

Marine wildlife stranding and mortality database
annual reports 2013-2015
Cetacean and Pinniped

Prepared by: Aquatic Species Program, Department of Environment and Heritage Protection

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Reviewer

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Foreword

The Department of Environment and Heritage Protection (EHP) monitors cetacean and pinniped strandings and mortality along the Queensland coast via StrandNet, the marine wildlife strandings and mortality database. StrandNet records sick, injured, incapacitated or dead wildlife in Queensland from reports received by the Department of National Parks, Recreation and Sport (NPRS), EHP, the Great Barrier Reef Marine Park Authority (GBRMPA) and the Department of Agriculture and Fisheries (DAF), in addition to those received directly from the public and rehabilitation facilities. This report has been published as part of EHP's Conservation Technical and Data Report series. Any request to access these data for research purposes should be made in writing to the StrandNet Coordinator, email: strand.data@ehp.qld.gov.au.

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List of acronyms and abbreviations

COD	Cause of death
COS	Cause of stranding
<i>Cwlth</i>	Commonwealth
DAF	Department of Agriculture and Fisheries
DPA	Dugong Protection Area
NPRS	Department of National Parks Recreation and Sport
EHP	Department of Environment and Heritage Protection
GBRMPA	Great Barrier Reef Marine Park Authority
JCU	James Cook University
MOP	Member of the public
Qld	Queensland
QBFP	Queensland Boating and Fisheries Patrol
QSCP	Queensland Shark Control Program
SOCI	Species of Conservation Interest

General summary

This report summarises whale, dolphin (cetaceans) and pinniped (seals) strandings and mortalities in Queensland waters from 2013 to 2015. A total of 75 cases were recorded in 2013, including 29 that were either rescued or left alive to natural processes, and 56 cases were recorded in 2014 (including 17 rescued/left alive). In 2015, a total of 57 cases were recorded, including 13 that were either rescued or left alive to natural processes. This represented a decline in the annual number of records from 2011 (86) and 2012 (82 cases).

Most records were of resident inshore dolphins or the migratory humpback whale, although a total of 22 species were identified across the reporting period (including one species of seal). One mass stranding event occurred in the period when 8 killer whales stranded in the Great Sandy Strait Marine Park (2013). Three of these whales died and five survived.

In 2013, the cause of death was identifiable in 14 of 46 mortalities (30%), compared to 18 of 39 in 2014 (46%) and 21 of 44 (48%) in 2015. This is similar to that reported from 2008-2011 (44%), but higher than in 2012 (24%). Identifying the cause of death in stranded cetaceans remains a challenge, especially in remote areas, where decomposition has occurred, or where there may have been a number of contributing factors. A total of 9 mortalities were attributed to natural causes that included disease and parasites.

Across the reporting period, incidental catch in the Shark Control Program was comprised mostly of common dolphins (23 mortalities and two released alive) and humpback whales (14 released alive). One Australian humpback dolphin, one Antarctic minke whale and 8 bottlenose dolphins (including one released alive) were also caught. Entanglements from other sources were predominantly tropical inshore dolphins with line-fishing gear (14 cases) or humpback whales with ropes, pots and/or floats (7 cases). Two mortalities of inshore dolphins were associated with entanglement in fishing nets and three mortalities were suspected to be because of entanglement in line-fishing gear. Three injuries and 4 mortalities were attributed to interactions with vessels, all of which involved medium to large whales, of which most occurred in southern Queensland (6 of 7). Entanglement in a plastic bag (one humpback dolphin observed alive) and ingestion of fishing line (one melon-headed whale) were also reported.

Introduction

Strandings¹ programs provide important data on marine mammal populations that can be difficult and expensive to survey in their natural environments (Geraci and Lounsbury 1993; Maldini *et al.* 2005; Pyenson 2011). Long-term strandings programs are also informative of long-term trends of marine mammal mortality (Truchon *et al.* 2013), and are fundamental in detecting unusual marine-mammal stranding or mortality events which may serve as indicators of larger environmental issues or threats to human health (Norman *et al.* 2012). Where strandings programs are supplemented with a carcass salvage program and necropsies, they can also be a useful tool to monitor sources of mortality and the effectiveness of existing conservation management (Mannocci *et al.* 2012).

A diverse range of marine mammals are found in Queensland waters, including cetaceans (dolphins and whales), pinnipeds (seals) and one sirenian (the dugong), all of which are protected by the *Nature Conservation Act 1992* (Qld). The Australian snubfin dolphin, *Orcaella heinsohni*; the Australian humpback dolphin, *Sousa sahulensis*; the subantarctic fur seal, *Arctocephalus tropicalis*; the humpback whale, *Megaptera novaeangliae* and the dugong, *Dugong dugon* are listed as vulnerable by the *Nature Conservation (Wildlife) Regulation 2006* (Qld) under the *Nature Conservation Act 1992* (Qld). A number of species listed as threatened under the *Environmental Protection and Biodiversity Conservation Act 1999* (Cwth) and occasionally found in Queensland waters include southern right whales, *Eubalaena australis* and blue whales, *Balaenoptera musculus* (Allen and Bejder 2003; Chilvers *et al.* 2005).

Within state and Commonwealth waters, the *Marine Parks Act 2004* (Qld) and the *Great Barrier Reef Marine Park Act 1975* (Cwth) provide the capacity for spatial protection measures for marine mammals. State marine parks include the

¹ The term 'stranding' is here used to include sick, injured, incapacitated or dead marine wildlife which were washed ashore or encountered at sea; in addition to animals which were entangled in fishing nets/synthetic debris or rescued from a situation where they would have died had they not been rescued (Geraci and Lounsbury 1993).

Moreton Bay Marine Park, the Great Sandy Marine Park and the Great Barrier Reef Coast Marine Park. Marine mammals in Queensland are also protected by a series of management arrangements specific to the East Coast Inshore Fin Fish Fishery, and the two-tiered Dugong Protection Area (DPA) system. DPAs were declared under the *Fisheries Act 1994* (Qld) by the *Fisheries Amendment Regulation (No. 11) 1997* (Qld), with restrictions on the type, size and locations of nets, and requirements for net attendance. A range of special management provisions for marine mammals were also implemented by the *Nature Conservation and Other Legislation Amendment and Repeal Regulation (No. 1.) 2013*.

Monitoring the incidence of marine mammals that are sick, injured, incapacitated or dead assists in assessing the effectiveness of the above legislation for maintaining sustainable marine mammal populations. In Queensland, these data are recorded in the StrandNet database. The current report presents a summary of records of cetacean and pinniped strandings and mortality in StrandNet from 2013-2015. Dugong and marine turtle strandings for the time period are reported elsewhere. The focus of the current report is on presenting case histories and summaries. Detailed analyses are undertaken elsewhere (e.g. Meager and Limpus 2014; Meager and Sumpton 2016).

