# Biological basis for managing dugongs and other large vertebrates in the Great Barrier Reef Marine Park

**Final Report**
**January 1989**

## VOLUME 4

## Raw data tables and programmes used in the estimation of prevailing weather conditions and the calculation of population and density estimates

**Note: The tables and programmes have also been supplied on a diskette in Word Perfect 4.2 format.**

## SECTION 1

Raw data tables for dugongs in the survey area from the tip of Cape York south to Cape Bedford

Section 1: Raw data tables for dugongs in the survey area from the tip of Cape York south to Cape Bedford.

Table 1: Details of weather conditions encountered during the surveys.

Table 2: Beaufort Sea State and glare (for the north/east and south/west side of the aircraft) for each transect.

Table 3: Raw data for the surveys: dugong sightings.

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TABLE 1: Details of weather conditions encountered during the surveys.

| Date | Session | Wind Speed (knots) | Wind Direction | Cloud Cover (oktas) | Cloud Height (ft) | Beaufort Sea State Inshore mode(range) | Beaufort Sea State Offshore mode(range) | Glare North mode(range) | Glare South mode(range) | Tide Time |
|---|---|---|---|---|---|---|---|---|---|---|
| Blocks 1 - 4, November 1984 | | | | | | | | | | |
| 13/11/84 | 1 | 7 | E | 1 | 3000 | 1.0 | 1.0(0.5-1.0) | 1.0 | | Low 0425[a] |
| | 2 | 10 | ESE | 0 | - | 3.0(2.0-3.0) | 3.0(1.5-3.0) | 1.0(0.0-2.0) | | High 1201[a] |
| 14/11/84 | 1 | <5 | NW | 2 | 2000 | 1.0(0.0-1.0) | 0.5-1.0 | 1.0(0.0-1.0) | | Low 0521[a] |
| | 2 | 7 | ESE | 0 | - | 2.5(1.5-3.0) | | 1.0(0.0-2.0) | | High 1450[a] |
| 15/11/84 | 1 | 13 | ESE | 1 | 2500 | 2.0(1.0-3.0) | | 1.0(1.0-2.0) | | Low 0710[a] |
| | 2 | 13 | SE | 0 | - | 2.5(0.0-3.0) | | 1.0(0.0-2.0) | | High 1544[a] |
| Blocks 6 - 13, April 1985 | | | | | | | | | | |
| 21/04/85 | 1 | 10 | E | 3,7 | 1500,3000 | 1.5(1.0-2.5) | 2.0(1.0-2.5) | 1.5(0.0-3.0) | 0.0(0.0-1.0) | High 0943[b] |
| | 2 | 10-15 | E | 5,5 | 1500,30000 | 2.0(1.0-2.0) | 2.0(1.0-2.0) | 1.0(0.0-2.0) | 0.0(0.0-1.0) | Low 1558[b] |
| 22/04/85 | 1 | 5 | E | 2,4 | 1500,2000 | 2.0(1.0-2.5) | 2.0(1.0-2.5) | 2.0(0.0-3.0) | 0.0 | High 0956[b] |
| | 2 | 10 | ENE | 4 | 1000 | 2.0(1.5-2.5) | 2.0(1.0-2.0) | 1.0(0.0-2.0) | 0.5(0.0-1.0) | Low 1617[b] |
| 23/04/85 | 1 | 10 | ESE | 5,4 | 700,20000 | 1.5(1.0-2.0) | 1.5(1.0-2.5) | 2.0(1.0-3.0) | 0.5(0.0-1.0) | High 1004[b] |
| 24/04/85 | 1 | 10 | SE | 6 | 1000 | 2.0(1.5-2.0) | 3.0(2.0-3.5) | 2.0(0.0-3.5) | 1.0(0.0-1.0) | High 0849[b] |
| | 2 | 12 | ESE | 5 | 1400 | 2.5(2.0-3.0) | 2.5(1.0-3.0) | 2.0(1.0-3.0) | 1.0(0.0-1.0) | Low 1649[b] |
| 25/04/85 | 1 | 5 | E | 3 | 1000 | 1.5(1.0-2.5) | 2.0(1.5-3.0) | 2.0(1.0-3.0) | 0.0(0.0-1.0) | High 0806[b] |
| | 2 | 10 | E | 2 | 1000 | 3.0(2.0-3.0) | 2.0(1.0-3.0) | 2.0(2.0-3.0) | 0.5(0.0-1.0) | Low 1551[b] |
| 26/04/85 | 1 | 10 | E | 7 | 8000 | 2.0(2.0-2.5) | 1.0(1.0-3.0) | 2.0(1.0-3.0) | 0.5(0.0-1.0) | High 0426[b] |
| | 2 | 10 | ESE | 4 | 1500 | 1.5(1.0-2.0) | 1.0(1.0-2.0) | 2.0(1.0-3.0) | 2.0(0.0-2.0) | Low 1519[b] |
| Blocks 1 - 7, November 1985 | | | | | | | | | | |
| 31/10/85 | 1 | 10 | SSE | 3 | 1500 | 3.0(0.0-4.0) | | 1.0(0.0-2.0) | 1.0(0.0-2.5) | High 0931[a] |
| | 2 | 20 | SSE | 3 | 5000 | 3.0(1.0-4.0) | | 1.0 | 1.0(0.0-1.0) | Low 1605[a] |
| 01/11/85 | 1 | 10 | E | 3-8 | 1500 | 3.0(1.0-3.0) | 3.0(2.0-3.0) | 2.0(0.0-2.0) | 1.0(1.0-2.0) | High 1035[a] |
| 02/11/85 | 1 | 10 | E | 5 | 1000 | 2.5(2.0-3.0) | 3.0(2.0-3.0) | 2.0(0.0-2.0) | 1.0(0.0-2.0) | High 1120[a] |
| 03/11/85 | 1 | 10 | E | 1-6 | 1500 | 2.5(1.0-3.0) | 2.5(1.0-3.0) | 2.0(0.0-2.5) | 2.0(0.0-2.0) | Low 0416[a] |
| | 2 | 10 | E | 3,5 | 1000,5000 | 2.5(2.0-3.0) | 2.5(2.0-3.0) | 2.0(0.0-2.0) | 1.0(0.0-2.0) | High 1522[a] |
| 05/11/85 | 1 | 10 | E | 2,2 | 1500,12000 | 2.0(1.0-2.5) | 2.0(1.0-2.5) | 0.0(0.0-2.5) | 2.0(0.0-2.0) | Low 0846[a] |
| | 2 | 15 | E | 1 | 1000 | 2.5(0.0-3.0) | | 1.0(0.0-2.0) | 1.0(0.0-2.0) | High 1629[a] |
| 06/11/85 | 1 | 10 | E | 5 | 1500 | 2.0(1.0-2.5) | | 1.0(0.0-2.0) | 1.0(0.0-2.0) | Low 0957[a] |
| | 2 | 15 | E | 1 | 1500 | 2.0(1.0-3.0) | | 2.0(0.0-2.5) | 1.0(0.0-2.0) | High 1659[a] |

