

A FAREWELL TO ARMS - REVISITED

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In his last year as the Vice Chief of the Defence Force, Lieutenant General Des Mueller provided some intriguing insights into the workings of senior levels of the Department of Defence. His observations were communicated through various forums, presentations and writings, including his speech to the SIMTECH Conference that year and his retirement legacy paper entitled "A Farewell to Arms".

The message was delivered in such an erudite manner that it led one senior defence staffer to note that it was "typically classic Des Mueller". Such a comment was echoed, in dominant *groupthink* style, by several other senior officials. However, stripping out the diplomatic niceties, one message is clear. Decision making in the Defence senior leadership group is heavily influenced by perceptions, rumours, hearsay and innuendo. Realities and facts, such as those derived from the laws of physics and defence community specialists with expert knowledge, play too little part in the process.

This article outlines one example of the problem. In this case, the issue involved has more serious than most consequences for Australia's defence capabilities.

In evidence to the Joint Standing Committee on Foreign Affairs, Defence and Trade (JSCFADT), on 15 December 2003, the Chief of Air Force, Air Marshal Angus Houston, states:

"The other factor that is really important here is that, if we look back over the last few years, the F-111 has cost us an extra six per cent per year over the last few years. We project into the future that it will continue to cost us more as each year passes. We are working on five per cent compounded, which is probably a fairly conservative estimate. So, for reasons of capability and cost, we think the decision we have made [the early retirement of the F-111 fleet circa 2010] is a reasonable one and gives the Australian government and the Australian people a good strike capability well into the future."

Two principal inferences are encouraged by such statements. First, the F-111 is expensive relative to other air force capabilities. Second, the F-111 will place an intolerable burden on the Defence budget in future years.

Other pronouncements, both publicly and internal to Defence, indicate the general perception within the organisation, particularly in the civilian and military senior leadership group, is that the F-111 is expensive to operate and maintain and a costly burden to the rest of the air force and the defence force overall.

However, as history reminds us with monotonous regularity, considering only the perception argument of the equation 'Perceptions plus Knowledge of Facts equals Reality' invariably leads to flawed decision making, as may be seen from the following.

Now, presumably, the term "the last few years" referred to above by Air Marshal Houston embraces the fiscal years of 1999 through to 2003.

This being the case, the financial statements in the Defence Annual Reports (DAR) for these periods do not support the promotion of such inferences nor the assertion that the decision to retire the F-111 is reasonable "for reasons of capability and cost".

An analysis of the costs of RAAF outputs can be done using data from the financial statements in the DAR, at the following three reported levels -

- Total Direct Expenses – being the total costs for defence employees and suppliers – both inventory and non-inventory;
- Total Operating Expenses¹ - being the *Total Direct Expenses* plus non direct operating expenses including depreciation, amortisation, interest, grants, expenses of asset sales, and write down expenses, as defined in the financial accounts; and,
- Price to Government - being the *Total Operating Expenses* plus considerations for the Capability Usage Charge and Own-Source Revenues, again as defined in the accounts.

Looking at the *Price to Government* for Air Force capabilities, as tabled in DAR 99/00, leads to the following findings:

- The total price for the F-111 capability year was \$787.1m in FY99/00 dollars and made up 17.3 per cent of the total *Price to Government* for air force capabilities (\$4,551.4m overall).
- In relation to the *Price to Government*, and therefore to the Australian tax payer, the capability represented by the F-111 cost less than all other airborne platform-based capabilities operated by the RAAF

These findings are summarised in Table 1.

¹ The entry "Expensed Assets Under Construction" was only reported in two of the six reports (DAR99/00 and DAR00/01) over the period of interest. The entries against this 'expensed item' represented less than one per cent of the total operating expenses of interest in the baseline year (FY99/00) of the analysis. Therefore, to conservatively enable direct comparisons to be made, this entry has not been included in the analysis totals.

