessened. It will not be sufficient in this new era to aim simply at developing a small high-quality Western national security organisation. The Australian national security community needs to become something rather different. It needs to adopt a culture that is highly innovative, which is focussed on applying asymmetric leverage to achieve carefully defined strategic effects and which demands world's best practice in efficiency and effectiveness across its administrative and procurement activities.

In considering the best broad strategy to adopt, Australia would appear to have two main options:

- Contributing to a combined United States–Australia theatre strategy; or
- Developing a more self-reliant Australian defence strategy.

An analysis of the key elements of each approach reveals that in practical terms they share many characteristics. Indeed, Australia has the option of designing its future national security capabilities in a way that would work well in both a combined campaign in close partnership with US forces, and also in situations where Australia might be forced to conduct major operations with a high level of independence because of US distraction elsewhere.

With this framework in mind this paper argues that Australia has four primary options for the development of its national security structure to 2030.

Option 1 envisages a modernised general purpose force structure along the lines described in the 2008 National Security Statement² and the 2009 Defence White Paper³. This evolutionary option offers capabilities to undertake many types of operation moderately well. However, it offers only limited strategic leverage against major powers, and it would be capable of providing only modest support to the forces of the United States and other allies and friends in the event of a major crisis in the Western Pacific.

Option 2 entails substantial efforts to strengthen regional and alliance engagement as a means of balancing and offsetting growing Chinese regional influence. When compared to Option 1, this option involves slightly reduced purchases of conventional defence capabilities, but it does envisage further investment in cyber and underwater capabilities. Option 2 seeks to develop a degree of independence from the US but, in doing so, it builds a new dependence on regional countries and tends to assume that they share Australia's deep concerns about the PLA.

Option 3 also aims to retain a level of reduced dependence on the United States but it envisages much heavier investments in asymmetric military capabilities to help balance and offset the rising strength of the PLA. This option entails larger investments in cyber capabilities, advanced underwater systems including nuclear powered attack submarines, modestly-sized multi-role arsenal ships (with reductions in other surface naval vessels), advanced air combat capabilities and also a major restructuring of ground

² See: *The First National Security Statement to the Parliament of Australia*, (Address by the Prime Minister of Australia, The Hon. Kevin Rudd MP, 4 December 2008 at: <http://pmrudd.archive.dpmc.gov.au/node/5424>)

³ See: Department of Defence, *Defending Australia in the Asia Pacific Century: Force 2030* (Defence White Paper, Commonwealth of Australia, Canberra, 2009).

forces to place greater emphasis on next-generation special force operations.

Option 3 would provide relatively high leverage against a major power and also reasonable flexibility to conduct a wide range of additional operations. However, this option would probably be the most expensive of the four and would fail to deliver the range of synergies that are available from a close partnership with the United States.

Option 4 is designed to deliver high asymmetric leverage against a coercive major power in close partnership with the United States. It would require heavy Australian investment in many of the capabilities highlighted in Option 3, but in this case they would be designed and operated in close partnership with United States forces in the region with some economies resulting. Heavy investment would be made in regional engagement, cyber capabilities, both inhabited and uninhabited underwater systems (including, potentially, nuclear-powered attack submarines), advanced air combat capabilities and also a substantial reconfiguration of ground forces with an emphasis on next-generation special force operations. A distinctive feature of Option 4 is provision for the hosting of several categories of United States units on Australian soil.

Option 4 recognises that a key effect of the rapid expansion of the PLA is to make United States operations in the Western Pacific more risky and expensive. This option has Australia helping to balance these effects by taking reasonable steps to reduce the risks and costs of the United States continuing to operate extensively in this theatre.

Whilst not as costly as Option 3, this option would still be expensive. It would, however, deliver several 'game-changing' components for regional security, it would give future Australian governments a range of credible options in highly-demanding contingencies and, by exploiting synergies with US forces, it would maximise Australia's balancing, offsetting and deterrence potential for the available level of funding.

OPTIMISING AUSTRALIA'S STRATEGIC EDGE FOR 2030

While acknowledging some advantages in all of the above options, this report favours Option 4. However, there is a need for much more detailed analysis to determine optimal campaign concepts, capability trade-offs and preferred means of mitigating risk.

This report recommends implementation of something like Option 4 *via* a hedging strategy. This would see the Australian Government starting down the track of developing and fielding this type of force structure by 2030, while simultaneously planning to review the overall approach, the long-term goals and the levels of funding at intervals of 3-5 years along the way according to the requirements of the evolving security outlook.

In addition to the above approach to force structure development, a number of important enabling initiatives will be required across the Australian national security community. These additional reforms are:

- Mastery of strategy at the highest strategic level as well as at the campaign or operational level. This will require a sustained program of education, training and testing.
- Making asymmetric strategy and asymmetric strategic thinking the norm.
- Developing a strong culture of designing, evaluating and testing alternative total force structure options rather than evaluating individual capability proposals with a high level of abstraction and limited total force coherence. This will require much stronger and more rigorous analytical skills.
- Fostering high levels of innovation and experimentation. Striving to set new standards of the world's best practice in national security design, force structure development and in total force operations.
- Insisting on world-leading levels of efficiency and effectiveness, especially in national security administration and overhead functions.

- Strengthening resilience and avoiding the maintenance of 'hollow' capabilities.
- Building a culture of whole-of-nation national security planning.
- Fostering exceptional military and civilian leadership.

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ABOUT THE AUTHOR

ROSS BABBAGE

Professor Ross Babbage is Founder of the Kokoda Foundation. For the first five years of the Foundation's existence, he served as the Chairman and Chief Executive Officer of the organisation. Professor Babbage is also Managing Director of Strategy International (ACT) Pty Ltd, a defence consulting and education service delivery organisation.

Professor Babbage served as a special advisor to the Minister for Defence during the preparation of the 2009 Australian defence white paper. He also served on the Council of the International Institute for Strategic Studies in London for a maximum six year term.

Professor Babbage's career background is unusual in Australia as he has served as a senior government official, a senior executive in the corporate world and also as a senior academic.

Professor Babbage served for 16 years in the Australian Public Service, holding several senior positions, including Head of Strategic Analysis in the Office of National Assessments, and leading the branch in the Department of Defence responsible for ANZUS policy. Professor Babbage was Assistant Secretary, Force Development in the late 1980s, carrying responsibility for the analysis of all major defence capability proposals and the preparation of recommendations for the senior Defence committees and for Cabinet. Through the 1990s, Professor Babbage moved to the corporate sector working with ADI Limited, Australia's largest defence company. In 2000 he was appointed the inaugural Director of the Centre for International Strategic Analysis in Perth. In 2003 and 2004 he served as Head of the Strategic and Defence Studies Centre at the Australian National University.

Professor Babbage has Bachelor and Masters degrees in economics from the University of Sydney and a PhD in International Relations from the Australian National University. Amongst his publications are: *A Coast Too Long: Defending Australia Beyond the 1990s* (Allen & Unwin, Sydney, 1990), *Rethinking Australia's Defence* (University of Queensland Press, St Lucia, 1980), *Preparing Australia's Defence for 2020 – Transformation or Reform?* (Kokoda Foundation, Canberra, 2005), *Australia's Future Underwater Operations and System Requirements* (Kokoda Foundation, Canberra, 2007), *Firepower to Win: Australian Defence Force Joint Fires in 2020* (Kokoda Paper, October 2007) and *Strategic Decision-Making: Optimising Australia's National Security Planning and Coordination for 2015* (Kokoda Paper, May 2008).

Professor Babbage was appointed a Member of the General Division of the Order of Australia (AM) on 26 January 2011.

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AUSTRALIA'S STRATEGIC EDGE IN 2030

INTRODUCTION

The strategic environment in the Western Pacific is being transformed by the rapid economic, military and political rise of China. The foundation of China's surging influence is the vast scale, rapid pace and increasing complexity of the Chinese economy and of its stronger interactions across the globe. Most other countries are being forced to rethink their economic and development programs as a result.

There is, however, another side to China's rapid rise that has hitherto attracted far less attention. The capabilities of China's People's Liberation Army (PLA) have also been growing very rapidly. Indeed China's expenditure on the PLA has risen faster in recent years than the pace of China's economic growth.¹ Very sophisticated new military capabilities have been introduced into service and others are following rapidly. In combination, these new PLA capabilities and a new assertiveness in PLA behaviour challenge long-established United States, Australian and broader Western security interests in the Western Pacific. They make allied military operations in large parts of this region risky and potentially very high cost. They also challenge the credibility of Western security assurances in this region and undermine the security confidence of many governments in East and Southeast Asia and beyond.

A key question for Australia is how best to respond to this markedly changed strategic environment. Some commentators have suggested that the further rise of China to dominate Australia's region is inevitable and that Australia has no choice but to come to terms with Chinese hegemony and encourage the United States and other allies and friends to do

¹ For details see: *Military and Security Developments Involving the People's Republic of China 2010* (A Report to Congress Pursuant to the National Defense Authorization Act for Fiscal Year 2010, Office of the Secretary of Defense, Washington DC, 2010.) p.41.

the same.² Others have argued that Australia should focus its energies on intensified diplomatic, cultural and other linkages with China in the hope that, over time, these more developed relationships will generate more favourable consideration of Australia's interests in Beijing.³ Yet others have implied that the looming challenges in East Asia are simply an unwelcome distraction from immediate domestic demands and the current security requirements of Afghanistan, East Timor and elsewhere.⁴

This paper argues that Australia needs to adopt a more sophisticated and proactive approach to the rise of China. Australia needs to pursue a multi-tracked policy approach with two dominant themes.

The first primary theme is economic cooperation. Australia has a strong interest in encouraging greater trade and investment flows, productive economic partnerships and joint ventures with Chinese enterprises. Both countries can gain greatly from these cooperative activities and, over time, they have the potential to foster greater warmth in the overall relationship.

The second primary theme is the notion of a broader security approach towards China. In this field Australia cannot turn a blind eye to the very substantial growth of the PLA, to the strong PLA focus on striking United States and allied forces in the Western Pacific and to the more assertive Chinese military behaviour that has been evident in recent

² See, for example: Hugh White "Power Shift: Australia's Future Between Washington and Beijing" (*Quarterly Essay No.39*, September 2010, <http://www.quarterlyessay.com/issue/power-shift-australia%E2%80%99s-future-between-washington-and-beijing>).

³ See, for example: Rory Metcalf "Decisions and Destinies: Asian Security in 2010" *Snapshot 3* (Strategic Snapshots, MacArthur Foundation and Lowy Institute for International Policy, September 2010) and Raoul Heinrichs "Little Power, Big Choices: Australia's Strategic Future" *Snapshot 4* (Strategic Snapshots, MacArthur Foundation and Lowy Institute for International Policy, September 2010).

⁴ See, for example: Peter Leahy "Shifting Priorities in National Security: More Security Less Defence" *Security Challenges* (Vol. 6, No.2, Winter 2010) pp. 1-8.

years.⁵ Australia needs to assess its security interests and options with care, it needs to respond with a firm and determined posture and it needs to embark on a strategy that will secure Australia's vital interests for the long term.

In effect, this paper is arguing for a more sophisticated Australian approach towards China than has generally been discussed in the past. The most appropriate approach for Australian governments is to cooperate with and encourage those aspects of China's behaviour that are in Australia's interests, and simultaneously to balance, offset and counter those aspects of Chinese behaviour that pose a challenge to Australia's interests. In a variant of what President Lyndon Johnson is reputed to have said: "We need to walk and chew gum at the same time."⁶ Moreover, we need to do this with a degree of self-assurance and confidence in close partnership with our long-standing allies and friends so that the prospects for success can be maximised.

Australia's interests will be compromised seriously if Australian governments emphasise only one of the primary themes at the expense of the other. Australia should not hesitate to encourage strong economic interactions with China and other regional countries where the benefits are clearly mutual. However, so long as the PLA develops, deploys and operates new military capabilities that challenge key Australian, United States and allied interests directly, Australia has to develop an effective response. Australia should define, implement and maintain an effective military and broader national security response to offset and balance the PLA in our region, secure Australia's vital interests and reinforce the confidence of our regional partners and friends.

As so much has been written, and continues to be written, about Australia's developing economic and broader political relationship with China, the remainder of this paper focuses on

⁵ Details of China's new military capabilities and its more assertive behaviour in recent years are described in some detail later in this paper.

⁶ For details, see: Robert Hendrickson *The Facts on File Encyclopaedia of Word and Phrase Origins* (4th ed. Facts on File, New York, 2008), p.151.

the nature of China's military challenge, its security implications for the region and the national security options that may be appropriate for the Australian Government to consider in response.

THE NATIONAL SECURITY PLANNING CHALLENGE

The challenge posed by the rising PLA is arguably one of the most serious that has confronted Australia's national security planners since the Second World War. China is, for the first time, close to achieving a military capability to deny United States and allied forces access to much of the Western Pacific rim. Moreover, during the coming 20 years these anti-access, area denial capabilities are projected to grow stronger and reach out much further.

Many of the fundamental assumptions on which Australia's and our Western allies' security planning have been based since the Second World War are now being challenged.

- The assumption that the United States and its close allies will continue to enjoy an operational sanctuary in space is in serious doubt. The PLA is actively engaged in programs to degrade or destroy the United States command, control and communications (C3), the intelligence, surveillance and reconnaissance (ISR) and the navigational systems that are mostly space-based and critical for US and Australian military operations.⁷
- The assumption that United States operational bases in Guam, Japan and elsewhere will enjoy high levels of security in a future crisis is crumbling. This is primarily because the PLA is fielding ballistic and cruise missile systems, and a number of other

⁷ These and related developments in PLA capabilities are discussed in *Military Power of the People's Republic of China 2009* (A report to Congress pursuant to the National Defense Authorization Act, Fiscal Year 2000, Office of the Secretary of Defense, Washington DC, 2009) and also Jan van Tol *AirSea Battle: A Point of Departure Operational Concept* (Center for Strategic and Budgetary Assessments, Washington DC, 2010).

capabilities designed to strike all of these locations with precision. These attacks would destroy most key facilities there within a few hours and persistent further attacks would prevent base resuscitation. Some Australian defence facilities could also be targeted in such PLA attacks.⁸

- The assumption that US and allied naval surface vessels can operate with high security in all parts of the Western Pacific is no longer valid. A combination of PLA long-range surveillance assets and land, air and submarine launched weaponry means that US aircraft carrier strike groups and other surface vessels are becoming increasingly vulnerable up to 1,200 nautical miles from China's coast.⁹ This is further than carrier-based aircraft can fly unrefueled, so that were carrier strike groups tasked to attack targets on the Chinese coast or further inland they would need to operate from very vulnerable locations.¹⁰ Moreover a new generation of Chinese submarines will pose a serious challenge to surface vessels much further out into the Pacific.¹¹
- The assumption that United States and allied air forces would enjoy uncontested access to airspace in the Western Pacific is now also invalid. The PLA is fielding an impressive array of wide-area surveillance systems which are being integrated into a hardened air defence network and tied to a growing number of modern long range surface-to-air missile systems

⁸ For details see: *Military Power of the People's Republic of China 2009 op cit*, pp.25-29; and also *Military and Security Developments Involving the People's Republic of China 2010* (A Report to Congress Pursuant to the National Defense Authorization Act for Fiscal Year 2010, Office of the Secretary of Defense, Washington DC, 2010.) pp.29-33.

⁹ For details see: *Military Power of the People's Republic of China 2009 op cit*, pp.20-22, 25, 28-29.

¹⁰ This is argued persuasively in Jan van Tol, *op cit*, p.25

¹¹ For details see: *Military and Security Developments Involving the People's Republic of China 2010 op cit*, pp.2-3, Jan van Tol. *op cit*, pp. 19,40-43.

(SAMS) and advanced fighter aircraft.¹² The result is to make allied air operations in much of the Western Pacific vulnerable in a manner not contemplated since the Second World War.

- The assumption that in a crisis United States and allied surveillance, situational awareness, logistic and other information networks would remain inviolate is invalid. China is working hard to develop cyber and other capabilities to challenge, penetrate or degrade a wide range of defence, national security and logistics networks that would play key roles in any future crisis in the Western Pacific.¹³
- The assumption that in the event of a major security crisis in the Pacific Australia could rely on speedy and tailored military resupply from the United States is almost certainly invalid. US defence planning for the new security challenges in the Western Pacific makes clear that a future conflict in this theatre could extend over many months and maybe even years. Great efforts would be required to expand the production of high-usage parts, precision-guided munitions and many other things in order to sustain US operations.¹⁴ In those circumstances the requirements of allies for re-supply and support would most likely be accorded a relatively low priority.

United States defence planners have been surprised by the speed and breadth of this deterioration in the Western Pacific security environment. Nevertheless, the challenges posed by the PLA have been recognised in Washington and Honolulu and steps are being taken to take stock of the situation and to consider major changes to US theatre strategy, force posture and investment priorities. Perhaps most importantly, the United States Government has made the

¹² For details see: *Military Power of the People's Republic of China 2009 op cit*, pp.13, 50 and Jan van Tol *op cit*, p.40-41.

¹³ *Military and Security Developments Involving the People's Republic of China 2010 op cit*, pp.7,25.

¹⁴ These requirements are discussed in Jan van Tol. *op cit*, pp. 18, 91,93-94.

decision to pursue a new concept designed to counter the PLA in this theatre, called Air-Sea Battle.¹⁵

These developments have fundamental implications for Australia's defence strategy, planning and priorities. Some of the consequences are immediate and are affecting current operations in the region. However, national security planners also face an even tougher task of selecting those new capabilities that will be required for 2030-2040, because it will take up to 20 years to bring into service any major new capabilities chosen now.

This situation raises some key questions for Australian national security planners that require early answers:

- Given the speed with which the PLA has developed and fielded markedly improved military capabilities during the last decade, what capabilities will the PLA deploy by 2030? And what might be the operational and strategic consequences for the Western allies of such Chinese military developments?
- What assumptions should be made about how the United States and other regional allies and friends will respond to a further strengthening of the PLA during the coming two decades?
- What options will Australia have to maintain a 'strategic edge' over Chinese and other regional military capabilities during the next 20-30 years? Are there options for the Australian Government to consider that would provide credible means of deterring coercive behaviour and military attacks during this timeframe?
- Will the simple modernisation of Australia's current defence and broader national security force structure

¹⁵ See: Robert M. Gates, Remarks to the Navy League Sea-Air-Space Exposition, Gaylord Convention Center, National Harbor, Maryland, 3 May 2010 (Office of the Secretary of Defense (Public Affairs), US Department of Defense. Accessible at: <http://www.defense.gov/utility/printitem.aspx?print=http://www.defense.gov.speeches/speech.asp>.

be a credible option for future Australian governments seeking to meet a major regional crisis? What other force structure options deserve consideration and what would be their advantages and disadvantages?

The following discussion seeks to address these key questions directly.

AUSTRALIA'S STRATEGIC CHALLENGES IN 2030-2040

The core responsibility of Australian national security planners is to ensure that no matter what security challenges arise in the 2030-2040 timeframe the Australian Government of the day will have available a series of good options to secure the country's vital interests. Decisions are needed soon on what will be required for 2030-2040 because of the exceptionally long timeframes for most categories of defence development and acquisition. For instance, a decision taken in 2011 to develop and buy a new class of submarines or surface ships for the RAN would require 3-5 years of requirement and specification development, 1-2 years for project competition and contracting and 10-20 years for production, set-to-work and introduction into service. Similarly, an in-principle decision in 2011 to acquire a new fleet of fighter aircraft or a new class of armoured vehicles might require 2-3 years of requirement and specification development, 1-2 years for project competition and contracting and then 5-10 years for production, set-to-work and introduction into service. Indeed, the time required to introduce such systems into service might exceed these estimates substantially were selected systems not already in production.

This means that judgements are required now, or at least soon, concerning those major defence capabilities that will need to be introduced into service by 2030. However, making decisions about a defence force structure so far ahead is not straight-forward. It is simply not possible to predict the detailed future 20 years hence with any confidence. The horizon for most types of intelligence prediction is 2-3 years, at best. When attempting to look out further than this it may be

possible to draw some broad conclusions about the 'tides' of international development and distinguish them from most of the short-term 'ripples' on the international stage. With this level of analysis it is reasonable to assess, for instance, that during the coming 20 years the Middle East is likely to continue to be riven by serious ethnic and national disputes. It might also be reasonable to conclude that Africa will continue to be beset by serious developmental problems and that on the African continent economic, social and political progress will be very uneven. In a similar vein, the 'tides' of international development would appear to suggest that by 2030 China will be the most powerful economic, political and military state in the Western Pacific theatre and probably the primary strategic rival of the United States.¹⁶

However, is it possible to go further and clarify what China might look like and how it might behave twenty to thirty years hence? Leading thinkers in the field¹⁷ suggest that there are probably four primary alternative futures for the People's Republic of China (PRC) in the 2030-2040 period:

Scenario 1: A continuation of rapid economic and military growth. This scenario assumes that China can maintain an average economic growth rate of 8% or more until 2030. This scenario could result either in China developing the world's largest military budget or, alternatively, gradually reducing defence spending as a proportion of GDP and allocating the savings to other priorities. The assessed probability of Scenario 1 is about 20%

¹⁶ Means and modes of making these longer-term strategic assessments are discussed in Allan Behm *Strategic Tides: Positioning Australia's Security Policy to 2050* (Kokoda Paper No.6, The Kokoda Foundation, Canberra, November 2007).

¹⁷ These four scenarios, and their assessed relative probabilities, were developed following discussions with senior Australian and United States national security analysts. However, the author carries full responsibility for their design and expression.

Scenario 2: A continuation of strong economic and military growth but with some reductions in the pace of development as the economy and society further matures. This scenario would still result in Chinese defence spending rivalling and possibly exceeding that of the United States in 2030-2040. This scenario assumes an average economic growth rate of 6.0% or more until 2030.¹⁸ Key factors in the reduced pace of growth may be the peaking of population growth and rising labour costs. The assessed probability of Scenario 2 is about 60%

Scenario 3: A serious reduction in the pace of economic development and also of military modernisation. While in this alternative future most of the Chinese population accept the markedly reduced pace of economic growth, there are significant internal disturbances and the government is forced to focus more intensely on domestic issues, including domestic security. The assessed probability of Scenario 3 is about 15%

Scenario 4: Serious economic and political problems arise in the PRC generating widespread internal dissent and a growth of separatist pressures in some provinces. In these circumstances the central government might be tempted to rouse nationalist sentiment by focussing domestic attention on an external challenge – perhaps an artificially stimulated international crisis.¹⁹

¹⁸ Strong supporting views for this scenario include those reported in Jamil Anderlini "China's Growth Model 'Unsustainable'" *Financial Times* (23 December, 2010).