TABLE 1: continued.

| Date | Session | Wind Speed (knots) | Wind Direction | Cloud Cover (oktas) | Cloud Height (ft) | Beaufort Sea State Inshore mode(range) | Beaufort Sea State Offshore mode(range) | Glare North mode(range) | Glare South mode(range) | Tide Time |
|---|---|---|---|---|---|---|---|---|---|---|
| Blocks 1 - 7, November 1985 | | | | | | | | | | |
| 07/11/85 | 1 | 10 | E | 2-6 | 2000 | 1.0(0.0-2.5) | | 1.0(0.0-2.0) | 0.0(0.0-2.0) | Low 1046[a] |
| | 2 | 15 | E | 4,3 | 1500,9000 | 2.0(2.0-2.5) | 2.0(1.0-2.5) | 1.0(1.0-2.5) | 1.0(0.0-2.0) | High 1729[a] |
| 08/11/85 | 1 | 10 | E | 2-6 | 1000 | 2.5(1.0-2.5) | 2.5(1.0-4.0) | 1.0(0.0-2.0) | 1.0(0.0-2.5) | Low 1133[a] |
| Blocks 8 - 13, November 1985 | | | | | | | | | | |
| 17/11/85 | 1 | 5 | NE | 2 | 1500 | 0.5(0.0-1.0) | 0.0(0.0-1.0) | 1.0(0.0-2.5) | 0.0(0.0-1.0) | Low 0700[b] |
| | 2 | 10 | E | 1 | 1500 | 2.0 | 1.0(1.0-2.5) | 2.0(0.0-2.0) | 1.0(0.0-2.0) | High 1517[b] |
| 18/11/85 | 1 | 0 | - | 2 | 2000 | 0.0(0.0-1.0) | 0.0 | 1.0(-.0-1.0) | 0.0(0.0-1.0) | Low 0900[b] |
| | 2 | 0 | - | 1 | 1500 | 1.0(0.0-1.0) | 0.0(0.0-1.0) | 1.0(0.0-1.0) | 0.0(0.0-1.0) | High 1625[b] |
| 19/11/87 | 1 | 0 | - | 3 | 1000 | 1.0(0.0-1.5) | 1.0(0.0-1.0) | 1.0(0.0-2.0) | 1.0(0.0-1.0) | Low 1025[b] |
| | 2 | 10 | ENE | - | - | 2.0(1.0-2.5) | 2.0(1.0-3.0) | 2.0(0.0-2.0) | 0.0(0.0-2.0) | High 1717[b] |
| 20/11/85 | 1 | 5 | E | 1,4 | 1500,12000 | 1.0 | 1.0(0.0-1.0) | 1.0(0.0-2.5) | 1.0(0.0-2.0) | Low 1026[b] |
| | 2 | 8 | N | 1,4 | 1500,12000 | 1.0(0.0-1.0) | 1.0(0.0-1.0) | 1.0(0.0-2.5) | 0.5(0.0-1.0) | High 1800[b] |
| 21/11/85 | 1 | 0 | - | 1 | 1500 | 0.5(0.0-1.0) | 0.5(0.0-0.5) | 1.0(0.0-2.0) | 0.5(0.0-1.0) | Low 1219[b] |

[a] Neap tides. Times are for Cape Flattery and equal Cairns -10 mins.

[b] Tide times are for Cape Grenville and equal Cairns +40 mins.

TABLE 2: Beaufort Sea State and glare (for the north/east and south/west sides of the aircraft) for each transect.

Scale : 0 = no glare
1 = 0 ≤ 25% field of view glare affected
2 = 25 ≤ 50% field of view glare affected
3 = > 50% field of view glare affected

| Transect No. | Beaufort Sea State | | Glare | |
|---|---|---|---|---|
| | Inshore mode(range) | Offshore mode(range) | North mode(range) | South Mode(range) |
| Blocks 1 - 4, November 1984 | | | | |
| 1 | 1.0 | 1.0 | detailed glare data not recorded for this survey | |
| 2 | 1.0 | 1.0(0.5-1.0) | | |
| 3 | 1.0 | 1.0 | | |
| 4 | - | 1.0 | | |
| 5 | 2.5(2.0-3.0) | 2.5(2.0-2.5) | | |
| 6 | - | 1.5-3.0 | | |
| 7 | 3.0 | 2.5-3.0 | | |
| 8 | 3.0 | 3.0(2.0-3.0) | | |
| 9 | - | 3.0 | | |
| 10 | 1.0 | 0.5(0.5-1.0) | | |
| 11 | 0.5 | 0.5(0.5-1.0) | | |
| 12 | 0.0-1.0 | 1.0 | | |
| 13 | 0.5 | 1.0 | | |
| 14 | - | 0.5 | | |
| 15 | 2.0 | | | |
| 16 | 2.5(2.0-2.5) | | | |
| 17 | 2.0(2.0-2.5) | | | |
| 18 | 2.0(0.0-2.5) | | | |
| 19 | 2.0(2.0-2.5) | | | |
| 20 | 2.0 | | | |
| 21 | 2.5 | | | |
| 22 | 2.0(2.0-2.5) | | | |
| 23 | 2.5 | | | |
| 24 | 2.5-3.0 | | | |
| 25 | 1.5(1.0-2.0) | | | |
| 26 | 1.0-2.0 | | | |
| 27 | 1.0-2.0 | | | |
| 28 | 2.5(2.0-3.0) | | | |
| 29 | 2.5 | | | |
| 30 | 2.5(2.0-3.0) | | | |
| 31 | 3.0 | | | |
| 32 | 3.0 | | | |
| 33 | 2.5 | | | |
| 34 | 2.5 | | | |
| 35 | 2.5-3.0 | | | |
| 36 | 3.0 | | | |
| 37 | 2.0(2.0-2.5) | | | |
| 38 | 1.5-2.0 | | | |
| 39 | 2.0 | | | |
| 40 | 2.0(2.0-2.5) | | | |

