New Zealand sea lion Auckland Islands 2023/24

CSP POP 2023-05

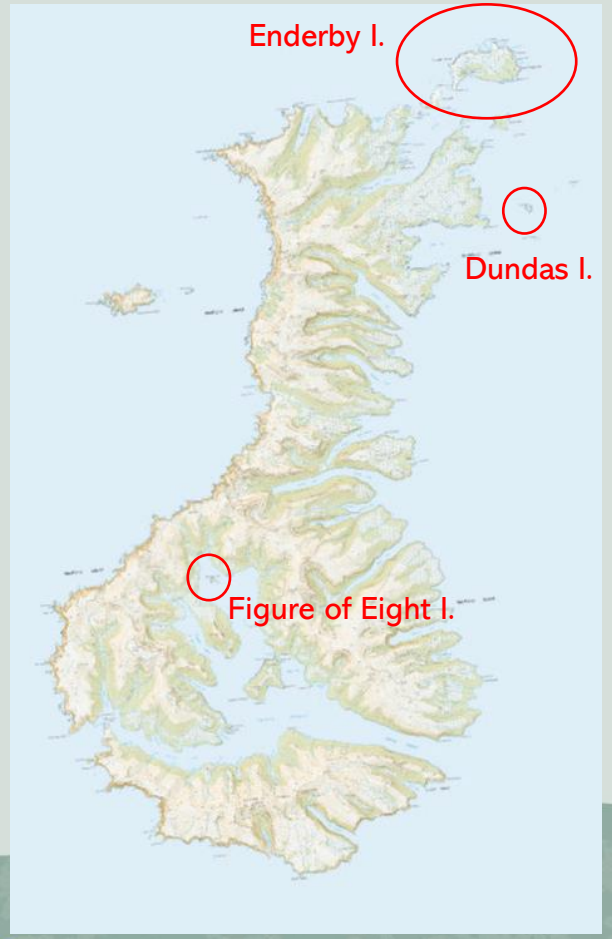
25 June 2024

Department of Conservation
Te Papa Atawhai

New Zealand Government

Trip logistics

2023/24



- 7 – 9 December 2023: Bluff to Enderby Island.
- 10 December 2023 – 12 January 2024: Daily direct counts of all sexes and age classes, resightings, weekly island surveys, terrain trap mitigation (Enderby Island).
- 13 – 16 January 2024: Pup tagging and microchip insertion, morphometrics, mark-recapture, necropsies (Enderby Island).
- 18 – 21 January 2024: Pup tagging, morphometrics, direct counts, mark-recapture (Dundas Island); Daily direct counts, pup-dam pair-matching, necropsies (Enderby Island).
- 22 January 2024: Direct count (Figure of Eight Island).
- 22 – 24 January 2024: Figure of Eight Island to Bluff.

Methods: CSP work

2023/24

Daily direct counts (Pups, females, SAMs, males) (Enderby Island). Pups (Dundas, Fo8).

Marking pups (Enderby = all, Dundas = 200) and morphometrics (50 male, 50 female)

Mark-recapture of pups (Enderby, Dundas Islands)

Resighting marked animals, pup-dam relationships (Enderby Island)

Methods: other data collection

2023/24

Gross necropsies (Enderby Island)

Terrain trap mitigation (Enderby Island)

Scat collection (Sandy Bay, Enderby Island)

