# Scenario-based analysis

## *Scheduling Activities for the Patrol Boat Force*

# Report Documentation Page

*Form Approved*
*OMB No. 0704-0188*



| 1. REPORT DATE | 2. REPORT TYPE | 3. DATES COVERED |
|---|---|---|
| **01 OCT 2003** | **N/A** | **-** |

| 4. TITLE AND SUBTITLE | 5a. CONTRACT NUMBER |
|---|---|
| **Scenario-based analysis: Scheduling Activities for the Patrol Boat Force** | 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 | 18. NUMBER OF PAGES | 19a. NAME OF RESPONSIBLE PERSON |
|---|---|---|---|---|---|
| a. REPORT | b. ABSTRACT | c. THIS PAGE | | | |
| **unclassified** | **unclassified** | **unclassified** | **UU** | **13** | |

**Standard Form 298 (Rev. 8-98)**
Prescribed by ANSI Std Z39-18

# 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

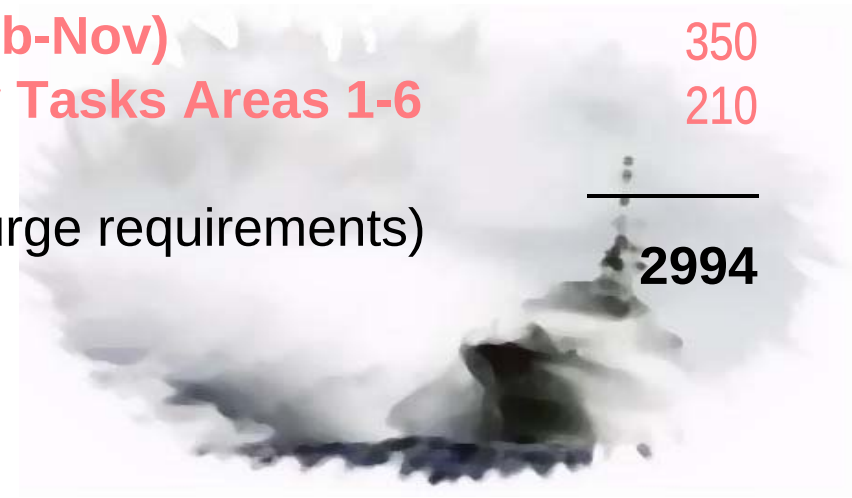