Air Force Capabilities	PRICE (\$A m)	% of Total Price
Output 13: Capability for Air Strike/Reconnaissance	787.1	17.3%
Output 14: Capability for Tactical Fighter Operations	1,398.1	30.7%
Output 16: Capability for Strategic Surveillance	445.1	9.8%
Output 17: Capability for Maritime Patrol Aircraft Operations	788.4	17.3%
Output 18: Capability for Airlift	892.6	19.6%
Output 19: Capability for Combat Support of Air Operations	240.1	5.3%
Total Price to Government of Air Force Capabilities	4,551.4	100.0%

Table 1 – Price to Government of RAAF Outputs in 1999/00
(Extract from DAR 99/00, Page 158 of Section 3 – Outputs)

The *Price to Government* level of Defence accounts incorporates ‘own source revenues’ and the ‘capability usage charge’. Because of the fluctuation from year to year between capability groups within Defence outputs, these revenues and charges have the potential to skew an observer’s appreciation of the real costs at the output and capability levels.

Therefore, looking more deeply into the expenses (costs) aspects of the RAAF’s financial statements shows the following.

- In DAR 99/00, the total (business) operating expenses attributed to the then Output 13, the Air Strike/Reconnaissance (F-111) Capability, was \$527.0m, being nominally 18.5 per cent of the RAAF’s Total Operating Expenses which were reported as \$2,852.1m.
- For the same period, Output 14, the Tactical Fighter Operations Capability, cost \$782.2m or 27.4 per cent of the RAAF’s Total Operating Expenses.
- For comparison. Output 17 (the Maritime Patrol Capability) had total operating expenses of \$460.8m (16.2 per cent) and Output 18 (the Air Lift Capability) was \$632.3m (22.2 per cent).
- Therefore, at the level of *Total Operating Expenses*, the F-111 ranked number three out of four in ‘the most costly airborne platform capability’ stakes, with Output 14 – Tactical Fighter Operations coming in as the most costly.

Unfortunately, since 1999/00 these *Total Operating Expense* level costs have not been available from the DAR. The level of fidelity in the financial statements, as well as performance, has been significantly coarsened in subsequent annual reports.² If the recent Defence budget estimates are any indication, a higher level of financial fidelity may be returning Force Element Group accountability (with the exception of the air force).³

Fortunately, though, the detailed analyses by the RAAF which underpin the statement by the Chief of Air Force to the JSCFADT, enables cost figures at this level to be derived for the F-111 over the period with a high level of confidence.

Applying the reported six per cent to the *Total Operating Expenses* for the F-111 capability, as reported in DAR 99/00, and compounding the cost at this rate on a per annum basis results in a total operating expense for the F-111 capability in FY 02/03 of \$627.7m.

Over the same period (1999–2003), the *Total Operating Expenses* for the RAAF overall rose by some 63.7 per cent to \$4,669.7m. This would indicate that the cost of capability of the F-111 is now 13.4 per cent of the total – a reduction in relative cost of some 5.1 per cent against other air force capabilities (and the F-111's proportion of the RAAF budget) over the period.

The increase in the RAAF's *Total Operating Expenses* of 63.7 per cent (or \$1,817.6m) equates to an average rate of increase for the whole of the air force of more than 18 per cent per annum. Therefore, the stated six per cent rate of increase attributed to the F-111 capability is actually less than one third of the average annual rate of increase in operating expenses for the rest of the air force.

A graphical summary of key aspects of this is in Figure 1.

² A review of Defence Annual Reports for the past six years discloses several other interesting facts. DAR 99/00 is the most comprehensive and informative of all the DAR over the period by some degree, with a level of fidelity and objectivity not seen before or since. This fidelity enables analysis down to FEG level for not only financial but also operational performance. This provides some clear metrics which, if they were available in subsequent years, could form the basis for determining Measures of Performance (MOP) and Measures of Effectiveness (MOE). One indicator of this finding is a simple page count comparison. The RAAF Section of DAR 99/00 is 32 pages of focused data, the bulk of which is quantitative. The highest page count seen for the RAAF section in DAR prior to 99/00 is 16 pages (98/99) with previous years averaging about 12 pages (including the ubiquitous organisational diagram). The RAAF sections in DAR subsequent FY 99/00 average 7 pages (or less than 22 per cent of the information space tabled in DAR 99/00).