Drone Survey (Dundas Island) *(weather prevented trial drone surveys)*

Sandy Bay. Photo: Lydia Uddstrom

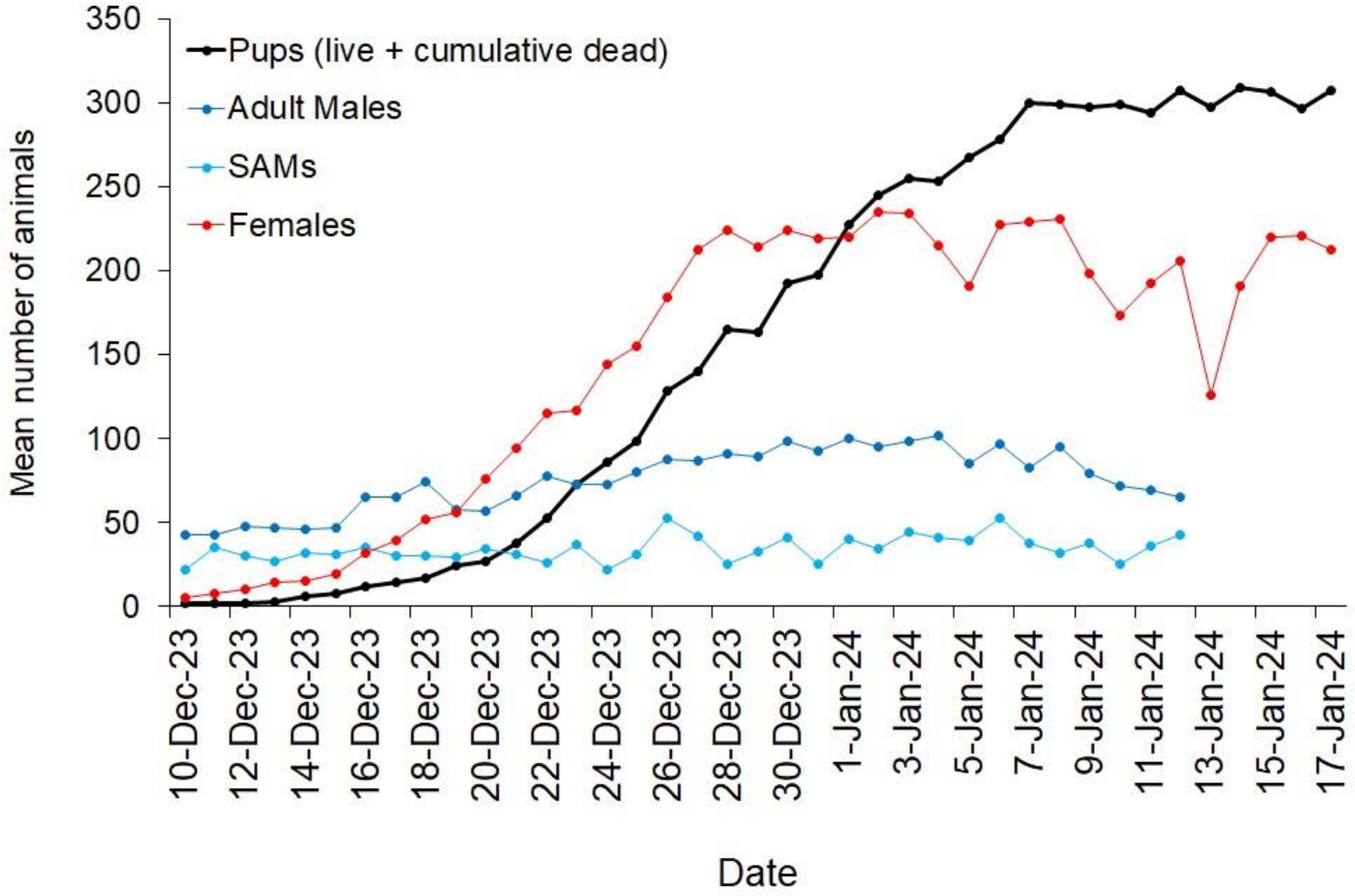
Results: Enderby Island

Daily direct counts
All age classes

Sandy Bay, Enderby Island

10 December 2023 –

17 January 2024



Mean # females in peak pupping period = 221 (range: 212 – 235)