Methods

All records of sick, injured, incapacitated or dead marine wildlife reported to the Department of Environment and Heritage Protection (EHP) are entered into the StrandNet database (<https://www.derm.qld.gov.au/strandnet/application/>). From 2013 to 2015, most cetacean and pinniped strandings were reported by staff from the Department of National Parks Recreation and Sport (NPRS). Other records were received from the Great Barrier Reef Marine Park Authority (GBRMPA), Australia Zoo, university researchers, the Water Police, directly from the public or via the state-wide stranding telephone hotline (1300 264 625). In 2015, Sea World also provided records to StrandNet. Searches of online media were used to check for strandings that were not reported to StrandNet. Records of marine mammal entanglement and incidental catch (bycatch) in the Queensland Shark Control Program (QSCP) were received from the Queensland Boating and Fisheries Patrol (QBFP) of the Department of Agriculture and Fisheries (DAF), NPRS or directly from the public. Net strikes, where net damage occurred but no animal was sighted, were not recorded in StrandNet.

Records were lodged in StrandNet by registered users via a web-based interface and each record was assigned a unique alphanumeric identifier. A record that could not be confirmed as a cetacean or pinniped, or where there was insufficient evidence to establish whether the stranding occurred at the time and location reported, was entered into StrandNet as an unconfirmed record. Additional details that were recorded included the coordinates, location details and date of the report; the sex, life-history stage, size and condition of the animal, and the fate of the animal or carcass. Where available, photos and necropsy reports were attached to the record.

Records were then verified by a NPRS regional stranding coordinator. This process was overseen by the EHP state-wide stranding coordinator to ensure that records were accurate, complete and consistent. Records that occurred outside of Marine Parks were entered directly by the state-wide stranding coordinator. Species identification was established with taxonomic evidence including photographs, morphometric measurements, teeth/baleen, skulls or genetic samples. Where possible, the cause of death (COD) or stranding (COS) was established by (1) the circumstances of the incident, (2) examination of carcass or photographic records, (3) post-mortem examination by trained staff or (4) necropsies². The level of certainty to the COD/COS assignment was also recorded, as 'confirmed' or 'suspected'. 'Confirmed' diagnoses were the most probable and parsimonious based on the available evidence. In contrast, in 'suspected' diagnoses there was evidence for the COD/COS assignment, but either the mechanism was substantially unclear or there was considerable uncertainty (see Moore *et al.* 2013 and references therein for a further discussion of uncertainty in necropsies). Where there was limited or no evidence, the COD/COS was recorded as 'unknown'.

It is recognised that StrandNet represents only a proportion of stranded and dead cetaceans and pinnipeds occurring in Queensland. The number of carcasses or debilitated animals that reach the shoreline depends on factors such as currents, wind and carcass buoyancy, and losses to scavengers (Peltier *et al.* 2012). This also means that a carcass or debilitated animal may drift substantial distances before stranding. It is acknowledged that coverage is less

² For the purposes of this report, a necropsy is defined as a systematic procedure to gain insight into the cause of death of an animal whereby gross observations are first generated to establish a differential diagnosis. Subsequent tests (such as histopathology) are then used to eliminate diagnoses until an etiology is established (Pugliares *et al.* 2007). This procedure is usually undertaken by a veterinarian or in consultation with a veterinarian.

comprehensive in sparsely populated areas or where there are no regular ranger patrols (i.e. outside of marine parks).

It is also acknowledged that fisheries bycatch records in StrandNet may be incomplete. Cetaceans can be unintentionally caught as bycatch in nets or other gear associated with fisheries activities. Since 2002, it has been a Commonwealth and State obligation for commercial fishers to report interactions with all protected species including cetaceans in their Species of Conservation Interest (SOCI) logbook. Where available, bycatch records were downloaded from the Queensland Government Open Data portal (<https://data.qld.gov.au/dataset/total-number-of-species-of-conservation-interest-interactions-with-released-conditions-from-06-to-13/resource/bb2a337d-70d3-4a94-b69b-98a2e332b7a1>) and cross-referenced against records in StrandNet.

Age class and maturity was estimated from total body length following Best (2007), unless other data were available (e.g. internal examination). No detailed information of length or age at maturity Australian snubfin and Australian humpback dolphins were available.

Results

Annual trend since 1996

The overall number of stranded or dead pinnipeds and cetaceans has declined each year since the peak in 2011 (Figure 1). In 2013, the number of cases per year remained above the 10-year annual average (mean from 2003-2012 \pm standard deviation = 69.4 ± 14.5) but was less than in 2012. In 2014 and 2015, the number of cases per year was below the 10-year annual average (Figure 1). Pinniped strandings and mortalities continue to be rare events, with two records between 2013 and 2015. As in previous years, humpback whales were the most numerous species recorded, and together with short-beaked common and Indo-Pacific bottlenose dolphins accounted for close to half of the overall number of cases (45 to 53% of cases, Table 1).

Case histories

In the following summarised case histories, the alphanumeric number (e.g. W230093) is the unique identifier. The coordinates of the reported position are in parentheses and the measurement in metres represents standard length. Species names are provided in Table 1. Carcass condition: D1, alive by subsequently died; D2: dead, fresh carcass; D3: decomposing but internal organs intact; D4: advanced decomposition; D5: skin holding bones together; and D6: disarticulated bones.

Records from outside of Queensland (not included further)

- W230093. Humpback whale. 06-Jul-13. Evans Head (153.7174°E; -29.0594°S). Left alive *in situ*. Entangled in rope with large black buoy and small white float. Reported to be heading northwards. Not subsequently reported in Queensland waters. Age class, size and length unknown.

Pinnipeds from 2013 to 2015

- W230290. Leopard seal. 23-Sep-14. Fraser Island (153.7174°E; -29.0594°S). Euthanised. Shark attack. Severe shark bite to the caudal spine severed the spinal vertebrae. Emaciated and lethargic, weighing approximately 150 kg. Blood serology negative for brucellosis, toxoplasmosis, leptospirosis and phocine distemper virus. First reported 7-Sep-14 at Teewah on the Sunshine Coast. Adult female. 2.7 m. Necropsy: David Blyde, Sea World.
- W233460. Unidentified fur seal (*Arctocephalus* sp.). 28-Jun-15. Fraser Island (153.0177°E; -25.01507°S). D2. Left for scavengers. Age class, size and length unknown.

