

## **A list of data inputs to the west coast rock lobster area-disaggregated assessments**

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The following data are available as inputs into the west coast rock lobster area-disaggregated assessments. Data items 1-3 relate to the data for the resource as a whole. The methods and assumptions used to split these data for use in the area-disaggregated assessments are found in ASWS/JUL07/WCRL/ASS/1.

### **1. Commercial Catch Data**

There are commercial catch input data from 1870-2005. As the assessment models are run from 1910 only, the 1870-1909 catches are added to the 1910-1920 period equally. The Roy Melville-Smith catch record is used for the pre-1968 period. These data are for the resource as a whole and the method used to split these catches is described in ASWS/JUL07/WCRL/ASS/1. Area-disaggregated catches are available from the MCM database for the 1968-2005 period.

### **2. Recreational catch data**

Area-aggregated data are available for 1992<sup>1</sup> onwards. The 1992-2000 values are estimated from telephone surveys (note though that the 1999 value is the average of the 1994-1998 values). The 2001 and 2002 estimates rest on the assumption that the recreational catch was 20% of the TAC calculated from the OMP for that season. For 2003-2005 it is assumed that the recreational take will be 320 MT. Further, it is assumed that recreational catch was zero in 1959, and that catches increased linearly to the estimated 1992 value. Table 1 reports the area-aggregated values for 1992-2005.

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<sup>1</sup> 1992 refers to the 1991/92 season

Table 1: Recreational catch estimates for the area-aggregated model.

Season	Recreational catch (MT)
1992	469
1993	391
1994	336
1995	379
1996	496
1997	340
1998	249
1999	360
2000	404
2001	468
2002	583
2003-2005	320

### 3. Poaching data

No direct data are available. The total poaching take for the resource is assumed to be as follows:

$$C_{p,t}^T = 0 \quad t \leq 1949$$

$C_{p,t}^T$  increases linearly from zero in 1950 to 500 in 1990.

$$C_{p,t}^T = 500 \quad t \geq 1990$$

The assumptions made to split these poaching amounts are described in ASWS/JUL07/WCRL/ASS/1.

### 4. Trap:hoopnet ratio for source of catches

These data are available from the MCM catch records for 1969-2005 for all areas. The fishery was entirely a hoop fishery until 1969, when traps were introduced. Area 1-2 has remained a hoop-only fishery.

### 5. CPUE

#### a) Trap CPUE

These data are available for 1981-2004 for all areas (except Area 1-2 – hoop only fishery).

#### b) Hoop CPUE

These data are available for 1981-2004 for all areas.

#### c) FIMS CPUE

These data are available for 1992-2004. These data are collected from Area 3-4, Area 7 and Area 8 only.

### 6. Catch Size Structure

All catch size structure information is available for males and females separately, and by 5mm size classes for the legal portion of the catch.

#### a) Trap catch size structure

These data are available for each area from 1976-2004 (except Area 1-2 – hoop only fishery). The following lists the number of years for each area for which data are missing:

Area	# years missing data
Area-aggregated	3
Area 8	4
Area 7	3
Area 3-6	4
Area 3-4	4
Area 5-6	5

*b) Hoop catch size structure*

These data are available for each area from 1976-2004. Data are available for Area 1-2 for 1985-2004. The following lists the number of years for each area for which data are missing:

Area	# years missing data
Area-aggregated	3
Area 8	13
Area 7	21
Area 3-6	3
Area 3-4	3
Area 5-6	6
Area 1-2	2

*c) FIMS catch size structure*

These data are available for Area 8, Area 7 and Area 3-4 only for 1992-2004. No data are available for 1999.

*d) Commercial trap sublegal catch size structure*

These data were collected in Area 8 for the 1994-1998 period and provide data for the sublegal portion of the catch.

## **7. Percent females in catch (F%)**

These data are calculated from the catch-at-size data and are thus available for the same period as for the catch size structure data described above. They relate to the percentage females (by number) in the catch.

- a) Trap F%
- b) Hoop F%
- c) FIMS F%

## **8. Minimum legal carapace length**

The minimum legal carapace length has changed over time. The minimum legal carapace length for the recreational sector is currently 80mm, and is different from that for the commercial sector (for more recent years). These size limits are the same for all areas, except for Area 1-2. The current commercial legal carapace length is 75mm.

## **9. Somatic growth data**

These data are available from 1968-2005 for all areas – although there are data gaps for some areas. The data relate to adult male lobsters. Annually 28 000 lobster

(collectively) are tagged and released in all areas to estimate male somatic growth of lobsters 75-100mm CL. Tag recaptures were 10-15% prior to the mid-1980s, thereafter the recapture rate declined to 5% but increased in 2005 to 15% when the tag reward was increased. A moult probability analysis which allows for the treatment of area\*season interactions as random effects is applied to the somatic growth data to estimate season trends for each super-area.