Table 2: continued.

| Transect No. | Beaufort Sea State | | Glare | |
|---|---|---|---|---|
| | Inshore mode(range) | Offshore mode(range) | North mode(range) | South Mode(range) |
| Blocks 6 - 13, April 1985 | | | | |
| 1 | 2.0(2.0-2.5) | 2.0(1.0-2.5) | 2.0(1.0-2.0) | 0.0 |
| 2 | 1.0(1.0-1.5) | 1.0(1.0-2.0) | 2.0(0.0-3.0) | 0.0(0.0-1.0) |
| 3 | 1.5(1.5-2.0) | 1.5(1.0-2.0) | 1.5(0.0-2.0) | 0.0 |
| 4 | 1.5 | 1.0(1.0-2.0) | 1.0(0.0-2.0) | 0.0 |
| 5 | 1.5(1.5-2.0) | 2.0(1.5-2.5) | 1.0 | 0.0 |
| 6 | 1.5(1.0-2.0) | 2.0(1.0-2.5) | 1.5(1.0-2.0) | 0.0 |
| 7 | 2.0 | 2.0(1.0-2.0) | 1.0 | 0.0 |
| 8 | 1.0 | 1.5(1.0-2.0) | 2.0(0.0-2.0) | 0.0 |
| 9 | 2.0 | 2.0(1.5-2.0) | 1.0 | 0.0 |
| 10 | - | 2.0 | 0.5(0.0-1.0) | 0.0 |
| 11 | 1.5 | 1.5(1.5-2.0) | 1.0 | 1.0 |
| 12 | 2.0 | 2.0 | 1.0 | 0.0 |
| 13 | 2.0(2.0-2.5) | 2.0(2.0-2.5) | 2.0 | 0.0 |
| 14 | 2.0(2.0-2.5) | 2.0(2.0-2.5) | 1.5(0.0-1.5) | 0.0 |
| 15 | 2.5 | 2.5(2.0-2.5) | 2.0(1.0-2.0) | 0.0 |
| 16 | 2.0 | 2.0(2.0-2.5) | 2.0 | 0.0 |
| 17 | 1.0(1.0-2.0) | 2.0(1.5-2.5) | 2.0 | 0.0 |
| 18 | 1.5(1.5-2.0) | 1.5(1.0-2.0) | 2.0(1.0-2.0) | 0.0 |
| 19 | 2.0(1.0-2.0) | 2.0(1.5-2.5) | 2.0(1.0-2.0) | 0.0 |
| 20 | - | 2.0(1.5-2.5) | 3.0(2.0-3.0) | 0.0 |
| 21 | 2.0 | 2.0(1.5-2.5) | 2.5(2.0-3.0) | 0.0 |
| 22 | - | 2.0(1.0-2.0) | 2.0(1.0-3.0) | 0.0 |
| 23 | - | 1.5(1.0-1.5) | 2.5(2.0-3.0) | 0.0 |
| 24 | 2.0 | 1.5(1.0-2.5) | 2.0 | 0.0 |
| 25 | 2.5 | 2.0(2.0-2.5) | 1.5(1.0-2.0) | 1.0 |
| 26 | 2.5 | 2.0(1.0-2.5) | 2.0 | 1.0 |
| 27 | - | 2.5(1.5-2.5) | 2.0 | 1.0 |
| 28 | 2.5 | 2.5(1.0-3.0) | 2.0 | 0.5(0.0-1.0) |
| 29 | 2.0(2.0-2.5) | 2.0(2.0-2.5) | 3.0(1.0-3.0) | 0.5(0.0-1.0) |
| 30 | 3.0 | 2.5(1.0-2.5) | 2.0 | 0.5(0.0-1.0) |
| 31 | 3.0(2.5-3.0) | 2.0(1.0-3.0) | 2.0 | 0.0 |
| 32 | 2.5(2.0-3.0) | 2.0(2.0-2.5) | 2.0(2.0-3.0) | 1.0(0.0-1.0) |
| 33 | 2.0 | 1.0(1.0-2.0) | 3.0(2.0-3.0) | 0.0 |
| 34 | 2.5 | 2.0(1.0-2.5) | 2.0 | 0.0 |
| 35 | 2.0 | 1.5(1.0-2.0) | 2.0 | 1.0(0.0-1.0) |
| 36 | 2.0 | 2.0(1.0-3.0) | 2.0(1.0-2.0) | 1.0 |
| 37 | 2.0(2.0-2.5) | 1.5(1.5-2.5) | 1.5(1.0-2.0) | 1.0 |
| 38 | - | 2.5(2.0-3.0) | 3.0(0.0-3.5) | 1.0 |
| 39 | 2.0 | 3.0(2.0-3.0) | 3.0(1.0-3.0) | 0.0 |
| 40 | 1.0 | 1.0(1.0-2.0) | 2.0 | 0.0 |
| 41 | 2.0 | 1.5(1.0-2.0) | 2.0(2.0-3.0) | 2.0(1.0-2.0) |
| 42 | 2.0(1.5-2.5) | 2.0(2.0-3.0) | 2.0(2.0-3.0) | 0.0 |
| 43 | 2.0 | 3.0(2.0-3.0) | 2.0(1.0-2.0) | 0.0(0.0-1.0) |
| 44 | 2.0 | 2.5(2.5-3.5) | 2.0(0.0-2.5) | 1.0 |
| 45 | 2.0(1.5-2.5) | 3.0(2.0-3.5) | 2.0 | 0.5(0.0-1.0) |
| 46 | 1.5 | 1.0(1.0-2.0) | 2.0 | 1.0 |
| 47 | 1.0(1.0-1.5) | 2.0(1.0-2.0) | 2.0(1.0-2.0) | 0.0(0.0-1.0) |
| 48 | 1.5 | 2.0(1.0-2.0) | 1.0(1.0-2.0) | 1.0(0.0-1.0) |
| 49 | 2.0 | 2.0(1.0-2.0) | 2.0 | 0.0 |
| 50 | 1.0(1.0-1.5) | | 2.0 | 0.0 |
| 51 | 1.5(1.0-2.0) | | 2.0 | 0.0 |
| 52 | 2.0(1.0-2.0) | | 2.0(0.0-2.0) | 0.0 |
| 53 | 1.0(1.0-2.5) | | 1.5(1.0-3.0) | 0.0 |
| 54 | 2.5(2.0-2.5) | | 1.5(0.0-2.5) | 0.0 |
| 55 | 2.0(1.5-2.5) | | 3.0 | 0.0 |
| 56 | 2.5(2.0-2.5) | | 3.0 | 0.0 |
| 57 | 1.5(1.0-2.0) | | 3.0 | 0.0 |