Cetaceans in 2013

Strandings and mortality from natural causes

1. W230075. Indo-Pacific bottlenose dolphin. 26-May-13. Lammermoor Beach, Yeppoon. (150.76692°E; -23.15309°S). D1. Morbillivirus positive. Taken to Quoin Island Turtle Rehabilitation Centre for treatment but died. Juvenile male,

- 1.75 m. Necropsy: David Blyde, Sea World. Genetic and toxicology samples taken
2. W230126. Humpback whale. 28-Aug-13. Bait Reef, Whitsunday Islands (149.07259°E; -19.81236°S). Left alive *in situ*. Reported to be trapped in a lagoon but did not appear to be stressed. Freed itself on the high tide. Calf sized, length and sex unknown. No photos available.
 3. W230130. Indo-Pacific bottlenose dolphin. 30-Aug-13. Kirra Beach, Gold Coast (153.53341°E; -28.16579°S). D1. Encephalopathy. Fungal encephalitis and pneumonia caused by lungworm infestation. Parasitic pneumonia may have predisposed dolphin to fungal infection. Female calf. 1.11 m. Necropsy: David Blyde, Sea World
 4. W230179. Unidentified bottlenose dolphin 07-Nov-13. Bongaree, Bribie Island (153.1523°E; -27.0814°S). Left alive *in situ*. Shark bites on head and body. Sex, length and age class unknown.

Anthropogenic causes of strandings and mortality

Unknown anthropogenic cause.

5. W230055. Australian humpback dolphin. 21-Feb-13. Cairns (146.07654°E; -17.49033°S). D3. Unknown anthropogenic cause. Missing right half of tail fluke. Investigation closed because of insufficient evidence to identify offender. Adult male. 2.47 m

Interactions with vessels

6. W230184. Humpback whale. 21-Sep-13. Offshore from Noosa (153.08086°E; -26.35461°S). Left alive *in situ*. Vessel impact to area behind dorsal fin. Observed alive afterwards. Extent of injuries unknown. Adult sized female with calf. Length unknown.

Entanglement in ropes

7. W230183. Humpback whale. 24-Sep-13. Offshore from Moreton Island (153.3629°E; -27.0694°S). Left alive *in situ*. Trailing rope and a pink/orange buoy. Reported initially on 23/9/2013 off Caloundra. Approximately 8-10 m in length. Sex and length unknown.

Queensland Shark Control Program (QSCP)

8. W230079. Common dolphin. 14-Apr-13. Burleigh, Gold Coast (153.4596°E; -28.083°S). D3. Drowned in gill net (same net and time as W230080). Female calf, 1.57 m. Disposed at sea
9. W230080. Common dolphin. 14-Apr-13. Burleigh, Gold Coast (153.4596°E; -28.083°S). D3. Drowned in gill net. Adult female, 2.05 m. Disposed at sea.
10. W230071. Common dolphin. 12-May-13. Mermaid Beach, Gold Coast (153.44517°E; -28.0385°S). D2. Drowned in gill net. Good condition (based on fat reserves). Recent first time breeder based on corpus lutea scars and uterus lobes. Lactating. Jack mackerel in oesophagus indicated that the dolphin was feeding just prior to entanglement. Skull, and stomach contents taken to Queensland Museum. Toxicology and genetic sample taken. Post-mortem examination: David Blyde, Sea World and Justin Meager, EHP. Prey identified by Jeff Johnson, Queensland Museum. Adult female, 2.12 m.
11. T85869. Common dolphin. 19-May-13. Rainbow Beach (153.097°E; -25.89417°S). D3. Drowned in gill net. Unsexed. 2.00 m. Disposed at sea.
12. W230206. Australian humpback dolphin. 08-Jul-13. Bilinga, Gold Coast (153.507°E; -28.1431°S). D2. Drowned in gill net. Stomach full (whiting and a shovel-nosed shark). Sexually mature. Sperm in testes. 150 kg weight. Adult male, 2.37 m. Necropsy: David Blyde, Sea World. Genetic and toxicology samples taken.
13. W230122. Humpback whale. 26-Jul-13. Noosa, Sunshine Coast (153.09003°E; -26.3811°S). Released alive from net. Juvenile, sex unknown. 9 m.
14. W230214. Humpback whale. 08-Aug-13. Surfers Paradise, Gold Coast (153.43851°E; -28.00166°S). Released alive from net. Juvenile female, 10.0 m
15. W230212. Common dolphin. 14-Aug-13. Noosa, Sunshine Coast (153.09516°E; -26.38099°S). D2. Drowned in gill net. Juvenile female 1.45 m. Disposed at sea.
16. W230213. Common dolphin. 14-Aug-13. Noosa, Sunshine Coast (153.09516°E; -26.38099°S). D2. Drowned in gill net. Adult sized female 2.45 m. Disposed at sea.

17. W230215. Humpback whale. 14-Aug-13. Kirra, Gold Coast (153.53283°E; -28.15783°S). Released alive from net. Juvenile female 9.00 m.
18. W230211. Common dolphin. 24-Sep-13. Rainbow Beach (153.0977°E; -25.89207°S). D2. Ingested/snagged on drum line. Adult sized male 2.10 m. Disposed at sea.
19. W230196. Unidentified bottlenose dolphin. 01-Oct-13. Kings Beach, Sunshine Coast (153.14567°E; -26.80766°S). D2. Drowned in gill net. Male calf, 1.00 m. Disposed at sea. Genetic samples taken.
20. W230195. Humpback whale. 01-Oct-13. Tallebudgera, Gold Coast (153.47182°E; -28.09583°S). Released alive from net. Calf, unsexed 5.00 m.
21. W230197. Common dolphin 26-Oct-13. Bribie Island (153.21049°E; -27.073°S). Released alive from drumline. Adult size, sex and length not recorded.
22. W230218. Humpback whale. 29-Oct-13. Burleigh, Gold Coast (153.46051°E; -28.082°S). Released alive from net. Calf, sex unknown. 5.00 m.
23. W230210. Common dolphin. 28-Dec-13. Bilinga, Gold Coast (153.51083°E; -28.14966°S). D2. Drowned in gill net. Adult sized female. 1.92 m. Disposed at sea.

