

Scenario-based analysis

Scheduling Activities for the Patrol Boat Force



Report Documentation Page

Form Approved
OMB No. 0704-0188

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. REPORT DATE 01 OCT 2003		2. REPORT TYPE N/A		3. DATES COVERED -	
4. TITLE AND SUBTITLE Scenario-based analysis: Scheduling Activities for the Patrol Boat Force				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) DSTO Defence Systems Analysis Division				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release, distribution unlimited					
13. SUPPLEMENTARY NOTES See also ADM001929. Proceedings, Held in Sydney, Australia on July 8-10, 2003., The original document contains color images.					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT UU	18. NUMBER OF PAGES 13	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

Objective and Method

- Objective
 - To understand the implications of the current government guidance for new patrol boat fleet and find better ways to manage the new fleet
- Method
 - Statistics



Analysis targets

- Boat
- Crew



Scenario

- Typical annual missions programmed
- Generic maintenance schedule
- Boats: 12 (Min. practical No.)
- Crews: 12, 15 and 18



Typical Missions Programmed

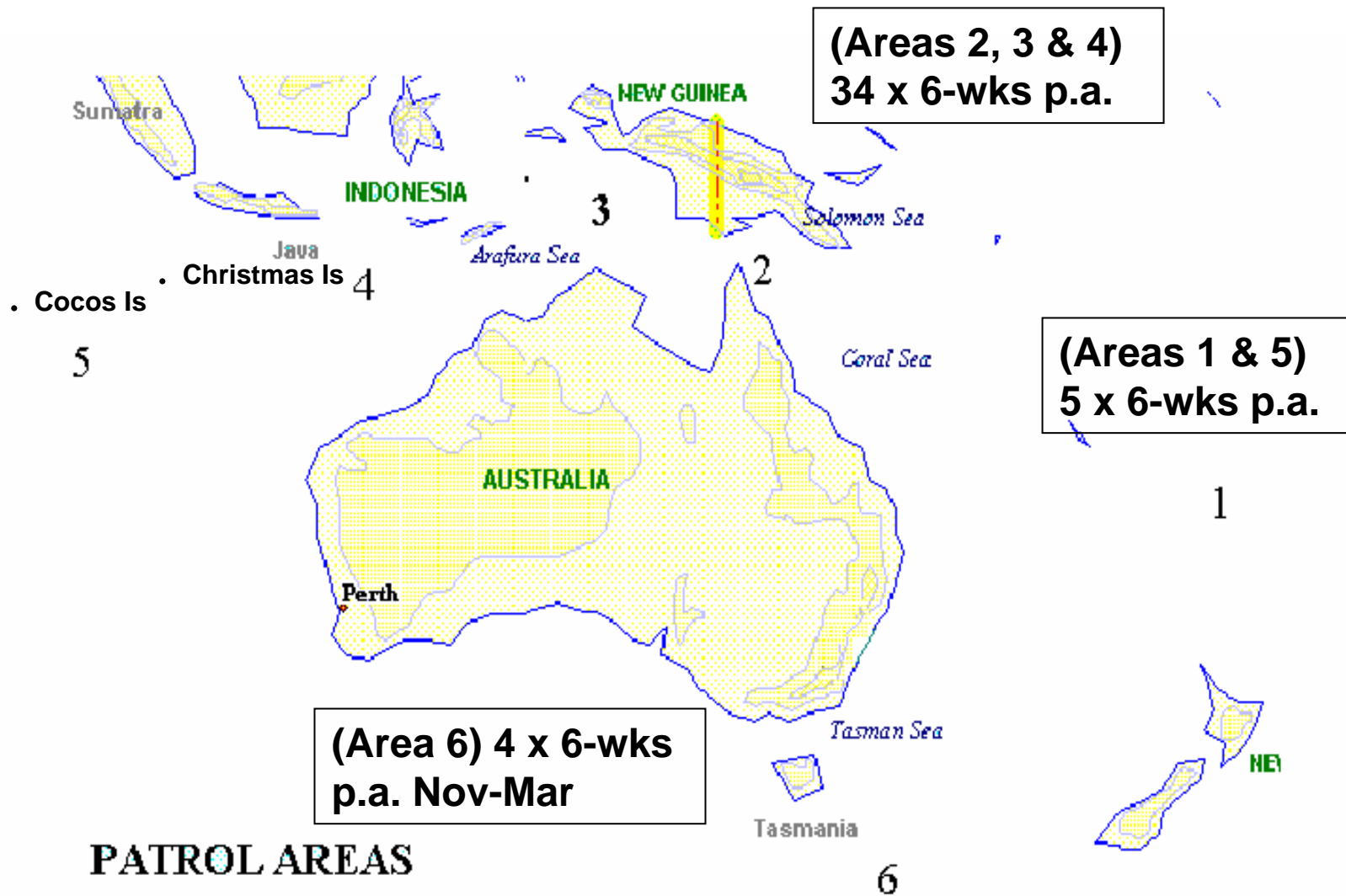
	Boat-days	
(a) 34 x 1 boat x 6 weeks NCSP Areas 2-4	1806 {	
(b) 4 x 1 x 6 wks NCSP Area 6 (Nov-Mar)		1428
(c) 5 x 1 x 6 wks NCSP Areas 1,5		168
(d) 4 x 2 x 8 wks Overseas Visits (Feb-Nov)	210	
(e) 2 x 2 x 3 wks Overseas Exercises (1 each half yr)	448	
(f) 1 x 8 x 5 days Minor War Vessel Concentration	84	
(g) 8 x 1 x 1 wk Local Exercises (Feb-Nov)	40	
(h) 10 x 1 x 3 wks Workup plus		
10 x 1 x 2 wks Consort (Feb-Nov)	56	
(i) 10 x 1 x 3 wks Contingency Tasks Areas 1-6	350	
	210	