Pup production estimate

Enderby Island

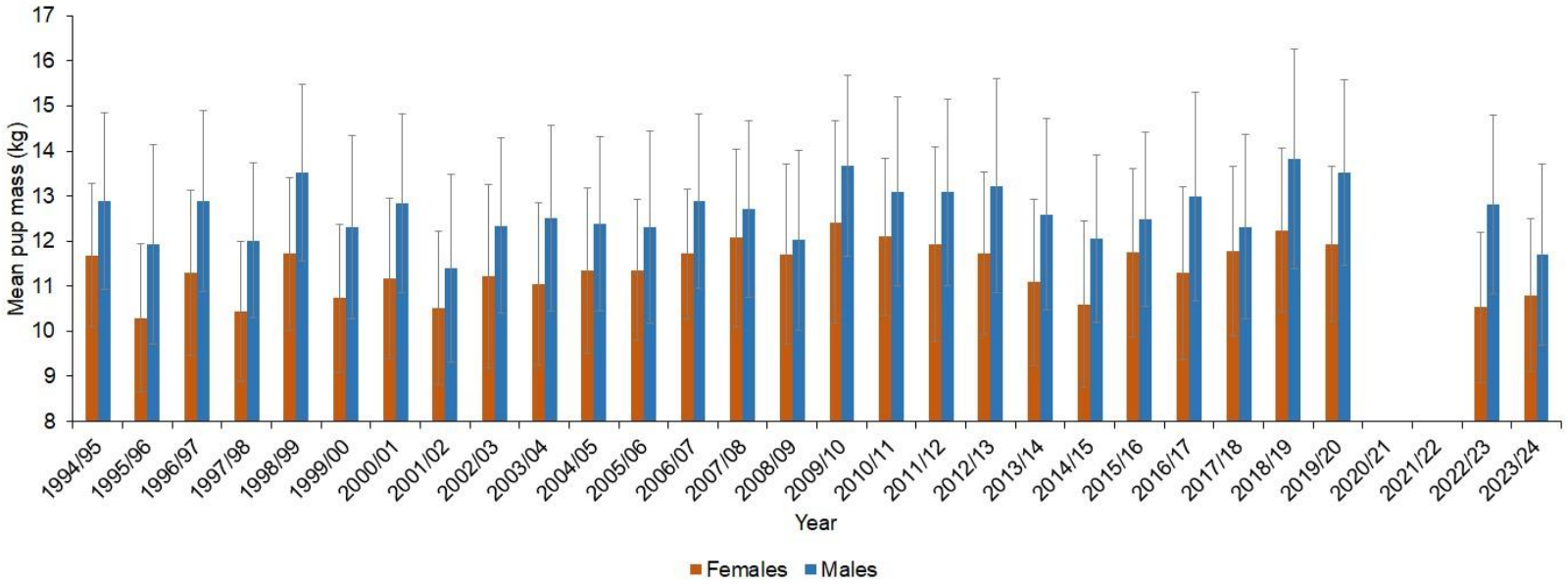
16 January 2024

Pup production estimate	Live	Dead
Direct counts: Sandy Bay Post-pupping period	*284 ± 3*	*21*
Mark-recapture: Sandy Bay	*288 ± 3*	*21*
Tagging	297	21
Direct counts: Around the Island	0	0
Total – Enderby Island	318 pups	

Pup mass

Sandy Bay, Enderby Island

1994/95 to 2023/24



Equal sex ratio at tagging: 148 females, 149 males

Female mass = 10.8 ± 1.7 kg (n = 53)

Male mass = 11.7 ± 2.0 kg (n = 50)

Resightings of marked animals

Enderby Island

10 December 2023 – 21 January 2024

Resightings	This season	Last season	% increase
Events	1,960	1,467	25 %
Unique males identified	193	190	2 %
Unique females identified	344	243	30 %

Photo: Annie Page

Results: Other Enderby Island projects

2023/24

Gross necropsies

- 15/39 dead pups were necropsied (Dec – Feb)
- Pending histology/microbiology for COD

Faecal sample collection

- 44 samples collected and processed from harem, representing peripheral males/SAMs
- 20 samples collected from adult females

Terrain trap mitigation

- Inventory of all traps
- Four new pup ramps installed
- Maintenance of existing pup ramps