Fisheries interactions

24. W230017. Unidentified bottlenose dolphin
 1. 18-Jan-13. Harry Atkinson's Artificial Reef, Moreton Bay (153.3073°E; -27.407°S). Left alive *in situ*. Rope around tail. Previously reported on 25-Nov-12. Sex and size unknown. Individual identification by NPRS staff.
 2. 16-Mar-13. Harry Atkinson's Artificial Reef, Moreton Bay (153.30945°E; -27.40745°S). Left alive *in situ*. Fishing line around tail. 18-Jan-13. Adult sized, unsexed.
 3. 21-May-13. Harry Atkinson's Artificial Reef, Moreton Bay (153.30945°E; -27.40745°S). Left alive *in situ*. Fishing line around dorsal fin and tail fluke. Multiple sightings reported. Fisherman removed line around tail on 21-May-13. Reported again 5-July-13 and attended to by NPRS staff. Reported to be swimming well and in good condition.
25. W230149. Unidentified bottlenose dolphin 16-Apr-13. Moreton Bay (153.33829°E; -27.48085°S). Left alive *in situ*. Cause unknown. Damage to dorsal fin and healed cut on body. Reported to have an entanglement on tail. No photos. Size, length and sex unknown.
26. W230069. Australian snubfin dolphin. 14-May-13. Leichhardt (146.51453°E; -19.0968°S). D2. Drowned in net. Adult female, 2.23 m. Necropsy undertaken by JCU indicated skin lacerations consistent with net entanglement prior to death. Severe, chronic pneumonia was also present. Referred to QBFP who issued an infringement notice for commercial netting offences. Genetic and toxicology samples taken.
27. W230094. Humpback whale. 06-Jul-13. Offshore of Moreton Island (153.5878°E; -27.2898°S). Left alive *in situ*. Entangled in rope and three white floats. Age, sex and size unknown.
28. W230180. Humpback whale. 10-Aug-13. Currimundi, Sunshine Coast (153.13918°E; -26.77751°S). Left alive *in situ*. Unconfirmed report of entanglement. Later reported at Dicky Beach. No photos available. Sex and age class unknown.
29. W230125. Humpback whale. 25-Aug-13. Gloucester Island (148.54616°E; -20.04955°S). Left alive *in situ*. Unconfirmed report of entanglement in a crab pot. No photos available. Length, sex and age class unknown.
30. W230182 Unidentified dolphin. 29-Sep-13. Offshore from Southport, Gold Coast (153.51833°E; -27.92167°S). Unconfirmed report of hook lodged near blowhole. No photos attached to report. Length, age class and sex unknown. Left alive *in situ*
31. W230175. Humpback whale. 07-Oct-13. Sunshine Coast (153.14134°E; -26.72028°S). Left alive *in situ*. Entanglement in net and yellow buoy. Sex and age class unknown.
32. W230176. Indo-Pacific bottlenose dolphin. 20-Oct-13. Tangalooma, Moreton Island (153.37183°E; 27.18086°S). Left alive *in situ*. Entanglement in gang hooks and braded line (around caudal peduncle and flukes). Known individual fed at Tangalooma Resort. The fishing line had disappeared by 21-Oct-13. Sex, length and age class not reported.

Causes of strandings and mortality unknown

33. W230053. Unidentified bottlenose dolphin 02-Jan-13. Flinders Reef (153.4909°E; -26.9352°S). Left alive *in situ*. Cause unknown. Missing most of upper jaw. Sighted again off Cape Moreton later same day.
34. W230029. Pygmy sperm whale. 05-Jan-13. Great Keppel Island (150.93518°E; -23.16861°S). D3. Cause unknown. Adult sized, sex unknown. 3.17 m. Genetic, blubber, teeth and muscle samples taken.
35. W230039. Sperm whale. 07-Jan-13. Curtis Island (150.98055°E; -23.48684°S). D4. Cause unknown. Adult sized

- male, 18.6 m. Left *in situ*
36. W230042. Unidentified bottlenose dolphin 23-Jan-13. Mackay (149.09434°E; -21.00771°S). D3. Cause unknown. Adult sized female, 2.1 m. Buried on site.
 37. W230067. Sperm whale. 01-Mar-13. Western beach, Fraser Island (153.20233°E; -25.02837°S). D3. Cause unknown. Adult sized male, 16.5 m. Genetic, blubber and teeth samples sent to the Queensland Museum. Left for scavenging wildlife.
 38. W230066. False-killer whale. 04-Apr-13. Cairns (145.83531°E; -16.76318°S). D3. Cause unknown. Male, size unknown. Left *in situ*. Genetics and teeth samples taken.
 39. W230068. Australian humpback dolphin. 22-Apr-13. Great Sandy Strait (152.89745°E; -25.57556°S). D2. Cause unknown. Damage consistent with ante or post-mortem bites from a crocodile or shark. Age class unknown, female. 1.9 m. Buried off site.
 40. W230104. Australian humpback dolphin. 23-Jun-13. Moreton Island (153.3714°E; -27.1795°S). D2. Cause unknown. Female, 2.11 m Buried off site
 41. W230091. Humpback whale. 29-Jun-13. Peregian Beach, Sunshine Coast (153.0953°E; -26.50057°S). D3. Cause unknown. Male neonate. 4.42 m. Genetic and toxicology samples taken.
 42. W230092. Humpback whale. 04-Jul-13. Eastern Beach, Moreton Island (153.4463°E; -27.0893°S). Rescued from beach stranding. Pushed back into water by NPRS, Police and public. Appeared to be in good condition. Calf sized, sex unknown. Estimated to be approximately 5 m in length.
 43. W230090. Rough-toothed dolphin. 13-Jul-13. Cooya Beach, Cairns (145.40871°E; -16.45027°S). D1. Cause unknown. Unsuccessful rescue by MOP. Juvenile female, 1.89 m. Genetic sample taken. Left *in situ*.
 44. W230105. Humpback whale. 14-Jul-13. Fraser Island (153.2045°E; -25.3365°S). D2. Cause unknown. Numerous recent wounds, lice and poor condition. Genetic and blubber samples taken. Left for scavengers
 45. W230108. Humpback whale. 02-Aug-13. Sandy Cape, Fraser Island (153.25352°E; -24.69716°S). D2. Cause unknown. Calf, sex unknown. 3.96 m. Left for scavengers
 46. W230112. Australian humpback dolphin. 06-Aug-13. Deception Bay (153.0362°E; -27.1952°S). D3. Cause unknown. Adult male 2.25 m. Genetic sample taken (N96692). Buried off site.
 47. W230127. Australian snubfin dolphin. 09-Aug-13. Yeppoon (150.761°E; -23.1426°S). D2. Cause unknown. Appeared to be in good condition prior to death. Decapods, fish and squid remains in stomach. Necropsy: Terry Fisher (Torenbreek Vet Clinic) and David Blyde, Sea World. Adult sized female, 2.0 m. Genetic, blubber, stomach contents, histopathology and pathology samples taken.
 48. W230114. Australian snubfin dolphin. 10-Aug-13. Toolakea Beach (146.59269°E; -19.14737°S). D2. Cause unknown. Male calf. 1.22 m. Necropsy: James Cook University. Genetic and blubber samples taken.
 49. W230113. Indo-Pacific bottlenose dolphin. 15-Aug-13. Freshwater Beach (150.78921°E; -22.64916°S). D2. Cause unknown. Female 1.80 m. Genetic samples taken. Left *in situ*.
 50. N97695. Humpback whale. 15-Aug-13. Inshore of the Hayman Islands (148.8228°E; -20.1613°S). D2. Cause unknown. Calf, sex unknown. 5.0 m. Genetic and blubber samples taken. Left *in situ*.
 51. W230119. Southern right whale. 26-Aug-13. Offshore from Wurtulla, Sunshine Coast (153.14217°E; -26.74228°S). D2. Cause unknown. First reported and filmed *in situ* by QBFP. Towed by Coastguard Mooloolaba to offshore of Bribie Island under direction of EHP. Washed ashore on Bribie Island on 30-Aug-13. Genetic and blubber samples taken on 26-Aug-13 and again on 30-Aug-13. Skeletal remains sampled by the Queensland Museum and were further investigated. Adult female. 15 m.
 52. W230137. Humpback whale. 04-Sep-13. Fraser Island (153.12209°E; -25.52541°S). D2. Cause unknown. Neonate male, 4.28 m. Genetic and baleen samples taken. Left *in situ* for wildlife.
 53. W230144. Australian humpback dolphin. 06-Sep-13. Curtis Island (151.29619°E; -23.75233°S). D4. Cause unknown. Sex and age class unknown. Left *in situ*.
 54. W233152. Australian humpback dolphin. 12-Sep-13. North Stradbroke Island (153.43663°E; -27.40281°S). Left alive *in situ*. Cause unknown. Approximately 10 cm of upper jaw missing as a result of a recent injury. Subsequently sighted again on 20-May-15 and appeared healthy. Sex and age class unknown.
 55. W230152. Humpback whale. 23-Sep-13. Hervey Bay (153.12166°E; -25.09971°S). D2. Cause unknown. Floating carcass of a whale approximately 6-6.5 m in length, carcass scavenged sharks. Length, size and age class unknown. Left *in situ*.
 56. W230145. Unidentified bottlenose dolphin 02-Oct-13. Fraser Island (153.07737°E; -25.68165°S). D2. Cause unknown. Juvenile female. 1.47 m. Genetic and biopsy samples taken. Left *in situ* for wildlife.