¹⁹ There is precedence for the Chinese national leadership triggering an international crisis as a means of stirring nationalist sentiment and distracting the population from the domestic failures. The most notable instance was Mao Tse Tung's generation of the Quemoy crisis in 1954-55 largely to distract domestic attention from the millions starving as a result of the failure of the Great Leap Forward agricultural reforms.

The assessed probability of Scenario 4 is about 5%

Each of these alternative futures could pose challenges for Australian defence planning. While there will always be some uncertainty about the outlook in the Western Pacific, prudent planning would prevent any arbitrary dismissal of a very powerful and assertive China in the 2030 timeframe. For detailed planning purposes it may make sense to focus initially on the most probable future for the PRC (Option 2) while also conducting sensitivity analysis to ensure that preferred balancing strategies can cope adequately in the event of one of the alternative futures developing.

While a larger and more powerful China may be highly probable, it is important to emphasise that Australia's national security priorities are not driven by the assessed probability of specific futures or types of threat alone. The assessed probability of a much stronger and more threatening PLA in 2030 will clearly be an important factor in Australian decision-making. But defence planners need to weigh this factor against the assessed importance or consequence of this potential development. A third key factor is the assessed timing of a particular challenge, or the speed with which it has the potential to materialise to directly confront Australia.

On the basis of what is currently known it may be appropriate to draw the following conclusions. First, the probability of the PLA developing into a much stronger and more challenging force by 2030 is HIGH. Second, the PLA's rapid development of strong ballistic missile, submarine, cyber, space and other capabilities signal that China's capability to threaten Australia's vital and most important interests in two decade's time will also be HIGH. And third, that were such strong PLA capabilities to be developed by 2030, the potential for them to be directed against Australia at short notice will also be HIGH. In other words, an initial assessment of the priority that should be accorded to countering a much more powerful PLA in 2030 is that this challenge is probably now more important for Australia's future

force structure design and national security development than any other.

CHINA'S RAPID STRATEGIC RISE – THE KEY CHARACTERISTICS

The rapid rise of Chinese power has been driven largely by the speed of the country's economic growth. For the last twenty years China's economy has maintained annual growth rates of between 8-12% so that in real or Purchase Power Parity (PPT) terms China's economy is already more than half the size of the United States economy with a GDP of US\$8 trillion.²⁰ Moreover, China's economy is growing with a surprisingly high level of economic integration with its Western Pacific neighbours. Close to 30 per cent of the output of Japanese manufacturing companies is actually produced in China, not in Japan.²¹ China is also already the largest trading partner of Australia, Japan, Korea and Taiwan and by 2020 China it will probably be the largest economic partner of every country down the Western Pacific rim.²² This, in turn, is delivering to Beijing an unprecedented level of economic and political leverage and laying the foundations for what may become a strong sphere of influence.

As mentioned earlier, China's defence expenditure has grown at an even faster rate than the country's GDP in recent years. Indeed, the annual growth in Chinese defence spending averaged 12.9% from 1996-2008.²³ The 2005 defence budget was almost ten times the size of defence expenditure in 1989.²⁴ The long-term trend in Chinese defence spending is clear from Figure 1.

²⁰ *Military and Security Developments Involving the People's Republic of China 2010 op cit*, pp. 41-42.

²¹ Peter Drysdale "China and Japan in Landmark Shift in Asian Economic Power?" *East Asia Forum* (Monday 6 September, 2010), p.1 found at: east_asia_forum-bounces@anu.edu.au

²² *Ibid.*

²³ Office of the Secretary of Defense *Military Power of the People's Republic of China 2009* (Annual Report to Congress, A report to Congress pursuant to the National Defense Authorization Act, Fiscal Year 2000, 2009) p.31.

²⁴ *Ibid.*

The future growth of Chinese military spending might moderate slightly and track real GDP growth more closely in coming decades. Nevertheless, this can still be expected to deliver an annual growth of military spending of between 6-12% during the coming decade or two, a rate of defence growth that is unlikely to be matched by any other major country in the Western Pacific.

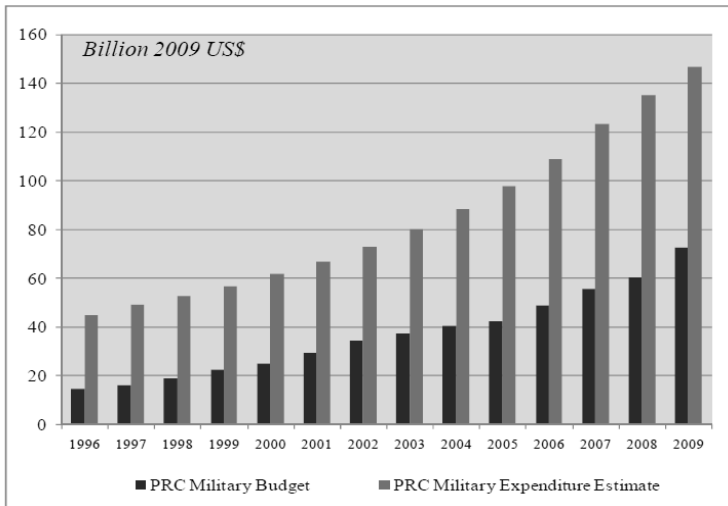


Figure 1: PRC Military Budget and Estimated Defence Expenditures, 1996-2009

Source: *Military and Security Developments Involving the People's Republic of China 2010* (A Report to Congress Pursuant to the National Defense Authorization Act for Fiscal Year 2010, Office of the Secretary of Defense, Washington DC, 2010.) p.42.

Western concerns about Chinese military developments do not spring only from the scale and pace of Chinese defence expenditure. At least as important is the nature of and clear intent behind the Chinese military expansion. High priority is being accorded to the development of the following ten key PLA capabilities:

1. Strategic Nuclear Forces

China's strategic nuclear forces are currently being modernised, expanded and made more mobile and survivable. The new DF-31 and DF-31A inter-continental ballistic missiles (ICBMs) have solid fuel motors and are carried on road-mobile transporters that can be shuffled through an extensive network of deep underground tunnels and associated alternative launch sites. Some credible reporting suggests that this deep tunnel road network already extends for some 5,000km.²⁵ There are also now two new Jin class nuclear-powered ballistic missile-firing submarines (SSBNs) each armed with 12 JL-2 strategic ballistic missiles (SLBMs).²⁶ This new strategic missile force supplements the older force of land-based, liquid-fuelled ballistic missiles (CSS-4s) and several types of intermediate and medium range ballistic missiles and bomber aircraft. At present the PLA has some 66 ICBMs deployed and some 24 SLBMs and these numbers are growing.²⁷

The modernisation and expansion of China's strategic nuclear forces appear designed to deter other nuclear powers, especially the United States, from nuclear escalation, to provide a clear risk threshold for any major conventional attacks on China and to limit the scope for other countries to coerce China in future crises. Figure 2 shows the range capabilities of the PLA's intercontinental and medium range ballistic missile forces.

²⁵ See, for example, L.C. Russell Hsiao "China's Underground 'Great Wall' and Nuclear Deterrence" *China Brief* (Volume 1X, Issue 25, 16 December 2009), pp.1-2.

²⁶ *The Military Balance 2010* (The International Institute for Strategic Studies and Routledge, London, February 2010), p.399.

²⁷ *Ibid.*

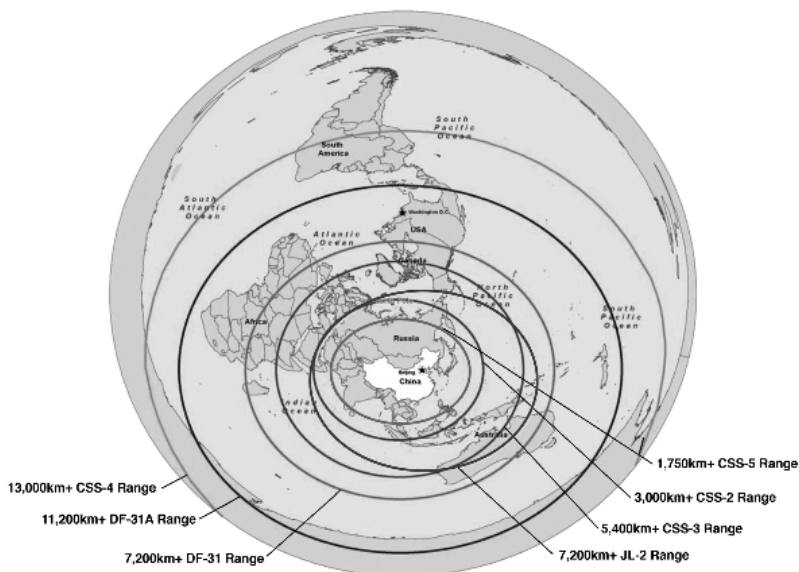


Figure 2: The Range Capabilities of China's Intercontinental and Medium Range Ballistic Missiles

Source: *Military and Security Developments Involving the People's Republic of China 2010* (A Report to Congress Pursuant to the National Defense Authorization Act for Fiscal Year 2010, Office of the Secretary of Defense, Washington DC, 2010.) p.35.

2. Wide-Area Surveillance and Targeting

During the last 15 years the PLA has invested heavily in a range of overlapping systems that are designed to provide the high command with a clear picture of what is happening in the maritime approaches to China. The intent is to make this environment as transparent as possible so that adversary aircraft, surface vessels and submarines can be detected and tracked in real-time and, if required, can be targeted for precision attack.

Some of the elements of this complex surveillance network are the satellite systems China has deployed to provide optical, multi-spectral and radar imagery, electronic and signals intelligence and navigation, communications and

weather services.²⁸ Indeed some analysts have reported that China is currently developing as many as 15 different types of satellites for these purposes.²⁹

These space-based systems are reinforced by several long-range land-based surveillance networks. In recent years the PLA has deployed a network of high-frequency over-the-horizon backscatter radars not unlike Australia's Jindalee Over-the-Horizon Radar Network (JORN). These radars can typically monitor air and surface targets out some 1,600 nautical miles or more.³⁰

These systems are reinforced by a network of medium-range surface-wave radars and a sophisticated system of ground-based electronic emissions monitoring. In addition the PLA is starting to deploy high-altitude, long-endurance (HALE) intelligence, surveillance and reconnaissance uninhabited aerial vehicles (UAVs). These systems have the capability to fly for over 24 hours at very high altitude monitoring air and surface movements over very long ranges – not unlike non-orbiting terrestrial satellites.³¹

China has also been active in recent years in instrumenting the underwater environment in the Western Pacific. Undersea arrays of various types are reported to have been deployed, particularly in parts of the East China and South China Seas.³² These have the potential to detect and track many submarine and surface movements.

When the digital data streams from these multiple long-range surveillance sensors are fused and displayed through the increasingly sophisticated and well protected Chinese command and control system, a detailed and reasonably

²⁸ Jan van Tol *AirSea Battle: A Point of Departure Operational Concept* (Center for Strategic and Budgetary Assessments, Washington DC, 2010), pp.18-20.

²⁹ Andrew Krepinevich *Why AirSea Battle?* (Center for Strategic and Budgetary Assessments, Washington DC, 2010) p.20.

³⁰ *Ibid.* pp.19-20.

³¹ Jan van Tol *op.cit.* pp.33-34, and also *Military Power of the People's Republic of China 2009, op.cit.*p.23.

³² Jan van Tol *op.cit.* pp.26.

accurate picture of air, surface and sub-surface movements in the Western Pacific should be available. For instance, aircraft carrier strike groups should be visible to several different categories of sensor. Even advanced Western stealth aircraft, such as the B-2 *Spirit*, should also be vulnerable to some categories of PLA system detection and tracking. The primary consequence is that the Western Pacific theatre can no longer be assumed to be a secure operating environment even for very advanced Western air, surface and sub-surface forces. Aircraft, ships and aircraft operating in much of this theatre will in many circumstances be detected, tracked and potentially also targeted.

3. New Medium-Range Ballistic and Cruise Missiles

The next priority PLA capability is the rapidly growing force of cruise and ballistic missiles that is being fielded with the capability to strike targets out to 3,000km whether they are fixed bases or mobile forces at sea.

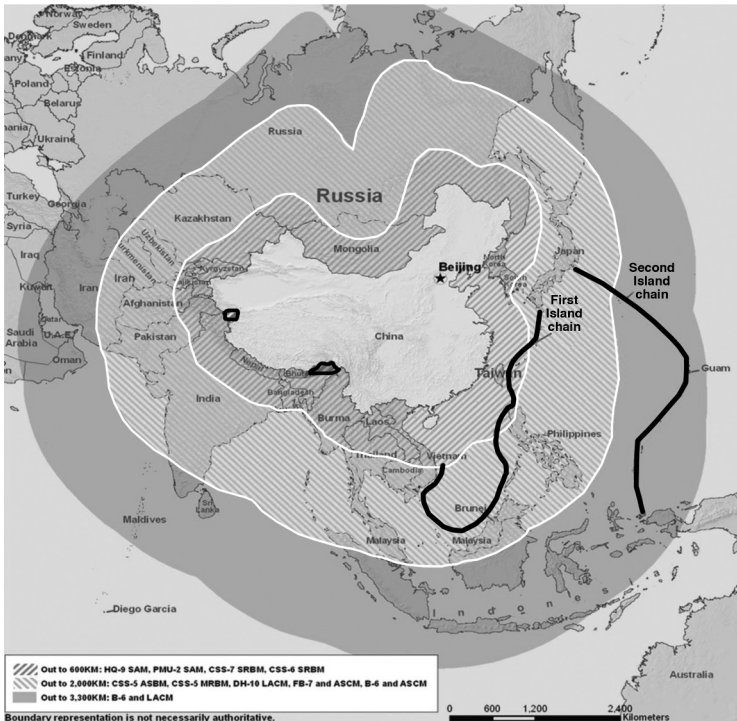


Figure 3: Range Capabilities of Primary PLA Land-Based Anti-Access Ballistic and Cruise Missile Systems (Not included are ranges for PLA surface and sub-surface-based weapons systems)

Source: *Military and Security Developments Involving the People's Republic of China 2010* (A Report to Congress Pursuant to the National Defense Authorization Act for Fiscal Year 2010, Office of the Secretary of Defense, Washington DC, 2010.) p.32.

The PLA is developing and deploying several types of air and land-launched long range cruise missiles. These are designed to strike land-based targets such as bases and logistic supply facilities. Several hundred of these systems are reportedly already deployed.³³

In addition to these capabilities the PLA has deployed several classes of ballistic missiles that are capable of delivering different types of warheads to a range of 3,000km with precision accuracy. Figure 3 displays those areas that fall within range of the PLA's land-based medium range ballistic and cruise missile systems. These systems provide a strong capability to strike United States and allied bases in the region with very little warning, potentially destroying most forward-based allied military capabilities in the first few hours of any conflict. A notable feature of Figure 3 is that all of the so-called Second Island Chain in the Western Pacific, including the critical United States base facilities at Guam, fall within range of one or more of these systems.

One particularly interesting Chinese priority has been the development and deployment of a modified medium-range ballistic missile, the DF-21, capable of striking highly manoeuvrable aircraft carriers and other ships.³⁴ Chinese literature describes how ships at sea can be tracked by the PLA's wide-area surveillance systems which can provide coordinates to guide DF-21 missiles into the immediate vicinity of targeted vessels. Figure 4 illustrates the flight sequence of this missile system. Following atmospheric re-entry, the missiles' own active and passive radar systems identify the ships and manoeuvre the re-entry vehicles (carrying warheads) to score direct hits on the selected targets. Several different types of warheads have reportedly been tested with this system including submunition flechettes and electromagnetic pulse generators designed to disable naval

³³ For a summary of these missile capabilities see: *Military and Security Developments Involving the People's Republic of China 2010 op cit.* p.31.

³⁴ For details see: *Military Power of the People's Republic of China 2009, op.cit.* pp.20-21.

radars and communications systems.³⁵ This ballistic missile system is unique and, in the event of a crisis, would pose a serious threat to high-value allied shipping in the Western Pacific.³⁶

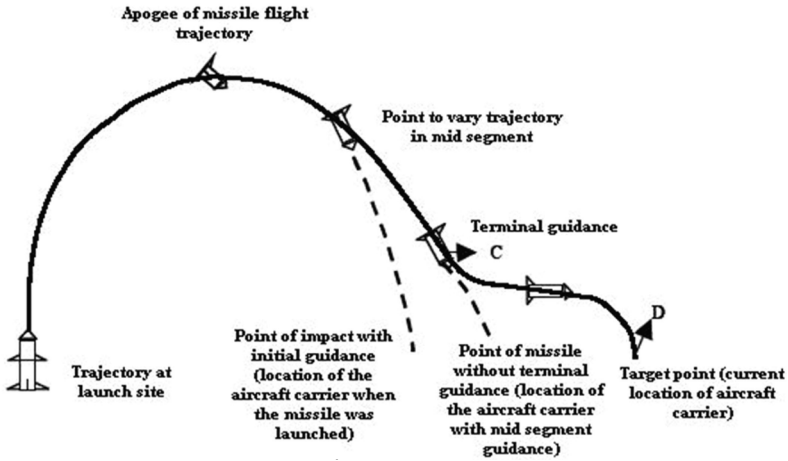


Figure 4: Schematic Diagram of DF-21 Missile Flight Trajectory with Terminal Guidance

Source: *Military Power of the People's Republic of China 2009* (A report to Congress pursuant to the National Defense Authorization Act, Fiscal Year 2000, Office of the Secretary of Defense, Washington DC, 2009), p.21.

4. A Larger Modern Submarine Force

The land and air launched forces described above are now backed by a rapidly growing and modern submarine force.

Until the 1990s China's submarine force possessed only modest capabilities. However, during the last fifteen years the PLA has invested in 12 Russian-built Kilo class boats equipped with impressive wake-homing and wire-guided torpedoes and also supersonic stealthy cruise missiles against

³⁵ Andrew Krepinevich *Why AirSea Battle?* *op.cit.* p.19.

³⁶ The US Department of Defense believes that this system achieved initial operational capability late in 2010. See: Kathryn Hille "Chinese Missile Shifts Power in Pacific" *Financial Times* (28 December 2010).

which defence is exceptionally difficult.³⁷ In addition the PLA has been building new classes of both conventionally and nuclear powered submarines that are equipped with similarly impressive weaponry.³⁸ Between 1995 and 2007, the PLA Navy (or PLAN) introduced no fewer than 38 new submarines into service.³⁹ The PLAN is currently developing or fielding at least five new classes of submarines.⁴⁰ If the PLAN's submarine programs continue at their current pace, China's submarine force is likely to number between 85 and 100 boats in 2030.

This larger and much more modern Chinese submarine force is far removed from the limited 'mobile minefield' capability provided by the Romeo and Ming class boats in the 1970s and 1980s. The submarine force now being deployed by the PLAN poses a serious threat to allied naval forces and coastal assets not only within the second island chain in the Western Pacific but also to maritime areas, especially straits and choke points, in more distant regions.

5. A Stronger Surface Combatant Force

Another area in which the PLA has long had relatively modest capabilities is naval surface combatants. However, again, substantial programs are underway to remedy this deficiency. During the last ten years the PLAN has deployed no less than ten new classes of ships.⁴¹ Perhaps the most powerful are the four *Sovremennyy II* Class guided missile destroyers purchased from Russia. Most of the new surface combatants feature wide-area aerospace surveillance and control capabilities, surface-to-air missile systems and long-

³⁷ The Military Balance 2010, *op.cit.*, p.401.

³⁸ For details see: *Military Power of the People's Republic of China 2009*, *op.cit.*, p. 49.

³⁹ Andrew Krepinevich *Why AirSea Battle?* *op.cit.* p.22.

⁴⁰ The Military Balance 2010, *op.cit.*, p.377.

⁴¹ *Military Power of the People's Republic of China 2009*, *op.cit.*, p.22.

range anti-ship missile capabilities and are now comparable to modern Western warships.⁴²

China also has an active aircraft carrier research and design program with senior spokesmen indicating a strong interest in introducing aircraft carriers to the PLAN. China is currently upgrading the Soviet-era *Kuznetsov* Class aircraft carrier in a Dalian shipyard and discussions have been initiated with the Russians concerning the possible purchase of Su-33 carrier-borne fighter-bomber aircraft. Domestic production of a class of aircraft carriers is probable, but the speed and scale of such a program remains unclear.⁴³ Up to three PLAN aircraft carriers may be at sea by 2030.

6. A New Generation of Advanced Fighter-Bombers

China's modern fighter-bomber force has also been expanding rapidly in recent years with some 500 fourth-generation aircraft likely to be fielded by 2012. The Chinese aviation strike force includes K-6K naval aircraft equipped with supersonic anti-ship cruise missiles supported by large numbers of Su-30 and Su-27 air superiority fighters.⁴⁴

The H-6Ks can strike targets out to 1,600 nautical mile range and, if the Su-30s can be refuelled once in flight, they can operate in support of the H6-Ks out to almost their full radius of action. In other words, this combination of aircraft has the potential to strike so far out into the Pacific that they could attack United States aircraft carriers before they could approach within range of targets on the Chinese mainland.⁴⁵

⁴² For a brief summary of the PLAN surface combatant program see: *Military and Security Developments Involving the People's Republic of China 2010 op cit.* p.3.

⁴³ For a concise summary of PLAN aircraft carrier development see: *Military Power of the People's Republic of China 2009, op.cit.* p.40

⁴⁴ *Ibid.* pp.22-23.and also *Military and Security Developments Involving the People's Republic of China 2010 op cit.* p.3-4.

⁴⁵ See this argument made in greater detail in: Jan van Tol *op.cit.* pp.18-20,25,35-36,67.

These modern air combat capabilities, when operating within China's wide-area surveillance system and supported by Hu-6U and Il-76MCK tanker aircraft and A-50 airborne early warning and control aircraft, would pose a serious threat to allied maritime and air forces anywhere west of the Second Island Chain, illustrated in Figure 3.

7. Modernised Air Defences

Pre-emptive or counter-strikes against Chinese bases and other high-priority targets on the Chinese mainland are becoming more difficult to contemplate because of the rapid development and modernisation of China's air defences and the sophistication and scale of China's hardening and protective measures.

Chinese surveillance systems and surface-to-air missile systems now form a dense network along most of the eastern coast and in the vicinity of high priority facilities inland. Many of these missile systems are relatively modern and they include the impressive Russian-built S-300PMU2 which has a range approaching 200km.⁴⁶

Considerable efforts are being expended to harden and strengthen the surveillance systems, the communications links, the command and control nodes and the surface-to-air weapons systems within this air defence network. Most elements are connected to a stand-alone fibre-optic communications network and many are physically hidden, buried or hardened in other ways.⁴⁷ In combination this increasingly modern and extensive air defence system would pose a major challenge to Western forces operating in this theatre.