Photo: Andy Maloney

Results: Dundas Island

Pup production estimate

Dundas Island

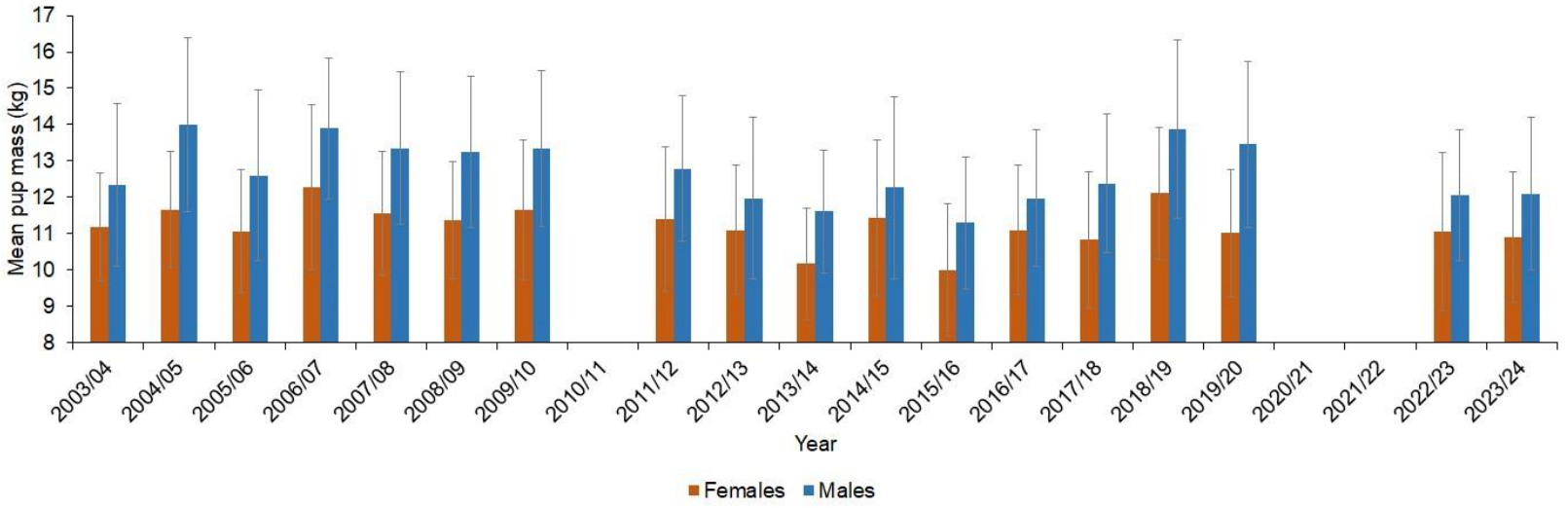
19 – 21 January 2024

Pup production estimate	Live	Dead
Direct counts: Dundas Island Post-pupping period	*1022 ± 8*	*111*
Mark-recapture	996 ± 19	111
Total – Dundas Island	1107 ± 19 pups	

200 pups tagged (100 female, 100 male)

Pup mass

Dundas Island



Unknown sex ratio as not all pups are tagged (100 male, 100 female)

Female mass = 10.9 ± 1.8 kg (n = 50)

Male mass = 12.1 ± 2.1 kg (n = 50)