57. W230151. Common dolphin. 13-Oct-13. Rainbow Beach (153.07337°E; -25.82419°S). D4. Cause unknown. Adult sized, length and sex unknown. Buried on site
58. W230154. Humpback whale. 16-Oct-13. Moreton Island (153.42133°E; -27.28371°S). D3. Cause unknown. Adult size, sex unknown. 13.2 m. Genetic samples taken.
59. W230177 Unidentified cetacean. 17-Oct-13. Fraser Island (153.24409°E; -25.2447°S). Rescued from beach stranding by MOP. Age class, length and sex unknown.
60. W230186. Blainville's beaked whale. 13-Nov-13. Thorton Beach, Cape Tribulation (145.44186°E; -16.17318°S). D2. Cause unknown. Adult sized female. 4.3 m. Sampled by Queensland Museum.
61. W230187. Sperm whale. 16-Nov-13. Whitsunday Islands (149.05379°E; -20.27375°S). D4. Cause unknown. Tiger sharks feeding on carcass. Towed to Windy Bay, Hazelwood Island by NPRS (149.087586°E; 20.288025°S). Adult sized, sex unknown. Estimated to be around 18 m long.
62. W230188. Pygmy sperm whale. 24-Nov-13. Byfield National Park (150.78835°E; -22.88911°S). D1. Cause unknown. Unsuccessful rescue from beach stranding together with W230192. Attempts were made by MOP to push both back to sea, but they re-stranded. Adult, sex unknown. 3.01 m. Genetic and teeth samples taken. Left *in situ*
63. W230192. Pygmy sperm whale. 24-Nov-13. Byfield National Park (150.78835°E; -22.88911°S). D1. Cause unknown. Sex and age class unknown. 2.05 m. Case history above (W230188). Genetic and teeth samples taken. Left *in situ*.
64. W230190 Unidentified dolphin, 26-Nov-13. Cape Grenville (143.2398°E; -11.97915°S). D3. Cause unknown. Left *in situ*
65. W232420 Unidentified baleen whale, 06-Dec-13. Moffatt Beach, Sunshine Coast (153.14235°E; -26.78909°S). D5. Cause unknown. Buried on site.

Killer whale mass stranding event

66. W230095. Killer whale. 03-Jul-13. Sheridan Flats, Great Sandy Strait (152.85447°E; -25.52151°S). Left alive *in situ*. Reported in the morning. NPRS staff attended and monitored whales until flooding tide in the afternoon. Adult male. 7.9 m
67. W230096. Killer whale. 03-Jul-13. Sheridan Flats, Great Sandy Strait (152.85447°E; -25.52151°S). Left alive *in situ*. As above. Adult female. 6.9 m
68. W230097. Killer whale. 03-Jul-13. Sheridan Flats, Great Sandy Strait (152.85447°E; -25.52151°S). Left alive *in situ*. As above. Fresh wound on upper jaw. Adult female. 6.9 m
69. W230099. Killer whale. 03-Jul-13. Sheridan Flats, Great Sandy Strait (152.85447°E; -25.52151°S). Left alive *in situ*. As above. Juvenile, sex unknown. 4.1 m.
70. W230100. Killer whale. 03-Jul-13. Sheridan Flats (152.85447°E; -25.52151°S). Left alive *in situ*. As above. Female adult. 7.1 m
71. W230101. Killer whale. 03-Jul-13. Northern Great Sandy Strait (152.98145°E; -25.49218°S). D3. Cause unknown. Adult female. 9 m. Post-mortem examination: David Blyde, Sea World. Genetic and toxicology samples taken. Skeleton recovered by Queensland Museum
72. W230102. Killer whale. 03-Jul-13. Northern Great Sandy Strait (152.98145°E; -25.49218°S). D3. Cause unknown. Poor condition. Post-mortem examination by NPRS and Ingrid Visser. Skull sent to Queensland Museum. Length, sex and age class unknown. Genetic samples taken.
73. W230103. Killer whale. 05-Jul-13. Northern Great Sandy Strait (153.0418°E; -25.32478°S). D3. Cause unknown. Very poor condition. Post-mortem examination by NPRS and Ingrid Visser. Skull sent to Queensland Museum. Length, sex and age class unknown. Genetic samples taken.

Cetaceans in 2014

Strandings and mortality from natural causes

1. W230205. Fraser's dolphin. 17-Jan-14. Great Sandy Strait (153.12181°E; -25.93452°S). D1. Pneumonia, pathogen unknown. Bacterial cultures of lung, liver, spleen, kidney and heart failed to reveal any pathological bacteria. Histopathology of various organs, including the brain indicated parasitic pneumonia. Unweaned female calf, 1.18 m. Unsuccessful rescue by NPRS and Sea World. Necropsy: David Blyde, Sea World.
2. W230283. Cuvier's beaked whale. 23-Oct-14. Wurtulla (153.1363°E; -26.74673°S). D3. Suspected natural mortality. Poor condition, stomach full of nematodes (samples sent to the Queensland Museum). Post-mortem examination:

Justin Meager, EHP. Juvenile female. 5.55 m. Skeleton sampled by Queensland Museum. Genetic, toxicology and stomach content samples taken. Buried on site.