⁴⁶ For details see: *Military Power of the People's Republic of China 2009*, *op.cit*, p.50. and *Military and Security Developments Involving the People's Republic of China 2010 op cit*. p. 4.

⁴⁷ For details see: *Military Power of the People's Republic of China 2009*, *op.cit*,p.26 and Jan van Tol *op.cit*. p.34.

8. Growing Capabilities for Space Warfare

PLA strategists make clear that the Chinese high command recognises the heavy Western dependence on space-based systems for wide-area surveillance, command, control and communications, navigation, precision guidance and many other things besides. The Chinese see this as a major Western vulnerability and, in consequence, their writings and investment programs indicate that high priority is being placed on destroying, damaging and interfering with these space-based systems.⁴⁸

Part of this effort was demonstrated by the January 2007 interception and destruction of an inoperative weather satellite in low earth orbit. The PLA is also reported to have developed ground-based laser anti-satellite systems that can 'dazzle' and otherwise interfere with United States and other Western spacecraft.⁴⁹ Other Chinese anti-satellite programs are believed to be underway and by 2030 the PLA will probably have the capability to attack spacecraft in all normally-employed orbits.

9. Strong Cyber Capabilities

The 'Western way of warfare' depends heavily for its strength on the secure close-to-real-time transmission, interpretation and display of vast streams of digital data sourced from numerous sensors and systems. The Chinese realise that if, in a crisis, they can cut or severely cripple these information flows, the effect would be analogous to cutting Samson's hair. The Western military machine would lose much of its strength and rapidly become very vulnerable.

Western intelligence agencies believe that this allied vulnerability is a prime driver of the large and energetic Chinese investment in cyber warfare. Several Western countries have reported extensive Chinese probing,

⁴⁸ *Military Power of the People's Republic of China 2009, op.cit.* pp.13-14.

⁴⁹ *Military Power of the People's Republic of China 2009, op.cit.* p.14, *Military and Security Developments Involving the People's Republic of China 2010 op cit.* p.25 and Andrew Krepinevich *Why AirSea Battle? op.cit.* p. 15.

intelligence gathering and various forms of attacks on a wide range of information and computer networks.⁵⁰ Since 2005, the PLA has routinely built offensive cyber operations into its major exercises. Then in early 2010, President Hu Jintao announced that investment in cyber warfare would be a high priority during the 2011-2015 Five Year Plan.⁵¹

Lt. Col. Timothy Thomas and Jan Van Tol have written that China is well on the way to developing computer network operations capabilities to conduct the following primary categories of operation:

- Securing peacetime access, reconnaissance and exploitation of enemy networks;
- Implanting trap-doors, Trojan Horses, or logic bombs that could be activated in the event of war;
- Executing pre-emptive cyber attacks aimed at corrupting enemy information systems, communications and databases;
- Introducing false data into information networks as part of broader deception operations; and
- Otherwise disrupting the effective use of information systems and networks by the enemy.⁵²

Van Tol suggests that “combat” in the cyber domain has the potential to become the future equivalent of the effort during the Second World War to break enemy codes and protect one’s own.⁵³ In the Western Pacific theatre it may well prove to be decisive and this is a struggle that PLA is striving hard to win.

⁵⁰ *Military Power of the People’s Republic of China 2009, op.cit.* pp..52-53.

⁵¹ It is worth noting in this context that in July 2010 the PLA unveiled China’s first ‘cyber base’, which appears to draw together components of computer network operations and information warfare capabilities that were previously being managed by different PLA departments. For details see: Russell Hsiao ‘China’s Cyber Command?’ *China Brief*, July 2010. For President Hu’s announcement, please see: Jan van Tol *op.cit.* p.27.

⁵² See: Lieutenant Colonel Timothy L. Thomas, US Army (retired), “China’s Electronic Long-Range Reconnaissance”, *Military Review*, November-December 2008 and Jan van Tol *op.cit.*p.28.

⁵³ *Ibid*, p. 28.

10. Hardened and Protected Command and Control

In building a strong and resilient command and control system for the Western Pacific, China has some major advantages. It occupies a continental landmass located within the theatre giving it the option of building a highly sophisticated and hardened network that makes extensive use of dedicated fibre-optic cables, deep tunnel networks and other hardened land-based systems. The PLA still has some dependence on space-based and maritime communication systems but China is in a strong position to maintain command and control functionality even while under severe attack.⁵⁴

The United States and its Western allies, by contrast, operate in this theatre either on relatively confined islands or in a mobile mode at sea, in the air, or in space. Western command and control systems are, in consequence, much more dependent upon space-based communications and long-range sea-bed cables, etc. As such, they are more expensive, potentially more vulnerable and less resilient.

The development of China's command and control systems indicates that they are not being designed and built just for peacetime operations. Substantial investments are clearly being made to ensure that these critical functions are not only efficient and effective but also very durable and resilient in the event of conflict.

CHINA'S CONCEPT FOR ANTI-ACCESS AREA DENIAL OPERATIONS

Western defence analysts have a strong interest in understanding the goals that are driving this sustained program of Chinese defence investment. Amongst the many factors at play are:

- The political leadership has a strong interest in keeping the senior commanders of the PLA satisfied with the leadership of the Communist Party.

⁵⁴ *Military Power of the People's Republic of China 2009, op.cit.* p. 26 and also: Jan van Tol *op.cit.* pp.33-34.

- The country's economic success is providing the opportunity for military expenditure on a large scale.
- China's future prosperity and security is increasingly reliant on the uninterrupted flow of energy, raw materials and manufactured goods, most of which are transported from distant locations by sea.
- The sense that China's future security requires a strong capability to deter potentially hostile major powers interfering in China's primary strategic interests, including Taiwan and China's maritime surroundings.
- The ambition of restoring China's status as a great power and, indeed, as a great civilisation.

There are on-going debates in China about the concepts that should provide the foundations for PLA development. There has been a substantial shift since the 1970s and 80s when the primary focus was on defending the country by fighting a major land war – a so-called “people's war under modern conditions.” China's 2006 Defence White Paper, for instance, stated that “security issues related to energy, resources, finance, information and international shipping routes are mounting.”⁵⁵ The 2008 Defence White Paper says that “struggles for strategic resources, strategic locations and strategic dominance have intensified.”⁵⁶ President Hu Jintao has also openly described China as a “sea power” and advocated a “powerful people's navy.”⁵⁷

Some Chinese analysts have discussed a concept of “Offensive Active Defence” and more recently the predominant approach has been labelled “Far Sea Defence.”⁵⁸ These concepts signal that the Chinese leadership sees the country's strategic interests extending far beyond its immediate maritime approaches. In accord with this thinking, more and larger PLA elements have been committed to distant peacekeeping and

⁵⁵ *Military Power of the People's Republic of China 2009, op.cit. p.17.*

⁵⁶ *Ibid.*

⁵⁷ *Ibid.*

⁵⁸ *Ibid. p.18.*

other missions in recent years. The PLAN has, for instance, deployed a naval task group for extended periods into the Western Indian Ocean on counter-piracy operations.

The primary focus of Far Sea Defence is, however, a layered, multi-dimensional defence against foreign forces operating in the Western Pacific. This concept envisages the capability to detect, track and target hostile forces well out into the Pacific and the ability to strike these forces by multiple means and with little notice. The PLA believes that it already possesses a strong capability to conduct such operations out to the first island chain and that it is currently strengthening its capabilities to strike to the second island chain and beyond.⁵⁹

There are indications that PLA strategy for such operations springs, in part, from the Taiwan Strait crisis of 1996. In March of that year, following a series of intimidating PLA actions, including the firing of several ballistic missiles across Taiwan into the ocean beyond, the United States deployed two aircraft carrier battle groups into the theatre to signal clearly that Washington was prepared to act to restore the regional military balance. Shortly after those events the development of the PLA's anti-access area-denial capabilities accelerated.

The Chinese literature rarely mentions the concept of anti-access area denial but it often features another term; *offshore defence*. This is a term that is used very flexibly to describe a wide range of offensive and defensive actions both within the second island chain and further afield.

Another strategic concept of potential relevance with strong roots in Chinese history is *shashoujian* or 'assassin's mace.' The *shashoujian* were short hand maces that could be hidden readily within the folds of ancient Chinese clothing and swung into action to take an enemy by surprise, crush an enemy's skull or assassinate an important leader.⁶⁰ The use of

⁵⁹ *Military and Security Developments Involving the People's Republic of China 2010 op cit.* pp.22-23 and *Military Power of the People's Republic of China 2009, op.cit.* pp.20-24.

⁶⁰ Jason E. Bruzdinski "Demystifying *Shashoujian*: China's 'Assassin's Mace' Concept" at:

this term in modern Chinese thinking indicates an interest in using surprise to strike in an asymmetric manner to cripple or disable a superior enemy at the very beginning of a struggle.

When one considers both the pattern and scale of Chinese military development during the last 20 years and the primary themes in Chinese strategic debates, the general structure and broad sequence of China's campaign strategy for the Western Pacific can be discerned. It would appear that the primary elements of the PLA strategy for major war are:

- To blind United States' and allied surveillance and reconnaissance systems and destroy or seriously disrupt allied command, control and communications systems. This would entail heavy cyber and electronic warfare attacks, multiple attacks on US and allied satellite systems and their supporting terrestrial infrastructures and the destruction or the serious disruption of undersea cable and other communications networks. As van Tol has indicated, the intent appears to be to render the US and its allies deaf, blind and dumb from the outset.⁶¹
- To launch large-scale pre-emptive attacks to inflict severe damage on United States, Japanese and other forward-deployed allied forces and their bases. These attacks would primarily comprise ballistic and cruise missile strikes, air attacks and some special force raids against key air, naval and logistic bases and command and control installations. Key targets would include the priority military and logistic support facilities on Guam, the Japanese islands and possibly some support assets in Singapore and Australia. The PLA's strategy would be to pre-emptively destroy the United States' and allies' primary military capabilities in the Western Pacific and then deliver periodic follow-

http://mitre.org/work/best_papers/best_papers_04/bruzdzinski_demystify/brudzinski.pdf 2007.

⁶¹ Jan van Tol *op. cit.* pp.20-21.

up attacks so as to prevent facility or force restitution.⁶²

- At about the same time as the above strikes on land-based targets the PLA would also launch multiple strikes on the major naval vessels in this theatre via long range ballistic missile and cruise missile strikes, submarine attacks and stand-off air strikes. The PLA would aim to sanitise the waters inside the second island chain of major allied forces and place at risk many combatants well beyond this zone.⁶³
- Selected PLA units would aim to operate out at much longer range to attack follow-on forces in Hawaii, Alaska, on the US West Coast and also in base and staging facilities in Singapore, Australia and Diego Garcia. Submarine, mining and some special force operations can be anticipated to destroy, damage or disrupt these follow-on forces in or close to their bases, or as they transit straits and other choke points. As well as delaying or preventing a meaningful military response, such long-range operations by the PLA would force the allies to divert substantial resources to the protection of military and civil shipping and other assets over many thousands of kilometres.⁶⁴

Once these goals have been achieved, the PLA's strategy appears to assume that the United States and its Western allies would be confronted by the prospect of a stark defeat, and they would be forced to negotiate a regional withdrawal and accommodation with Beijing. As Jan van Tol rightly notes, this strategic concept bears an uncanny resemblance to the Japanese Imperial Forces strategy in 1941-42.⁶⁵ It appears to carry over many of the strengths, but also many of the weaknesses, of that campaign into a very different era.

⁶² Andrew Krepinevich *op.cit.* pp15-23.

⁶³ *Ibid.*

⁶⁴ Jan van Tol *op. cit.* pp.20-21.

⁶⁵ *Ibid.* p.21. See also: Andrew Krepinevich *op.cit.* p.25.

TRENDS IN CHINESE STRATEGIC BEHAVIOUR

There is another factor of some importance that needs to be weighed in assessing the strategic trajectory of China. This is the pattern of Chinese international behaviour in recent years. This is a major subject deserving thorough analysis in its own right. However, for the purposes of this study, brief mention of some specific instances and fields of recent Chinese behaviour will suffice.

- First, as already noted in this report, Chinese cyber operations have grown substantially in recent years and many have been conducted very aggressively. Some analysts believe that there are tens of thousands, if not hundreds of thousands, of Chinese-based cyber attacks every day. There is a consensus amongst the Western allies that these energetic Chinese cyber operations are a significant security challenge.⁶⁶
- Chinese behaviour in the South China Sea has toughened markedly during the last three years. In the early 1990s, when it became clear that China's claim to almost all of the South China Sea overlapped with claims by several ASEAN countries, China offered to shelve its territorial claims and pursue cooperative initiatives in the area. However, during 2009-2010 China's language and both civil and military activity became markedly more assertive. Senior Chinese leaders for the first time described China's interests in the South China Sea as "core", effectively placing them in the same category as China's interests in Tibet and Taiwan. Other countries have been warned not to interfere in the South China Sea.⁶⁷

⁶⁶ *Military Power of the People's Republic of China 2009, op.cit. pp.52-53.*

⁶⁷ For an excellent discussion of Chinese actions on South China Sea issues in recent years see: Mingjiang Li "China's Changing Approach to the South China Sea Dispute" *Security Challenges* (Vol.6, No.2, Winter 2010), pp. 61-83.

- In March 2009 a United States Navy surveillance ship, the *USS Impeccable* was patrolling in international waters in the South China Sea some 75 nautical miles off the coast of Hainan when it was harassed for several days by PLAN ships and aircraft in a most aggressive manner.⁶⁸ Then in June 2009, during a multinational exercise off the west coast of the Philippines, the sonar array being towed by a US Navy destroyer, the *USS McCain*, was snagged by a closely following Chinese submarine.⁶⁹
- In July 2010 United States and South Korean forces planned a combined maritime exercise in the Yellow Sea, West of the Korean Peninsula, in order to demonstrate alliance solidarity following the North Korean sinking of the South Korean frigate *Cheonan*. However Chinese officials protested strongly about the conduct of this exercise, involving the aircraft carrier *USS George Washington*, so close to China's coast.⁷⁰ Despite the fact that waters beyond the 12 nautical mile limit in the Yellow Sea are international waters under the 1982 UN Convention on the Law of the Sea, Chinese commentators argued that the Yellow Sea was "a boundary marker" and that US and allied forces should not enter. Somewhat surprisingly, the United States acceded to this pressure and rescheduled the exercise further East in the Sea of Japan. A much smaller United States – South Korean naval exercise was subsequently conducted in the Yellow Sea during September 2010. Then in late November 2010, following North Korean shelling of the South Korean island of Yeonpyeong, the *USS George Washington* strike group conducted a

⁶⁸ For an account of these events see: Carlyle A. Thayer "The United States and Chinese Assertiveness in the South China Sea" *Security Challenges* (Vol.6, No.2, Winter 2010),pp.74-75.

⁶⁹ *Ibid.*

⁷⁰ Brian Spegele "China Edict May Leave U.S. Navy Blue" *The Australian* (20 July, 2010), p.10.

combined exercise with South Korean naval units in the south-eastern end of the Yellow Sea.

- In September 2010, following the interception of a Chinese fishing vessel and the arrest of its crew by a Japanese Coastguard ship in disputed waters in the East China Sea, the Chinese Government not only protested very strongly but warned Tokyo to “brace for severe consequences”. Beijing then appears to have taken steps to suspend all exports of rare earths. China currently produces over 90% of the world’s rare earths and they are important for the production of many advanced electronic systems, including radars, wind turbines and advanced computer and communications systems.⁷¹
- Chinese intelligence operations designed to infiltrate allied security organisations and to steal technologies from companies and research organisations in Western countries have grown substantially in recent years and also become more vigorous.⁷²
- Finally, there have been several instances during the last two years when the Chinese Government has displayed very assertive international behaviour in its political dealings. Numerous incidents could be mentioned but perhaps the most notable was the deeply discourteous behaviour of the Chinese delegation towards the United States President, Barak Obama, at the Climate Change Conference in Copenhagen in December 2009.⁷³

⁷¹ Mure Dickie “Japan Reacts over Rare Earths Ban” *Financial Times* 28 September 2010 and also Leslie Hook and Mure Dickie “China Defends Policy on Rare Earths” *Financial Times* 20 October 2010.

⁷² *Military and Security Developments Involving the People’s Republic of China 2010 op cit.* pp.45-46 and *Military Power of the People’s Republic of China 2009, op.cit.* pp.37-38.

⁷³ See, for example: Peter Maer “Impromptu Moments Shaped Copenhagen Accord” (CBS news.com, 20 December 2009), accessible at: <http://www.cbsnews.com/stories/2009/12/20/politics/main6000506.shtml>
Also see: Mark Lynas “How Do I Know China Wrecked the Copenhagen Deal? I Was in the Room” (guardian.co.uk, 22 December 2009),

The essential point being made here is that when Western strategic analysts attempt to look forward to 2030-2040 they need to consider not only China's likely political, economic and military strength and its military force structure and capabilities. Nor is it enough to consider the rapid growth of military capabilities and their apparent pre-emptive strategic purpose. There is also a need to weigh the notable toughening of Chinese attitudes and actions in recent years and the implications for future Chinese behaviour.

ASSESSING PLA CAPABILITIES IN 2030-2040

Whilst there remain significant uncertainties about PLA military capabilities, strategies and operational intentions and how they will develop over the next 20-30 years, Western defence planners have no choice but to make prudent judgements now about what should be expected in that timeframe. This is essential so that sensible judgements can be made soon concerning future allied strategy and those allied defence and broader national security capabilities that should receive priority investment.

What are likely to be the primary features of the PLA in 2030-2040?

- The Chinese economy will probably be the largest in the world in this timeframe and Chinese defence expenditures will likely match or exceed those of the United States. Moreover, even though Beijing will likely have broadened its strategic interests to include some concerns in distant theatres, China's defence investments will probably continue to be focused heavily in the Western Pacific where it will be seen as the dominant military power.
- The PLA's strategic nuclear forces will have expanded substantially by 2030, probably to 2-3 times their

accessible at:
<http://www.guardian.co.uk/environment/2009/dec/22/copenhagen-climate-change-mark-lynas/>

current size and new generations of both land mobile and sea-based ballistic missiles will be deployed. The land-based missile forces will likely operate within an extended network of deep tunnels, many of which are already operational. This larger and more sophisticated missile force will be broadly comparable to the greatly reduced United States and Russian strategic nuclear arsenals of the time and provide an effective deterrent against strategic nuclear attack.

- By 2030 most of the space, land-based and maritime wide-area sensor systems deployed by China will have been further upgraded. Particularly strong progress is likely in surveillance of the air, surface and sub-surface areas of the Western Pacific. Sub-surface 'en-sensoring' efforts will most likely receive attention primarily within the first and second island chains.⁷⁴ There will, however, be some increased interest in surveillance and reconnaissance of distant regions, particularly in the Indian Ocean and the Eastern Pacific. All of these upgraded sensor systems will be better integrated resulting in a significantly improved operational picture being provided to senior commanders.
- The PLA will also be fielding a new generation of medium-range ballistic and cruise missiles.⁷⁵ These newer systems will likely possess longer range capabilities, more stealthy characteristics, greater in-flight manoeuvrability, as well as features to defeat missile defences, greater accuracy and a broader range of warhead options. These systems will have the potential to deliver a disarming first strike against allied forces in all parts of the Western Pacific, including in areas beyond the Second Island Chain.

⁷⁴ These capabilities are discussed in Jan van Tol *op. cit.* pp.25-26,

⁷⁵ For a discussion of current and anticipated PLA developments in this field see: *Military and Security Developments Involving the People's Republic of China 2010 op cit.*, pp.29-34.

- There is also a possibility that by 2030 China might be fielding a much longer range, highly accurate conventionally armed ballistic missile force – effectively a ‘prompt regional or global strike’ force. A force of this type would threaten distant United States and allied targets with very short flight-time conventional strikes. China already possesses all of the technologies required to build such a force.
- China’s submarine force will continue to grow with new classes of both nuclear and conventionally-powered boats in production by 2030.⁷⁶ The newer boats will carry a range of new and upgraded torpedoes, missiles, mines and other weaponry. The professionalism of the PLAN crews can also be expected to improve.
- By 2030 China will probably have been producing new fifth generation combat aircraft for 5-10 years. These fighter-bomber aircraft – led by the J-20 which is being flight tested early in 2011⁷⁷ - will possess capabilities broadly similar to the United States F-22 and F-35. Hence, in the 2030 timeframe, China’s fighter-bomber force might comprise something like 800 fourth generation aircraft and possibly some 50-150 fifth generation aircraft.⁷⁸ These systems, operating within China’s upgraded wide-area Western Pacific sensor network, will pose a far more difficult challenge for

⁷⁶ There is considerable uncertainty concerning the size of the PLA submarine force in the 2030 timeframe. The rate of submarine production is currently high but the eventual size of the force remains the subject of debate, including within the PLA itself. Several aspects are discussed in: *Military Power of the People’s Republic of China 2009 op cit*, pp. 21-22, 48-49. See also: *Military and Security Developments Involving the People’s Republic of China 2010 op cit*, p.10.

⁷⁷ See Jeremy Page “Photographs Reveal Secret J-20 Chinese Stealth Fighter” *The Wall Street Journal* (5 January 2011). Accessible at <http://theaustralian.com.au/business/news/photographs-reveal-secret-j-20-chinese...>

⁷⁸ For discussion of the developing combat capabilities of the PLA Air Force see: *Military and Security Developments Involving the People’s Republic of China 2010 op cit*, p.3-4 and Jan van Tol, *op cit*, p. 20.

allied forces seeking to operate within the second island chain.

- The PLAN's surface combatant force will also be greatly modernised, larger and more formidable. At this stage it is not clear whether the emphasis in Chinese naval ship building during the next 20 years will be in general-purpose destroyer and frigate classes or whether China will decide to invest heavily in aircraft carrier battle groups, capable of conducting semi-self-contained combat operations into distant theatres. If it chooses the latter path up to three aircraft carriers could be in service by 2030.
- China's air defences in 2030 are also likely to be further modernised, better integrated, and more deeply hardened. By 2030 China will probably be manufacturing very advanced long range SAMS with little, if any, external assistance.
- By 2030 China's anti-satellite capabilities will have been further developed and it is likely that there will be at least one Chinese missile interception of a satellite in a distant geo-synchronous orbit. Laser and other anti-satellite systems will also probably reach a higher level of maturity.
- By 2030 China's cyber and information warfare capabilities may be world-leading. This will be a reflection of the scale of the financial and human commitment to cyber programs, the quality and depth of engineering expertise committed to the effort and high-level strategic recognition of the importance of winning an advantage in this domain.⁷⁹
- Perhaps the most difficult element of Chinese development to assess twenty years hence is the

⁷⁹ For details see: *Military Power of the People's Republic of China 2009 op cit*, pp. 26-27; *Military and Security Developments Involving the People's Republic of China 2010 op cit*, p. 7 and Andrew Krepinevich *Why AirSea Battle?* (Center for Strategic and Budgetary Assessments, Washington DC, 2010) p16.

nature of Beijing's behaviour in that timeframe. It is possible that China's international behaviour may moderate as the Chinese leadership and the population at large start to feel that the country is being returned to its rightful international status. On the other hand, there is also a possibility that the achievement of clear economic and military predominance in the Western Pacific might foster the adoption of harder stances on so-called "core" security issues and periodically trigger aggressive actions. Prudent Western security planning should take full account both possibilities.