Table 2: continued.

| Transect No. | Beaufort Sea State | | Glare | |
|---|---|---|---|---|
| | Inshore mode(range) | Offshore mode(range) | North mode(range) | South Mode(range) |
| Blocks 1 - 4, November 1985 | | | | |
| 1 | 2.5(1.0-3.0) | 3.0 | 1.0-2.0 | 1.0 |
| 2 | 3.0 | 3.0 | 1.0 | 1.0-2.0 |
| 3 | 3.0 | 3.0(2.0-3.0) | 1.0-2.0 | 1.0 |
| 4 | 3.0 | 3.0(2.0-3.0) | 1.0 | 1.0-2.0 |
| 5 | 3.0 | 3.0(2.0-3.0) | 1.0-2.0 | 2.0 |
| 6 | 3.0 | 3.0(2.0-3.0) | 1.0-2.0 | 1.0-2.0 |
| 7 | 3.0(2.0-3.0) | 2.0(2.0-3.0) | 1.0-2.0 | 1.0 |
| 8 | 3.0 | 3.0 | 1.0-2.0 | 2.0 |
| 9 | 3.0 | 3.0(2.0-3.0) | 2.0(0.0-2.0) | 1.0(1.0-2.0) |
| 10 | 3.0 | 2.5(2.0-3.0) | 0.0-2.0 | 0.0-2.0 |
| 11 | 3.0 | 3.0(2.0-3.0) | 2.0(1.0-2.0) | 2.0(1.0-2.0) |
| 12 | 2.0(2.0-3.0) | 3.0(2.0-3.0) | 1.0(0.0-1.0) | 1.0(0.0-1.0) |
| 13 | 2.5-3.0 | 3.0(2.0-3.0) | 2.0(0.0-2.0) | 1.0(0.0-2.0) |
| 14 | 2.5 | 2.5(2.0-3.0) | 2.0(1.0-2.0) | 2.0(1.0-2.0) |
| 15 | 3.0(2.5-3.0) | 2.5(2.0-3.0) | 1.0 | 2.0(1.0-2.0) |
| 16 | 3.0(2.0-3.0) | 3.0(2.0-3.0) | 0.0(0.0-1.0) | 2.0(0.0-2.0) |
| 17 | 2.5(2.0-2.5) | 2.5(2.0-3.0) | 2.0(1.0-2.0) | 2.0(1.0-2.0) |
| 18 | 2.5(2.0-2.5) | 3.0(2.0-3.0) | 2.0(0.0-2.0) | 1.0-2.0 |
| 19 | 2.5(2.0-3.0) | 2.5(2.0-3.0) | 1.0(0.0-2.0) | 2.0(0.0-2.0) |
| 20 | 2.5(2.0-2.5) | 2.5(1.0-3.0) | 2.0(0.0-2.0) | 2.0(0.0-2.5) |
| 21 | 3.0(2.5-3.0) | 2.5(2.0-3.0) | 0.0(0.0-1.5) | 2.0(0.0-2.0) |
| 22 | 3.0(1.0-3.0) | 2.0(1.0-2.5) | 1.0(0.0-2.0) | 2.0(1.0-2.0) |
| 23 | 2.5(2.0-3.0) | 2.5(2.0-3.0) | 1.0(0.0-2.0) | 1.0(0.0-2.0) |
| 24 | 2.0-2.5 | 2.0-2.5 | 0.0-2.0 | 2.0(1.0-2.0) |
| 25 | 2.0(2.0-2.5) | 2.0(1.0-2.5) | 0.0(0.0-2.0) | 0.0(0.0-2.0) |
| 26 | 2.0(1.0-2.5) | 2.5(1.0-2.5) | 0.0-2.0 | 0.0(0.0-2.0) |
| 27 | 2.5(2.0-2.5) | 2.0(1.0-2.0) | 1.0(0.0-2.0) | 1.0(0.0-2.0) |
| 28 | 2.5(2.5-3.0) | | 1.0 | 1.0 |
| 29 | 3.0(2.5-3.0) | | 2.0 | 2.0 |
| 30 | 3.0(2.5-3.0) | | 1.0 | 1.0-2.0 |
| 31 | 3.0(2.5-3.0) | | 2.0 | 2.0 |
| 32 | 3.0(2.5-3.0) | | 1.0 | 1.0-2.0 |
| 33 | 2.5(2.0-3.0) | | 1.0(1.0-2.0) | 1.0(0.0-2.0) |
| 34 | 2.5(2.5-3.0) | | 1.0 | 1.0-2.0 |

Table 2: continued.

| Transect No. | Beaufort Sea State | | Glare | |
|---|---|---|---|---|
| | Inshore mode(range) | Offshore mode(range) | North mode(range) | South Mode(range) |
| Blocks 5, November 1985 | | | | |
| 1 | 3.0(2.5-4.0) | | 1.0 | 1.0 |
| 2 | 3.0(1.0-4.0) | | 1.0 | 0.0 |
| 3 | 3.0(1.0-4.0) | | 1.0 | 1.0 |
| 4 | 3.5(2.0-4.0) | | 1.0 | 1.0 |
| 5 | 3.0(0.0-3.0) | | 1.0(0.0-2.0) | 1.0(0.0-2.0) |
| 6 | 3.0(0.5-3.0) | | 0.0-1.0 | 1.0(0.0-2.0) |
| 7 | 3.0(1.0-4.0) | | 2.0(1.0-2.0) | 2.5(1.0-2.5) |
| 8 | 1.0(1.0-4.0) | | 0.0-1.0 | 1.0 |
| 9 | 2.5(0.0-3.0) | | 0.0-2.0 | 0.0-2.0 |
| 10 | 2.5(1.0-3.0) | | 1.0-2.0(0.0-2.5) | 2.0(0.0-2.5) |
| 11 | 2.5(2.0-3.0) | | 1.0(0.0-2.0) | 1.0(1.0-2.0) |
| 12 | 2.0(0.0-3.0) | | 1.0(0.0-2.0) | 1.0(0.0-2.0) |
| 13 | 2.5(1.0-4.0) | | 2.0(0.0-2.0) | 2.0(0.0-2.5) |
| 14 | 2.0(1.0-2.5) | | 1.0(0.0-2.0) | 1.0(0.0-2.0) |
| 15 | 1.0(1.0-2.5) | | 1.0(0.0-2.0) | 1.0(0.0-2.0) |
| 16 | 1.0(0.0-2.5) | | 1.0(0.0-2.0) | 0.0(0.0-2.0) |
| 17 | 2.0(1.0-2.5) | | 1.0(0.0-2.0) | 0.0(0.0-2.0) |
| 18 | 2.0(1.0-2.5) | | 0.0-1.0(0.0-2.0) | 0.0-2.0 |
| 19 | 2.0(1.0-2.5) | | 1.0-2.0(0.0-2.0) | 1.0-2.0 |
| 20 | 1.0(1.0-2.5) | | 1.0(0.0-1.0) | 0.0-2.0 |
| 21 | 2.0(1.0-2.5) | | 1.0-2.0 | 0.0-2.0 |
| 22 | 2.5(1.0-2.5) | | 2.0(0.0-2.0) | 1.0 |
| 23 | 2.0(1.0-2.5) | | 1.0(0.0-2.0) | 1.0(0.0-2.0) |