Anthropogenic causes of strandings and mortality

Interactions with vessels

3. W230271. Southern right whale. 15-Aug-14. Near Peel Island (153.3781°E; -27.50094°S). D2. Propeller cuts to head. Mother and calf pair first sighted off Shorncliffe on 9/08/2014. Collision between 24 m commercial vessel and whales occurred at 0517 on 15-08-2014. Severe impact and propeller injuries. Propeller cuts 108 to 122 cm in length, at intervals of 8 cm, 8 cm and 13 cm. Female calf. 7.10 m. Genetic samples taken. Skeletal and blubber samples taken by the Queensland Museum.
4. W230272. Southern right whale. 15-Aug-14. Near Peel Island (153.3934°E; -27.5088°S). Left alive *in situ*. Propeller cuts (19 on right dorsal side). Adult female size. Incident details as above.
5. W230254. Humpback whale. 9-Jul-14. Offshore from Cape Moreton (153.4774°E; -27.0037°S). Left alive *in situ*. Vessel strike. No obvious damage observed. Sex, age class and size unknown. Left alive *in situ*.

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6. W230236. Common dolphin 24-Feb-14. Tallebudgera, Gold Coast (153.47182°E; -28.09583°S). D3. Drowned in gill net. Adult female. Length unknown. Disposed at sea.
7. W230237. Common dolphin 24-Feb-14. Tallebudgera, Gold Coast (153.47182°E; -28.09583°S). D3. Drowned in gill net. Adult female. Length unknown. Disposed at sea.
8. W230238. Common dolphin 24-Feb-14. Kirra, Gold Coast (153.53283°E; -28.15783°S). D3. Drowned in gill net. Juvenile male. 1.40 m. Disposed at sea.
9. W230322. Unidentified bottlenose dolphin 29-Mar-14. Caloundra, Sunshine Coast (153.14567°E; -26.80766°S). D2. Drowned in gill net. Female calf. 1.40 m. Disposed at sea.
10. W230317 Unidentified dolphin. 06-Apr-14. Mooloolaba, Sunshine Coast (153.12333°E; -26.67733°S). D2. Drowned in gill net. Neonate sized male. 1.00 m. Disposed at sea.
11. W230249. Unidentified bottlenose dolphin 13-May-14. Wurtulla, Sunshine Coast (153.14033°E; -26.74933°S). D2. Drowned in gill net. Juvenile male. 1.61 m. Genetic and blubber samples taken. Disposed at sea.
12. W230315. Indo-Pacific bottlenose dolphin. 19-Jul-14. Near the Sheraton Mirage, Gold Coast (153.43466°E; -27.9565°S). Rescued. Hooked on drumline. Treated and remained in captivity at Sea World. Juvenile female, 1.5 m.
13. W230324. Common dolphin. 26-Mar-14. Kirra, Gold Coast (153.53366°E; -28.155°S). D2. Drowned in net. Juvenile female. 1.80 m. Disposed at sea.
14. W230310. Common dolphin 25-Jun-14. Main Beach, Gold Coast (153.4345°E; -27.97066°S). D2. Drowned in gill net. Juvenile male, 1.6 m. Disposed at sea.
15. W230320. Common dolphin. 28-Jun-14. Noosa, Sunshine Coast (153.09266°E; -26.38183°S). D2. Drowned in gill net. Juvenile female, 1.7 m Disposed at sea.
16. W230264. Antarctic minke whale. 14-Jul-14. Bilinga, Gold Coast (153.507°E; -28.14317°S). D1. Drowned in gill net. Unsuccessful rescue by MART and Sea World. Sex, age class and length unknown. Identification based on Sea World, QBFP and media footage, with assistance from experts from the Queensland Museum, NOAA, CSIRO and Alaska Sealife. No samples taken. Sex and age class unknown. Estimated to be approximately 6 m in length.
17. W230316. Humpback whale. 15-Jul-14. Twin Waters, Sunshine Coast (153.105°E; -26.6295°S). Released alive from drumline. Calf sized, sex unknown. 6.00 m Released *in situ*.
18. W230313. Humpback whale. 24-Jul-14. Coolangatta, Gold Coast (153.536°E; -28.15516°S). Released alive from net. Juvenile, sex unknown. 8.50 m.
19. W230312. Humpback whale. 29-Jul-14. Coolangatta, Gold Coast (153.536°E; -28.15516°S). Released alive from net. Juvenile, sex unknown. 8.00 m.
20. W230311. Common dolphin. 31-Jul-14. Burleigh, Gold Coast (153.45483°E; -28.07633°S). D2. Drowned in gill net. Juvenile female 1.8 m. Disposed at sea.
21. W230309. Humpback whale. 11-Aug-14. Main Beach, Gold Coast (153.4345°E; -27.97066°S). Released alive from net. Calf sized, sex unknown. 4.50 m.
22. W230302. Humpback whale. 04-Sep-14. Kirra, Gold Coast (153.5336°E; -28.155°S). Released alive from net. Adult female. 8 m

23. W230299. Common dolphin. 13-Sep-14. Tallebudgera, Gold Coast (153.471°E; -28.0911°S). D2. Drowned in gill net. Adult female 2.40 m. Disposed at sea.
24. W230303. Humpback whale. 26-Sep-14. Coolangatta, Gold Coast (153.536°E; -28.15516°S). Left alive *in situ*. The animal released itself from net entanglement before the rescue team arrived. Calf sized, sex unknown.
25. W230306. Humpback whale. 16-Oct-14. Rainbow beach (153.096°E; -25.896°S). Released alive from net. Heavily entangled in net but was able to breathe easily. Rescued from MART and in good condition with all net removed. Calf, sex unknown. 5.5 m
26. W230308. Common dolphin. 26-Nov-14. Surfers Paradise, Gold Coast (153.436°E; -28.0015°S). D2. Drowned in gill net. Adult female, 1.8 m. Disposed at sea.
27. W230307. Common dolphin 29-Nov-14. Caloundra, Sunshine Coast (153.1468°E; -26.8068°S). D2. Drowned in gill net. Juvenile female. 1.80 m. Disposed at sea.

Fisheries interactions

28. W230223. Australian humpback dolphin. 13-Feb-14. Near Amity, Moreton Bay (153.4373°E; -27.4003°S). Left alive *in situ*. Seen regularly at Amity, North Stradbroke Island. Fishing line tangled around tail fluke and trailing approximately 1-2 m behind. Age class, sex and length unknown.
29. W230240. Indo-Pacific bottlenose dolphin. 06-Apr-14. Cape Bedford (145.29437°E; -15.30712°S). D2. Suspected drowned in gill net. Sample frozen and transported to Cairns. Adult size, length and size unknown.
30. W230260. Indo-Pacific bottlenose dolphin. 25-Jul-14. Moreton Bay (153.34377°E; -27.38233°S) Left alive *in situ*. Fishing line entangled around pectoral fin with approximately 10 m of fishing line trailing. Calf, sex and length unknown.
31. W230273. Australian humpback dolphin. 19-Aug-14. Port of Townsville (146.8343°E; -19.2439°S) Left alive *in situ*. Fishing line tight at base of tail and trailing. Scar from shark bite. Age class, sex and length unknown.