Overall, then, by 2030 the PLA will probably pose a significantly stronger challenge to United States and allied forces in the Western Pacific. The Chinese are, however, most unlikely to try to match the Western allies in every type of military capability. They will rather continue to pursue a modified asymmetric strategy. They will likely seek to exploit perceived Western weaknesses in order to more effectively deny allied access to the Western Pacific, particularly within the Second Island Chain.

In efforts to protect energy, trade and other key interests in distant theatres, selected force projection capabilities will probably be strengthened over time so that Chinese forces can operate more frequently and for more extended periods far from the homeland. In consequence, selected surface combatants, submarines and probably some aircraft might be expected to deploy more frequently into the Indian Ocean, the Eastern Pacific and possibly elsewhere.

THE CAPABILITY OF THE UNITED STATES TO RESPOND CONVINCINGLY

China's rapidly expanding military capabilities are being introduced to the Western Pacific at a time when the United States is less than ideally placed to generate an effective counter. For Australia and the other Western Pacific allies of the United States, judgements about whether Washington will be able to respond convincingly and in a timely way to this strong and direct challenge are fundamental to security planning and priorities.

Why would the Western Pacific allies have reason to doubt the effectiveness of Washington's response on this occasion? After all, the United States has been sufficiently innovative and responsive to every conventional military threat since the Second World War. The reason why doubts are being raised is that the current situation looks different and, in many respects, more challenging than any other that has arisen to confront the United States during the last sixty years. The United States faces the following primary constraints.

First, the impact of the global financial crisis on the United States economy has been far deeper and potentially longer-lasting than many have hitherto assumed. American economic growth continues to be insipid, unemployment remains high (9.8% at the time of writing) and the US budget deficit is also very high and still climbing. The rise of government spending from 20% to 25%-26% of GDP on a sustained basis since the 1960s⁸⁰ is converting the United States economy into what the prominent Harvard economist, David Hale, describes as "...a version of a European welfare state."⁸¹ The expected gradual economic recovery will boost tax receipts and help to slow the structural deterioration but in order for the United States economy to be righted for the long term there is a need for serious and sustained cuts to government spending. There is little evidence that either the Administration or Congress is

⁸⁰ Paul Kelly "US Debt a Threat to Security" *The Weekend Australian* 17-18 July 2010, p. 13.

⁸¹ *Ibid.* p.13

willing to give deep and sustained budgetary cuts serious consideration. This outlook may, however, turn around relatively rapidly following policy changes triggered by the 2010 mid-term elections and the 2012 presidential elections.

The implications for allied security are profound. If the outlook for the United States is a crippled economy struggling to maintain momentum for the next decade or more, American capacities to maintain defence spending and generate an effective response to the Chinese challenge will be undermined. As David Hale argued recently:

“My message to all America’s allies is don’t count on US security guarantees beyond the year 2020. America’s fiscal situation is so bad that Congress focuses exclusively on domestic issues, not on America’s allies. I am not talking immediately but projecting out 10 years. Any sensible person looking at this country has to think there will be serious pressure on the US defense budget over this period. Even Hilary Clinton has hinted at these sorts of problems.

I think allies such as Australia will have to accept more responsibility for their own security or form new regional alliances to buttress their security.”⁸²

A closely-related problem concerns not the scale of United States debt, but the fact that a large proportion of this debt is held by the Chinese Government or commercial entities closely associated with the Chinese Government. Chinese Government spokesmen have stated on numerous occasions that they have no interest in exploiting this potential United States vulnerability.⁸³ Indeed, China has very strong commercial and broader economic interests in ensuring that the United States economy continues to thrive and absorb large numbers of Chinese products. Nevertheless, from the perspective of United States and allied security planners the

⁸² David Hale is quoted at length in Paul Kelly “US Debt a Threat to Security” *The Weekend Australian* 17-18 July 2010, p.13.

⁸³ See, for example, Aaron Back “China Says US Debt Not a Threat” *The Australian*, 9 July, 2010, p.23.

possibility that Beijing may be tempted to destabilise the American economy in a future crisis by manipulating this weakness should be deeply troubling.

A third constraint on decisive United States action in the Western Pacific is the country's distraction by both serious domestic problems and major international demands in other theatres. To the extent that Administration and Congressional leaders have time to focus on challenges beyond America's borders they are inclined to focus heavily on Afghanistan/Pakistan, Iran, Iraq, Israel, the Palestinians and the Middle East more generally and then the problems just across the southern borders of the United States, particularly in Mexico. Western Pacific security planners need to appreciate that Washington is distracted heavily by domestic demands and challenges in other parts of the world.

A fourth constraint is that the security analysts in the United States intelligence community, the Pentagon, the Department of State and a few think tanks that do appreciate the nature, scale and momentum of the challenge posed by the PLA's rapid expansion are in a distinct minority. Perhaps worse still, they face a major challenge in securing the full and serious attention of either the Administration or Congressional leaders. Put bluntly, beyond the core national security community there is not at present an overwhelming constituency in Washington for making the Chinese challenge a high priority, for triggering urgent reviews of current policies and plans and for taking decisive action to improve the situation. Moreover, even those United States Government agencies that recognise the need for significant change appreciate that funding constraints will limit severely the scope for strengthening defences in the Western Pacific, at least in the short to medium-term.

Finally, international commentators have noted a tendency for United States administrations to smooth the sharp edges of the relationship with China and to avoid strong and forceful actions to uphold key positions or principles in the international community. Perhaps this is a reflection of declining relative

economic power, or the deep bruising from the military campaigns in Iraq and Afghanistan, or a simple preference to focus on domestic concerns. However, there appears to be a pervading sense that in current circumstances Washington is much more interested in soft options rather than hard ones when it comes to the serious challenges posed by Iran, by North Korea, by other problems in the Middle East and certainly by the rapid rise of Chinese military power. The effect is to provide encouragement to opponents and rivals of the United States, to erode United States deterrence, and to force allies of the United States, even some of Washington's closest partners, to review the fundamental bases of their security.

In combination, these factors are resonating in the Western Pacific. Some United States' allies and other regional friends in this theatre are starting to feel uneasy. The long-held assumption of *Pax Americana* is starting to be discussed. Regional security planners are reluctantly asking whether the United States will rise to the challenge.⁸⁴ Generally in closed-door discussions, the credibility of the United States is being questioned and Washington's political capital is starting to erode.

UNITED STATES DEFENCE PLANNING FOR AN EFFECTIVE RESPONSE IN THE WESTERN PACIFIC

One agency of the United States Government that does clearly recognise the challenge posed by China is the Department of Defense. The Chief of Staff of the US Air Force, General Norton Schwartz and the US Navy's Chief of Operations, Admiral Gary Roughead reportedly signed a classified memorandum in September 2009 to jointly develop a new operational concept termed "Air-Sea Battle".⁸⁵ This

⁸⁴ See, for example, the views of Kishore Mahbubani in Evelyn Goh "What the Asian Debate about U.S. Hegemony Tells Us" (PacNet Report #39A, Pacific Forum CSIS, Honolulu, Tuesday, September 7, 2010)

⁸⁵ Christopher P. Cavas and Vago Muradian, "New Program Could Redefine AF-Navy Joint Ops", *Air Force Times*, 16 November 2009. Accessible at: http://www.airforcetimes.com/news/2009/11/airforce_navy_cooperation_111509w/

concept appears to be focussed on countering the growing anti-access, area denial capabilities of China and, to a lesser extent, those of Iran and North Korea.

Secretary of Defense, Robert Gates spoke about the importance of this new thinking when he addressed the Navy League Sea-Air-Space Exposition on 3 May 2010.

“Our Navy has to be designed for new challenges, new technologies and new missions – because another one of history’s hard lessons is that, when it comes to military capabilities, those who fail to adapt often fail to survive. In World War II, both the American and British navies were surprised by the speed with which naval airpower made battleships obsolete. Because of two decades of testing and operations, however, both were well prepared to shift to carrier operations. We have to consider whether a similar revolution at sea is underway today.

Potential adversaries are well-aware of our overwhelming conventional advantage – which is why, despite significant naval modernisation programs underway in some countries, no one intends to bankrupt themselves by challenging us to a shipbuilding competition akin to the Dreadnought race before World War I.

Instead, potential adversaries are investing in weapons designed to neutralise US advantages – to deny our military freedom of action while potentially threatening America’s primary means of projecting power: our bases, sea and air assets, and the networks that support them.....

At the higher end of the access-denial spectrum, the virtual monopoly the US has enjoyed with precision-guided weapons is eroding – especially with long-range, accurate anti-ship cruise and ballistic missiles that can potentially strike from over the horizon. This is a particular concern with aircraft carriers and other large, multi-billion-dollar blue-water surface combatants,

where, for example, a Ford-class carrier plus its full complement of the latest aircraft would represent potentially a \$15 to \$20 billion set of hardware at risk. The US will also face increasingly sophisticated underwater combat systems – including numbers of stealthy subs – all of which could end the operational sanctuary our Navy has enjoyed in the Western Pacific for the better part of six decades.

One part of the way ahead is through more innovative strategies and joint approaches. The agreement by the Navy and the Air Force to work together on an Air-Sea Battle concept is an encouraging development, which has the potential to do for America's military deterrent power at the beginning of the 21st century what Air-Land Battle did near the end of the 20th.

But we must also rethink what and how we buy – to shift investments towards systems that provide the ability to see and strike deep along the full spectrum of conflict. This means, among other things:

- Extending the range at which US naval forces can fight, refuel, and strike, with more resources devoted to long-range unmanned aircraft and intelligence, surveillance and reconnaissance capabilities.
- New sea-based defences.
- A submarine force with expanded roles that is prepared to conduct more missions deep inside an enemy's battle network. We will also have to increase submarine strike capability and look at smaller and unmanned underwater platforms.”⁸⁶

With Secretary Gates signalling that change is on the way for United States strategy, capabilities and posture in the

⁸⁶ See: Robert M. Gates, Remarks to the Navy League Sea-Air-Space Exposition, Gaylord Convention Center, National Harbor, Maryland, 3 May 2010 (Office of the Secretary of Defense (Public Affairs), US Department of Defense. Accessible at: <http://www.defense.gov/utility/printitem.aspx?print=http://www.defense.gov.speeches/speech.asp>.

Western Pacific the manner and effectiveness with which the Air-Sea Battle concept evolves will clearly be of critical importance.

So far there has been very little published by senior Defence officials about the Air-Sea Battle concept. The primary reason is, presumably, that a great deal of work is underway within the Pentagon and the theatre commands to determine the optimal mix of concepts and capabilities that should drive future United States planning and investments in forward theatres. However, some apparently well-informed discussion papers have been published in recent months that provide some insights into many of the key elements of the strategy that is likely to emerge. Foremost are the reports prepared in the Center for Strategic and Budgetary Assessments by Jan van Tol and Andrew Krepinevich.⁸⁷

The primary judgements in these reports are underpinned by several key assumptions:

- First, that the United States would not initiate hostilities in this theatre and so United States and allied postures need to be able to absorb a Chinese first strike with modest casualties and recover rapidly.
- Second, both sides would remain deterred from the use of nuclear weaponry, even during the course of an intense conventional military struggle.
- Third, advance warning of the conflict may be very limited. While strategic indicators of combat action may be apparent, China may be able to achieve tactical surprise.
- Fourth, both Japan and Australia would most probably actively support United States operations in the theatre. Both of these allies offer strategic depth, valuable basing and support facilities and also capable military forces.

⁸⁷ See Jan van Tol *op cit*, and also: Andrew F. Krepinevich "Why AirSea Battle?" *op.cit*.

- Fifth, neither Chinese nor United States territory would be accorded sanctuary status in any conflict. The nature of both side's key military assets means that each will see strong advantages in striking in depth.
- Sixth, space and the cyber domain would be fiercely contested and almost certainly play key roles in determining the outcome.
- Seventh, a prolonged conflict would most probably favour the United States and its allies. This is largely because during an extended struggle China could be denied most imported energy, raw material and manufactured good supplies. It would be virtually impossible for similar constraints to be applied against the United States and most members of the Western alliance. However, serious disruptions of supplies to Western Pacific allies would be likely.⁸⁸

Given these assumptions, the primary elements of an allied Air-Sea campaign in the Western Pacific discussed in the preliminary, publicly available reports can be summarised, as follows:

1. Blind the Opponent

An early priority for the United States and its allies would be to counter the Chinese threats to allied space assets, forward bases and forward-deployed ships and aircraft by blinding the PLA's primary intelligence, surveillance, reconnaissance and command and control systems.⁸⁹

Early success in these endeavours would be critical to the prospects of all subsequent operations. Effective early blinding of priority PLA systems would not prevent strikes against allied bases, but it should reduce markedly the accuracy of strikes against ships and submarines at sea, planes in the air and satellites in space. It would also make Chinese efforts to track allied forces in the theatre exceptionally difficult and it would

⁸⁸ These assumptions detailed in Jan van Tol *op.cit.* pp.50-52.

⁸⁹ The nature and criticality of these operations are discussed in Jan van Tol *op.cit.* pp.56-60.

seriously complicate battle damage assessment following an initial round of attacks. A key consequence would be to increase the miss-rates of Chinese attacks and increase markedly munition wastage rates.

Allied forces would need to conduct sustained blinding operations in order to roll-up all key intelligence, surveillance and reconnaissance capabilities and prevent any significant system restitution. Electronic and kinetic attacks would be required to disable the primary over-the-horizon, surface wave and microwave radar systems, the major underwater sensor systems, long range intelligence and surveillance aircraft and also the primary PLA systems in space.

2. Priority Defensive Measures

Many steps would need to be taken to strengthen the resilience and recuperative capabilities of United States and allied forces in the Western Pacific.⁹⁰

First, it would be essential to harden and otherwise protect allied space-based and other long range intelligence, surveillance and reconnaissance systems and associated command and control systems. It would be important to also have available back-up surveillance and communications networks to ensure that even in the face of heavy and sustained attacks, key functions could still be performed.

There is also scope to consider upgrades to ballistic and cruise missile defences for both priority land-based facilities and high-value ships at sea.

It would appear to make sense to disperse priority assets more widely between main and reserve basing facilities. Some of these alternative facilities might be in the immediate vicinity of main bases and others could be relatively distant from immediate operations. Rapidly shuffling high-value combat assets between alternative operating facilities would complicate PLA targeting substantially.

⁹⁰ These operations are discussed in Jan van Tol *op.cit.* p.60.

Other areas deserving consideration include the further development of decoy and other counter-intelligence systems and the physical hardening of key system nodes, capabilities and critical facilities. Many facilities could and should be built underground.

It is notable in this context that Hilary Clinton, the US Secretary of State, has announced during an extensive trip through East Asia that the core themes of the Pentagon's current Posture Review are to make the United States' military posture in this theatre "more politically sustainable, operationally resilient, and geographically dispersed"⁹¹

3. Suppress PLA Medium-Range Land-Based Ballistic and Cruise Missile Forces

Success in blinding the PLA high command and then protecting most key allied forces and bases would not be sufficient to prevail in such a conflict. Also required would be the effective suppression of most PLA medium range ballistic and cruise missile forces.⁹²

This would be a formidable undertaking. Most of these systems are road-mobile and are routinely deployed within the very extensive deep tunnel network that has been developed by the PLA Second Artillery in recent years. Moreover, most of these missile systems can also be readily hidden in both natural terrain and in urban infrastructures. A successful campaign to seriously reduce the threat from these forces would require exceptional and persistent surveillance of all relevant launch areas and highly-responsive precision strike capabilities. Because of the PLA's capabilities to reconstitute these forces relatively rapidly, separate efforts would be required to identify and destroy missile manufacturing and storage facilities.

Precisely how these key operations might best be performed deserves careful study. The selected approach is

⁹¹ For details see: <http://www.state.gov/secretary/rm/2010/10/150141.htm> 28 October, 2010.

⁹² The nature of these operations is discussed in Jan van Tol *op.cit.* pp.64-67.

likely to require a tailored mix of capabilities with a prominent role being played by survivable long-range, conventionally-armed ballistic missile forces – preferably deployed on submarines within the theatre - and by strike aircraft possessing the capability to persist in defended airspace. Progress in these demanding, highly-tailored strike operations would likely take time. However, as Jan van Tol argues, a combination of blinding and counter-missile strike operations may be able to reduce PLA ballistic and cruise missile launches from a “downpour” to a “drizzle”.⁹³

United States analysts recognise that the launching of operations of this nature against mainland China would carry a serious risk of conflict escalation. These challenges would need to be weighed by senior allied leaderships in the context of many factors, including whether the political leadership in Beijing shows any signs of being prepared to cease operations and eschew offensive activities in the theatre.

4. Seizing the Initiative

This analysis suggests that in the early phases of such a conflict the United States and its close allies would be focussed heavily on blinding the opposing high command and stymieing initial salvo strikes. On the assumption that allied forces do survive an attempted pre-emptive knock-out blow, attention would focus initially on reinforcing local defences, secondly on scouting out PLA forces and dispositions and then, thirdly, on striking and ‘rolling-up’ priority PLA capabilities.⁹⁴

As indicated above, sustained offensive strikes would most likely be launched on the PLA's wide-area surveillance and command and control networks and then on medium range cruise and ballistic missile systems. During the course of such operations suppression strikes would also be required on the PLA's primary air defence systems, networks and capabilities.

⁹³ Jan van Tol *op.cit.* p.67.

⁹⁴ The likely nature of these operations is discussed in Jan van Tol *op.cit.* pp.67-74.

At sea, Chinese surface combatants would also be hit, submarine forces attacked, and those naval forces remaining at bases would be effectively isolated from operating areas.

Operations in this phase would be highly complex, very demanding and they would probably require significant time. Moreover, several of the capabilities required to conduct such operations are not currently held by the United States and its allies at all, or in the numbers likely to be required.

Some of the capabilities needed for such operations include:

- Persistent and highly protected round-the-clock intelligence, surveillance and reconnaissance systems covering relevant land, surface and sub-surface maritime areas, space and the cyber domain.
- Highly durable and reliable theatre and tactical command, control and communications systems.
- Highly stealthy aircraft capable of conducting long endurance strike operations in contested battle spaces.
- Highly accurate, time-urgent non-nuclear ballistic missile capabilities – sometimes referred to as ‘prompt conventional strike’ capabilities, preferably based on submarines.
- Allied anti-submarine forces with the potential to exploit the Ryukyu Island barrier and maritime straits to contain and serially attack PLAN submarines within the first and second island chains. In order to undertake such operations optimal allied forces might place greater emphasis on more operationally flexible submarines, advanced mobile mines and a range of armed, unmanned undersea vehicles.

A key feature of operations in this phase is that they would require the United States and its allies to seize the initiative and force the opponent onto the back foot. In many respects this should be a period in which it would become obvious that

the tide of the conflict has turned and that continuation of the war would eventually render the PLA vulnerable to decisive defeat. However, a clear allied victory could not be expected to come quickly or at low cost. Combat operations would need to continue for months and possibly even years.

5. Sustaining Protracted Operations

Over time, additional and substantial United States and allied forces would need to be deployed into the operational theatre. These fresh forces would help to relieve and reinforce those units that had taken the brunt of the early exchanges. During this period many platforms (e.g. ships, submarines and aircraft) would need to be repaired. Numerous facilities would also need to be rebuilt and many others constructed from scratch to support sustained high-tempo operations.⁹⁵

The defence industrial capabilities of all of the allies would be placed on emergency production footings. While there might be scope for a small number of additional platforms to be produced or completed during the conflict period, a higher priority is likely to be accorded to battle damage repair, system upgrades and to the production of additional intelligence, surveillance and reconnaissance systems and a wide range of stand-off precision munitions.

At this stage interference with the opponent's non-military assets is likely to become of comparable importance to dominance over the opponent's military forces. Denial of most types of international financial transactions, an effective cessation of most types of trade, serious disruption of the domestic economy and a cessation of many internet services would likely bring home to the opposing leadership that continuation of the conflict would result in very serious damage to the Chinese economy and, indeed, fundamental risks to the ruling elite itself.

Trade in many types of energy, raw materials and manufactured goods could be stopped at their international

⁹⁵ The likely nature of these sustained operations is discussed in Jan van Tol *op.cit.* pp.74-79.

sources prior to shipment. Some might need to be interdicted in distant locations, such as in the South East Asian maritime straits. Other maritime trade bound for China might be deterred or interdicted by the intensity of allied military operations undertaken along or close to the Chinese coasts. This type of widespread counter-trade campaign would be complex, resource-intensive and time-consuming. Some of the forces required to perform these roles might possibly be supplied by Western allies in more distant theatres, including Europe.

Allied operations undertaken in the Western Pacific for such extended periods would require a greatly expanded strategic logistics system. Amongst the many steps required in this field would be the stockpiling of petrol, oil and lubricants (POL), munitions, spare parts and other key materials in relatively secure areas adjacent to the theatre, such as in Australia, Hokkaido, Singapore, the Aleutians and Hawaii.

TOWARDS A WESTERN PACIFIC NET ASSESSMENT FOR 2030

The discussion above suggests that many of the steps required to counter the PLA's strength in the Western Pacific have already been identified by United States and close allied defence planners. Is it feasible then to determine the primary features of the military balance in this theatre in 2030? Is it possible to determine with confidence now whether the PLA or the United States and its close allies will hold the upper hand in the event of a serious military clash in the Western Pacific in the 2030-2040 timeframe?

The short answer is no. While it is reasonable to speculate where China's military programs might take the PLA in the 2030 timeframe, it is certain that there will be surprises. As indicated earlier in this paper, there are credible alternative scenarios for China in 2030. There are many things that could derail or divert Chinese military investments during the coming two decades. Similarly, it is likely that in coming years China will unveil some completely new military capabilities that will

surprise the West and materially affect the regional force balance.