Results: Figure of Eight Island

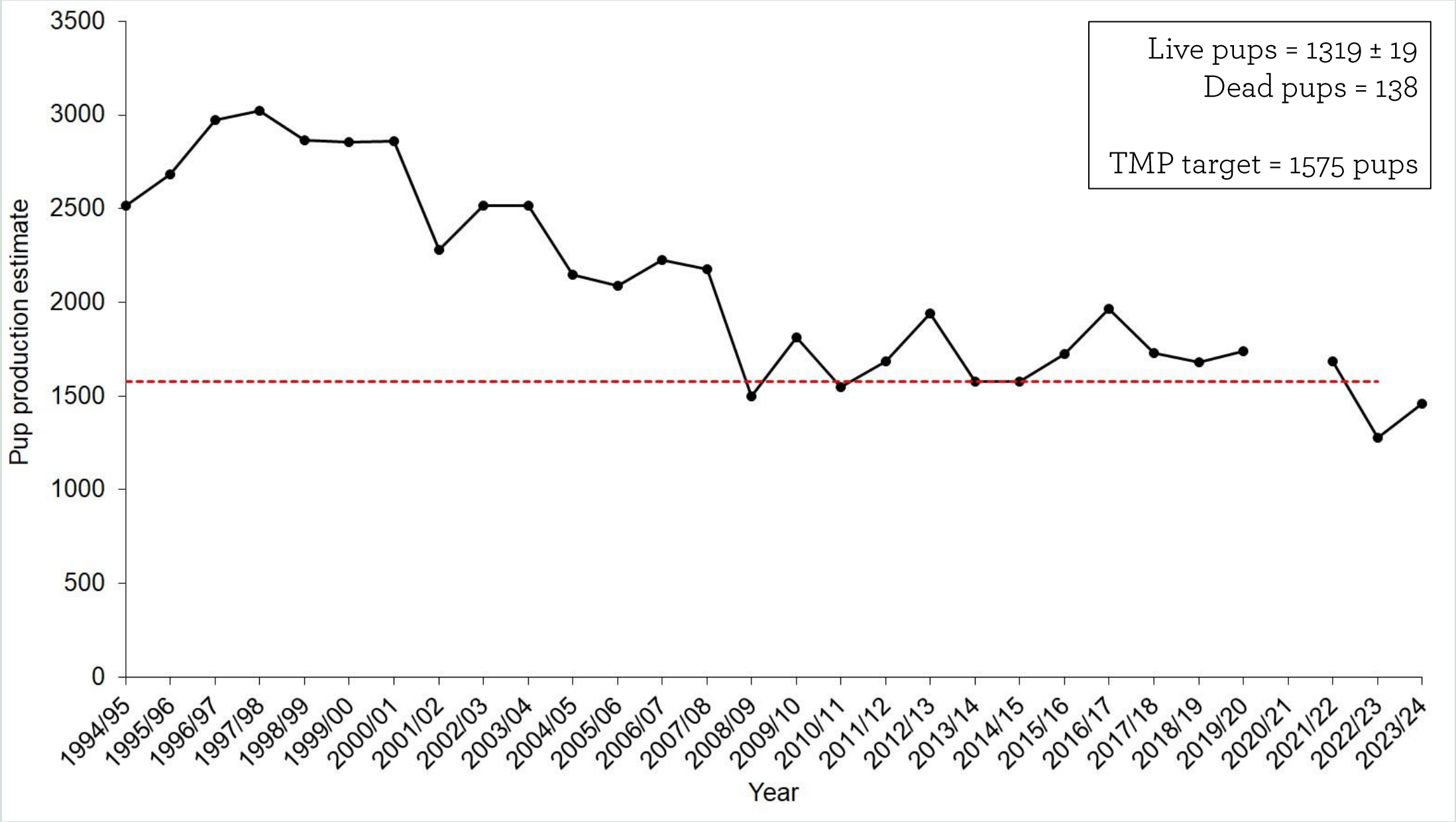
Pup production estimate

Figure of Eight Island

22 January 2024

Pup production estimate	Live	Dead
Direct counts: Figure of Eight Post-pupping period	*26 ± 1*	*6*
Total – Figure of Eight Island	32 ± 1 pups	

Auckland Islands pup production 2023/24 = 1457 ± 19 pups



Recommendations

2024/25 season

- Replace Dundas Island hut.
- Analyse tag resight data from 2022/23 and 2023/24 to determine drivers of low pup production and low female colony attendance.
- Determine female sea lion foraging locations using satellite tags, and determine evidence for nutritional stress using a variety of diet methods.
- Review and implement a new Sea Lion Action Plan with Te Rūnanga o Ngāi Tahu and Fisheries NZ.

Photo: Lydia Uddstrom.

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