
Sent: Wednesday, 1 October 2008 14:52
To: White Paper
Subject: WWW Submission: 2. Navy/Sea Power [SEC=UNCLASSIFIED]

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Submission: DEFENCE WHITE PAPER SUBMISSION 2008 Public Submission - LCDR Ross Bowden

INTRODUCTION

1. The lifeblood of Australia is Trade and specifically maritime trade. With 99.5% (733 million tonnes) of trade by volume carried by shipping clearly one of Australia's priorities is to ensure it maintains sufficient force structure to guarantee open sea lanes. The Australian Hydrographic Service (AHS) is mandated to conduct Australia's national hydrographic survey and charting program. The original statement above therefore requires amendment to Australia's priority is to ensure it maintains sufficient force structure to guarantee navigationally safe, efficient and open sea lanes.

2. This submission will propose that an independent enquiry into the economic and military benefits of the AHS is required for the future force structure of the Navy

BACKGROUND - HISTORY

3. Navy is the lead agency for hydrography in Australia. The Australian Hydrographic Service (AHS) was established and assumed the responsibility for hydrographic surveys of Australia in 1920. In 1946, Federal Cabinet decided that the Navy would maintain the national responsibility for Hydrographic surveying, nautical charting and provision of hydrographic services. This decision was re-affirmed in 1988 following the Richardson review. Navy continues to be responsible for meeting Australia's obligations to provide Hydrographic services as required by SOLAS chapter V, UNCLOS and the Navigation Act 1912.

4. A key feature of the 1946 decision and reaffirmed in 1988 was the sharing ratio for the provision of hydrographic and charting services. It was originally decided this ratio would be 60:40 between Defence and the customer. It was acknowledged in 1992 that private industry would be unlikely to bear this heavy cost burden noting the assumption relied solely upon the sale of charts products.

5. In 1990 the AHS commissioned the Inspector-General Programme Evaluation of the Hydrographic Service and was subsequently followed by the economic analysis of the benefits of the RAN Hydrographic Programme. These evaluations clearly demonstrated the requirement and benefit to the nation of a hydrographic survey and charting program for the public good and retention within Defence. Unfortunately these reports are approaching 20yrs of age and many of the original assumptions are no longer relevant e.g. GPS was not in wide use, no large scale commercial hydrographic survey companies existed in the region to provide a valid comparison.

PRESENT SITUATION

6. Maritime trade has changed significantly in the past 40yrs as demonstrated by the graphic below. The drive for efficiency has demanded the maritime industry utilize larger vessels and thus adopt innovative approaches to maximize the cargo volume to the available depth of water. The maritime industry will increasingly demand high levels of accuracy in current shipping channels and those maritime routes requiring development. The AHS Annual reports clearly state the majority of hydrographic survey activity within the last 10 years have been in support of Defence rather than commercial activities.

7. The commercial maritime industry is steadily increasing demands for surveys which will require the AHS to invest in higher levels of training and equipment. In addition Defence requires AHS units and personnel to remain current in the provision of Rapid Environmental Assessment (REA) and maritime Military Geospatial Information

(MGI) in a joint force scenario. Clearly the availability of AHS units to undertake core hydrographic surveys in support the national survey and charting program is continually being eroded. The impact of limited manpower exasperates the situation and has created a condition where the RAN hydrographic surveyor is rapidly approaching a "Jack of all trades - yet master of none".

8. In 2006/07 the AHS surveyed 3322sq nm yet in 1995 this figure was 7340 sq nm. Contrary to capability improvement intentions the introduction of new ships with more modern systems has not increased the rate of achievement when measured by sq nm surveyed - it has effectively been halved. What is clear is that the surveys are more accurate and to a higher standard due the use of this technology. The current rate of effort is unsustainable in the longer term. Australia requires a minimum of 10000 sq nm to be surveyed per annum with an additional 2000 sq nm achieved on resurveying critical trade routes, at the current rate of effort it will take >300 years to complete only those areas of navigational significance i.e. <200m deep . At present the AHS is achieving only 25% of the required output. The RAN does not have the capacity to significantly increase this rate of effort therefore the utilisation of contract surveying must be considered to meet requirements in the longer term.

9. Commercial hydrographic surveying historically was not cost effective when compared to AHS activities due to the expense of survey equipment and working in predominately remote areas. This is no longer the case - an RAN Hydrographic Ship costs approximately \$100K per day in the survey area, where a contracted vessel of equivalent size and capability equates to approximately \$65K per day. The AHS long term survey program needs to be reviewed to identify those areas where significant commercial survey input could provide justifiable benefit.

CONCLUSION

10. Defence must commission a review into the operation of the AHS and determine if its current roles and responsibilities are defined as core business to Defence. The following are issues that must be incorporated into the terms of reference of any review.

- a. What are Defence's core hydrographic survey requirements.
- b. Define the legislative framework that is currently lacking for the provision of the national hydrographic survey and charting role.
- c. Recommend a force structure which has the capability to achieve its defined role e.g. is the AHS provided a suitable vessel to conduct hydrographic surveys in Antarctica.
- d. Provide recommendations on which agency / agencies will assume residual national hydrographic and / or charting responsibilities
- e. Define an annual rate of effort of the AHS or combination AHS and contracted hydrographic survey.
- f. Define terms for the review of the annual hydrographic survey program to maximise efficiency and possible inclusion of commercial hydrographic survey operators.

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