The other reason why it is too early to attempt a theatre net assessment for 2030 is that there are many uncertainties about the speed and effectiveness with which the United States and its close allies will reorient and restructure their forces, dispositions and supporting infrastructures in the Western Pacific. As discussed briefly above, the budgetary constraints in the United States will probably constrain severely complex new defence investments at least for the short and medium term. This means that low-cost electronic and kinetic counter-measures against PLA surveillance and missile systems and some juggling of force operational patterns can be anticipated in this theatre in coming years. There is also likely to be a quickening in the pace of research and development programs designed to meet some of the high-priority theatre operational tasks, such as high resolution real-time reconnaissance and surveillance, next-generation underwater capabilities and long range persistent strike capabilities. However, the speed with which these new capabilities can be introduced into service and fully integrated into operational plans remains open to question. Short of a serious near-term crisis in the Western Pacific major new capabilities of the types mentioned above will probably not be deployed into this theatre until 2020 at the earliest.

This outlook is contributing to the unease of many Western security analysts. Not since the Second World War has the future security of this theatre been so open to question. The stakes are exceptionally high. The outcome depends largely on how well and how quickly the United States and its close allies are able to re-orient, restructure and expand key capabilities in order to effectively counter, offset and balance the rapidly expanding PLA.

WHAT SHOULD AUSTRALIA DO? DEFENCE PLANNING OPTIONS FOR 2010-2030

The discussion above makes clear that Australian defence planners are now confronted by a markedly different set of challenges to those they have faced in recent decades. China's military capabilities have grown rapidly in recent years and they now pose serious challenges to United States and allied forces in the Western Pacific. Many of the assumptions that have underpinned allied operations in this theatre since the Second World War are now invalid. Moreover, the capabilities of the PLA show every sign of continuing to grow strongly during the coming two decades, at least.

These developments come at a difficult time for the United States, but the US Department of Defense has taken stock of the situation and is working to develop strategic concepts and plans that offer the prospect of balancing China's rising military capabilities and, in the event of a major conflict in this theatre, would promise victory.

How should the Australian Government respond to this marked change in Australia's strategic circumstances and security outlook? There are four initial questions that need to be addressed when considering how Australia should proceed. They are:

1. Should the Australian Government share the United States assessment of the challenges posed by Chinese military developments in the Western Pacific?
2. What Australian interests are at stake and how vital are these interests?
3. Does Australia have the option to stand aloof and detached from the marked changes in the regional strategic environment?
4. What priority should the rising challenge posed by the PLA receive in Australia's forward defence planning and preparations?

Each of these questions is addressed briefly below.

1. Should the Australian Government share the United States assessment of the challenges posed by Chinese military developments in the Western Pacific?

The short answer to this question is yes, but with some reservations.

The evidence for the PLA's rapid development of anti-access, area denial capabilities in the Western Pacific is strong. Also strong is the evidence for the new, more assertive Chinese strategic thinking and operational behaviour. However, this is not to suggest that the Australian Government should simply accept United States assessments of the direction and pace of PLA development in an unquestioning manner. Rather, Australia's intelligence agencies should review all of the evidence carefully, validate the raw data, test key judgements, debate major issues and verify independently for the Australian Government all primary judgements about current and anticipated PLA capabilities and operations.

2. What Australian interests are at stake and how vital are these interests?

The PLA's rapid military developments are challenging at least six categories of Australian strategic interest:

- a. Assured Australian and broader Western access to space across the entire theatre is now under serious question. So is assured access to airspace, surface and underwater sea space down the Western Pacific rim out to at least 1,200 nautical miles. During the coming two decades areas under threat in the space, air and sea environments will likely extend further, possibly to a third of the way across the Pacific Ocean. Allied operations in this vast theatre are coming under challenge for the first time since the Second World War and, unless sustained action is taken, they would be very vulnerable in the event of serious conflict.
- b. Many of Australia's close allies and friends in the Western Pacific from Japan and South Korea in the

north, to the Philippines, Malaysia, Indonesia and Papua New Guinea in the south will fall within this new Chinese strategic 'sphere of influence' and, potentially become vulnerable to increased Chinese pressure and coercion. A key question for Australia's strategic planners is the extent to which these close allies and friends should be helped to maintain their independence and freedom of action. This paper argues that, to the extent that resources permit, Australia should support closer security cooperation and mutual assistance between these like-minded allies and partners.

- c. The very strong anti-access, area denial capabilities being fielded by the PLA in the Western Pacific pose a serious challenge to the liberal economic and security regime that has dominated this theatre for over six decades underpinned by the military forces of the United States. Australia has exceptionally strong security, trade and broader economic interests in seeing the established liberal security and economic regime continue indefinitely.
- d. The PLA's anti-access, area denial and other new military capabilities pose a serious threat to the military forces and supporting bases and infrastructures of Australia's closest ally in the Western Pacific. Australia has an exceptionally strong interest in seeing the United States' military presence in this theatre continuing on a large scale and in a secure manner for the long-term. If the military capabilities of the United States are seriously threatened in this theatre, Australia's security will be greatly diminished.
- e. The PLA's growing missile, air and naval forces are expected to extend their reach during the coming two decades and will exert a much stronger influence on Australia's immediate maritime surroundings, its airspace and also strategic assets on Australian territory. The PLA's challenge in the 2030 timeframe

will not be confined to the airspace and sea space to the immediate east of China. Indeed, much of Australia is already within range of missile, submarine, special force, cyber and other PLA capabilities. Over time, Australia's vulnerability to direct pressure and coercion exerted by such forces will likely increase. The PLA's emerging capabilities should not be viewed by Australia's national security planners as a challenge in a forward theatre, but rather as a rising challenge to the direct defence of Australia itself. In consequence, balancing, offsetting and deterring the PLA deserves a high priority in the development of Australia's national security strategy, policies, investments and operations.

- f. Because the People's Republic of China continues to be an authoritarian communist state, the extension of Beijing's strategic and political influence in the Western Pacific will likely undermine propagation of the liberal democratic values that the Western allies hold so dear. Australia's and its close allies' interest in encouraging and fostering these liberal democratic values is most unlikely to weaken in coming decades and so there is the prospect that Southeast and East Asia, the South Pacific and other adjacent regions will experience a more intensive ideological struggle in coming decades. Australia has a strong and enduring interest in the outcome of any such struggle.

3. Does Australia have the option to stand aloof and detached from the marked changes in the regional strategic environment?

There are those in Australia who would argue that the country need not worry unduly about the developments described in the earlier sections of this paper because recent PLA developments pose no immediate, direct and obvious threat to Australia's sovereignty or to the Australian people. Attempting to stand aloof, they would argue, would minimise the prospect of provoking Beijing and probably reduce the likelihood of Australia being targeted, or the extent of such

targeting, in the event of a serious clash between China and the United States.⁹⁶ Others argue that China's rise to regional dominance is inevitable, that the United States should be encouraged to accommodate itself to this new reality and move to share its regional power and influence with Beijing.⁹⁷

This paper takes a different view. It argues that adoption of such positions would underplay the significance of current and anticipated Chinese military developments and operations and would undermine Australia's security for the following primary reasons:

- a. First, by defining Australia's security interests in such narrow and short-term ways there would be a strong risk of rendering the country vulnerable were the PLA's capability and operational development to proceed as anticipated in coming decades.
- b. Second, a 'do nothing' approach would ensure that Australia would become a diminishing player in the Western Pacific and that it would lose effective control over the vital national interests described in the section above, including the capacity to provide for the direct defence of the Australian continent and its immediate surroundings.
- c. Third, turning a blind eye to current and anticipated security developments in the region would mean that, over time, Australia would probably be embraced by China's growing 'sphere of influence'. This would

⁹⁶ Elements of this thinking are evident in, for instance: Rory Metcalf "Decisions and Destinies: Asian Security in 2010" *Snapshot 3* (Strategic Snapshots, MacArthur Foundation and Lowy Institute for International Policy, September 2010) and Raoul Heinrichs "Little Power, Big Choices: Australia's Strategic Future" *Snapshot 4* (Strategic Snapshots, MacArthur Foundation and Lowy Institute for International Policy, September 2010) and Peter Leahy "Shifting Priorities in National Security: More Security Less Defence" *Security Challenges* (Vol. 6, No.2, Winter 2010) pp. 1-8.

⁹⁷ See, for example: Hugh White "Power Shift: Australia's Future Between Washington and Beijing" (*Quarterly Essay No.39*, September 2010, <http://www.quarterlyessay.com/issue/power-shift-australia%E2%80%99s-future-between-washington-and-beijing>).

render the country far more susceptible to Chinese pressure and coercion and, *in extremis*, could make Australia less able to repel PLA attacks.

- d. Fourth, adopting a 'do nothing' stance would inflict serious damage on Australia's relations with most of our neighbours and friends in Southeast and East Asia who are almost all deeply concerned by recent PLA developments and are looking to Australia for security advice, reassurance and practical assistance as they consider their own options for enhanced security.
- e. Fifth, attempting to ignore the challenge posed by the PLA and the broader consequences that will flow to the region would inflict serious damage on Australia's alliance with the United States. Washington would look with dismay were Canberra to seek to down-play the fundamental shift of regional power that is rapidly becoming obvious to all. In American eyes, this would be seen as an attempt to leave the United States to deal with the emerging challenge alone. Australia would be seen to be shirking in its responsibility to shoulder a fair share of the burden for Western Pacific security. The very future of the Alliance could be at risk.
- f. Sixth, and finally, there is little to suggest that the Australian electorate would tolerate a 'do nothing' stance once it is well informed about rising PLA capabilities and the pattern of assertive Chinese behaviour. Australian public opinion polling over many decades is remarkably consistent in showing deep sensitivity to external security threats. Any Australian government that attempted to down-play the issue or was seen to be weak or overly defensive in response would be vulnerable politically.

4. What priority should the rising challenge posed by the PLA receive in Australia's forward defence planning and preparations?

The priority that should be given to the challenge posed by the PLA needs to be decided by the Australian Government, following careful consideration of all current and anticipated developments and the claims of competing priorities.

In weighing these issues it is important to maintain a sense of balance and proportion. In particular, this report is not suggesting that a major crisis or war between China and the United States is imminent or even likely, at least in the short-to-medium term. However, this report does argue that the Western Pacific security environment is being changed in fundamental ways by the scale and pattern of PLA development and that Australia and its allies have a very strong interest in maintaining a stable strategic balance. Given the nature of PLA developments, their scale and their momentum the Western allies are justified in being deeply concerned. This more challenging security environment is not one encouraged or welcomed by Australia, or by the other Western allies. But the new security realities cannot be ignored or simply wished away. Australia, the United States and its other close allies have no choice but to consider carefully how best to respond.

This paper argues that in crafting a coherent Western response the United States and its close allies should not seek to confront China. Rather, the intent should be to offset and balance the PLA's more threatening force developments and operations. In part, this requires allied defence planners to 'think the unthinkable' and prepare defence options for future governments that are viable, well thought-out and cost-effective.⁹⁸ While there is a possibility that such options might need to be activated in a future crisis, their main purpose should be to balance the PLA, to deter adventurism and to restore and maintain regional confidence.

⁹⁸ A very similar argument is made in the US context in: Jan van Tol *op.cit.* pp.x and 17.

In considering how Australia might best proceed to achieve these goals it is important to distinguish clearly between the four primary layers of a national security action that are required:

- First is **Australia's foreign policy and the country's broader economic, social and political approach.** This paper argues that Australia's foreign and broader economic and social policies should most appropriately encourage friendly engagement and many forms of cooperative partnership with China, while simultaneously keeping a weather eye on Beijing's assertive military and intelligence capabilities and operations. These endeavours should be aimed at promoting the full range of Australian interests while helping to shape elite Chinese thinking and actions in ways that hopefully, over time, dissuade Beijing from assertive PLA actions or coercion.
- Second is **Australia's national security and defence diplomacy.** National security and defence diplomacy should ideally be designed to engage, understand and help shape favourable trends in China, including within the PLA. It should, for instance, actively promote rules and mores of acceptable international behaviour through Incidents at Sea and other agreements and the application of relevant legal frameworks, such as the United Nations' Convention on the Law of the Sea. Australia's national security and defence diplomacy also needs to operate closely with other regional countries to reinforce their resilience and confidence in the face of the changing regional security environment.
- Closely related to the above two components of Australia's national security strategy is the pattern of **Australia's defence and broader national security operations.** Where, how, with whom and how frequently Australia's defence and other national security units talk, operate and exercise sends

powerful signals about Australia's national security relationships and priorities. They can, for instance, help build regional capabilities and confidence, they can underline the closeness of key partnerships and they can signal varying levels of national concern. They can also, when required, underline powerfully those interests that are considered vital by Australia's national leadership. Some of these operational patterns can be on display for all to see but others should generally be held as classified contingency plans that detail the best modes and methods for manoeuvring in different types of future crises.

- The fourth key component of Australia's future national security strategy relates to **the selection, acquisition and introduction into service of those national security capabilities required for the challenges anticipated 20+ years hence**. Getting Australia's force structure right for the challenges anticipated in 2030-2040 is critical if Australian governments are to have available an appropriate range of options to deter, dissuade or defeat the threats that arise in that timeframe. In contrast to the first three components of national security strategy there is little room for error in this field. It is not possible to remedy quickly errors of judgement on force structure priorities. This is largely because major defence capabilities generally take 20 years to introduce into service. Those national security capabilities required for service in the 2030-40 timeframe have either been selected already or need to be chosen soon. Within a democracy like Australia most capability acquisitions should be announced publicly, but many detailed elements of capability and system performance are best held in secret.

All four key components of Australia's national security action are important. They all require constant management and attention and, most importantly, while each has its own 'drivers', all four need to be closely coordinated so that

together they work well as an integrated team to secure Australia's priority national security goals. From time to time there are officials, academics and commentators who are tempted to focus only on one or two of these operational elements and overlook the others. Such an approach is clearly flawed. Australia's national security planners need to plan, deliver and review all four elements of action within a close teaming framework. In other words, with apologies to President Lyndon Johnson, it could be said that Australia's national security leaders need routinely to walk, chew gum, talk and carry critical supplies in a pack all at the same time!

This paper argues that the fourth, or force structure development challenge, is of special importance. Quality force structure decision-making is absolutely critical to the success of Australia's future national security strategy. If serious mistakes are made with these judgements, the future of Australia as an independent democratic country could be at risk. In consequence, the remainder of this paper focuses primarily on the challenges that Australia's defence and national security planners now face in deciding what should be selected for early acquisition and introduction into service and why.

CLARIFYING FORCE STRUCTURE PRIORITIES

While it is important to consider those capabilities which would be most suited to countering or balancing the rising PLA, the Australian Defence Force should not focus on one security challenge alone. The ADF actually needs to perform a wide range of functions, most notably:

- Providing peacetime response capabilities in times of national emergencies, such as floods, bushfires and other natural disasters.
- Contributing to Australia's diplomatic efforts in fostering a favourable regional security environment through visits, combined exercises, etc.
- Contributing to border protection and security.

- Conducting counter-terrorism operations.
- Providing low and medium level military support when needed throughout the Southwest Pacific and the countries in the archipelago screen. These requirements range from the restoration of local security to the protected evacuation of threatened Australian and allied citizens.
- Contributing to allied efforts in more distant theatres such as Afghanistan, Iraq and potentially South Korea and elsewhere. Australia clearly needs to maintain capabilities to conduct highly effective counter-insurgency as well as high-intensity conventional operations.
- Providing the core of a large-scale mobilisation of whole-of-nation – mainly civilian – capabilities to support operations in the direct defence of Australia.

These primary defence tasks are, however, not all of equal importance and, in particular, they do not all warrant equal priority for capability investment. Fortunately for this analysis successive Australian governments have determined that the most fundamental and vital task for the Australian Defence Organisation is the direct defence of Australia against the threat of major conventional force attacks.

A useful way to help manage the diverse demands on the Australian Defence Force is to draw a clear distinction between, on the one hand, those tasks that should receive priority for force structure design and capability development and, on the other hand, those tasks deserving priority in current and near-term Defence Force activities.⁹⁹ Applying that

⁹⁹ A rough analogy is a family's choice of a new car. If the family expects to drive almost exclusively on sealed roads a modestly-priced four cylinder sedan may be perfectly suitable. However, if a family expects that from time-to-time it will have no choice but to traverse rough trails and deep river crossings a capable off-road Sports Utility Vehicle (SUV) would be a better choice. The SUV, once bought, could readily spend most of its time on sealed roads, but when it becomes essential to travel rough tracks or cross rivers it can continue to perform well whereas the sedan would be defeated by such tough conditions. This paper argues the merits of focusing

distinction with discipline should result in the requirements of the direct defence of Australia receiving almost exclusive priority for force structure design and development. Having developed a complete force structure and range of capabilities (including equipments, personnel, base infrastructures and administrative support systems) tailored for the defence of Australia, elements of that force structure could then be employed on other, important but less vital, tasks as the government of the day may direct.

In other words, an Australian Defence Force and Defence Organisation designed, developed and trained largely for the defence of Australia can then be employed for border protection, disaster relief, counter-terrorism, regional engagement and other operations as may be expedient at the time. However, these broader functions, while accorded high priority for activities, should not influence what is actually bought for the Defence Force, except at the margins.

In the context of this study, this logic is of fundamental importance. The reason is that if almost all force structure and capability development investment was directed in a disciplined way to meeting the key needs of the defence of Australia in major conventional conflict, Canberra should be able to procure a more formidable range of capabilities over the coming two decades that would be very suitable for future allied balancing, offsetting and deterrence operations in Australia's Western Pacific approaches. In other words, there may be scope for stretching existing and projected Australian defence budgets further and offering future governments a better range of options to meet the challenge posed by the fast-rising PLA.

Australia's limited defence resources by buying a highly-capable 'SUV-type' of defence force. A tough, highly capable force of this nature would be designed primarily to deal with the most vital and demanding challenges but it would also be capable of dealing with the wide range of less vital and less demanding tasks when required with aplomb. Focusing Australia's limited defence investments on a sedan-type defence force may be attractive to some but it would carry very serious risks for the 2030-2040 timeframe.

In effect, this paper argues that the primary driver of Australian defence force structure design and development should continue to be the defence of Australia. However, in the 2030 timeframe the defence of Australia will need to encompass ways of offsetting, balancing and even confronting directly the rapid changes that are underway in Australia's approaches and immediate surroundings.

Importantly Australian defence force designers and developers should avoid being distracted or diverted by the short-term demands of contingencies of lesser priority. Distant counter-insurgency, fragile state reinforcement, counter-piracy and similar operations may, indeed, warrant sizeable force commitments and deserve some priority for defence operations from time-to-time. However, the Defence Force should not be designed and developed primarily to conduct these less vital categories of operation. Were this discipline to be relaxed, Australia's capabilities to deal with the most vital existential threats would be seriously diluted with potentially catastrophic consequences in the medium term.

THE NATURE OF AUSTRALIA IN 2030

Before considering Australia's national security development options for the more challenging security environment that is rapidly emerging, it is important to note that Australia in 2030 will be characterised by some new or significantly altered features that are likely to influence the scope for Australian national security investment.

First, as is clear from Figure 5, Australia's population is expected to age significantly during the coming twenty years. A key consequence is that the proportion of the population actively engaged in the workforce will decline, although the speed and extent of this trend remains the subject of debate. Nevertheless, it is probable that the tax base from which all government expenditure must be drawn will be relatively constrained by 2030.

Another of the consequences of this outlook is summarised in Figure 6. This figure shows the Australian Treasury's estimate of the likely changes in demand on Federal Government expenditure categories between 2006-07 and 2046-47. Particularly notable are the projected steep rises in expenditures on health, aged care and pensions and the slight drop in projected expenditure on defence. Again, these estimates are open to debate.

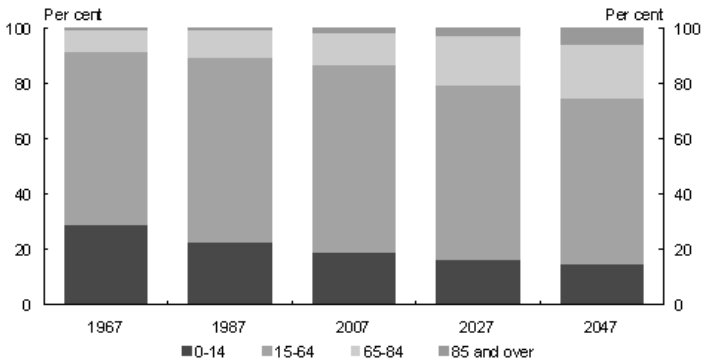


Figure 5: Projected Age Distribution of the Australian Population to 2047

Source: *Australia to 2050: Future Challenges* (A paper circulated by The Hon. Wayne Swan MP, Treasurer of the Commonwealth of Australia, January 2010) p.10.

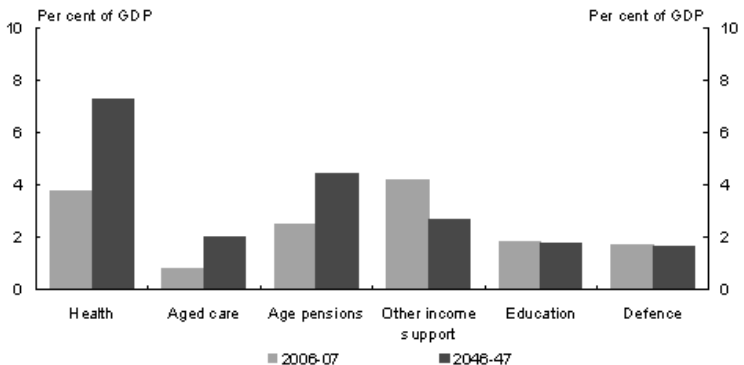


Figure 6: Australian Treasury Assessment of Probable Changes in Federal Government Expenditure 2006-07 to 2046-47

Source: *Australia to 2050: Future Challenges* (A paper circulated by The Hon. Wayne Swan MP, Treasurer of the Commonwealth of Australia, January 2010) p.xvi.

Figure 7 flags the fact that unless significant changes are made, the Federal Government's accounts will move into substantial structural deficit by 2020. Effectively, Treasury is signalling that the Australian Government needs to start thinking soon about how major categories of spending can be reined in for the long term and/or how levels of taxation can be raised.

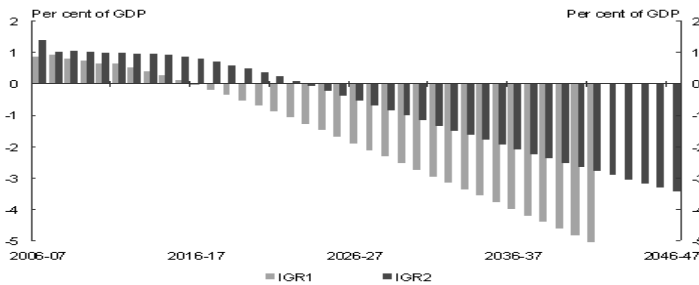


Figure 7: The Long-Term Outlook for Australia's Budgetary Balance

Source: *Australia to 2050: Future Challenges* (A paper circulated by The Hon. Wayne Swan MP, Treasurer of the Commonwealth of Australia, January 2010) p.xi.