# Scenario

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

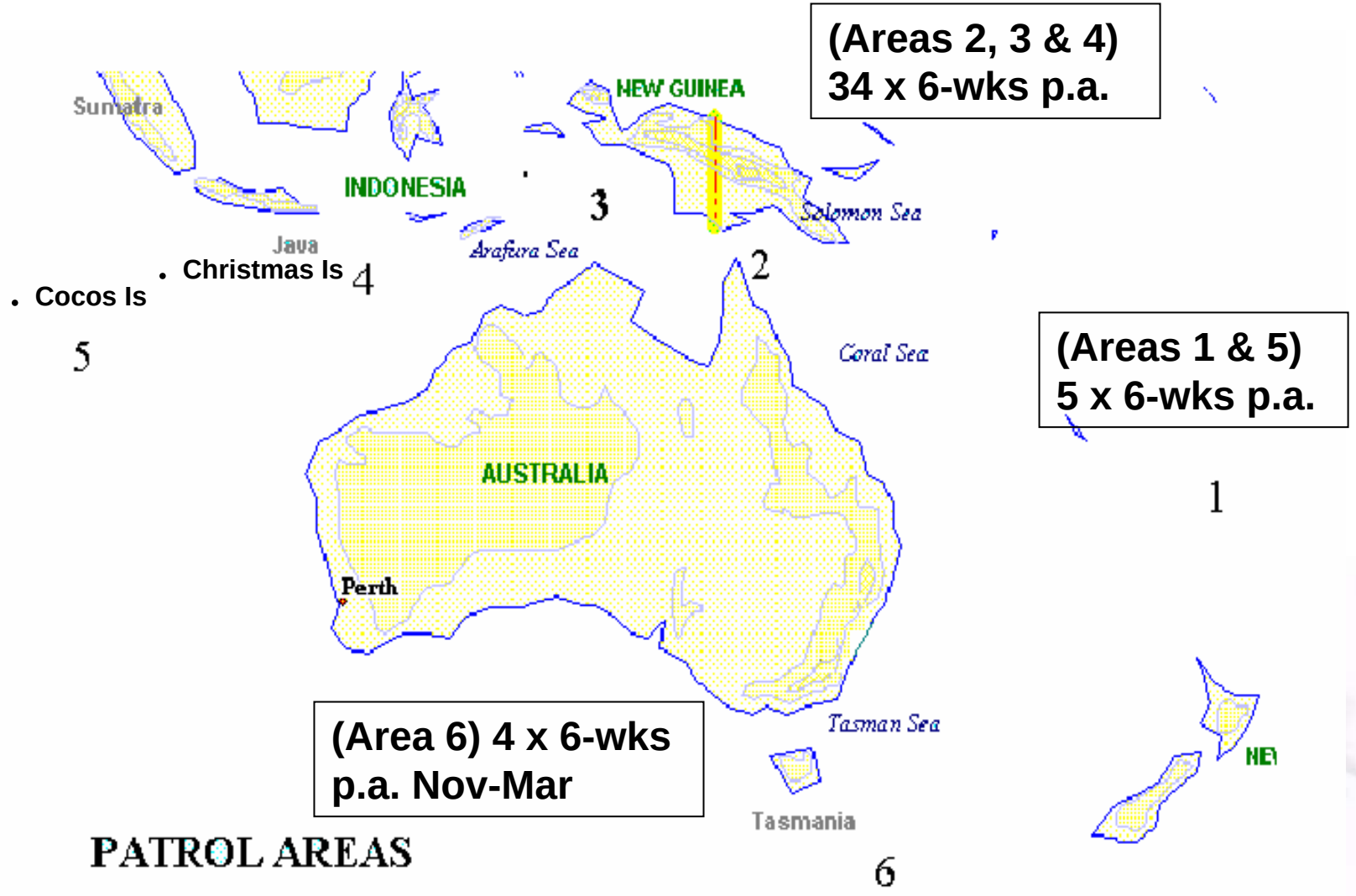
# Typical Missions Programmed

| | Boat-days | |
|---|---|---|
| **(a) 34 x 1 boat x 6 weeks NCSP Areas 2-4** | 1806 | 1428 |
| **(b) 4 x 1 x 6 wks NCSP Area 6 (Nov-Mar)** | | 168 |
| **(c) 5 x 1 x 6 wks NCSP Areas 1,5** | | 210 |
| **(d) 4 x 2 x 8 wks Overseas Visits (Feb-Nov)** | | 448 |
| **(e) 2 x 2 x 3 wks Overseas Exercises (1 each half yr)** | | 84 |
| **(f) 1 x 8 x 5 days Minor War Vessel Concentration** | | 40 |
| **(g) 8 x 1 x 1 wk Local Exercises (Feb-Nov)** | | 56 |
| **(h) 10 x 1 x 3 wks Workup plus 10 x 1 x 2 wks Consort (Feb-Nov)** | | 350 |
| **(i) 10 x 1 x 3 wks Contingency Tasks Areas 1-6** | | 210 |
| | | **2994** |

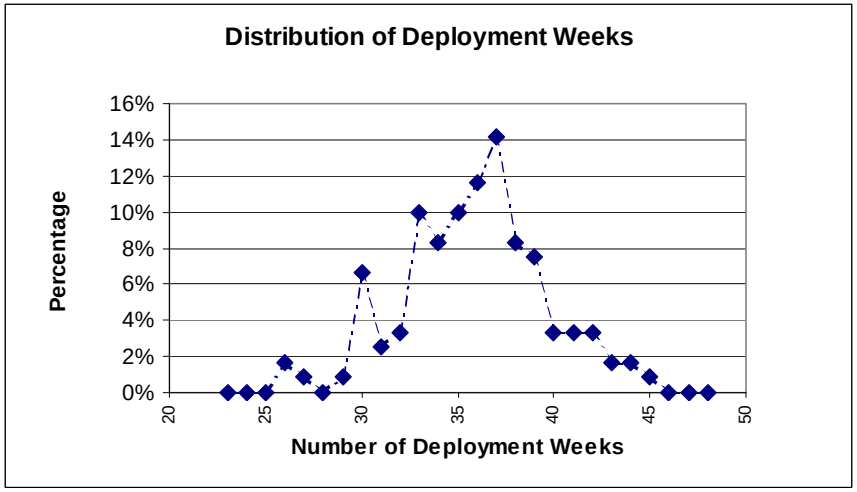
(These figures do not include surge requirements)