Causes of strandings and mortality unknown

32. W230225. Pygmy sperm whale. 24-Jan-14. Moreton Bay (153.0346°E; -27.1925°S). D1. Cause unknown. Numerous parasites sampled for the Queensland Museum. Adult female. 2.97 m. Toxicology and genetic samples taken. Buried on site.
33. W230224. Short-finned pilot whale. 01-Feb-14. Marcus Beach, Sunshine Coast (153.104°E; -26.4541°S). D2. Cause unknown. Female. Age class and length unknown.
34. W230233. Sperm whale. 29-Mar-14. Moreton Bay (153.4256°E; -27.3021°S). D2. Cause unknown. Calf, sex unknown. 3.15 m. Genetic and toxicology samples taken
35. W230235. Common dolphin. 30-Mar-14. Moreton Bay (153.4989°E; -27.5316°S). D2. Cause unknown. Blood around mouth and under pectoral fin. Adult sized male. 2.03 m. Buried on site.
36. W230234. Common bottlenose dolphin. 30-Mar-14. Moreton Bay (153.4175°E; -27.2484°S). D2. Cause unknown. Adult, female, 2.75 m. Toxicology and genetic samples taken.
37. W230243. Australian humpback dolphin 16-May-14. Pumicestone Passage (153.0991°E; -27.0269°S). Left alive *in situ*. Cause unknown. Multiple reports described the dolphin as spending unusually long periods at the surface, shallow diving and being approachable to one metre. It was unclear whether this represented poor health or unusual behaviour. Subsequent descriptions of a very similar behaviour were received in the same area in the following year (2015, see below). The 2015 reports related to the same animal. Sex, age class and size unknown.
38. W230247. Sperm whale. 30-May-14. Moreton Island (153.4232°E; -27.1851°S). D2. Cause unknown. Ante/post mortem shark bites. Adult size, sex unknown. 11 m. Genetic and toxicology samples taken. Left *in situ*.
39. W230321. Humpback whale. 27-Jun-14, Mooloolaba, Sunshine Coast (153.1349°E; -26.6817°S). D1. Cause unknown. Monitored in shallow water from 23-July-14 to 26-July-14 and died on 27-July-14. Shark damage to flukes and high load of external parasites (whale lice). No photos. Length estimated to be 6-7 m. Toxicology and genetic samples taken from slough. Age class, sex and unknown. Disposed of at sea.
40. W230261 Unidentified dolphin. 01-Jul-14. Norman River, Gulf of Carpentaria (140.82906°E; -17.46817°S). Left alive *in situ*. Cause unknown. Floating and appeared injured. Sex, size and age class unknown.
41. W230255. Humpback whale. 08-Jul-14. Main Beach, Gold Coast (153.46806°E; -28.11072°S). Rescued from beach stranding by NPRS, EHP and SeaWorld. Cause of stranding unknown. First two rescue attempts were unsuccessful, rescued on 10-July-14. Juvenile male, 8 m.
42. W230256. Humpback whale. 12-Jul-14. Shoal Point (149.06833°E; -20.97666°S). Natural escape from stranding.

- Cause unknown. Stranded on sandbank on the ebbing tide. Monitored by MOP and presumed to have escaped on the flood tide that night. Sex, size and age class unknown.
43. W230258. Humpback whale. 17-Jul-14, Blacks Beach, Mackay (149.19408°E; -21.05338°S). D3. Cause unknown. Juvenile 8 m. Genetic samples taken. Buried on site.
 44. W230259. Common dolphin 25-Jul-14. Moreton Bay (153.45828°E; -27.67756°S). D2. Cause unknown. Adult Female 2.22 m. Left *in situ*.
 45. W230266. Australian humpback dolphin. 01-Aug-14, Brisbane River (153.13331°E; -27.42597°S). Suspected moribund, left alive *in situ*. Cause unknown. Tail injury based on *in situ* assessments by Sea World and Dolphin Research Australia. Injury not examined but given low probability of survival based on behaviour. Sex, size and age class unknown.
 46. W230265 Unidentified dolphin. 01-Aug-14, Shorncliffe, Moreton Bay (153.085°E; -27.32278°S). D3. Cause unknown. No photos available. Sex, size and age class unknown.
 47. W230276. Short-finned pilot whale. 04-Aug-14, Bedford Beach, Cape York (145.30728°E; -15.29439°S). D3. Cause unknown. Adult size, sex unknown (shark bite in genital area). 3.7 m. Genetic sample taken. Left *in situ*.
 48. W230281. Short-finned pilot whale. 15-Sep-14, Teewah (153.06659°E; -26.27416°S). D2. Cause unknown. Genetic and toxicology samples taken. Buried on site.
 49. W230282 Unidentified dolphin. 18-Sep-14, Port of Brisbane (153.1736°E; -27.3668°S) Carcass state unknown. Cause unknown. Reported by port staff but not attended by staff. Left *in situ*.
 50. W230277. Australian humpback dolphin. 24-Sep-14, Margate, Moreton Bay (153.11256°E; -27.24251°S) Carcass state unknown. Cause unknown. Adult male, >2.17 m (flukes missing). Genetic and toxicology samples taken.
 51. W230289. Indo-Pacific bottlenose dolphin. 02-Oct-14, Skirmish Point, Bribie Island (153.20705°E; -27.08709°S). D3. Cause unknown. Approximately 1 m in length (tail missing). Calf sized, sex and length unknown.
 52. W230284. Australian humpback dolphin. 09-Oct-14, Sutton Park (153.11677°E; -27.2161°S). D4. Cause unknown. Not available for examination. Sex, length and age class unknown.
 53. W230288. Humpback whale. 09-Nov-14, Gold Coast (153.43025°E; -27.94828°S). D4. Cause unknown. Sex, size and age class not available. Report from media article (not reported to StrandNet at the time).
 54. W230297. Pygmy sperm whale. 17-Nov-14, Fraser Island (153.345°E; -24.9638°S). D1. Cause unknown. Adult sized, sex unknown. 2.85 m. Buried on site.
 - W230296. Common dolphin. 12-Dec-14, Eastern Beach, Moreton Island (153.46363°E; -27.04131°S). D2. Cause unknown. Calf, sex unknown. 1 m. Buried on site.