Table 2: continued.

| Transect No. | Beaufort Sea State | | Glare | |
|---|---|---|---|---|
| | Inshore mode(range) | Offshore mode(range) | North mode(range) | South Mode(range) |
| Blocks 2 - 16, November 1985 | | | | |
| 1 | 2.0 | 2.0(1.0-2.5) | 0.0(0.0-2.0) | 0.0-2.0 |
| 2 | 2.0 | 2.5(1.0-2.5) | 1.0(0.0-1.0) | 1.0(0.0-2.0) |
| 3 | 2.0 | 1.0(1.0-2.0) | 0.0(0.0-2.0) | 0.0(0.0-2.0) |
| 4 | 1.5(1.0-2.0) | 2.0(1.0-2.5) | 0.0-1.0 | 0.0(0.0-2.0) |
| 5 | 2.0 | 2.0(1.0-2.5) | 1.0(0.0-2.0) | 1.0(0.0-2.0) |
| 6 | 2.0-2.5 | 1.0(1.0-2.5) | 1.0(0.0-1.0) | 0.0-2.0 |
| 7 | 2.5(2.0-2.5) | 2.0(1.0-3.0) | 1.0(1.0-2.0) | 1.0(0.0-2.0) |
| 8 | 2.0(1.0-2.5) | 2.0(1.0-3.0) | 1.0(0.0-2.0) | 1.0(0.0-2.0) |
| 9 | 1.0(1.0-2.5) | 2.5(1.0-3.0) | 1.0(0.0-2.0) | 1.0(0.0-2.0) |
| 10 | - | 2.5(1.0-3.0) | 1.0(0.0-2.0) | 2.0(0.0-2.0) |
| 11 | 2.0 | 2.5(1.0-4.0) | 0.0-2.0 | 0.0-2.0(0.0-2.5) |
| 12 | 1.0 | 2.0(1.0-3.0) | 0.0-1.0 | 0.0-2.0 |
| 13 | 0.5(0.0-1.0) | 0.0 | 0.0 | 0.0(0.0-1.0) |
| 14 | 0.0(0.0-1.0) | 0.0 | 0.0 | 0.0 |
| 15 | 0.0 | 0.0(0.0-1.0) | 0.0 | 0.0-1.0 |
| 16 | - | 0.0(0.0-1.0) | 0.0 | 0.0-1.0 |
| 17 | 1.0 | 0.0(0.0-1.0) | 0.0(0.0-1.0) | 0.0-1.0 |
| 18 | 1.0-1.5 | 0.5(0.0-1.0) | 1.0 | 1.0-2.0 |
| 19 | 1.0 | 1.0(0.0-1.0) | 0.0-1.0 | 0.0-1.0 |
| 20 | 2.0-2.5 | 1.5(1.0-2.0) | 1.0(0.0-1.0) | 0.0-1.0(0.0-2.0) |
| 21 | 2.5 | 2.0(0.0-2.5) | 0.0-1.0 | 1.0-2.0 |
| 22 | - | 2.0(1.0-2.5) | 0.0(0.0-2.0) | 0.0(0.0-1.0) |
| 23 | 2.0(2.0-2.5) | 1.0(0.0-2.0) | 0.0-1.0 | 2.0 |
| 24 | 2.0 | 2.0(1.0-3.0) | 0.0(1.0-2.0) | 0.0(0.0-2.0) |
| 25 | 1.5(1.0-2.0) | 2.0(0.0-3.0) | 0.0-1.0 | 2.0 |
| 26 | - | 1.0(0.0-1.0) | 1.0(0.0-1.0) | 1.0(1.0-2.0) |
| 27 | 1.0 | 1.0(0.5-1.0) | 1.0(0.0-1.0) | 0.0(0.0-1.0) |
| 28 | - | 1.0(0.5-1.0) | 0.0 | 1.0 |
| 29 | 1.0(1.0-2.0) | 1.0(0.0-1.0) | 0.0-1.0 | 1.0(0.0-1.0) |
| 30 | 0.0 | 1.0(0.0-0.5) | 0.0(0.0-1.0) | 1.0 |
| 31 | 0.5-1.0 | 0.5 | 1.0(0.0-1.0) | 1.0(0.0-2.0) |
| 32 | 1.0 | 1.0(0.0-1.0) | 1.0(0.0-1.0) | 1.0(0.0-1.0) |
| 33 | 1.0 | 1.0(0.0-1.0) | 1.0(0.0-1.0) | 2.0(0.0-2.5) |
| 34 | - | 1.0(0.0-1.0) | 0.0(0.0-1.0) | 1.0-2.0(0.0-2.0) |
| 35 | 1.0 | 1.0(0.0-1.0) | 1.0(0.0-2.0) | 2.0(0.0-2.0) |
| 36 | - | 1.0(0.0-1.0) | 0.0(0.0-1.0) | 1.0-2.0 |
| 37 | 1.0 | 1.0 | 0.0-1.0 | 1.0(0.0-2.0) |
| 38 | 1.0 | 0.0(0.0-1.0) | 0.0 | 0.0-1.0 |
| 39 | - | 1.0(0.0-1.0) | 1.0(0.0-1.0) | 1.0(0.0-2.0) |
| 40 | 1.0(0.0-1.0) | 0.0(0.0-1.0) | 0.0 | 0.0-1.0 |
| 41 | 1.0(0.0-1.0) | 1.0(0.0-1.0) | 0.0 | 0.0-1.0 |
| 42 | 1.0 | 0.0(0.0-1.0) | 0.0-1.0 | 0.0-1.0 |
| 43 | 0.5(0.0-1.0) | 0.0 | 0.0(0.0-1.0) | 1.0(0.0-1.0) |
| 44 | 0.0 | 0.0 | 0.0 | 0.0-1.0 |
| 45 | 0.0 | 0.0 | 0.0 | 1.0 |
| 46 | - | 1.0(1.0-2.5) | 1.0 | 2.0(0.0-2.0) |
| 47 | 2.0 | 1.0(1.0-2.0) | 1.0(0.0-1.0) | 2.0(0.0-2.0) |
| 48 | - | 0.0(0.0-1.0) | 0.0-1.0 | 2.0(0.0-2.0) |
| 49 | 0.5(0.0-1.0) | 1.0(0.0-1.0) | 1.0(0.0-1.0) | 1.0(0.0-2.50 |
| 50 | 0.5(0.0-1.0) | | 0.0 | 1.0 |
| 51 | 0.0 | | 0.0 | 1.0 |
| 52 | 0.0 | | 0.0 | 1.0 |
| 53 | 0.0(0.0-1.0) | | 0.0 | 1.0 |
| 54 | 0.0 | | 0.0 | 1.0-2.0 |
| 55 | 1.0 | | 0.0 | 1.0 |
| 56 | 1.0 | | 0.0(0.0-1.0) | 1.0 |
| 57 | 1.0 | | 1.0 | 1.0 |