# National Civil Surveillance Program

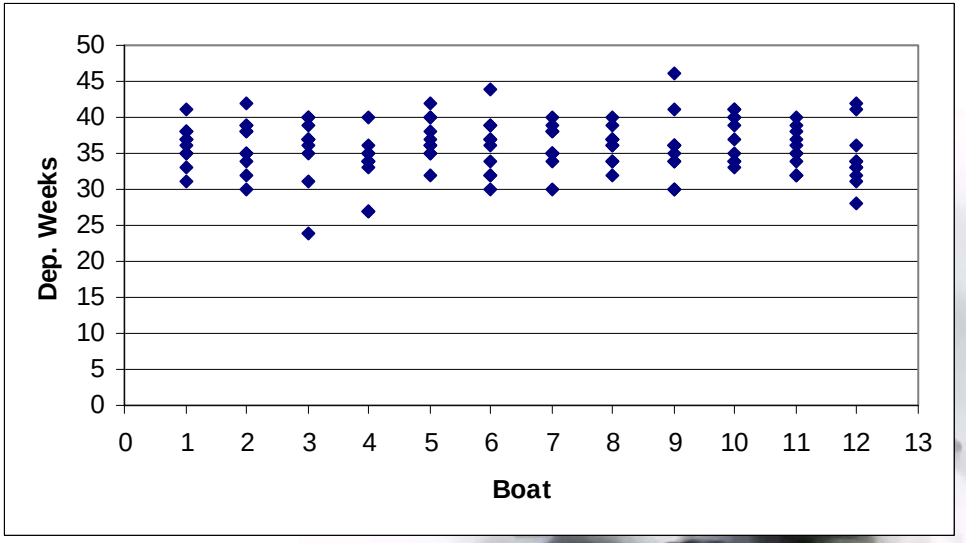


# Boat Deployment

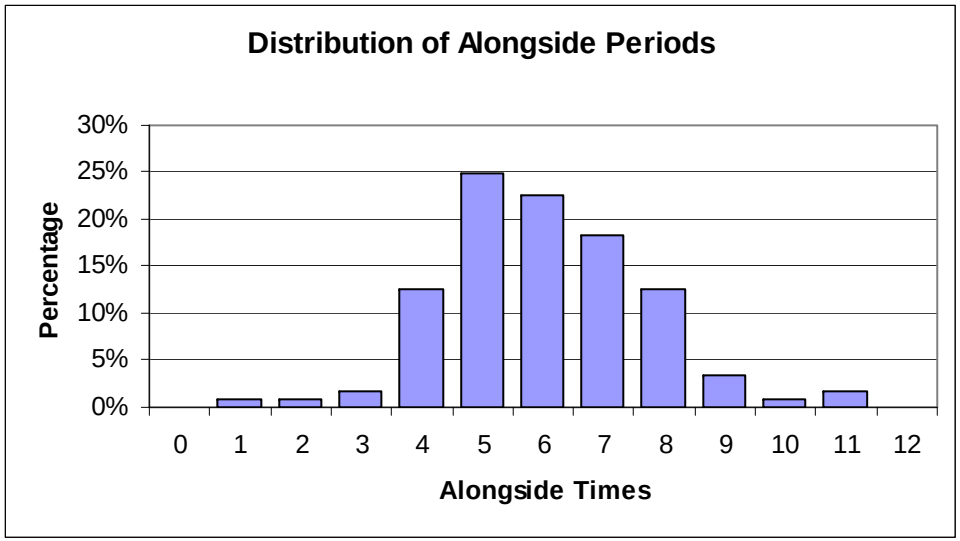



- 10 FAS samples
- Normal distribution
- Mean: 36 wk (250 days)
- 95% in 30 ~ 42 weeks