The primary implications of these trends are that unless successive Australian Governments, and more generally the Australian people, can be convinced that the country faces a markedly increased and compelling threat, defence spending is not likely to rise much higher than its current level of 2% of GDP during the 2010-2030 period. However, if a strong and compelling case can be made, the generally good health of the Australian economy would make it possible to boost defence expenditure quite significantly. It is appropriate in this

context to recall that during Indonesian Confrontation and the Vietnam War defence expenditure in Australia reached 2.8% of GDP and during the Second World War it reached 34% of GDP.¹⁰⁰

WEIGHING AUSTRALIA'S STRATEGIC AND FORCE STRUCTURE OPTIONS

If the Australian Government decides that offsetting, balancing and deterring the rapidly-rising PLA deserves priority in Australian defence planning and force structure development, two broad approaches would present themselves:

- First, Australia could develop its defence force structure for 2030 with a view to offsetting, balancing and deterring the PLA in close partnership with its primary ally, the United States.
- Second, Australia could decide to develop an approach and force structure that would be optimised for offsetting, balancing and deterring the PLA with a much higher level of self-reliance, to guard against the possibility of Washington being over-extended or distracted elsewhere in the event of a major crisis.

Both of these options are considered briefly below.

Strategy Option 1: Contributing to a Combined United States – Australia Strategy

The primary goal of this option would be to exploit the synergies and combined assets of Australia and the United States in order to maximise Australian and allied security.

The primary advantages of a combined strategy with the United States would be:

¹⁰⁰ "Defence Expenditure Over the Century" Table 4.4 in Australian Bureau of Statistics *Year Book Australia 2001* (Australian Bureau of Statistics, Canberra, January 2001)
<http://www.abs.gov.au/ausstats/abs@.NSF/Previousproducts/1303.0Feature%20Article102001?op..>

- Combined physical, intellectual, virtual and other resources would greatly exceed those which Australia could marshal on its' own.
- Some special capabilities could be jointly developed and operated that would otherwise be difficult for either country to deploy independently.
- There would be powerful synergies to be won from combined operations, basing, logistic and other activities.
- There would be strong diplomatic benefits flowing from regional perceptions of the ADF's exceptionally close partnership with United States' forces.
- There may be economic benefits to flow to Australia from the United States conducting more military and support activities on or from Australian facilities.

The primary disadvantages of a combined Australian strategy with the United States would be:

- The United States would have to be available to support Australia and to play a strong role in the developing security environment of the Western Pacific without being seriously distracted by competing international or domestic demands.
- Acceptance of the fact that were the United States to be distracted or unprepared to play an active role in the event of a future crisis in the Western Pacific Australia's defence capabilities might be seriously handicapped in protecting the country's fundamental security.
- A possible difficulty for Australian diplomacy in separating Australia's interests and activities from those of the United States.
- A periodic need for Australia to be prepared to subordinate some of its own strategic and operational priorities to those of the United States.

What might a combined Australia-United States strategy for the Western Pacific in 2030 look like? In his seminal analysis of the Air-Sea Battle Concept, Jan van Tol describes some of the features that may be developed by the United States in the Western Pacific in coming decades, the general thrust of which was summarised earlier in this paper. Within that Air-Sea Battle Concept, Van Tol suggests that the United States should work to encourage Australia to make the following specific contributions to the allied effort in the Western Pacific, as follows:

- “Partner with the United States and Japan in developing the next-generation anti-ship/anti-surface cruise missile;
- Support its fielding a fifth-generation fighter force to support combined air superiority and ASW operations;
- Join the US space surveillance system and build an S-Band radar to improve southern hemisphere SSA (space situational awareness); and
- Establish an offensive node for the US Joint Space Operations Center to create a Combined Space Operations Center, thereby improving operational integration and enhancing C2 (command and control) survivability.”¹⁰¹

While all of these suggestions appear feasible and realistic, careful consideration of the Air-Sea Battle concept, at least as it is described in the public literature, raises a much broader range of options for possible Australian involvement. Amongst these possible additional contributions are:

Establishment of a Major C4ISR¹⁰² Hub This centre would operate an extended array of sensors (including Australia's own JORN and other sensor networks), electronic surveillance systems, long range aircraft, sub-surface systems, etc and also process, analyse and distribute relevant

¹⁰¹ Jan van Tol *op.cit.* p.93.

¹⁰² C4ISR is an acronym for: Communications, command, control, computers, intelligence, surveillance and reconnaissance.

products for the tactical and operational support of allied operations. The vast and relatively quiet electronic spaces across northern and offshore Australia provide an ideal environment for a diverse, dispersed and highly-resilient C4ISR network covering most of the Western Pacific.

Basing for Long Range UAVs Key roles in the evolving Air-Sea Battle concept are likely to be played by high altitude, long endurance (HALE) UAVs. These systems will be required to back-up satellite and other wide-area surveillance systems and also to contribute substantial resilient bandwidth for priority theatre communications. These valuable systems should ideally be based in relatively secure locations in the Western Pacific which offer good dispersal options and also highly skilled and trusted workforces. The several dispersed air force bare bases across Northern and Central Australia would appear to offer ideal basing options for this capability.

Basing for Long Range Strike Aircraft One of the problems of United States and allied country force structures in this theatre is that the stealthy, fifth generation fighter-bombers starting to enter service all possess relatively short range and endurance capabilities. Whilst the B-2 *Spirit* is an exception, there are only 20 of these aircraft in service and so the capability is limited. This means that the bulk of the current allied air combat force, comprising fourth generation jet aircraft possessing only modest stealth capabilities, would have difficulty operating in or near Chinese airspace and the advanced aircraft that could operate with some security in that environment are presently small in number and mostly possess limited range capabilities.

One clear conclusion is that there is a need for a new-generation of very stealthy, long endurance strike aircraft that are capable of operating for extended periods in contested airspace in order to launch persistent attacks. These aircraft, whether manned or not, would be very valuable and would be best based in a relatively secure environment that offers both good dispersal and protection capabilities and also highly skilled local support personnel. Australia offers all of those

advantages and many more, including great strategic depth, sophisticated industrial support capabilities and ready access to high-grade fully instrumented training facilities.¹⁰³

Basing long range strike aircraft in Australia would also open some interesting alternative flight-path options to parts of China not only from the East but also from the South. Generating an all-aspect air-defence challenge for the PLA has the potential to complicate Chinese defence planning seriously.

Contribute to Ballistic Missile Defence The Australia-United States joint facilities in Australia already contribute to some aspects of ballistic missile defence, notably through their capabilities to provide warning of missile launches. In addition, Australia has long been a partner of the United States in the development of new ballistic missile defence technologies. Most recently, the Australian Government has taken a decision to ensure that the Royal Australian Navy's three new air warfare destroyers, which are currently under construction, will be capable of carrying SM3 air defence missiles, the United States Navy's primary ballistic missile interceptor.

This means that Australia may be able to contribute readily to allied ballistic missile defence operations in this theatre, not least for the protection of strategically vital installations on Australian soil. There may also be scope to extend these defensive capabilities through further combined efforts. One option in that context would be to purchase a fourth air warfare destroyer and equip all four with SM3, even at the cost of reducing significantly other parts of the RAN's surface combatant force.

Serve as Major Western Pacific Arsenal Most of the analyses so far conducted on the Air-Sea Battle concept have concluded that a fundamentally different pattern of strategic logistics will be required. There will be a need for extensive

¹⁰³ The most advanced instrumented air range in the region is located at Delemere, to the west of the Tindal Air Force Base, near Katherine, in the Northern Territory.

battle damage repair, for urgent system modifications, for petrol, oil and lubricants (POL), for spare parts and munitions storage and for forward stockpiles of many other key items. An optimal environment for such purposes is a large land mass just beyond range of the major combat operations but with readily available technical expertise and physical facilities to perform these essential operations with efficiency and flexibility.

Some of these services might be provided by facilities in northern Japan, in Alaska or Hawaii. However, Australia possesses a very comprehensive range of support capabilities, including a surprisingly sophisticated range of defence manufacturing, modification, upgrade and repair capabilities. The Australian Defence Force already operates and supports many of the United States' primary sensor systems, platforms and munitions. Moreover, Australia has sufficient space and a modern transport and communications infrastructure that would permit dispersed and relatively secure logistics facilities to be operated with high efficiency.

It is notable in this context that General Douglas MacArthur appreciated these advantages in an earlier era and relied heavily on Australia as a large and secure logistic and operational base, as well as the optimal location for his own headquarters for much of the Pacific War.

Major Naval Support Base One of the enduring features of the Western Pacific theatre is the vast distance by which it is separated from the continental United States (CONUS). Sustained maritime and air operations in the Western Pacific cannot be conducted efficiently or economically across such trans-oceanic distances. Nowhere is the need for secure forward bases more acute than in the case of the United States' major fleet units. For them, transiting the width of the Pacific Ocean requires the passage of many days, and frequently weeks. When most ships and all aircraft require access to secure base facilities to re-arm, developing the appropriate pattern of forward basing needs to be a priority. Establishing a secure and efficient basing and support

structure will have a substantial influence on sortie rates, times on station, system survival rates and the overall effectiveness and speed of a campaign.

Several Western Pacific locations are likely to be able to play useful naval support roles. However, it is pertinent to note that Western Australia already hosts the largest submarine base south of Japan and Hainan and that Sydney possesses a naval dry dock capable of undertaking major hull and other repairs on the United States' largest aircraft carriers.

In raising this long list of possibilities for Australian support of the United States' Air-Sea Battle concept, this paper is not suggesting that adoption of them all would be either sensible or desirable. However, it is suggested that they might all be considered and evaluated with care.

Strategy Option 2: Approaching a More Self-reliant Australian Defence Strategy for 2030

It is appropriate for Australian defence planners to give some consideration to a second approach - an approach that would be designed to deliver key strategic results in future crises with a higher level of self-reliance.

The primary advantages of adopting a more self-reliant defence strategy would be:

- It would provide future Australian governments with real operational options carrying some prospect of success in the event of Australia being threatened by a major power should the United States be heavily distracted elsewhere, or unable to provide substantial assistance.
- It would force Australian defence planners to think their plans through carefully and test in repeated exercises the capability to secure Australia's vital interests even when confronted by a major power.
- It would demand an exceptional and enduring analytical effort to ensure selection of the most

valuable capability options and broader investment priorities.

The primary disadvantages of pursuing a more self-reliant defence strategy would be:

- It would deny Australia many of the intellectual, technological and scale advantages that the United States brings to the major security challenges in the Western Pacific.
- It would also deny Australia most of the diplomatic and potential economic advantages of operating in close partnership with the United States in the Western Pacific.
- It may inject a degree of coolness into the very warm and close Australia-United States defence relationship.
- It would force the Australian taxpayer to spend much larger sums in any attempt to secure roughly comparable levels of security to those available within a close alliance partnership.
- It may not be effective because a more self-reliant Australian defence strategy and set of capabilities would still remain heavily dependent upon United States intelligence, technologies, systems, equipment, spare parts and many other things besides. At best, a more self-reliant defence capability would reduce dependence upon the United States rather than eliminate it.

This paper does not suggest that any Australian Government would want to distance itself from the country's close alliance with the United States any time soon. Nevertheless, it is healthy for Australian defence planners to conduct their own defence analyses, to consider a range of options for securing the country's vital interests and then to reach their own conclusions on the best way forward. In this context, it is critical for Australia to develop its own strategic

thinking and logic about how the PLA's challenge in the Western Pacific should best be offset and balanced.

When conducting a more independent Australian strategic assessment of the challenge posed by the PLA in the Western Pacific, some of the key characteristics of China should be noted from the outset. In particular, that China:

- Is a geographically large country that is not an immediate neighbour but which is located in the more distant expanses of Australia's region.
- Possesses a very strong advantage in numbers of personnel and in the scale of its industrial capabilities.
- Has an economy that is currently about five times the size of Australia's and which is changing shape rapidly through industrialisation and modernisation.
- Is a society witnessing a rapid growth of new layers of middle classes and a dramatic increase in wealth disparities.
- Is growing heavily dependent on international trade and financial flows for its prosperity.
- Is increasingly dependent on imported energy and other materials. Indeed, China already imports more energy than the United States and this demand is continuing to rise steeply.
- Is heavily reliant on coastal and near-coastal infrastructures.
- Has a non-democratic communist government whose control of the state, while apparently firm and stable, might prove to be brittle if placed under severe stress.
- Has a leadership group that is relatively small and deeply concerned about regime survival and the maintenance of national cohesion and unity.
- Has a government that is concerned about its international image.
- Possesses large, rapidly-growing and sophisticated military capabilities, though with some weaknesses.

- Adopts a long-term view on most national security issues.

When Australian defence planners consider this range of strategic features a key question is how the Chinese leadership views its most vital interests. For instance, does the Chinese leadership place its highest priority on:

- The leadership group's own physical security?
- Protecting the leadership against various forms of incapacitation?
- Preventing loss of the senior leadership's connections to the organs of the state?
- Preventing the leadership being brought into disrepute and losing face through corruption and/or mismanagement?
- Ensuring that the leadership never fails to deliver economic prosperity and the Chinese civilization's continuing rise to great power status?
- Ensuring that the leadership never lets China become vulnerable to external powers?

This study considers that all of these factors might potentially prove to be core motivators for Chinese strategic decision-making. That being the case, a more self-reliant Australian strategic concept should seek to exert powerful influence on one or more of these key drivers of the Chinese leadership in order to deter aggressive action. The approach should be to make clear that were the PLA to threaten serious damage to Australia's vital interests, China's core leadership would be taking a serious risk and, potentially, would pay a very heavy price.

Once the precise strategic focus or foci of the Australian approach were determined, many components of capability would need to be harnessed to deliver the desired effects. An appropriate Australian response would require much more than the simple acquisition of new defence equipment and would need, at a minimum, to include:

- A strong and sustainable political posture that makes the key features of the nation's approach clear to the Australian public and to the international community.
- The fostering of deep understanding of, and relationships with, all high-level personnel and organisations in China and other countries of relevance.
- The development of an advanced operational strategy and a campaign plan that together build on Australia's strengths and the opponent's weaknesses and which are thoroughly tested *via* analyses, gaming and exercises.
- An integrated plan to identify, prepare and manage a broad range of whole-of-nation resources in order to greatly strengthen Australia's leverage and resilience in crisis situations.
- A tailored national security doctrine.
- Innovative operational and organisational concepts.
- Australian strategic decision-makers who are well-practised in using tailored decision support systems.
- Highly skilled and experienced personnel with a strong drive to deliver the world's best practice in key fields.
- Advanced national security education, training and exercising, including the use of modern simulation techniques.
- Advanced technology and innovative application of that technology to perform priority tasks and deliver key strategic effects.
- Carefully selected new hardware and software.
- A firm bipartisan commitment to provide adequate enabling budgets for the long-term.

Given the disparities in the scale and nature of Chinese and Australian societies, an optimal strategy for Australia is likely to be highly asymmetric. There would be little interest, or value in mimicking the substantial military capabilities now

being developed and introduced into service by the PLA. Rather, the primary intent of Australian strategy should be to focus effort and investment on those operational capabilities that are likely to provide the highest deterrence and combat leverage for given levels of investment. Those plans and capabilities would be selected not just for their potential to thwart aggressive actions by the PLA but to deter and, if necessary, do serious damage to the Chinese leadership's primary interests. In consequence, key criteria for selecting an optimal Australian strategy might include:

- The ability to threaten seriously one or more of the opposing leadership's vital interests using an array of capabilities, only some of which would be military.
- It should be very difficult, and take decades, for the PRC to counter.
- It should have substantial power to deter and dissuade Chinese decision-makers. Hence, the primary principles and general features of Australia's strategy must be apparent to the Chinese leadership and to the international community more generally in both peacetime and in crises. Australia's strategy would preferably be seen in the region as a 'game-changer' and help to shape the regional security environment in positive ways.
- A level of strategic ambiguity would be desirable. While the primary principles and general features of Australia's strategy should be public knowledge, many of the operational features and campaign capabilities would ideally remain concealed. A key purpose would be to encourage Chinese strategic uncertainty and risk avoidance.
- While Australia's approach might surprise many in Asia, over time it should improve China's and the broader region's general respect for Australia and encourage more serious efforts to consult and engage Australia in key dialogues and regional forums.

- It should be efficient in delivering a high level of strategic leverage for the scale of the budgetary investment.
- It should promise considerable effectiveness, including in the unlikely event that Australia is compelled to confront the PRC alone. It should have the effect of encouraging Chinese caution, doubt and conflict avoidance rather than stir Chinese pre-emptive attacks. In other words, it should contribute to crisis stability.
- Its approach should be synergistic with United States strategy and capabilities in the theatre.

The foci of a more self-reliant Australian counter-strategy might therefore include one or more of the following:

- Seriously damaging the capacities of China's strategic leadership to govern.
- Isolating China's strategic leadership from the primary organs of the state.
- Threatening strategic imports that are essential for the effective operation of the Chinese economy.
- Applying a close or distant blockade of China's key trade routes.
- Threatening the cohesion of the Chinese state.
- Building a powerful defensive alliance that has the potential to confront and isolate China until it agrees to operate within accepted international norms.

At first sight, the prospects of Australia being able to exert significant leverage in any of these dimensions might appear to be remote, if not fanciful. However, careful analyses undertaken with a strong emphasis on creative, asymmetric and high-leverage approaches suggest that should Australia invest in a carefully selected range of non-conventional capabilities it could, in fact, pose very serious dilemmas for any highly-assertive major power.

The types of specific capabilities that may be appropriate for Australia to consider developing in order to implement one or more of the above high-leverage strategic approaches would require shifts in national security investment. Some of the capability options might include:

- **Deep Engagement** This would require a national effort to build exceptional understanding of China's language, culture, and social system as well as those other major regional countries. Of particular importance would be the development of networks of close and friendly personal relationships with key community and national leaders in China. These sustained processes of deep engagement would be designed to provide high-definition understanding of political, economic and social developments and also opportunities to inform and influence key decision-makers on vital issues.

Also of great importance would be the deepening of security engagement with other key regional countries, particularly in Northeast Asia, Southeast Asia, South Asia and the South Pacific. The future security roles played by Japan, South Korea, India, Indonesia and the other ASEAN countries and also Russia will have an important influence on how the regional security environment evolves. Australia has a strong interest in deepening and further developing strategic understanding and operational cooperation with all of these countries. Working together there should be scope to strengthen many aspects of security cooperation and build a more robust regime of international norms for acceptable maritime and air behavior, the resolution of international disputes, etc.

- **Advanced Space Warfare Capabilities** In close partnership with the United States and other key allies this investment would be designed both to protect allied space systems that are critical for Australian operations and also to develop capabilities with the

potential to interfere with Chinese space systems in ways that would complicate the opponent's risk assessments, crisis decision-making, military targeting and broader military operations.

- **Advanced Underwater Combat Capabilities** This option would involve heavy investment in a range of manned and unmanned underwater capabilities that would have the potential to seriously disrupt China's international trade, including its energy imports, for an extended period by interfering with shipping and other elements of infrastructure both near and distant from China's coasts. Some variants of this option would require substantial investment in very innovative unmanned systems. Other options would require a restructuring of the ADF's Future Submarine Project to purchase 10-12 advanced nuclear attack submarines – preferably from a 'hot' production line. The most obvious early nuclear submarine option would be to negotiate with the US Navy the purchase of either standard or slightly modified *Virginia Class* boats. Taking account of the pricing of the latest United States Navy contract for eight of these boats, ten could be bought for some \$17 billion,¹⁰⁴ suggesting a total program acquisition cost (including all essential support requirements) of some \$28 billion. This is very comparable to, if not lower than, the budget anticipated for the currently-envisaged large conventionally-powered boats to replace the *Collins Class*. Overhead and support costs could be contained more tightly than has generally been assumed with nuclear-powered boats in the past because *Virginia Class* boats never need to be refuelled, and possess other characteristics that simplify aspects of through-life support. Purchasing boats from a 'hot' production line would also reduce

¹⁰⁴ "Navy Awards \$14 Billion Contract for Eight Virginia-Class Submarines" *Northrop Grumman News Release* (14 January 2010), accessible at: http://www.irconnect.com/noc/press/pages/news_releases.html?d=156803

markedly technology, system, interoperability, contracting and delivery risks. It would avoid the inevitable technical problems, the time delays, the project risks and the scope for steep cost escalation that would arise from attempting to design, develop and deliver a completely new 'orphan' class of large conventionally-powered submarines. It would also reduce dramatically the requirement for high-level Australian management oversight. A variant of this military off-the-shelf (MOTS) approach with yet other potential advantages would be to enter into a long-term leasing arrangement with the USN whereby the RAN simply operated ten or twelve *Virginia* boats for a specified number of years (say 25) with the USN contracted to provide all, or most, of the logistic support within its own supply system. These options would also permit the RAN to 'piggy back' on many established USN training and personnel development programs and should assist greatly in overcoming the RAN's long-running shortage of qualified submarine personnel.

- **Next Generation Large Strategic Strike Aircraft**
One of the key conclusions of the earlier discussion of the Air-Sea Battle concept was that the Western allies will likely need a new class of advanced, very stealthy strike aircraft that possesses very long range and an exceptional capability to loiter for extended periods in highly contested airspace. This option would entail Australia making an early decision to join with the United States in developing, building and deploying this type of system as a matter of priority. When combined with a dispersed and hardened basing and support system, this capability should have the capacity to threaten key PLA systems and capabilities in depth.
- **Prompt Conventional Strike Capability** The United States Department of Defense sees a need to field a conventionally armed missile system that has the

capability to strike time-urgent targets virtually anywhere in a theatre within an hour. In consequence it is considering, in the immediate term, fielding a conventionally-armed *Minuteman III* ballistic missile system for this role. In the longer term this capability might better be provided by a sea-based ballistic missile. A third possible prompt conventional strike capability might be provided by a hypersonic air-launched missile, the key technologies for which are currently being developed. Initial analysis of future crisis response options in the Western Pacific suggests that a system of this type could have a very important role to play in situations where Australia needed to conduct operations with a high level of independence, as well as when Australia would operate in close partnership with the forces of the United States and other close allies. Possible Australian involvement in the development and deployment of such a capability deserves closer study.