³ Refer Defence Report to Government on Outcomes and Outputs - Comparison between New and Old Outcome and Output Structures, Issue 1.0, dated Sep 03 (<http://www.defence.gov.au/im>).

TOTAL OPERATING EXPENSES OF RAAF OUTPUTS

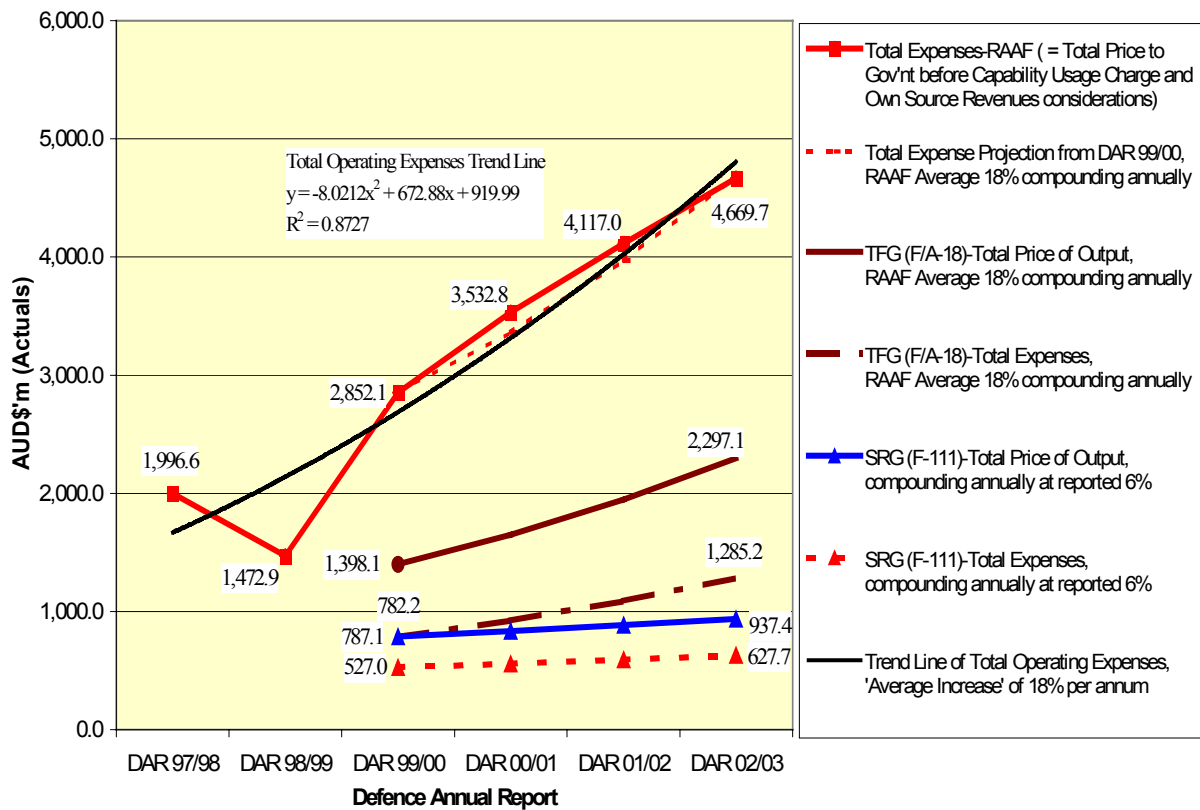


Figure 1 - Total Operating Expenses of RAAF Outputs

The actual data points (ie. numbers reported in the DARs and those determined for the F-111 on the basis of the reported 6 per cent annual rate of increase) are shown with data markers. These data points are connected by distinguishing lines to provide a relative picture over time. Projections and trends derived from the analysis, using the nominal 18 per cent per annum average rate of increase, are shown by lines without data markers.