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

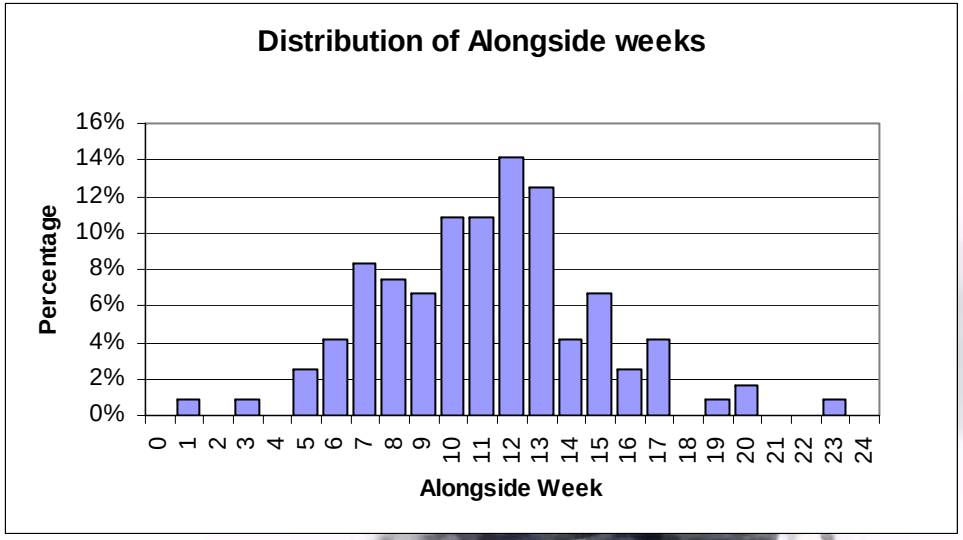


# Boat Alongside




- 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

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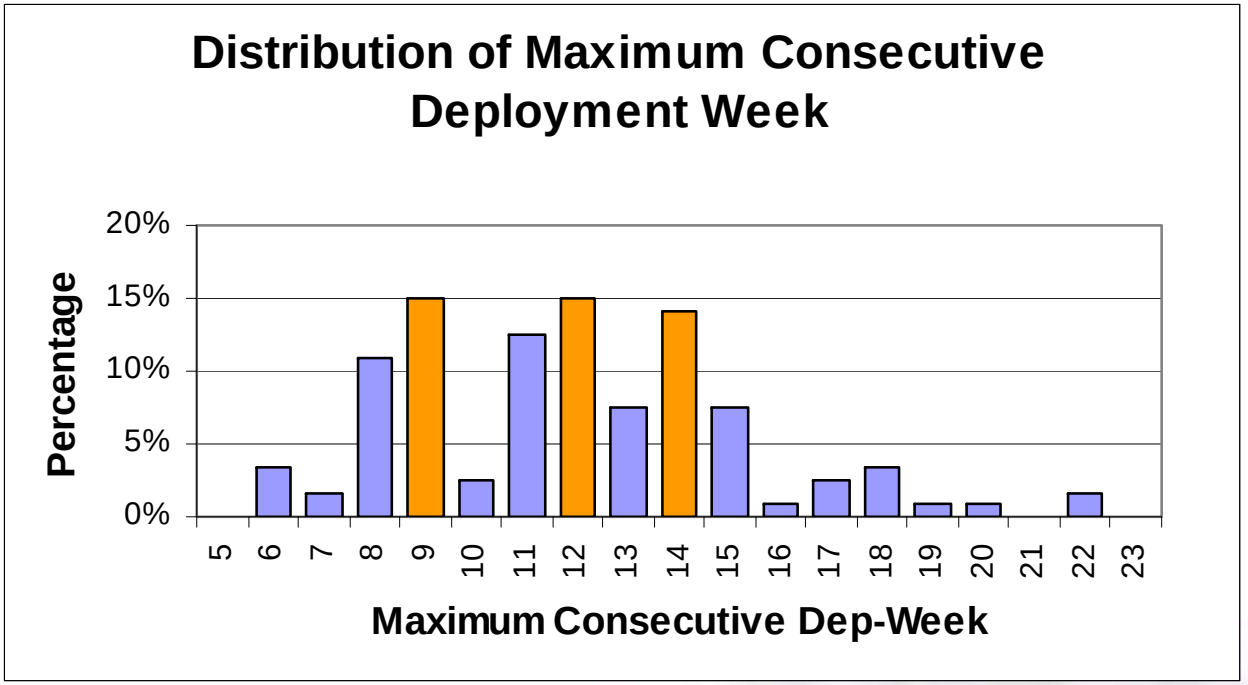
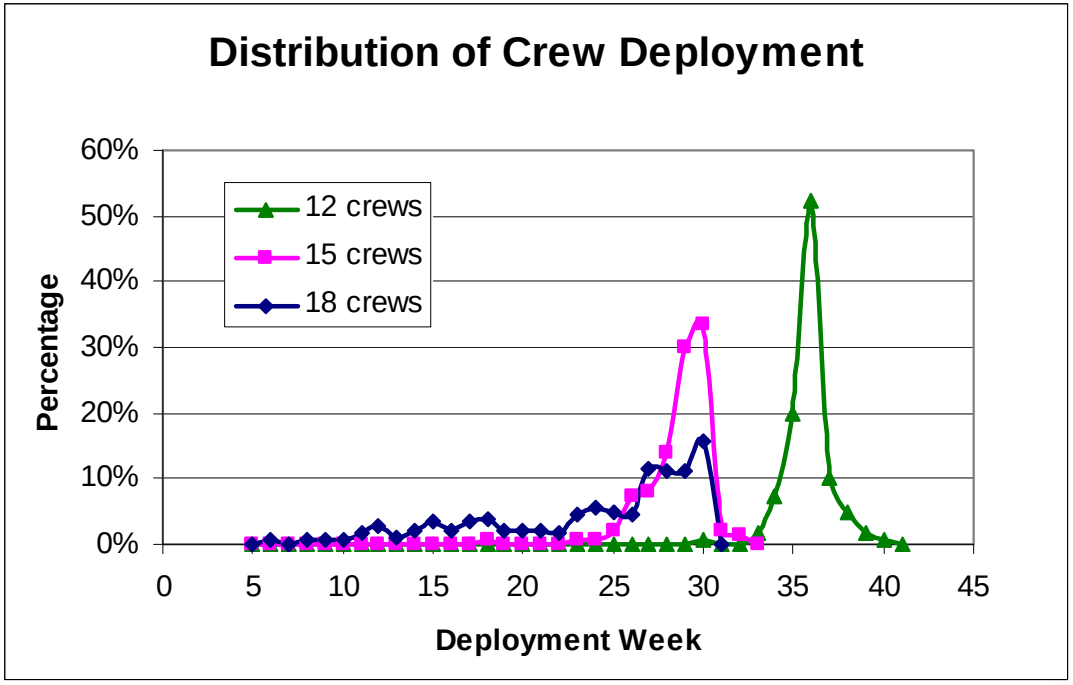
# Consecutive Deployment