- **Very Advanced Cyber and Information Warfare Capabilities** This option would entail a large and sustained investment in high-grade cyber and information warfare capabilities for use both in protecting Australian and allied systems and also for infiltrating, disrupting and/or damaging an opponent's critical command and control and other high-value electronic systems.
- **Special Internal Disruption Capabilities** This option would require the development over many years of a network of personal linkages of various sorts with key people within China and other relevant societies who harbour serious economic, social or political grievances against the regime. The primary purpose of these efforts would be to develop the capability to stir serious internal disruptions and even revolts in the event that the Chinese leadership threatened Australia's vital interests.

- **Encouraging the Basing of Priority United States Military Capabilities in Australia** One clear conclusion from the background analyses of Australia's more self-reliant strategic options that were conducted as part of this research is that the leadership of any major hostile power would be deeply concerned about the risks of any conflict in the Western Pacific escalating to involve the United States. Were the leadership of an aggressor state to consider attacking Australia directly or ADF units offshore they would need to weigh the likelihood of the ANZUS Treaty being invoked. One way to underline those risks to any opponent and optimise Australian (and United States) theatre deterrence would be for selected United States force elements to operate more frequently from Australia and, in the medium term, to be based there. Basing major United States combat capabilities in Australia would be a departure from long-standing Australian and United States policy and practice but, given the nature of the developing regional security environment, it would appear to offer significant advantages to both Canberra and Washington.

Some of these alternative strategy and capability elements could conceivably be developed so as to deliver particularly strong leverage in shaping a favourable security environment in peacetime. These capabilities include:

- Deep Engagement would greatly strengthen Australia's understanding of, and potential to influence, developments within China and other key societies. As such, over time, it should be of great value in helping to shape positive perceptions of Australia and help to prevent misunderstandings. It should also result in the development of a complex network of personal relationships and linkages that can be used periodically to communicate priority messages and, if required, warnings.

- Australia's acquisition of some capabilities would be seen in Beijing and other regional capitals as "game changers" in the sense that they would fundamentally alter the regional strategic terrain and force significantly recalibrated and more cautious approaches towards Australia. One of the most notable and obvious peacetime "game changing" capabilities would be synchronised announcements in Canberra and Washington that the two countries planned to work in close partnership to develop and acquire a new generation of very advanced underwater military capabilities. As part of this joint program Australia might announce the acquisition of 10-12 *Virginia Class* nuclear powered attack submarines with an interim capability being provided through the lease of an initial *Virginia Class* boat within three years. An announcement of this nature would signal unmistakably that Australia was very serious about developing capabilities to help maintain a stable strategic balance in the Western Pacific and offset the rapid growth of the PLA.
- Another Australian initiative that would send strong shaping and deterrent signals throughout the Western Pacific would be announcements in Canberra and Washington that the two countries had agreed that certain United States combat assets would be forward-deployed to operate more frequently from Australia and, subsequently, to be based in Australia. Primary candidates might include high-altitude long endurance (HALE) reconnaissance UAVs, a detachment of nuclear-powered attack submarines and/or a force of long-range strike aircraft. Announcements of this nature would indicate that serious practical steps were being taken to improve the military postures of the close allies in the Western Pacific and it would underline the seriousness with which both countries were moving to maintain a positive security balance in the region.

- Announcement of a very large Australian program of investment in cyber and information warfare capabilities. The development and fielding of these capabilities might not attract extensive public attention across the region. However, over time, the strategic leaderships of most Western Pacific countries would become aware that Australia had lifted its game in this field and was becoming a formidable cyber player. The fact that the scale and depth of this greatly expanded Australian cyber capability would be difficult to quantify or evaluate would be two-edged. On the one hand, a greatly expanded cyber capability could not be quantified and assessed in the manner of a class of submarines or combat aircraft. However, on the other hand, the very uncertainties surrounding large and sustained investment in advanced cyber capabilities would complicate any opponent's risk assessments, encourage caution and potentially add significantly to Australia's deterrence.

Another mix of strategy and capability packages would appear to possess more powerful leverage in circumstances when there was a strong prospect of intense hostilities between the PRC and the Western allies. Those capabilities include:

- Advanced cyber and information warfare capabilities would probably carry strong asymmetric leverage in the event of large scale conflict in the Western Pacific.
- A heavy investment in special internal disruption capabilities has been assessed by some to carry strong asymmetric leverage in the event of a serious crisis or major conflict in the Western Pacific. However, preliminary assessments of this capability suggest that the desired effects of causing serious internal disruption would be rather uncertain, and most likely would be delayed, possibly by many months or even years.

- Heavy investment in advanced underwater combat capabilities offers the potential to seriously disrupt PLAN operations and also to cripple large parts of the Chinese economy. As such, they would carry substantial asymmetric leverage in the event of a major crisis and they could be applied relatively quickly and with high reliability. These special underwater capabilities could also be employed in modestly-sized incremental packages to demonstrate resolve, signal particular messages or warn of possible escalation.
- The forward basing in Australia of significant US combat capabilities in dispersed and hardened facilities would significantly enhance Australia's combat leverage in the event of a major crisis in the Western Pacific. Many advantages would flow, including a greatly improved force balance from the outset of any conflict.

With these tentative judgements in mind, a group of senior Australian strategic leaders was polled for their views on the relative merits of the main capability options discussed above against the following eight criteria:

- The potential of the capability to effectively threaten a major power leadership's vital interests.
- The difficulty an opponent would experience in effectively countering the capability.
- The prospect that the capability would be seen as a strategic "game changer" and substantially boost Australia's deterrence.
- The potential of the capability to deliver enhanced diplomatic leverage and regional respect.
- The capability's potential to deliver strategic leverage efficiently for a given level of financial investment – i.e. "more bang for the buck."

- The scope for the capability to be used with strong effect in the unlikely event that Australia was forced to fight on its own.
- The prospect that the capability would enhance rather than detract from crisis stability.
- The potential of the capability to make a substantial contribution to any major United States combat operations in the theatre.

When the full menu of potential capability options was assessed by this expert group against these criteria, the following capability options received the highest ratings:

- Deep engagement capabilities;
- Advanced cyber and information warfare capabilities;
- Advanced underwater combat capabilities; and
- The basing of significant United States combat capabilities in Australia.

Merging Australia's Self-reliant Strategic Approach with the US Air-Sea Battle Concept

This discussion suggests that the very rapid rise of the PLA in the Western Pacific has triggered some interesting parallel thinking in the United States and Australia. The perspectives of a global superpower and a close regional ally on how to best respond to the PLA challenge will inevitably differ. However, this discussion suggests that Australia's strategic leaders will probably support the broad logic of the United States Air-Sea Battle concept.

Moreover, Australia's strategic decision-makers will most likely be prepared to consider many of the United States proposals for Australian involvement in helping to give substance to the Air-Sea Battle concept in the Western Pacific. Indeed, they might well be prepared to offer a larger range of combat and support capabilities to assist in the implementation of allied strategy in this theatre.

However, Australian strategic planners also feel a strong need to frame the country's future defence and security

investment within a broader national logic. They will need to convince themselves that, so far as is possible, they can guarantee the nation's vital strategic interests, preferably with a high level of self-reliance. As the discussion in this paper makes clear, this broader Australian logic does not cut across the US Air-Sea Battle concept in any significant way.

However, current trends suggest that Australia's defence and security investment will need to be selected and developed so that Australian forces would be able to operate with considerable effect with a high level of self-reliance, if Australia was forced to conduct major operations largely on its own. Secondly, in the far more likely event of Australia and the United States operating almost seamlessly within a refined Air-Sea Battle concept, Australia will want to make its own distinct contribution. The Australian Government is unlikely to be satisfied by contributing forces only on the margins of this theatre. Australia will most probably wish to be a close player and a significant contributor to some of the more challenging theatre operations, including in advanced cyber and information warfare operations and sophisticated underwater operations.

Why are future Australian Governments likely to be attracted to such a forward-leaning stance? Put simply, the country's most vital long-term security interests are riding on the outcome of this strategic competition with the PLA. For Australians this is no side-show. The Australian electorate will expect the challenge posed by the PLA to be met with a well-thought-out, confident, fully credible and sustained strategy.

AUSTRALIA'S STRATEGY FRAMEWORK

This discussion suggests some leading themes for Australia's national security strategy for the coming two decades. Strategy in this context needs to be considered at two distinct, but closely related levels. First, there are the core themes that might best drive Australia's national security strategy at the highest level of national policy – at the level that is frequently described as grand strategy.

Grand Strategy

At the grand strategic level, it is suggested that the most appropriate strategy is *Engagement and High-leverage Hedging*.

This is a strategy that would see emphasis on two primary themes. The first would be intense and sustained strategic engagement, particularly with China, Japan, South Korea, India, Indonesia and the other ASEAN member states and also with Russia. This would be the primary driver of Australia's foreign and international economic and commercial policies. Deep regional engagement would also drive Australia's national security and defence diplomacy and it would exert a strong influence on Australia's defence and broader national security operations.

The second grand strategic theme would be high-leverage hedging. This would entail the careful selection, development and introduction into service of a series of national security capabilities that have 'game changing' potential. They should be very difficult, expensive and time-consuming for even a major power to overcome and they should possess strong deterrent potential. As is discussed in greater detail later in this paper, it would not be necessary for all of these capabilities to be developed simultaneously and immediately. Rather, given the uncertainties surrounding the precise nature of the security challenges likely to be confronted in 2030 it would be best for the selected high leverage capabilities to be acquired in a phased manner over some 15-18 years, but with major planning reviews being conducted every 3-4 years.

Operational Strategy

There is a need also to determine the core themes of Australian strategy at the operational level. This is the level of strategy that would drive campaign planning and operational responses to major and direct national security threats to the country.

The proposed operational strategy is *Strategic Persuasion and Maritime Denial*.

At its core, Australian operational strategy for major crises should be driven by the need to persuade the opposing leadership to change its mind and come to terms that are broadly in accord with the interests of Australia and the country's close allies and friends. Effective strategic persuasion is likely to require the application of a broad range of political, diplomatic, economic, cyber, military and other instruments. In the military domain a primary theme would be operations to isolate an opponent and to deny access to priority maritime areas and priority seaborne supply.

Precisely how such strategic approaches might best be developed needs further study, including trade-off and other analyses. However, some illustrative force structure options that might be appropriate to consider in order to achieve primary strategic goals are described briefly below.

ILLUSTRATIVE AUSTRALIAN FORCE STRUCTURE OPTIONS

Once Australia's future national security strategy is selected, there will be a need for the Australian Government to choose a coherent set of capabilities that are tailored to meet the emerging requirements of 2030-2040. What broad options would seem to be available and what would be their relative strengths and weaknesses? For the purposes of this study, four alternative capability options are canvassed.

Force Structure Option 1: A Modernised General Purpose Force Structure Option with Modest Strategic Leverage over Major Powers

This is essentially a status quo option. It would entail a continued development of the national security capabilities discussed in the 2008 National Security Statement and the defence capabilities listed within the 2009 Defence White Paper and the current version of the Defence Capability Plan. Primary features of this option would be:

- Continued gradual development of national security coordination and a sense of national security community across relevant government agencies.

- A gradual strengthening of national security education and training.
- Generally loose and informal arrangements for national security coordination with some parts of industry and the broader civilian community.
- Most national security planning and preparations remaining within individual departmental 'silos' and limited planning for the mobilisation of civilian capabilities in future crises.

Within the Defence environment new capability elements would include those specified in the 2009 Defence White Paper. They include:

- About 100 F-35 Joint Strike Fighters or possibly fewer F-35s and additional F/A18 F Super Hornets and associated weaponry.
- 7 high altitude, long endurance (HALE) UAV reconnaissance aircraft.
- 8 P-8 long range maritime patrol aircraft
- 5 KC-20A aerial tankers
- 12 new conventionally powered submarines
- 3 highly capable air warfare destroyers
- 8 new anti-submarine frigates
- 20 new multi-role offshore combatants with modular systems.
- 2 landing ships dock (LHDs) and a new sealift ship.
- 46 large maritime helicopters
- 10 battalion-sized army battle groups
- 1,100 new deployable protected vehicles.
- Enhanced cyber and information warfare capabilities.
- Modest in-country stocks of munitions and spare parts.

The emphasis in this option is on gradually building an Australian national security community across government

agencies, modernising current defence force capabilities and strengthening Australia's air combat, submarine, surface fleet and low-to-medium intensity ground combat capabilities.

Primary Strengths of Option 1:

- This option offers continuity. It would further stimulate gradual coordination across the Australian national security community. It would result in a defence force structure in 2030 that in most respects would mirror that which was deployed in the 1970s, sixty years earlier. As such it would be bureaucratically convenient and relatively easy to implement.
- The emphasis in this option is on general-purpose forces with capabilities to undertake many types of operation moderately well, so long as the scale and intensity of the operational requirements are not too high.
- This option is probably affordable so long as Australia maintains a pattern of moderate-to-strong economic growth and substantial efficiencies are won in Defence administrative overheads.

Primary Weaknesses of Option 1:

- This option offers only limited asymmetric leverage against a major power. As such, it would contribute only modestly to efforts to balance and offset the rapid rise of the PLA. It certainly does not offer "game changing" capabilities for Western Pacific security challenges.
- This option would not offer any realistic prospect of deterring a major power threat to Australia's vital interests through independent operations. It would, indeed, necessitate high levels of dependence on United States protection in the event of a major regional crisis. This would entail significant strategic risks for the country in the 2030-2040 timeframe and carry potentially serious consequences for Australian sovereignty.

- This option offers only modest progress in strengthening national security coordination and a sense of national security community.
- It would not promise substantial progress in planning whole-of-nation or even whole-of-government planning for major national security crises. As such, it would not maximise Australia's crisis leverage or its sustained resilience.
- This option would only support independent combat operations for a very limited period. Combat operations for extended timeframes would be dependent on timely and large-scale allied resupply, which is unlikely to be available in the event of a major crisis in the Western Pacific.
- At best, Option 1 would be capable of offering only modest support to United States and other allied forces in the event of a major security crisis in the Western Pacific. In consequence, this option may convey the impression to Washington that Canberra was unresponsive and less than fully helpful given the serious security challenges that are now emerging.
- This option offers only modest scope for balancing, offsetting and deterring a major power and, in consequence, it would not contribute substantially to building and sustaining the resilience and confidence of Australia's regional neighbours and friends.

Force Structure Option 2: Semi-Independent Regional Engagement and Alliance Building but With Modest Strategic Leverage over Major Powers

This option would recognise the need to move swiftly to help balance the rapid rise of Chinese strategic power. However, partly because of doubts about United States long-term resilience in the Western Pacific, Option 2 would seek to strengthen Australia's longer-term security by placing stronger emphasis on intense regional engagement combined with heavy investments in selected highly asymmetric military capabilities.

The primary investment priorities in Option 2 would be:

- Strong regional engagement with key leaderships and organisations in China and other major regional countries. The primary goals of these efforts would be to build a much deeper understanding of these societies and governments, strengthen personal linkages with key individuals and foster capacities to influence decision-making when Australia's vital interests are at stake.
- The development of a strong informal association of key countries in the Asia-Pacific region who share Australia's concerns about the medium and longer term strategic trajectory of the PLA and are prepared to cooperate closely to help balance and offset China's emerging strategic weight. Key potential partners would include Japan, South Korea, Indonesia, India and Russia.
- Some strengthening of Australia's national security planning and coordination to help marshal whole-of-government assets with the goal of improving the scale and effectiveness of regional engagement.
- A strong focus on cyber and information warfare capabilities so as to build the potential to protect Australian and allied systems and also to infiltrate, disrupt and/or damage an opponent's critical command and control and other high-value electronic systems and encourage strategic doubt and caution.
- Strong investment in advanced underwater combat and support capabilities. This option would involve heavy investment in a range of inhabited and uninhabited underwater capabilities that would have the potential to seriously disrupt China's international trade, including its energy imports, for an extended period by interfering with shipping and other elements of infrastructure both near and far distant from China's coasts.

- Some adjustments to other defence equipment priorities, primarily to reduce numbers of potentially vulnerable surface combatants and associated helicopters and also some reductions in conventional ground force systems. This would mean that primary areas of defence capability investment would include:
 - About 100 F-35 Joint Strike Fighters or possibly fewer F-35s and additional F/A18 F Super Hornets and associated weaponry.
 - 7 high altitude, long endurance (HALE) UAV reconnaissance aircraft.
 - 8 P-8 long range maritime patrol aircraft
 - 5 KC-20A aerial tankers.
 - 12-14 new conventionally powered submarines plus the other advanced underwater capabilities described above.
 - 3 highly capable air warfare destroyers.
 - 4-6 new anti-submarine frigates.
 - 12 new multi-role offshore combatants with modular systems.
 - 2 landing ships-dock (LHDs).
 - 30 large maritime helicopters.
 - 10 battalion-sized army battle groups.
 - 800 new deployable protected vehicles.
 - Enhanced cyber and information warfare capabilities.
 - Strengthened in-country stocks of munitions and spare parts.
- A notable feature of this option is that special forces would be strengthened and would gain greater prominence in Australia's ground forces. They would acquire substantial additional capabilities, including those required to conduct a wider range of long-distance operations against high-priority strategic targets. The enhanced costs of these and related new capabilities would be largely offset by reductions and the transfer to reserve units of some of the more

conventional force capabilities and reduced numbers of some naval surface assets.

Primary Strengths of Option 2

- Option 2 seeks stronger leverage against coercion by a major power, though with less dependence on the United States.
- This option seeks to rally other regional countries to help balance the challenge posed by the rapid rise of the PLA.
- Option 2 makes a serious attempt to employ asymmetric instruments to counter the regional security challenge. It proposes moving well beyond general-purpose forces and, in consequence, promises to be more effective in balancing China.
- By placing strong emphasis on regional engagement and the building of collective regional action, as well as on investment in selected military capabilities, this option seeks to harness more whole-of-government, if not whole-of-nation, capabilities and capacities.
- The military capabilities identified for priority investment in this option, if developed effectively, would have the potential to contribute significantly to the strengthening of Australia's deterrence and defensive capabilities against a major power.

Primary Weaknesses of Option 2

- This option relies heavily upon many regional countries viewing the challenge posed by the rapid rise of the PLA with similar concern to Canberra and Washington. There will inevitably be widely divergent views on this core question from Seoul to Delhi to Moscow.
- This option relies not only on many regional countries coming to share Australia's deep concerns about the PLA's trajectory, but also them being prepared to take various collective actions to meet this challenge.

Progress in these endeavours would most likely be uncertain and patchy.

- While this option aims to deliver high leverage capabilities with a degree of independence from the United States, that independence would most likely be modest in practice. Most of the key capabilities proposed would require extensive United States support in order to be effective in delivering optimal strategic effects.
- Option 2 foreshadows only limited efforts to marshal a broader range of national capabilities to contribute to national security in future crises.

Force Structure Option 3: Advanced Semi-Independent Asymmetric High Leverage Capabilities

The primary investment priorities in Option 3 would be:

- A more extensive and sustained program of engaging and coordinating government and broader community capabilities across Australia to contribute to the delivery of priority strategic effects and to the maintenance of national resilience in future crises. Key features would be sustained programs of planning, public education and training and the periodic exercising of whole-of-nation capabilities.
- Deep regional engagement with key leaderships and organisations in China and other major regional countries. The primary goals of these efforts would be to build a much deeper understanding of these societies and governments, strengthen personal linkages with key individuals and foster capacities to influence decision-making when Australia's vital interests are at stake.
- Advanced cyber and space warfare capabilities.
- Very advanced underwater capabilities featuring new-generation underwater sensor systems, several types of uninhabited underwater vehicles (UUVs) and 10 nuclear-powered attack submarines – preferably of the

highly versatile *Virginia Class*. These capabilities would have the potential to seriously disrupt China's international trade, including its energy imports, for an extended period by interfering with shipping and other elements of infrastructure both near and far distant from China's coasts.

- 20 multi-role offshore patrol combatants designed with modular systems so that in high-intensity conflict they can be configured as stealthy arsenal (i.e. long range missile-firing) ships. However, at other times these vessels could also be configured to perform border protection, mine countermeasure, hydrographic, oceanographic and other tasks.
- Advanced air defence and air strike capabilities. This would entail the purchase of about 100 F-35 Joint Strike Fighters or possibly fewer F-35s and additional F/A-18 *Super Hornets* and/or uninhabited combat air vehicles with advanced fighter capabilities. Also required would be some 7-10 high altitude, long endurance (HALE) UAV reconnaissance aircraft up to 8 KC-20A aerial tankers and also a significant investment in the United States new-generation long-range air strike capabilities.
- Advanced capability ground forces. In this option most of Australia's ground force capabilities would be reconfigured and equipped to perform long-range special force operations of various types. They would, however, still be capable of operating as more conventional units across a range of less intense contingencies.
- Strengthened logistic capabilities would be an integral part of this option to ensure that the ADF could sustain extended combat operations when required without relying on early large scale resupply from the United States and other foreign countries.

Primary Strengths of Option 3

- Option 3 would provide the wherewithal for future Australian governments to exert high strategic leverage against any opponent, even a major power. A decision to pursue this option would deliver “game changing” strategic perceptions throughout the region. Australia would signal strongly that it was determined to develop very strong defensive capabilities and was not to be trifled with.
- The mix of capabilities envisaged in this option could be used in many different ways to deliver very strong dissuasive and deterrent effects.
- Primarily because of the two points above, Option 3 could be expected to boost Australia’s diplomatic leverage across the region. This option would signal unmistakably that Australia planned to be a major player in regional security for the long-term and that its views were of consequence.
- Option 3 would have the potential to deliver stronger strategic effects than the first two options primarily because it could marshal a much wider range of national capabilities in future national security crises. These efforts should deliver enhanced strategic leverage and also more robust crisis resilience.
- The cyber, underwater, air strike, surface combatant and special force elements of this option would all generate serious operational challenges for any major power aggressor in the Western Pacific. These forces could potentially inflict serious damage on an opponent’s combat forces and pose credible risks for the security of any adversary.
- The capabilities envisaged in Option 3 would provide the means for crafting a potent defensive capability with relatively high levels of combat and logistic independence.
- While the capabilities developed within this option could be used with a relatively high level of independence, they would certainly be valued very

highly by the United States and other close allies and friends and they would be well-suited to closely-integrated combined operations, particularly with the United States.

Primary Weaknesses of Option 3

- This option would be relatively expensive. While there would be some expenditure offsets, such as in reduced investment in large surface vessels, in some heavy land force capabilities and in administrative overheads, the overall set of capabilities may require a 25-50% increase in defence investment over the coming decade.
- While this option would provide exceptional capabilities against major powers and other nation states, it would probably deliver marginally less flexibility for conducting lower intensity operations, such as those required for fragile state stabilisation and extended counterinsurgency campaigns.
- Option 3 would require the periodic distraction of some parts of the broader Australian community from their normal functions in order to plan, train and exercise their national security functions.
- In striving to deliver advanced capabilities with a relatively high level of independence, this option fails to capitalise on the synergies that are available in the Western Pacific from a closer integration with United States' forces and systems.