(These figures do not include surge requirements)

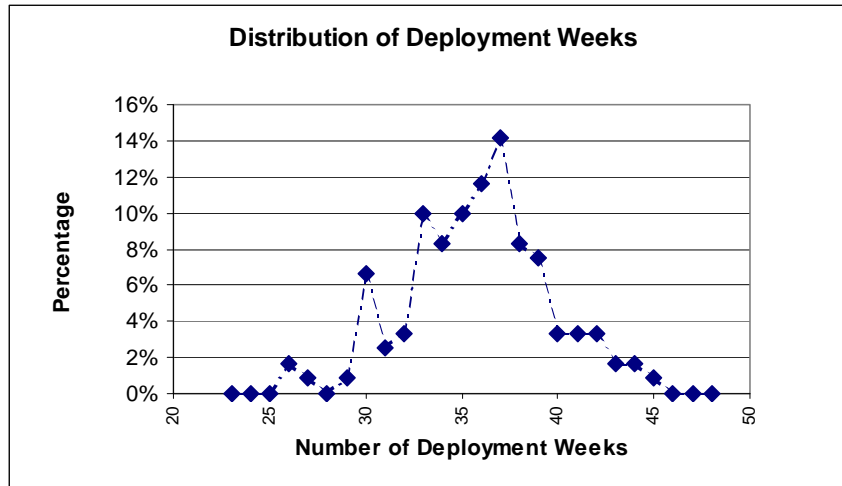
2994



National Civil Surveillance Program

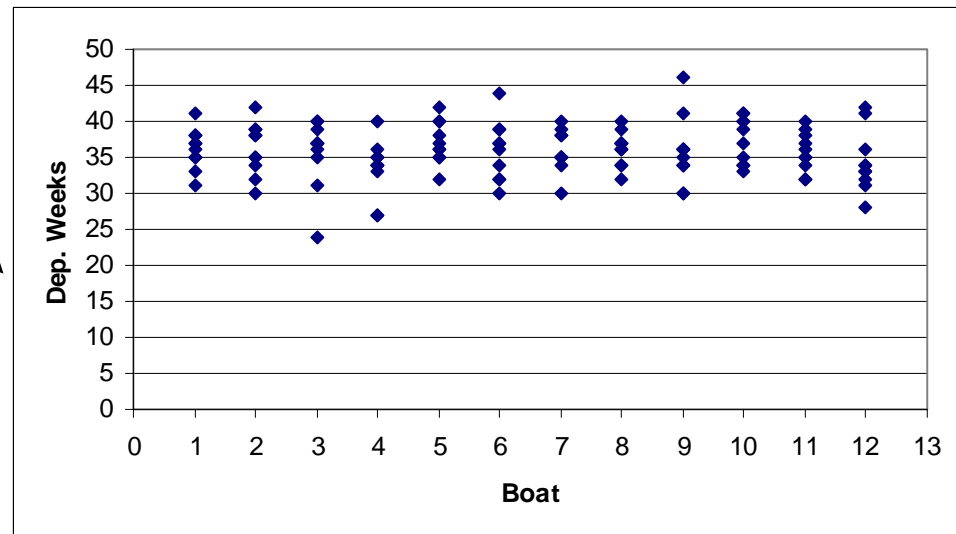


Boat Deployment

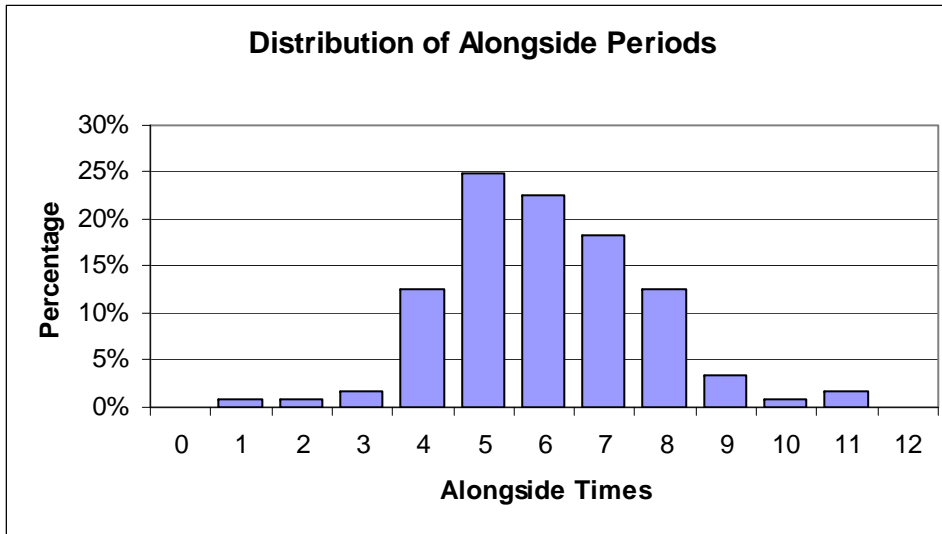


- 10 FAS samples
- Normal distribution
- Mean: 36 wk (250 days)
- 95% in 30 ~ 42 weeks

A different presentation of the 10 FAS samples (120 boat samples)

