

Australia

I. Current National Security Situation¹

Strategic security perspectives

Traditionally insulated from major threats to its territory, Australian national defense has been undergoing fundamental change in recent years and especially in recent months in light of the crisis in Indonesia and East Timor and the commitment of Australian peacekeeping forces. The threat of Indonesian disintegration and civil war, coupled with the inevitable entry of outside powers, backing one side or another in the Indonesian struggle, further complicates Australia's strategic national interests in the region.² Such worst-case scenarios could lead to a direct threat to the Australian mainland or its maritime approaches. Australia believes that sustained economic growth in the region has created significant increases in defense budgets and military modernization programs, and that Australia has a responsibility not only to defend itself but also to contribute to regional stability. Australia is also very much concerned about the potential for the proliferation of nuclear, chemical and biological weapons into the region.

Current Australian defense policy focuses on capabilities to defend Australia and maintain a "secure country in a secure region."³ This may include requirements to operate abroad. A cornerstone of Australian policy is to insure that wherever they operate, Australian forces have the capacity to survive against, and defeat, modern weapons. Australian policy is based on exploiting national strengths—high education standards, scientific and research base, and access to technology via the US alliance. The two key factors shaping the Australian strategic environment are East Asian economic growth and its implications for arms modernization programs, and changing strategic relations between the regions major powers, including the prospect of increased competition.

Despite its current difficulties, Indonesia is projected, in Australian estimates, to surpass Australia's GDP sometime before 2017. Likewise, Indonesia's military budget is expected to surpass Australia's over this period. Prudent defense planning requires that Australia take Indonesia into account as a potential future threat.

Future combat requirements

Australian national defense traditionally plans to defend the homeland from attacks from the sea, with heavy reliance on both air and naval forces to deter, damage or destroy enemy forces before they reach the Australian coastline. Preventing the formation of staging areas for attacks on the Australian homeland, i.e., those which could theoretically be created on the Indonesian mainland by hostile forces, is a key objective of the Australian Armed Forces during wartime.

Advanced military technology and the RMA

Modern long-range weaponry, such as cruise missiles, launched from the air or the sea, further complicates Australia's ability to thwart a determined homeland attack. Plans for future weapons systems and support systems are to take into account these new threats. Greater priority is being given to maritime forces, and the key technologies for maritime operations, including advanced surveillance and intelligence systems, and command and control capabilities. Strike forces and mid-range stand-off weaponry are also being pursued.

Locally, information technology is viewed as the centerpiece of Australia's future weapons platforms. Information technology is considered synonymous with the Revolution in Military Affairs (RMA), which has an increasing profile in the Australian defense establishment (In mid-1999 the government announced that it would fund a new "Office of the Revolution in Military Affairs and Defence" to explore RMA implications for future military requirements).⁴

Defense expenditures

Australia's military expenditures in 1997 were \$8.5B (1997\$US), compared with \$7.9B (1997\$US) in 1991.⁵ This placed Australia 15th globally.

Australian defense experts anticipate that peacekeeping operations in East Timor and their ripple effect through the Australian armed forces, for example, will add \$2 - 4.5 billion to the budget's bottom line.

II. National Defense Industrial Base

Basic characteristics

Australian defense industry is progressing in world stature. The 1999 Asian-Pacific Defense Review Annual Reference Edition advertises about 100 Australian domestic defense companies. The 1988-99 Asian Defence Journal Yearbook lists twenty companies and one government organization (the Defense Science and Technology Organization) as the main defence R&D and production organizations in Australia.