Force Structure Option 4: Strong Asymmetric Leverage in Close Partnership with the United States

This option is designed to make the most of Australia's limited strategic resources to leverage the country's close allied partnership with the United States and generate an integrated suite of highly asymmetric capabilities. These capabilities would be selected largely for their potential to deter and help balance the rapidly-rising capabilities of the PLA or any other major power. Were there to be a major

conflict in the Western Pacific these capabilities could contribute significantly to the primary operations of the close Western allies.

The primary investment priorities in Option 4 would be:

- Deep regional engagement with key leaderships and organisations in China and other major regional countries. The primary goals of these efforts would be to build a much deeper understanding of these societies and governments, strengthen personal linkages with key individuals and foster capacities to influence decision-making when Australia's vital interests are at stake.
- A major effort would be launched to select, organise, train and exercise Australian and relevant United States civilian resources to expand greatly crisis surge and sustainment capabilities in the Australian theatre of operations. These efforts should enable the delivery of key strategic effects in a range of national security contingencies with greater speed, larger mass and over much longer periods.
- Strong investment in cyber and information warfare capabilities so as to build the potential to protect Australian and allied systems and also to infiltrate, disrupt and/or damage an opponent's critical command and control and other high-value electronic systems and encourage strategic doubt and caution in the opposing leadership. In Option 4 Defence, other government agencies and many civilian organizations would be teamed to deliver much stronger cyber effects than any single government agency could deliver on its own.
- Expanded investment in advanced underwater combat and support capabilities. This option would involve heavy investment in a range of inhabited and uninhabited underwater capabilities including, potentially, a force of nuclear powered attack submarines. These capabilities would have the

potential to seriously disrupt China's international trade, including its energy imports, for an extended period by interfering with shipping and other elements of infrastructure both near and far distant from China's coasts.

- Heavy investment in combined air combat capabilities. This option would involve strengthened investment in Australia's air defence capabilities, including against long range cruise and ballistic missiles. It would also entail early involvement with the United States in the development and delivery of a new capability for long range, persistent air strikes in highly contested airspace and possibly also some investment in United States prompt conventional strike missile capabilities.
- As with Option 3, Option 4 would require the development of advanced capability ground forces. Most of Australia's ground force capabilities would be reconfigured and equipped to perform long-range special force operations of various types. They would, however, still be capable of operating as more conventional units across a range of less intense contingencies.
- Option 4 would, in addition, include the hosting by Australia of a range of United States sensor, command and control and combat capabilities. These would be accommodated in tailored facilities that feature high levels of dispersal and other protective measures. They would be located primarily in northern, central and offshore Australia and would be supported by the full range of Australian industrial and logistic expertise.

Primary Strengths of Option 4

- Option 4 offers several "game-changing" components that have the potential to alter the regional security landscape, strengthen Australian and allied deterrence, contribute significantly to balancing and

offsetting the rapidly-rising PLA and reinforce regional security confidence.

- Primarily because of the first point above, Option 4 could be expected to boost Australia's diplomatic leverage across the region. This option would signal unmistakably that Australia planned to be a major player in regional security for the long-term and that its views were of consequence.
- By marshalling a wide range of relevant civil capabilities in both Australia and the United States, Option 4 offers scope to deliver and sustain very strong strategic effects in national security crises.
- The cyber, underwater, air strike, special force and United States basing elements of this option would all potentially generate serious operational challenges for any major power aggressor in the Western Pacific. These forces could potentially inflict serious damage on an opponent's combat forces and pose broader risks for the security of any major opponent.
- This option would integrate Australia's defence capabilities more extensively with those of the United States. This would carry many advantages including enhanced access to new technologies and systems and greatly expanded opportunities for combined training and exercising.
- Basing a larger range of United States units in Australia would likely mean that some of Australia's enhanced strategic leverage would effectively be funded by the United States.
- The presence of significant United States military forces in Australia would generate substantial economic spin-offs. Some of these would flow from the direct support of United States forces and operations. Other benefits would flow more indirectly from the increased attractiveness of Australia as a location for a range of new, mainly high-technology investments.

Primary Weaknesses of Option 4

- In order to deliver its full promise, Option 4 requires the United States to continue to be a strong partner in the Western Pacific and to expand its security presence, especially in Australia. Given the economic challenges now being confronted by the United States there must be doubts about the level of flexibility that the United States leadership will possess in this field during the coming two decades.
- More than in Option 3 the planning, organising, development and periodic exercising of a wide range of civilian resources in both Australia and the United States would distract many people from their primary roles and incur an opportunity cost.
- Option 4 might try to achieve too much and may prove to be too expensive. There may be a case, in consequence, for reducing some of the national capabilities that feature in Option 4. In other words, there may be a case for an Option 4B.
- More frequent staging and exercising of allied forces in Australia and then the basing of selected elements there would carry the risk that additional parts of the country could be targeted by the PLA in the event of a future crisis in the Western Pacific.
- Some of the capabilities that the United States might wish to base in, or stage through, Australia within this option may have the potential to contribute to crisis instability in some future contingencies. This may, for instance, be the case with some types of prompt conventional strike capabilities.
- Proposals to base United States force elements and significant numbers of American personnel in Australia are politically sensitive both in Australia and in the United States. Were such initiatives launched there would be a need to explain to the publics of both countries the strategic and other reasons for the

decisions and the benefits that could be expected to be won.

WHERE TO FROM HERE? IT'S TIME FOR HIGH-LEVERAGE STRATEGIC HEDGING

This report concludes that Option 4, or a variant thereof, would provide the best platform from which Australia could consider developing its strategic edge over the coming two decades.

The primary purpose of this discussion has not, however, been to argue the merits of Option 4. Rather, its purpose has been to show that in response to the rapid expansion of the PLA, Australia has several significantly different national security capability options and that there is potential for future force structures to be tailored so as to deliver high-leverage strategic effects.

Importantly this analysis suggests that while a straightforward modernisation of the current force structure might be administratively and bureaucratically simple, it would not be very effective in balancing the challenge posed by the rapidly rising PLA. Other approaches featuring much stronger asymmetric capabilities promise more potent strategic balancing, offsetting, deterrence and combat capabilities. In short, there is a very strong case for Australia's defence investment priorities to be reviewed and changed in light of the new challenges.

The key variables are:

- How far and how fast does the Australian Government wish to go in exploiting asymmetric leverage to deter and dissuade powerful nation states?
- To what extent does the Australian Government want to deliver priority strategic effects with a high level of independence from the United States?

- To what extent should Australia's national security approach marshal Australian, United States and other allied civilian capabilities in order to strengthen Australia's strategic leverage and deliver enhanced strategic resilience?
- How much stress should Australia's defence investment programs place on providing flexibility to perform well in less strategically important lower intensity contingencies?
- What level of logistic sustainability and endurance will be required?

These are all matters requiring explicit decisions by the Australian Government. Once these key decisions are taken, there is a need for a new process to take forward the redirected force structure and implement component changes with discipline and timeliness.

First, there is a clear need to consider in greater depth than is possible in this paper the best means of dealing with the rapid rise of the PLA and the security challenges anticipated in the Western Pacific by 2030. This requires the application of impartial and very high quality analytical expertise. Clear goals need to be set and alternative strategy and capability options need to be evaluated and tested using a range of techniques. A premium should be accorded to innovative approaches for the delivery of priority strategic effects.

Key topics deserving early priority research include the following:

- Options for rapidly strengthening Australia's high leverage national security capabilities in the shorter term, i.e. by 2015.
- Options for developing and implementing deep engagement strategies with China, Japan, South

Korea, Indonesia, India, Russia and other priority countries.

- The relative merits of high-leverage capability options in delivering priority strategic effects against major power opponents in the 2030 timeframe.
- The relative merits of alternative options for using underwater capabilities to deliver high-leverage strategic effects against a major power in the 2030 timeframe.
- The relative merits of alternative options for prompt, precise theatre strike capabilities in the 2030 timeframe.
- The implications of future Western Pacific security crises for Australian logistic sustainability and endurance.
- Options for Australia's master-planning of defence bases and related facilities for the 2030-2040 period.
- Options for providing enhanced support for the forces of the United States and other close allies on and from Australian facilities.

In undertaking these and related studies, it would be important for specific systems, platforms and single service contributions to be seen only as offering options and instruments for the delivery of clearly identified priority strategic effects. The perpetuation of specific systems, platforms, single service contributions or administrative overhead functions should never be seen as objectives in their own right.

This analytical work should ideally be undertaken during 2011 and the first half of 2012 so as to inform the next Australian National Security Statement and Defence White Paper. As in the case of the previous National Security Statement and White Paper, those documents should be developed in close consultation with, and at the guidance of, the National Security Committee of Cabinet. These processes would refine the strategic logic and clarify the key priorities for

Australian national security investment for the coming two decades.

The next National Security Statement and Defence White Paper need not, however, determine and then lock-in all of the national security capabilities identified for purchase during the coming two decades. Rather it would be best to focus on defining clearly the strategic objectives for the coming decade, describing the strategic logic for the key investment priorities and then announcing those major capabilities that the government has decided to acquire within the new framework during just the coming decade or so.

National security development from that point onwards would best follow a process of strategic hedging, as illustrated in Figure 8 below. As can be seen, at Decision Point 1 in Year 0, the government needs to decide on the scenarios it wishes the national security system and the Defence Force to handle in Year 15 and onwards. If the government wishes the national security system to operate effectively in the most demanding contingencies A and B, it needs to plot a course towards Alternative Force Structures 22, 23 or 24. This requires the allocation of Level 1 spending for the first three years until Decision Point II.

At Decision Point II there is an opportunity to again review the challenges emerging in the international security environment and to ask whether progress should be sustained towards Alternative Force Structures 22, 23 or 24, or whether spending for the next three years should be allowed to slip from Level 1 to Level 2. Should the government decide at this point to carry more risk and reduce expenditure to Level 2, Alternative Force Structure 22 (the most capable force structure) would be placed out of reach for Year 15. By not proceeding with the development of the many key skills, equipments, systems and facilities needed for Force Structure 22 at Decision Point II, it would not be possible to catch up with lost time, even if substantially more than Level 1 expenditure were to be committed at Decision Point III.

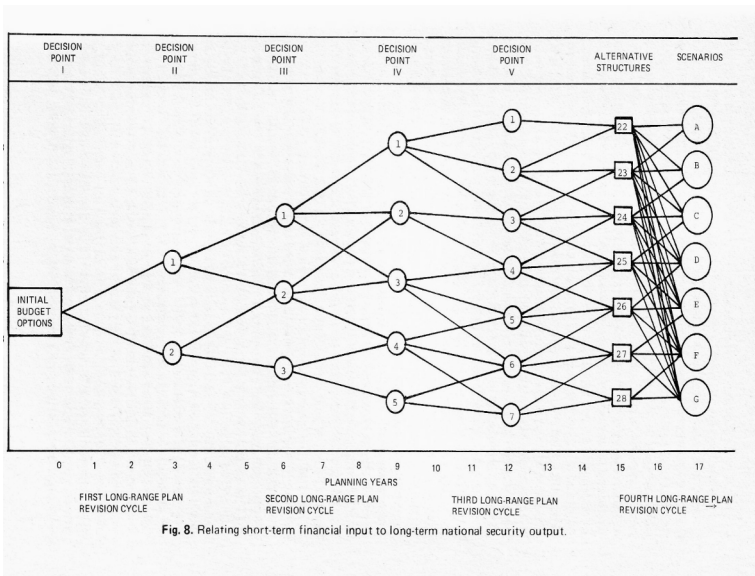


Fig. 8. Relating short-term financial input to long-term national security output.

Figure 8: Strategic Hedging in National Security Development

Source: Ross Babbage *Rethinking Australia's Defence* (University of Queensland Press, St. Lucia, 1980) p. 281.

The primary point of this discussion is that should the Australian Government decide at the time of the next National Security Statement or Defence White Paper to alter investment priorities and focus on building much stronger regional balancing and deterrent capabilities, it would be possible to chart the new course with clarity and commence a gradual process of total force change. The new course could be followed with energy whilst simultaneously permitting regular triennial or quadrennial reviews of the emerging security challenges, overall national security investment priorities and levels of expenditure.

In effect this approach offers rigor in force structure analysis. It ties force structure priorities directly to the achievement of specified strategic effects, it requires discipline in capability development and acquisition and it makes crystal clear the implications of varying levels of financial investment

at each decision point. Importantly, it allows government to hedge against strategic uncertainty by embarking on a clearly defined path and adjusting course periodically to accord with the latest assessments of the international security outlook.

CONCLUSIONS

This paper concludes that it would be unwise for Australian national security planning to remain on its current course. China is rapidly developing and deploying a formidable array of capabilities that has the potential to deny the United States and its allies unimpeded access to the space, airspace, surface and subsurface maritime areas in much of the Western Pacific theatre, including in Australia's immediate approaches. Australia has strong interests at stake and difficult strategic and force structure choices to make.

This analysis concludes that the Australian national security system will need to change the manner and modes of many of its activities if the country is to possess a true strategic edge in the 2030 timeframe. This need for strong change springs largely from the fact that the Australian Defence Force is most unlikely to enjoy an advantage in size or mass in coming decades. Hence, it will not be enough in the period ahead for the ADF and the broader Australian national security community to focus on just being a quality Western-style national security system. There will be a need, in addition, to work hard to sharpen significantly several key enablers of national security excellence. The Australian national security system will need to become truly exceptional in eight key respects that are highlighted below.

- 1. Mastery of Strategy** More than ever before, the leadership of the Australian national security system will need to possess exceptional capabilities to design, develop, evaluate and implement strategy at the highest grand strategic level as well as at the operational or campaign level. These endeavours will need to be supported by a career-long educational focus on these themes, the reward of excellence in this

field and the demonstration of advanced strategic thinking becoming a standard criterion in both military and civilian officer promotions.

2. Asymmetric Strategy and Planning Becomes the

Norm There needs to be full recognition that in most serious future conflicts the ADF and the broader Australian national security community will be outnumbered and sometimes out-gunned. In these circumstances symmetrical and linear strategic and force structure thinking will be inadequate. Rather Australia needs to foster a vibrant culture of thinking 'outside of the box', in identifying the weaknesses of opponents at an early stage and devising ways of exploiting those weaknesses, catching the opposing leadership off-balance and rapidly delivering priority strategic effects. National security personnel development and education needs to encourage such unconventional thinking and planning and consistently reward the more innovative commanders and managers.

3. Develop, Assess, Test and Select Total Force Structure Options

The Australian national security system has been slow to develop the skills and habits of developing, testing and evaluating alternative total force structure options for the government to consider. For instance, the Australian Defence Organisation generally evaluates, assesses and recommends individual capabilities to government piecemeal as items on a never-ending shopping list. While such submissions explain briefly where the proposed new capability might fit within the total force structure, it is normally only within the context of Defence White Paper development that any total force structure alternatives are considered seriously. Even then, the force structure options developed are limited and essentially budget-driven variants of a pre-determined core structure.

This process has been described in the past as being akin to buying a new car by purchasing a steering

wheel, axles and a muffler in the first year.¹⁰⁵ In the second year the chassis frame might be bought together with the doors and boot lid. In the third year the engine and the bumper bars might be bought, and so on. After 15 years the components of a complete car might have been bought but because the total design has not been analysed and tested rigorously and items purchased with the right specifications and in the correct timeframe to make the total system work optimally, the end result falls far short of world's best practice. This needs to change.

- 4. High Levels of Innovation and Experimentation** In order to foster exceptional performance in the demanding strategic future into which Australia is heading there is a need to encourage higher levels of innovation and experimentation in everything from the marshalling of civilian capabilities for national security purposes, to battlefield technologies and systems, to tactics, to campaign planning and to logistic and administrative support. This will require the creation of an experimentation facilitation cell and the active encouragement of appropriate cultures by the senior national security leaderships. It will need to be recognised that striving for new standards of world's best practice will require the taking of innovative risks, more testing and trialling of alternative approaches, the acceptance of periodic failures and the rewarding of innovative breakthroughs.
- 5. Foster World-Leading Levels of Efficiency and Effectiveness** The current Strategic Reform Program in the Department of Defence is delivering some improvements in efficiency and effectiveness. However, there is a need to go further and aim for world-leading levels of efficiency and effectiveness across the entire national security administration by:

¹⁰⁵ Ross Babbage *A Coast Too Long: Defending Australia Beyond the 1990s* (Allen & Unwin, Sydney, 1990) p.209.

- Carefully selecting and training a modest number (about 10) senior Output Managers who will be held responsible for delivering optimal portfolio outputs for an agreed budget. These Output Managers should be appointed to manage National Security Intelligence, Strategy and Policy, National Security Capability Development, the Mobilisation of Civilian Capabilities, National Security Operations, National Security Capability Acquisition and Support, National Security Science and Technology etc.
- Giving the Output Managers control over the means of production in order to deliver optimal outputs within their allocated budgets. In other words, empower the Output Managers to manage. They should be handed authority to acquire more or fewer staff in whatever mix of levels considered desirable; more or less technology; more or less facilities, etc. All costs for staffing, facilities and operations, etc would be measured according to full market rates.
- Permit Output Managers to reinvest most savings won from their efficiency measures back into their portfolios.
- Regularly benchmark the performance of Output Portfolios against world's best practice (including commercial best practice where appropriate) through independent audit.
- Hold Output Managers responsible for their performance and reward them appropriately.

These types of processes are commonplace in the private sector and have a long track record of delivering exceptional levels of efficiency and effectiveness. They are overdue in Australia's national security system.

6. Build Resilience There has been a tendency during the last fifty years for parts of the Australian national

security and defence communities to see themselves as being involved in an essentially peacetime enterprise. This has led to the development of some capabilities that are 'hollow' and which, in the event of a serious crisis, could not operate effectively in a sustained manner. This peacetime culture will be inadequate for the security environment likely to be faced in coming decades. In consequence, there is a need to review mobilisation planning and preparations, facilities locations and designs, spare parts and munitions holdings and many other things besides.

7. Foster Innovative Whole-of-Nation National Security Planning

Given the likely shape of the country's security future, the pressures on national security resources in coming decades are likely to be high. As emphasised earlier in this paper, one way of stretching the national security budget is to plan the more extensive and effective use of a wide range of government and civilian assets in future crises. National security planning has hitherto made only limited use of reserve personnel, contractors and contributions from other government and non-government organisations. There is scope for more innovative action in this field so as to deliver far greater crisis response capability for a given national security budget. National Security Output Managers should be encouraged to exploit these opportunities to deliver better value for the taxpayers' money.

8. Exceptional Leadership

It is a long-standing nostrum that substantial change and redirection in the Australian national security system only occurs when it is either forced by a major international crisis or it is imposed by external actors. This paper argues that this nostrum understates the capacity of Australia's current political and national security leadership to initiate and deliver the type of transformation that is now required.

However, the required changes will not be simple or easy to implement. There needs to be a clear vision of where the national security system should go, and there should be agreement on the part of the senior political and official leadership on the way forward, and then a strong and sustained program of implementation. This will require courage, energy and sustained commitment. It will also require very strong and enduring communication campaigns both within and outside of government. The potential benefits are, however, very substantial and achievable. There is a need to address the changes required at an early stage and to move forward quickly.

Many people within the national security community and in different parts of Australian society will resist the need for change. Some will seek to turn a blind eye to the markedly altered security challenges that are emerging. Others will find excuses to maintain their current focus and habits of behaviour even if they are increasingly irrelevant. Some will argue for a 'steady as she goes' approach. Still others will propose partisan or special interest capabilities or modes of operation. All of these deeply conservative responses need to be resisted. The changes underway in the regional security environment are profound, compelling and unavoidable. They must be addressed squarely. Failing to respond with an innovative restructuring of Australia's national security strategy, priorities and system would render the country increasingly vulnerable.

Australia currently faces a set of circumstances unlike any since the Second World War. It has enjoyed six decades of sunshine and mostly soft breezes. But now the weather is changing. The wind is faltering and shifting direction and there are dark clouds on the horizon. Heavy weather may be in store. Tee shirts and shorts should be replaced by more rugged attire. There is a need to review the way forward and re-focus, and to do so quickly.

About the Kokoda Foundation

Purpose

The Kokoda Foundation has been established as an independent, not-for-profit think tank to research, and foster innovative thinking on, Australia's future security challenges. The foundation's priorities are:

- To conduct quality research on security issues commissioned by public and private sector organisations.
- To foster innovative thinking on Australia's future security challenges.
- To publish quality papers (*The Kokoda Papers*) on issues relevant to Australia's security challenges.
- To develop *Security Challenges* as the leading refereed journal in the field.
- To encourage and, where appropriate, mentor a new generation of advanced strategic thinkers.
- Encourage research contributions by current and retired senior officials, business people and others with relevant expertise.

Membership

The Kokoda Foundation offers corporate, full and student memberships to those with an interest in Australia's future security challenges. Membership provides first-release access to the *Kokoda Papers* and the refereed journal, *Security Challenges*, and invitations to Foundation events. Membership applications can be obtained by calling +61 2 6295 1555, and downloaded from:

www.kokodafoundation.org

Australia's Strategic Edge in 2030

This report analyses the dramatic changes anticipated in Australia's security environment by 2030 and the best options for Australia in response.

The most fundamental changes are being caused by the nature, scale and speed of China's military expansion. China is rapidly deploying a range of very advanced military capabilities that, for the first time since the Second World War, challenge the Western allies' superiority and freedom of action in the Western Pacific.

China is starting to contest the Western allies' operational sanctuary in space, the security of their main operational bases in the Western Pacific, the security of their naval vessels at sea, the security of Western Pacific airspace and the security of allied surveillance, situational awareness, logistic and other information networks. These developments, and those anticipated during the coming 20 years, threaten many of Australia's key security interests and they pose numerous dilemmas for Australia's security decision-makers.

This paper concludes that Australia does not have the option of ignoring or standing aloof from these developments. Moreover, a 'steady as she goes' simple modernisation of Australia's current national security capabilities would not be effective in balancing and offsetting the rising PLA and optimising Australia's security for the medium and long term. There are, in consequence, strong incentives to consider at least four alternative options for moving forward. This report recommends the early and disciplined implementation of a strategy of engagement and high-leverage hedging.



About the Kokoda Foundation

The Kokoda Foundation has been established as an independent, not-for-profit think tank to research, and foster innovative thinking on, Australia's future security challenges. Visit our website at www.kokodafoundation.org

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