TABLE 3: Raw data for the surveys: dugong sightings.

(a) Blocks 1 - 4, November 1984

| Transect No. | No. of observers Port | Starboard | No. of groups of turtles Port Rear | Starboard Rear |
|---|---|---|---|---|
| 001 | 1 | 1 | 0 | 1 |
| 002 | 1 | 1 | 1 | 1 |
| 003 | 1 | 1 | 0 | 1 |
| 004 | 1 | 1 | 0 | 0 |
| 005 | 1 | 1 | 0 | 0 |
| 006 | 1 | 1 | 0 | 0 |
| 007 | 1 | 1 | 0 | 1 |
| 008 | 1 | 1 | 0 | 2 |
| 009 | 1 | 1 | 4 | 1 |
| 010 | 1 | 1 | 3 | 5 |
| 011 | 1 | 1 | 6 | 0 |
| 012 | 1 | 1 | 1 | 2 |
| 013 | 1 | 1 | 1 | 1 |
| 014 | 1 | 1 | 0 | 0 |
| 015 | 1 | 1 | 0 | 0 |
| 016 | 1 | 1 | 0 | 0 |
| 017 | 1 | 1 | 0 | 0 |
| 018 | 1 | 1 | 0 | 0 |
| 019 | 1 | 1 | 0 | 0 |
| 020 | 1 | 1 | 0 | 0 |
| 021 | 1 | 1 | 0 | 0 |
| 022 | 1 | 1 | 0 | 0 |
| 023 | 1 | 1 | 0 | 1 |
| 024 | 1 | 1 | 0 | 1 |
| 025 | 1 | 1 | 0 | 1 |
| 026 | 1 | 1 | 6 | 4 |
| 027 | 1 | 1 | 0 | 1 |
| 028 | 1 | 1 | 0 | 2 |
| 029 | 1 | 1 | 0 | 0 |
| 030 | 1 | 1 | 1 | 1 |
| 031 | 1 | 1 | 1 | 2 |
| 032 | 1 | 1 | 2 | 3 |
| 033 | 1 | 1 | 0 | 1 |
| 034 | 1 | 1 | 1 | 0 |
| 035 | 1 | 1 | 1 | 0 |
| 036 | 1 | 1 | 0 | 0 |
| 037 | 1 | 1 | 0 | 0 |
| 038 | 1 | 1 | 0 | 0 |
| 039 | 1 | 1 | 0 | 1 |
| 040 | 1 | 1 | 0 | 1 |
| | | | 28 | 34 |

TABLE 3: continued.

(b) Blocks 6 - 13, April 1985

| Transect No. | No. of observers | | No. of groups of dugongs | | | |
|---|---|---|---|---|---|---|
| | Port | Starboard | Port | Starboard | | |
| | | | Rear | Mid | Rear | Tandem |
| 001 | 1 | 2 | 2 | 0 | 0 | 0 |
| 002 | 1 | 2 | 1 | 0 | 1 | 0 |
| 003 | 1 | 2 | 0 | 0 | 0 | 0 |
| 004 | 1 | 2 | 1 | 0 | 0 | 0 |
| 005 | 1 | 2 | 1 | 6 | 0 | 5 |
| 006 | 1 | 2 | 1 | 1 | 0 | 0 |
| 007 | 1 | 2 | 0 | 0 | 0 | 0 |
| 008 | 1 | 2 | 1 | 1 | 0 | 0 |
| 009 | 1 | 2 | 0 | 0 | 0 | 1 |
| 010 | 1 | 2 | 0 | 0 | 0 | 0 |
| 011 | 1 | 2 | 0 | 0 | 0 | 0 |
| 012 | 1 | 2 | 2 | 0 | 0 | 0 |
| 013 | 1 | 2 | 0 | 0 | 0 | 0 |
| 014 | 1 | 2 | 2 | 0 | 0 | 0 |
| 015 | 1 | 2 | 1 | 0 | 0 | 0 |
| 016 | 1 | 2 | 0 | 0 | 0 | 0 |
| 017 | 1 | 2 | 0 | 1 | 0 | 0 |
| 018 | 1 | 2 | 0 | 0 | 0 | 0 |
| 019 | 1 | 2 | 0 | 0 | 0 | 0 |
| 020 | 1 | 2 | 0 | 0 | 0 | 0 |
| 021 | 1 | 2 | 0 | 0 | 0 | 0 |
| 022 | 1 | 2 | 0 | 0 | 0 | 0 |
| 023 | 1 | 2 | 0 | 0 | 0 | 0 |
| 024 | 1 | 2 | 0 | 0 | 0 | 0 |
| 025 | 1 | 2 | 1 | 0 | 0 | 0 |
| 026 | 1 | 2 | 0 | 0 | 0 | 0 |
| 027 | 1 | 2 | 1 | 0 | 0 | 1 |
| 028 | 1 | 2 | 2 | 0 | 2 | 0 |
| 029 | 1 | 2 | 0 | 0 | 1 | 0 |
| 030 | 1 | 2 | 1 | 0 | 0 | 0 |
| 031 | 1 | 2 | 0 | 0 | 0 | 0 |
| 032 | 1 | 2 | 0 | 0 | 0 | 0 |
| 033 | 1 | 2 | 0 | 0 | 0 | 0 |
| 034 | 1 | 2 | 0 | 0 | 0 | 0 |
| 035 | 1 | 2 | 0 | 0 | 0 | 0 |
| 036 | 1 | 2 | 0 | 0 | 0 | 0 |
| 037 | 1 | 2 | 0 | 0 | 0 | 0 |
| 038 | 1 | 2 | 0 | 0 | 0 | 0 |
| 039 | 1 | 2 | 0 | 0 | 0 | 0 |
| 040 | 1 | 2 | 0 | 0 | 0 | 0 |
| 041 | 1 | 2 | 0 | 0 | 0 | 1 |
| 042 | 1 | 2 | 0 | 0 | 0 | 1 |
| 043 | 1 | 2 | 0 | 0 | 0 | 0 |
| 044 | 1 | 2 | 0 | 0 | 0 | 0 |
| 045 | 1 | 2 | 0 | 0 | 0 | 0 |
| 046 | 1 | 2 | 0 | 0 | 0 | 0 |
| 047 | 1 | 2 | 0 | 0 | 0 | 0 |
| 048 | 1 | 2 | 0 | 0 | 0 | 0 |
| 049 | 1 | 2 | 0 | 0 | 0 | 0 |
| 050 | 1 | 2 | 0 | 0 | 0 | 0 |
| 051 | 1 | 2 | 0 | 1 | 0 | 0 |
| 052 | 1 | 2 | 0 | 0 | 0 | 0 |