The most significant Australian defense companies are ADI Limited, the Australian Submarine Corporation, Telstra Corporation, and Transfield Ltd. There are also several Australian subsidiaries of European, American, and other Asian defense firms.⁶

Australian defense industries views its key capabilities to be: (1) combat systems maintenance and life cycle support, to include software development and maintenance; (2) data management and signal processing capabilities, to include intelligence and surveillance activities; (3) command, control and communications systems, with emphasis on systems integration, software requirements, and modification; (4) systems integration on weapons platforms with particular emphasis on systems modified for use the Australian Defense Force; (5) repair, maintenance, and modification of major

weapons and surveillance platforms; and (6) logistics support infrastructure in transport systems and consumables supply.⁷

Current viability

With reduced expenditures on big ticket items, it will be difficult to maintain industry's current share of the defense budget dollar. Thus, the challenge is to maximize involvement in aerospace and IT. It is expected that Australian defense industries will be required to find foreign markets for their expertise and equipment, since aerospace and IT are not expected to return the revenues required to maintain the industries growth, comparable to big ticket naval ship and submarine platforms with currently dominate industry's attention.

Australian Global Top 100 Defense Industries

In 1991 Australia had one company in the Global Top 100 defense industries as measured by annual defense revenue. The revenue for that company (Australian Defense Industries) was \$599M (1991\$US).⁸ By 1999 two companies were in the top 100 list with a combined revenue of revenue of about \$714M (1999\$US).⁹ Those two companies are Tenix Group and Australia Defense Industries. Annual defense revenues for the largest Australian defense company in 1999 was \$400M, compared with \$599M in 1991. The largest Australian company (in terms of annual defense revenue) ranked 66th globally in 1999, compared with 57th globally in 1991.

III. National Armament Strategy

The Australian Department of Defence spends about \$6 bn yearly on goods and services, about 70 percent of this in Australia.¹⁰ Over the past decade, the proportion of defense capital equipment dollars going to Australian industry has increased from 20 percent to 70 percent.

Australia attempts to maintain in-country capacity to design, build and maintain much of its own equipment and systems. In a wide range of areas, Australia develops its own technology, trains its own people and designs and produces its own hardware and software.

Also, Australia's Defense Reform Program (DRP)¹¹, which streamlines the services and the acquisition process, is expected to achieve \$300 million in net annual gains by the end of this fiscal year and will deliver over \$900 million in annual gains and \$500 million in "one-off savings upon maturity."¹²

Over the course of the 1990's, Australia has increased its expenditure on research and development, by 1996-97 ranking tenth in R/D expenditures among OECD countries. In that year Australia spent about \$8.6M (\$A) on R/D, about equally split between public and private funding. Defense-related R/D expenditures comprised about 5 percent (\$435M) of the overall expenditure, of which about two-thirds (\$240M) was publicly

funded. Only 15% (\$69M) of defense-related R/D was for basic research. Research areas focus on land operations, smart weapons, electronic warfare, and joint systems.¹³

The cornerstone of Australia's armament strategy is self-reliance.¹⁴ This is interpreted to mean not complete self-sufficiency because Australia cannot provide a full capability to develop the technologically complex weaponry that has been manufactured abroad. One source argues that "to seek such self-sufficiency would be so demanding of our resources that it would constrain significantly the range of combat capabilities we could afford to maintain, and so weaken our overall defense effort."¹⁵ At the same time, the self-reliance policy gives the planning framework for both the defense industrial base and also international agreements designed to insure continued external armaments support and also to encourage Australian industry to enter international arms markets.

Force modernization requirements

Currently, Australia is undergoing a fundamental review of its defense weapons and equipment requirements for the future. Many top Australian analysts see an urgent need to rethink Australia's defense requirements and what it means for the multi-billion-dollar defense re-equipment program. Most of Australia's main air, naval and ground combat platforms will be "virtually obsolete" in 10 to 12 years. Former Deputy Chief of the Defense Department, Paul Dibb has called it the "coming train smash."¹⁶ It is commonly understood that Australia can not financially support the replacement costs for these systems, thus necessitating a "much harder" look at defense equipment requirements and thus, streamlining the inventory.