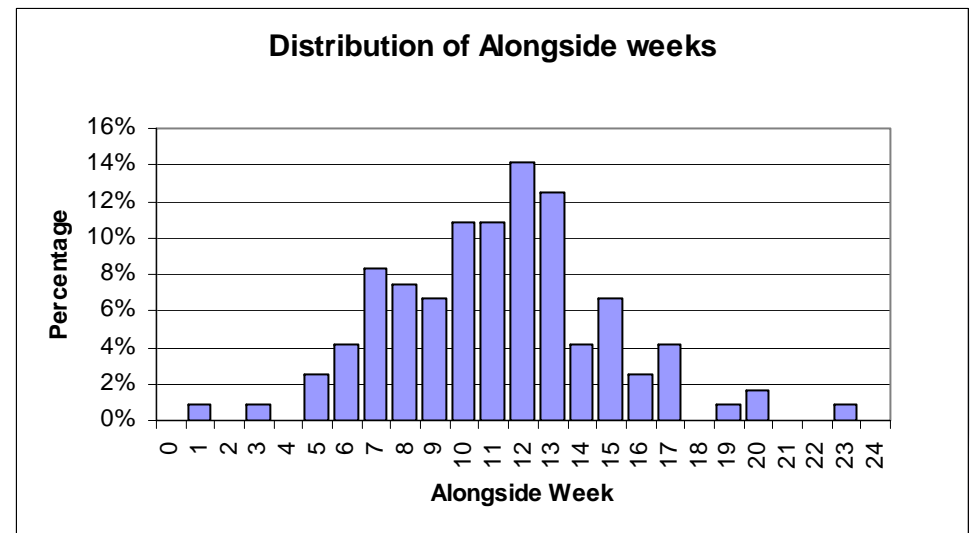


Boat Alongside

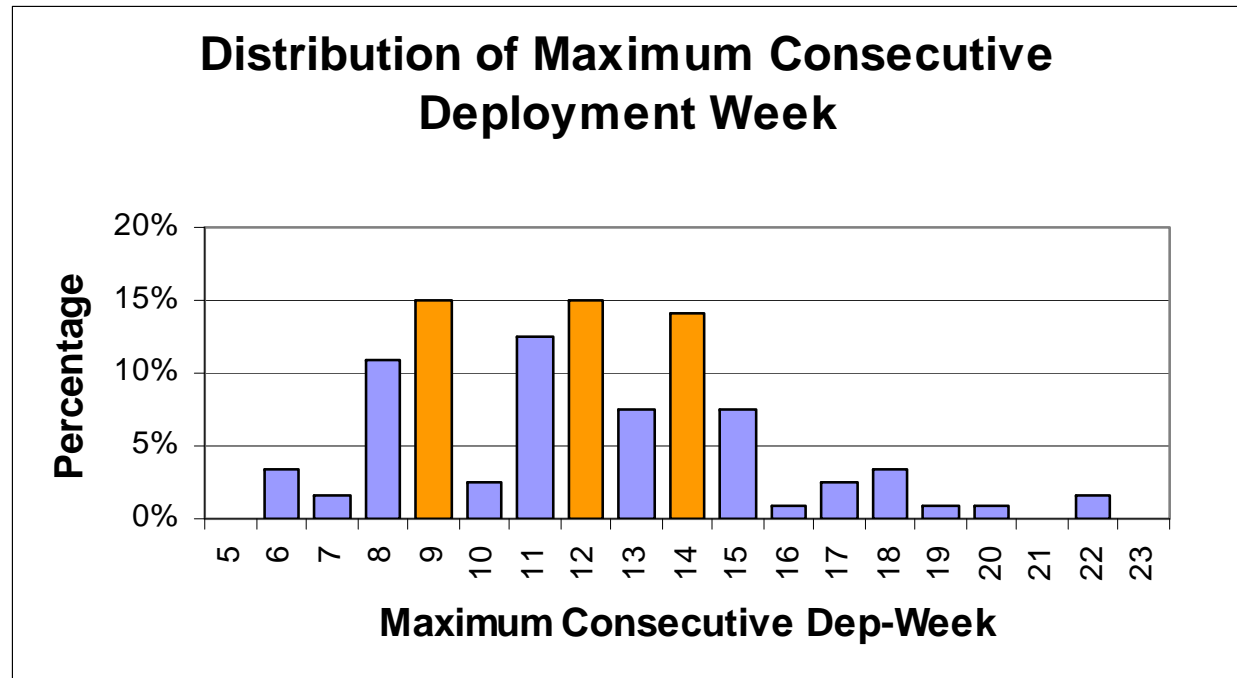


- Alongside period: average 6 times per boat per year
- 90% between 4 and 8 times