TABLE 3: continued.

(b) Blocks 6 - 13, April 1985

| Transect No. | No. of observers | | No. of groups of dugongs | | | |
|---|---|---|---|---|---|---|
| | Port | Starboard | Port | Starboard | | |
| | | | Rear | Mid | Rear | Tandem |
| 053 | 1 | 2 | 2 | 0 | 1 | 1 |
| 054 | 1 | 2 | 2 | 0 | 1 | 0 |
| 055 | 1 | 2 | 0 | 0 | 0 | 1 |
| 056 | 1 | 2 | 0 | 0 | 0 | 0 |
| 057 | 1 | 2 | 0 | 0 | 1 | 1 |
| | | | 21 | 10 | 7 | 12 |

TABLE 3: continued.

(c) Blocks 1 - 4, November 1985

| Transect No. | No. of observers Port | Starboard | No. of groups of dugongs Port Mid | Rear | Tandem | Starboard Mid | Rear | Tandem |
|---|---|---|---|---|---|---|---|---|
| 001 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 002 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 003 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 004 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 005 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 006 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 007 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 008 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 009 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 010 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 011 | 2 | 2 | 1 | 0 | 5 | 0 | 0 | 2 |
| 012 | 2 | 2 | 3 | 1 | 9 | 0 | 9 | 6 |
| 013 | 2 | 2 | 2 | 0 | 2 | 0 | 0 | 0 |
| 014 | 2 | 2 | 4 | 1 | 4 | 2 | 0 | 1 |
| 015 | 2 | 2 | 0 | 0 | 0 | 1 | 0 | 2 |
| 016 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 017 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| 018 | 2 | 2 | 0 | 0 | 2 | 0 | 0 | 0 |
| 019 | 2 | 2 | 0 | 0 | 0 | 0 | 1 | 0 |
| 020 | 2 | 2 | 2 | 0 | 1 | 1 | 0 | 0 |
| 021 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 022 | 2 | 2 | 0 | 0 | 1 | 0 | 1 | 2 |
| 023 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 024 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 025 | 2 | 2 | 0 | 0 | 1 | 0 | 0 | 0 |
| 026 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 027 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 028 | 2 | 2 | 2 | 3 | 4 | 2 | 0 | 0 |
| 029 | 2 | 2 | 1 | 0 | 2 | 1 | 1 | 2 |
| 030 | 2 | 2 | 1 | 0 | 1 | 1 | 0 | 0 |
| 031 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 1 |
| 032 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 033 | 2 | 2 | 0 | 0 | 1 | 0 | 0 | 0 |
| 034 | 2 | 2 | 0 | 0 | 0 | 0 | 1 | 0 |
| | | | 18 | 7 | 33 | 8 | 13 | 17 |

TABLE 3: continued.

(d) Block 5, November 1985

| Transect No. | No. of observers | | No. of groups of dugongs | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Port | Starboard | Port | | | Starboard | | |
| | | | Mid | Rear | Tandem | Mid | Rear | Tandem |
| 001 | 2 | 1 | 0 | 1 | 0 | | 1 | |
| 002 | 2 | 1 | 1 | 0 | 2 | | 1 | |
| 003 | 2 | 1 | 0 | 0 | 0 | | 0 | |
| 004 | 2 | 1 | 0 | 1 | 2 | | 1 | |
| 005 | 2 | 1 | 2 | 1 | 0 | | 2 | |
| 006 | 2 | 1 | 1 | 2 | 1 | | 3 | |
| 007 | 2 | 1 | 1 | 3 | 2 | | 2 | |
| 008 | 2 | 1 | 1 | 1 | 0 | | 0 | |
| 009 | 2 | 2 | 0 | 1 | 0 | 0 | 0 | 0 |
| 010 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 1 |
| 011 | 2 | 2 | 1 | 0 | 2 | 0 | 1 | 1 |
| 012 | 2 | 2 | 1 | 0 | 3 | 1 | 0 | 1 |
| 013 | 2 | 2 | 1 | 1 | 1 | 0 | 1 | 3 |
| 014 | 2 | 2 | 1 | 0 | 1 | 2 | 1 | 0 |
| 015 | 2 | 2 | 0 | 0 | 3 | 0 | 0 | 1 |
| 016 | 2 | 2 | 0 | 0 | 0 | 1 | 0 | 0 |
| 017 | 2 | 2 | 0 | 0 | 1 | 0 | 0 | 0 |
| 018 | 2 | 2 | 0 | 0 | 2 | 1 | 0 | 1 |
| 019 | 2 | 2 | 0 | 0 | 0 | 1 | 0 | 0 |
| 020 | 2 | 2 | 1 | 0 | 0 | 1 | 0 | 0 |
| 021 | 2 | 2 | 0 | 0 | 0 | 0 | 1 | 0 |
| 022 | 2 | 2 | 0 | 0 | 0 | 0 | 1 | 0 |
| 023 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | 11 | 11 | 20 | 7 | 15 | 8 |

TABLE 3: continued.