Under Australia's new strategic policy, armaments developments for the Australian Defense Force are focused on four priority areas:

- The effective exploitation of information technologies;
- Developing capabilities to defeat any threats in Australian sea and air approaches;
- The ability to maintain an effective military strike capability; and
- The capability to defeat any incursion onto Australian territory.¹⁷

Australia also places highest priority to maximizing interoperability with the United States and to be prepared to make significant investments to sustain that capability as new systems are fielded.¹⁸

Australia also recognizes that the current budget does not allow indigenous development of major new capabilities such as fighter aircraft or surface combatants.¹⁹

Defense industrial policy

In 1998, Australia announced a new strategic defense industry policy based "as soundly on commercial realities as it is on strategic imperatives."²⁰ Key strategies included the better integration of industry into defense, reforming the defense procurement process, and increasing Australian exports. One objective is to shorten long development cycle

times by adopting commercial best practice in order to procure better, faster, and cheaper. The policy called for a procurement system that keeps better pace with technological developments. Another objective is reduction in procurement costs and greater efficiency.²¹ Commercial products and standards will be used for needed capabilities wherever possible, and tender specifications will increasingly prefer commercial to military standards.²²

The Australian government recognizes that the Australian defense market is too small to sustain defense-related technology developments in industry solely for Australian defense purposes, and is thus seeking exports and joint ventures to promote economies of scale.²³ Australia encourages defense diversification in its defense industrial enterprises. This is because the defense industry has special characteristics: its defence product lines; the Australian Ministry of Defence as its only customer; its strategic importance as a national industrial capability; and the fact that it would probably not survive under international competition. In those cases, as few as possible, “special considerations will apply.”²⁴

Australia’s government policy is broadly aimed at making Australian industry more competitive and export oriented.²⁵ Defense policy is designed to allow market forces to shape a stronger and more innovative industry capable of competing in the world market. An important aspect of this is for the Defense Ministry to consider long-term relationships with suppliers in order to reduce acquisition costs and encourage investment in research and development, training, and quality management. Another aspect is the creation of a Defense Export Program to better coordinate Australian engagement with important export markets and to develop cooperative agreements (e.g., the Malaysian Australian Joint Defense Program).

Information Technology and telecommunications are the two priority areas for civil procurement, and international companies are encouraged to form strategic alliances with local firms that result in export of Australian-developed products and services, new export markets for local companies, Australian research and development and training, and technology transfer, strategic capital investment, and venture capital investment to Australian industry.

Offset requirements

In order to access external sources of supply while at the same time improving the capabilities of the domestic defense industry, Australia has an elaborate counter trade/offset policy.²⁶ In 1991 a new program, the Australian Industry Involvement program, was initiated to replace the previous one which has been in effect since the 1970’s. The main purpose of the program is to promote self-reliance. Thus a foreign supplier must insure that its proposals for domestic content match the objectives of the Australian government, or risk being dropped from consideration. Military offset obligations cannot be fulfilled with civil offsets, unless the civil project also supports defense industry’s strategic needs.

In the military offset program, each proposal must include a specified amount of in-country production, assembly, or procurement. Defense offset policy is focused on five objectives that contribute to self-reliance: achievement of a quality industrial base for defense capabilities; obtaining goods and services that offer best value for the money; providing a capability to repair and maintain equipment in peacetime and in conflict; providing a capability to modify and adapt equipment/systems to meet changing needs; and the development of a skills base to insure self-reliance. The program applies to all defense procurement in excess of A\$5 million.

Proposals from international firms must include tie the proposed work to Australian defense industry objectives, and also elaborate activities which will improve Australia's self-reliance in the defense sector. Proposed activities to strategically develop Australia's defense industry are encouraged, including technology transfer, research and development, specific training sponsorship, and provision of strategic facilities. Bidders are also encouraged to propose long-term commitments, at the risk of not being considered responsive to Australia's requirements.