- Alongside weeks: Av. 11 weeks
- 95% in 5 ~ 17 wks



Consecutive Deployment

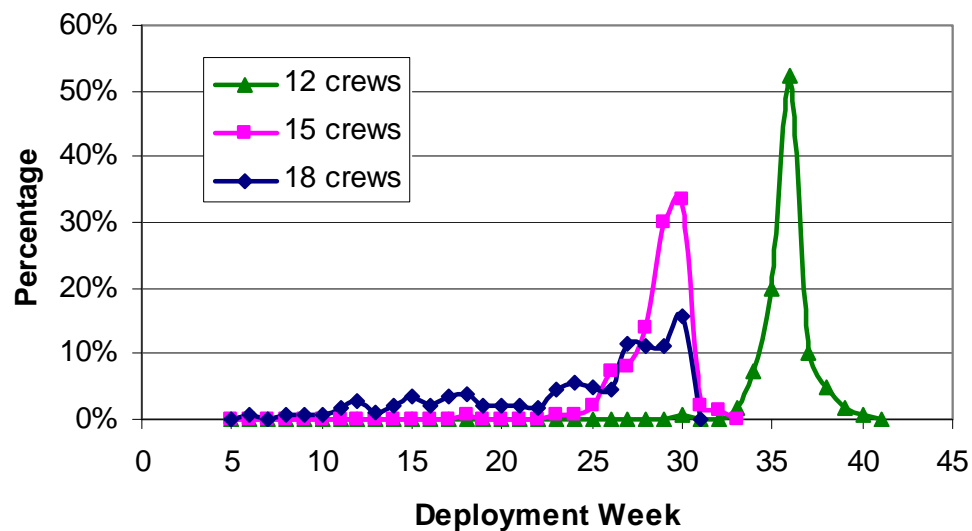


- 9, 12 and 14 weeks are most likely to be required for boat to continue to work
- 85% in 8~15 weeks



Crew Deployment

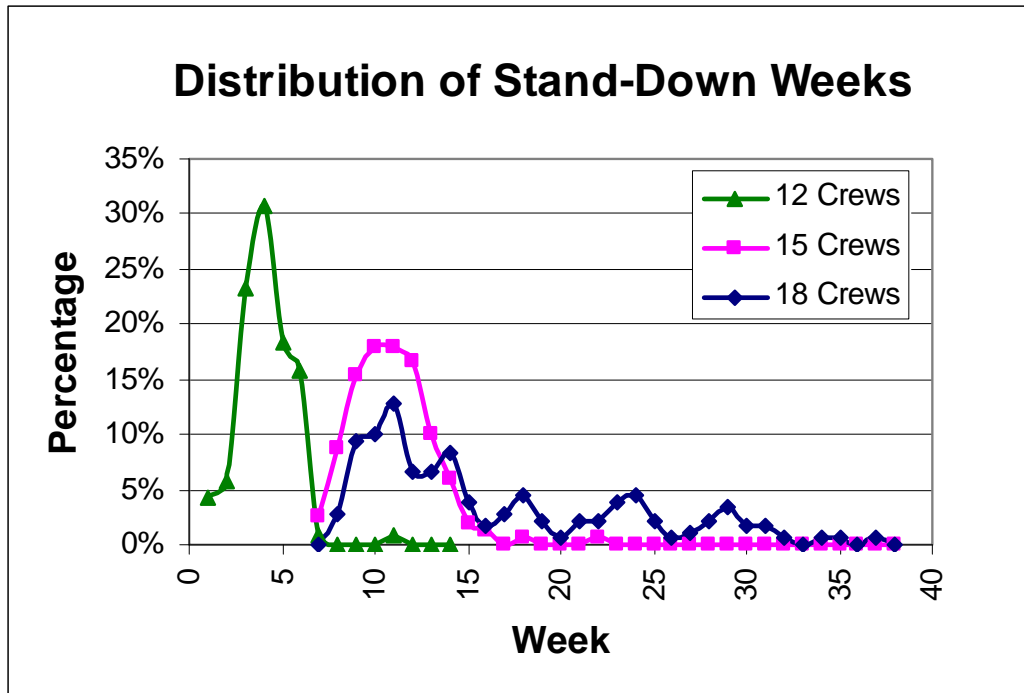
Distribution of Crew Deployment



No. Crew	18	15	12
Av. Weeks (Days)	24 (170)	29 (200)	36 (250)
St. Dev	6	2	1



Crew Stand-Down



No. Crew	18	15	12
Av. Weeks	16	11	4
St. Dev	7	2.2	1.5



Key Conclusions

- Recommend to upgrade the tool as an Operational Tool
- For 12 boats, a 14-week consecutive deployment is likely to be required
- There is always a tension between 'equity' and 'quality of life' if multi-crewing is introduced
- In the scenario tested here, a 15-crew scheme gives a reasonable balance



Questions?