The actual Price to Government for the F-111 as reported in DAR 99/00 is shown projected out to 2002/03 using the 6 per cent per annum compounding figure.

To provide a complete comparison, the DAR 99/00 figures for Total Operating Expenses and Price to Government for the other elements of the Air Combat Capability (formerly known as Tactical Fighter Group – TFG) are shown and then projected to 2002/03. The rate of projection is the average nominal annual increase for the whole of the air force, namely 18 per cent per annum.

This is considered conservative since the actual rate of increase over the period for the other capabilities (including those expenses for the TFG’s F/A-18 fighters) would have to be greater than the nominal average 18 per cent to compensate for the “under-performance” of the F-111 in these cost increase stakes.

An analysis at the *Total Direct Costs* level shows similar trends. The reported rate of increase in costs for the F-111 (6 per cent per annum compounding) is about half the rate of increase in *Total Direct Costs* over the period for the whole of the air force. Not included in the Direct Costs level are expenses for depreciation/amortisation or other expenses associated with capital items and related expenditures.

In regard to capabilities, using two different Measures of Effectiveness (MOE), over 50 per cent of the RAAF's Air Strike Capability is embodied in the F-111 fleet. As the data presented in the RAAF submission dated 03 June 2004 clearly demonstrates,⁴ withdrawal of the F-111 in 2010 will halve Australia's strategic strike capability. A more detailed analysis that compares other country's current plans across the region paints an even bleaker picture.⁵

Many would argue that, in a perfect world, we would, of course, invest enough in our defence capabilities so such 'gapping' and 'gaping' risks as early retirement of the F-111 before a replacement was available would not necessary. They would also say that insufficient defence funding over a long period has forced us to consider such unpalatable alternatives. But any decision to retire the F-111 early still needs to be based on careful assessment of its costs and the costs of the alternatives. It is apparent from the above analysis that the capability costings underlying the decision are seriously flawed and, thus, do not engender confidence in the course being adopted. The JSCFADT has noted this and other deficiencies in Defence's arguments and recommended the defence minister in the next parliament conduct an inquiry, in effect, into the New Air Combat Capability Project and such related decisions as the early retirement of the F-111.

If the Prime Minister's vision that "each generation of Australian's is obliged to leave our country in better shape than they found it" is to be followed for Australia's air combat capabilities, then the government needs to act upon the recommendations of the JSCFADT with some urgency. Moreover, how such flawed analysis made its way into the decision making process of the Department needs to be determined to ensure such circumstances do not arise in the future.

Peter Goon is the Managing Director of Australian Flight Test Services Pty Ltd and has been a board member for a number of Defence Industry organisations, including three terms as Deputy Chairman for the Defence Teaming Centre, Inc. In 2001, he was appointed an Industry Member of the Industry Policy Consultative Forum (IPCF), an initiative of DISP '98. A former RAAF Officer and graduate of United States Naval Test Pilot School (USNTPS), he is a practising professional engineer, specialising in T&E, aircraft flight test and certification, and innovative engineering design.

⁴ Refer Figure 3 of Submission Number 4, Air combat Capability, Air Force Submission to JSCFADT Inquiry dated 03 June 2004 (http://www.aph.gov.au/house/committee/jfadt/defenceannualreport_2002_2003/dar_subs.htm).

⁵ Refer Submission Number 5, *Analysis of Defence Responses*, Kopp/Goon dated 18 June 2004 (http://www.aph.gov.au/house/committee/jfadt/defenceannualreport_2002_2003/dar_subs.htm).