(e) Blocks 6 - 13, April 1985

| Transect No. | No. of observers | | No. of groups of dugongs | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Port | Starboard | Port | | | Starboard | | |
| | | | | Rear | | Mid | Rear | Tandem |
| 001 | 2 | 2 | 1 | 0 | 2 | 0 | 0 | 1 |
| 002 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 003 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 004 | 2 | 2 | 0 | 0 | 1 | 0 | 0 | 0 |
| 005 | 2 | 2 | 3 | 0 | 2 | 0 | 0 | 4 |
| 006 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 007 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 008 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 009 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 |
| 010 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 |
| 011 | 2 | 2 | 1 | 0 | 0 | 1 | 0 | 0 |
| 012 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 013 | 2 | 2 | 0 | 1 | 0 | 0 | 0 | 0 |
| 014 | 2 | 2 | 0 | 1 | 0 | 0 | 0 | 1 |
| 015 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 1 |
| 016 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 017 | 2 | 2 | 0 | 0 | 1 | 0 | 0 | 0 |
| 018 | 2 | 2 | 1 | 0 | 1 | 0 | 0 | 0 |
| 019 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 1 |
| 020 | 2 | 2 | 0 | 0 | 0 | 1 | 1 | 0 |
| 021 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 022 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 023 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 024 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 1 |
| 025 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 026 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 |
| 027 | 2 | 2 | 0 | 0 | 1 | 0 | 0 | 0 |
| 028 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 029 | 2 | 2 | 1 | 0 | 1 | 0 | 0 | 0 |
| 030 | 2 | 2 | 0 | 0 | 4 | 0 | 0 | 1 |
| 031 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 032 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 033 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 034 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 035 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 036 | 2 | 2 | 0 | 0 | 1 | 0 | 0 | 0 |
| 037 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 038 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 1 |
| 039 | 2 | 2 | 0 | 0 | 1 | 0 | 0 | 0 |
| 040 | 2 | 2 | 0 | 0 | 2 | 0 | 0 | 2 |
| 041 | 2 | 2 | 0 | 0 | 0 | 1 | 0 | 0 |
| 042 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 043 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 044 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 045 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 046 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 047 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 |
| 048 | 2 | 2 | 0 | 0 | 0 | 0 | 1 | 0 |
| 049 | 1 | 2 | | 0 | | 0 | 0 | 0 |
| 050 | 1 | 2 | | 1 | | 0 | 1 | 0 |
| 051 | 1 | 2 | | 0 | | 0 | 0 | 0 |
| 052 | 1 | 2 | | 0 | | 0 | 0 | 0 |

TABLE 3: continued.

(e) Blocks 6 - 13, April 1985

| Transect No. | No. of observers | | No. of groups of dugongs | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Port | Starboard | Port | | Starboard | | | |
| | | | Rear | | Mid | Rear | Tandem | |
| 053 | 1 | 2 | 3 | | 0 | 2 | 2 | |
| 054 | 1 | 2 | 5 | | 0 | 2 | 2 | |
| 055 | 1 | 2 | 0 | | 0 | 0 | 0 | |
| 056 | 1 | 2 | 0 | | 0 | 0 | 1 | |
| 057 | 1 | 2 | 0 | | 0 | 1 | 2 | |
| | | 12 | 12 | 17 | 3 | 3 | 20 | |

TABLE 4: Logistics of flight time for each survey

| Survey | Transit Time (hrs) | Survey Time (hrs) | Dead Time (hrs) |
|---|---|---|---|
| Blocks 1 to 4, November 1984[a] | 2.5 | 10.0 | 6.1 |
| Blocks 6 to 13, April 1985 | 7.6 | 19.7 | 11.1 |
| Blocks 1 to 7 and blocks 8 and 9 transects 10 to 12, November 1985 | 5.1 | 23.5 | 6.1 |
| Blocks 8 and 9, transects 13 to 32 and blocks 10 to 13, November 1985 | 6.8 | 16.6 | 11.6 |

[a] Extra expenses: $286 for fuel relocation

TABLE 5: Raw data used to calculate correction factors for each survey or sub-section of survey.

(a) Correction for perception bias

| Survey date | Blocks | Transects | No. of groups of dugongs | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Port | | | Starboard | | |
| | | | mid-seat | rear-seat | tandem | mid-seat | rear-seat | tandem |
| November 1984 | 1 to 4 | 1 to 40 | correction factor based on starboard rear-seat observer, November 1985 survey, blocks 8 - 13, transects 13 - 57. | | | | | |
| April 1985 | 6 to 13 | 1 to 57 | | 21 | | 10 | 7 | 12 |
| November 1985 | 1 to 4 | 1 to 34 | | | | | | |
| | 5[a] | 1 to 23 | 36 | 18 | 58 | 16 | 18 | 30 |
| | 6 and 7 | 1 to 9 | | | | | | |
| | 8 and 9 | 10 to 12 | | | | | | |
| November 1985 | 8 and 9 | 13 to 32 | 5 | 3 | 12 | 2 | 3 | 15 |
| | 10 to 13[b] | 33 to 57 | | | | | | |

[a] starboard perception correction factor for transects 1 to 8, block 5 is based on starboard rear-seat observer correction factor for all transects excluding 1 to 8, block 5.

[b] port perception correction factor for transects 50 to 57, block 11 and transect 49, blocks 12 and 13 is based on port rear-seat observer correction factor for all transects excluding these.

(b) Correction for availability bias

| Survey date | Blocks | Transects | No. of dugongs in groups $\leq 8$ | | |
|---|---|---|---|---|---|
| | | | Surface | Underwater | Total |
| November 1984 | 1 to 4 | 1 to 40 | 71 | 101 | 172 |
| April 1985 | 6 to 13 | 1 to 57 | 26 | 54 | 80 |
| November 1985 | 1 to 4 | 1 to 34 | | | |
| | 5 | 1 to 23 | 78 | 192 | 270 |
| | 6 and 7 | 1 to 9 | | | |
| | 8 and 9 | 10 to 12 | | | |
| November 1985 | 8 and 9 | 13 to 32 | 18 | 57 | 75 |
| | 10 to 13 | 33 to 57 | | | |