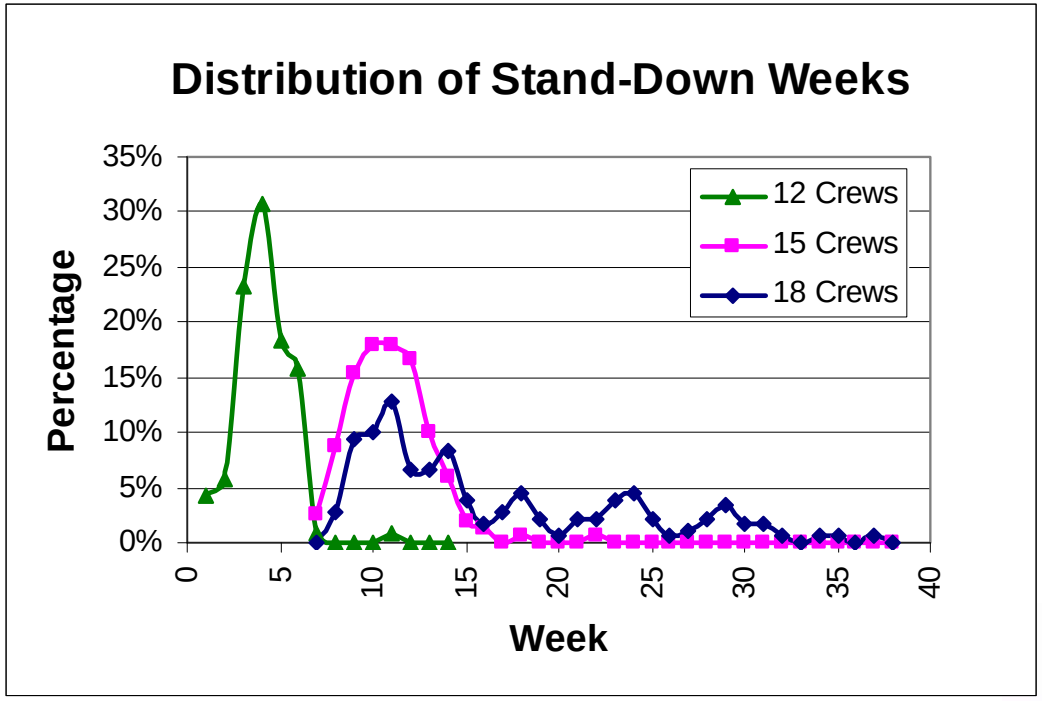

- 9, 12 and 14 weeks are most likely to be required for boat to continue to work
- 85% in 8~15 weeks

# Crew Deployment




| 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 |

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# 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?