The Defense Ministry believes that the Australian Industry Offset Program will provide several benefits to Australian defense industry. These include: (a) significant investments in facilities and equipment; significant employment of Australians in skilled jobs; (b) successful participation of Australian industry in major defense contracts; (c) significant levels of R&D; (d) demonstrated independence of action (i.e. not merely shop fronts in Australia for foreign firms); (e) the ability of domestic industry to compete successfully against the parent company in exports to a third country; development of defense exports; and (f) and Australian ownership of intellectual property (not dependent on the goodwill of foreign companies).

Recent major international procurements, including a new submarine, ANZAC frigate development, combat radios, combat support systems, command support systems, aircraft modifications, and over the horizon radar development, have included from 50-90% local content, implemented under the specifications of offset policy.

Arms import levels

Australia's arms import level in 1997 was \$0.9B (1997\$US), compared with \$1.25B (1997\$US) in 1991.²⁷ This placed Australia 13th globally.

IV. Perspectives on the International Arms Export Market

A preliminary review of Australian literature indicates that Australian defense industries have been heavily involved in domestic manufacturing, with few indications of an effort to turn outward, toward foreign markets. However, with big domestic ship and submarine building programs soon to end, Australian defense industries are beginning to look toward new products and new markets. Sources indicate that the local defense industry is set to refocus its efforts on aerospace and information technologies (IT), to replace traditional heavy military industries, such as shipbuilding.

Australian defense markets

The Australians believe that, despite international arms cutbacks, and despite the recent Asian financial crisis that has provided a dampening effect on defense procurement, there is a good market in the Asian-Pacific region in areas in which Australian industry has a natural competitive advantage. These areas include electronics (including optoelectronics), communications and information technology, aerospace, shipbuilding and repair, and heat transfer technology. Dual use applications are prevalent in the electronics area, the Australian Defense forces are making increasing use of existing commercial systems in the communications and information technology area, and Australia considers itself a world leader in some niche aerospace areas such as fatigue management.²⁸

Australia is also promoting export of Australian defense services, including training, project management, base support, and logistics, adaptation services, maintenance, and support services. Additionally, Australia is trying to rent its spare capacity in test ranges, simulators, bases and training areas to foreign users on a non-interference cost-recovery basis as long as the use does not compromise ADF operational readiness or national security. The government also promotes the sale, by private enterprise, of surplus ADF equipment, including refurbishment and support services.²⁹

Government and industry are working together to market these capabilities, particularly to countries in the region. They are especially focused on traditional markets in South East Asia, Europe and the United States, as well as new markets in North Asia.³⁰ The government is also attempting to insure that strategic interests such as arms control and human rights are properly considered, believing that carefully managed defense exports contribute significantly to Australian national interests by improving strategic relationships within the region, sustaining Australian strategic capabilities, and maintaining access to technology. They also provide economic advantages to the Defence Ministry by providing new markets that improve the viability of defense industry, encourage international competitiveness, and improving economies of scale with corresponding reductions in costs for the Australian armed forces.

Additionally, European and US defense firms increasingly see the Australian market as a springboard for further sales in the Asian-Pacific region. In 1995 the Australian government estimated that the original ASEAN nations—Brunei, Indonesia, Malaysia, the Philippines, Singapore, and Thailand—spend up to \$7.3B (\$US) per year importing high technology armaments. The Australian government is using this nearby market, plus its own capital equipment budget of \$1.9B (\$US) per year, to attract both US and European companies to Australia in order to strengthen its own defense industrial base. Australian firms are also trying to increase regional market share by teaming with international defense companies.³¹ In 1998 Australia also sent a defense industry delegation representing more than 100 Australian firms to the United States to promote teaming arrangements.³² Australia has also had recent major defense trade missions to South East Asia and the UK. Australia has also been deliberately establishing a presence at major international defense exhibits, including Defense Services Asia in Kuala

Lumpur(1998), Eurasatory in Paris (1998), AUSA in the United States (1998),and IDEX99 in Abu Dhabi (1999).³³

Export policies

Australian Minister of Defence Industry, Bronwyn Bishop, has formulated a series of “Procurement Rules” which are applied to foreign companies coming to participate in Australia’s defense market. These same expectations, according to policy, are to be applied to Australian industry expansion to regional markets. They include: (a) significant investment in facilities and plant; (b) significant employment of local citizens; (c) significant local participation in major defence contracts to demonstrate that the incoming company is there for the long haul; (d) demonstrated independence of action, including the ability of the local nation company to penetrate a parent company’s markets; and (e) nurturing local small and medium enterprises, i.e., no vertical integration.³⁴

As a matter of policy, the Australian government believes that defense industry exists to support the Ministry of Defence requirements, not the reverse. At the same time, the Ministry has developed a new Defense Product Endorsement Scheme that will allow companies to demonstrate government backing for products, even those that may not be in use in the Australian Defense Force. This process, scheduled to be in place by the end of 1999, will allow firms to show that they have ADF endorsement for goods and services they are marketing overseas.³⁵

This approach to international arms markets is consistent with Australia’s view that globalization offers major opportunities, but also blurs the distinction between domestic and foreign policy, increases competitive pressures in markets, and makes globally based procedures and rules very important. Globalization, coupled with Australia’s views that the economies of East Asia will continue to rise, serve as underpinnings of Australia’s foreign and trade policy.³⁶

Arms export levels

In 1997, Australian arms exports were only \$30M (1997\$US), compared to \$23M (1997\$US) in 1991.³⁷ This placed Australia 28th globally.

About an equal value of additional defense-related exports came from dual-use goods.³⁸ Under the new 1998 defense industrial policy, “exports and material cooperation remain key elements in creating a sustainable defense industry, and in enhancing strategic relationships.”³⁹ By recent Australian estimates, the export trade market for defense related goods and services is about \$32B (1998 \$US) annually.⁴⁰

IV. Transformations in the Defense Industrial Base

Privatization, mergers, and acquisitions

There have been privatizations, mergers and acquisitions in the Australian defense industry, particularly at the high-technology end. The former government owned aircraft factory, Aerospace Technologies of Australia, has been sold to Boeing. Additionally, Amalgamated Wireless Australia (AWA) Defense Industries has been acquired by BAe. ADI Ltd has acquired the defense division of Stanlite.⁴¹ Australia also has had good experiences to date with privatization, especially in the shipbuilding industry, and is working to share that experience with other countries such as the Philippines, Thailand, and Malaysia to promote regional cooperation.⁴²

ADI, created in 1989 out of the Office of Defence Production,⁴³ was originally owned by the Commonwealth. Since then it has been the object of privatization initiatives. In fact, Australian defense leaders have argued that the ADI privatization is “expected to facilitate the growth of a sustainable and efficient Australian defense industry through private capital investment and technology transfer.”⁴⁴ An original schedule of completion of sale by mid-1998, but this has been slipped into late 1999.⁴⁵ Competition has been fierce, with three bidding groups remain, including British GEC Marconi Systems (which has since announced merger with British Aerospace), the Australian Company Transfield (with the French company Thompson CSF), and Systems Engineering Company of Australia (with Sweden’s Celsius as a key partner). The US defense giants Lockheed-Martin, Boeing, and Raytheon are also attempting to expand operations in the Australian market. There are also some smaller rising defense companies, including CEA Technologies, a radar company, which has formed an alliance with British Aerospace.⁴⁶ Overall, however, the net result has been to create larger companies, and with fewer competitors.

At the same time, Australian policy is to strongly encourage the international prime contractors that are successful in Australia to make long-term commitments beyond the life of a single project. Companies are being asked to carry out significant levels of research and development in Australia to encourage the process of innovation, and also to help foster small to medium size Australian defense companies.⁴⁷ An explicit objective is to improve Australian access to intellectual property.⁴⁸

As mentioned above, the downturn of defense spending on big ticket naval platforms, expected to end in the near-term, is set to cause a dramatic shift in the defense industrial base of Australia. Most large concerns are discussing transitioning to aerospace and IT development, with less emphasis upon traditional strengths. The degree to which government and industry will work jointly to achieve a soft landing is crucial for the financial health of these organizations. However new requirements such as the recent East Timor peacemaking/keeping operation, in which Australia has a significant commitment may reinforce those who argue that it is too soon to significantly change the direction of Australia’s defense industrial base.

VI. Risks and Concerns

- In spite of the importance of the international defense market to Australian defense industrial strategy, as a matter of policy Australia is concerned that defense exports not detract from overall Australian national security or Australia's international and human rights obligations. Australian policy also calls for controlling defense-related and dual-use exports in a way that "does not cause undue delay" but that continues to meet Australia's national security and international interests.
- Australia is concerned about the impending block obsolescence of a majority of its combat platforms by approximately 2010. The ongoing Timor emergency, coupled with hard decisions regarding Australia's rising profile in Asian security, continues to complicate the planning for future defense and what types, and amounts, of forces will be needed.

VII. Some Observations

- Australia is pursuing a limited DoD-style RMA in its own force development program.
- Australia wants help from others, but is still trying to pursue a policy of self-reliance to the extent possible. At the same time, Australia recognizes that it is limited in its ability to broadly develop the technologically complex weaponry that has been developed overseas, and so is concentrating on a niche development strategy.
- Australia is deliberately invoking dual use technology and commercial off the shelf systems in some of its major defense capability areas.
- Australia has a demanding offset policy designed to insure domestic content across a broad range of developmental and production functions, and thus promote self-reliance of Australian defense industry. Australia encourages, if not requires, successful foreign bidders to make a long-term commitment support Australian defense programs, thus encouraging them to provide research and development and training out of their own funds.
- There has been a significant proportionate increase in fraction of domestic arms spending over the last decade.
- Australia will depend on arms exports to preserve the viability of its own defense industrial base.
- Australia believes that even though international arms sales are down, there is a regional market in areas of Australia core competencies, including electronics, communications and information technology, niche aerospace areas, shipbuilding and repair, and heat transfer technology.

- Australia is trying to maintain a careful and correct balance between the advantages to be gained from domestic arms exports and other strategic interests such as regional arms control.

ENDNOTES

¹Material in this chapter is summarized from a variety of recent Australian sources. These include: Gerald Henderson, "Australia Confronts a New, More Dangerous World," *The Age*, September 14, 1999; STRATFOR.COM, "Australia, New Zealand and the Geopolitics of Asia," September 12, 1999; Tod Crowell, "Who Will Hold the Power in Asia. As the region prospers, chances for conflict may become greater," *Asiaweek*, August 20-27, 1999; The Hon Bronwyn Bishop MP, Minister of Defence Industry, Science and Personnel, "Defence Exports: Directions and Outlook," Opening Address to Defence Export Outlook Seminar 98, (Sydney), April 1, 1998; Defence Acquisition Organization, "Defence Reform Program Implementation in the Defence Acquisition Organisation," February 1998; Department of Defence, Hon. Ian McLachlan, AO, MP, Minister of Defense, *Australia's Strategic Policy*, December 1997; Mark Metherell and Peter Cole-Adams, "Crisis Exposes Hole in Our Defences," *Sydney Morning Herald*, September 15, 1999; and Department of Foreign Affairs and Trade, *In the National Interest. Australia's Foreign and Trade Policy. White Paper 1997*. Other specific sources are also cited on individual points.

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¹⁹ McLachlan, op. cit, p. 51.

²⁰ The Hon Bronwyn Bishop MP, Minister of Defence Industry, Science and Personnel, "Defence & Industry – Strategic Policy Statement. Opening Address to the 1998 Defence Procurement Conference," National Convention Centre (Canberra), June 2, 1998.

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