Unconfirmed reports

55. ??? W230257 Unknown. 17-Jul-14, Offshore in Mackay region (148.95237°E; -20.74803°S). Carcass state unknown. Unconfirmed report of a whale carcass floating offshore. Sex and age class unknown.

Cetaceans in 2015

Strandings and mortality from natural causes

1. W232429. Risso's dolphin, 17-Jun-15, Wurtulla, Sunshine Coast (153.13748°E; -26.75817°S). Euthanised. Suspected natural cause. Poor condition and cookie cutter bites suggested protracted ill health. Lesions in brain suggested natural cause. Cephalopod beaks in stomachs. Juvenile male. 1.99 m. Skeleton sent to museum. Genetic, gut contents, toxicology and histopathology samples taken. Necropsy: David Blyde, Sea World.
2. W232432. Bryde's whale. 03-Jul-15. Elford Reef lagoon (146.22166°E; -16.92026°S). Released alive via natural escape. Cause of entrapment unknown. Reported in a lagoon for several weeks and monitored by NPRS. Poor condition. Last reported on 18-Jul-15, a site assessment on 04-Aug-15 revealed that it had left the lagoon. Adult sized, size and length unknown.
3. W232434. Indo-Pacific bottlenose dolphin. 10-Jul-15. Eastern Beach, Fraser Island (153.08753°E; -25.62323°S). D2. Suspected natural mortality. Old animal in poor condition. Extensive lesions resembling lacaziosis-like disease but would require PCR and histology to confirm the source of the lesions. No samples taken. Adult female. 2.25 m. Left *in situ*.
4. W232439. Humpback whale. 23-Jul-15. Palm Beach, Gold Coast (153.48022°E; -28.12571°S). D1. Suspected natural mortality. Unsuccessful rescue. Poor condition with superficial wounds. Neonate female, approximately 4 m in

length. Assessed to be approximately two days old by Sea World.

5. W232445. Humpback whale. 10-Jul-15. South Stradbroke Island (153.4331°E; -27.82686°S). Euthanised. Suspected birthing problems. Calf separated from mother and became exhausted. Rescue team tried twice to push out to sea but re-stranded. Blubber and blood samples taken. Neonate male 4.00 m.
6. W233681. Indo-Pacific bottlenose dolphin. 30-Sept-15. Smithburne, Gulf of Carpentaria (-17.0375°E; -17.0375°S). D5. Adult sized, size and length unknown.

Anthropogenic causes of strandings and mortality

Interactions with vessels

7. W232711. Dwarf minke whale. 14-Aug-15. Western side of Peel Island (153.32326°E; -27.50918°S). D3. Suspected interaction with a commercial vessel. Interaction reported by crew of a commercial vessel at 153.35565°E; -27.5279°S. Carcass located at 153.32326°E; -27.50918°S with four dorsal propeller wounds; 17 cm, 14 cm, 15 cm and 19 cm across. Genetic and toxicology samples taken. Juvenile size, unsexed. 4 m.
8. W233257. Humpback whale. 27-Aug-15. Offshore, Sunshine Coast (153.11134°E; -26.66551°S). D2. Suspected vessel interaction. Reported to have suspected propeller cuts by DAF contractor but no photos were provided. Calf sized. Sex unknown. 7.50 m. Genetic samples taken. Towed out to sea.
9. W232455. Humpback whale. 8-Sep-15. Hay Point (149.3121°E; -21.25833°S). D2. Suspected interaction with a commercial vessel. A tugboat had engine failure during port manoeuvres and found a small humpback whale lodged between the propeller and rudder. The carcass was fresh but it could not be ruled out that the interaction before death without a necropsy. Genetic, baleen and toxicology samples taken. Carcass removed piecewise by divers and disposed off-site. Immature, but age, sex and size unknown.

Entanglement in ropes

10. W233275. Humpback whale. 18-Jul-15. Offshore from the Gold Coast (153.61579°E; -27.90706°S). Left alive *in situ*. Rope entanglement of tail flukes. Age class, sex and size unknown.
11. W233255. Humpback whale. 15-Aug-15. Offshore from the Gold Coast (153.4885°E; -27.60366°S). Left alive *in situ*. Rope entangled around flukes. Age class, sex and size unknown.

Ingestion or entanglement in debris

12. W232465. Melon-headed whale. 15-Oct-15. Fraser Island (153.13165°E; -25.50369°S). D2. Suspected mortality from ingestion of debris. Cookie cutter wounds and poor condition suggested ill health. Subsequent examination by NPRS staff revealed that it had ingested fishing line. Genetic samples taken. Adult male. 2.71 m. Left *in situ* for wildlife.
13. W232425. Australian humpback dolphin 14-Apr-15. Amity, Moreton Bay (153.4369°E; -27.4015°S). Left alive *in situ*. Adult size, sex unknown. Plastic bag wrapped tightly around its rostrum. Approximate length: 2 m. Sex, age class and size unknown.

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14. W233273. Unidentified bottlenose dolphin 14-Apr-15. Wurtulla, Sunshine Coast (153.142°E; -26.74617°S). D3. Drowned in gill net. Juvenile female 1.6 m. Disposed at sea
15. W233264. Common dolphin. 06-May-15. Buddina, Sunshine Coast (153.13983°E; -26.70283°S). Released alive *in situ* after being caught on a drum line. Juvenile female. 1.60 m.
16. W233269. Common dolphin. 12-May-15. Currumbin, Gold Coast (153.48916°E; -28.12333°S). D2. Drowned in gill net. Female 1.65 m. Genetic samples taken. Disposed at sea
17. W233270. Common dolphin. 17-Jun-15. Coolangatta, Gold Coast (153.53583°E; -28.15516°S). D2. Drowned in gill net. Adult Female. 2.30 m. Disposed at sea.
18. W233263. Common dolphin. 19-Jun-15. Mooloolaba, Sunshine Coast (153.13983°E; -26.67733°S). D2. Drowned in gill net. Photo suggests that the dolphin was pregnant. Adult female. 2.32 m. Genetic samples taken. Disposed at sea.
19. W233272. Common dolphin. 23-Jun-15. Rainbow Beach (153.09633°E; -25.89616°S). D2. Drowned in gill net. Adult sized, sex unknown. 2.05 m. Disposed at sea.

20. W233274. Humpback whale. 18-Jul-15. Coolangatta, Gold Coast (153.536°E; -28.15517°S). Entangled in shark net at Coolangatta. Later released alive east of the Gold Coast Seaway by MART and Sea World. Juvenile, sex unknown. 7 m.
21. W233268. Unidentified bottlenose dolphin. 22-Jul-15. Marcoola, Sunshine Coast (153.1025°E; -26.58233°S). D2. Drowned in gill net. Juvenile, sex unknown. 1.65 m. Disposed at sea. Genetic samples taken
22. W233266. Common dolphin. 14-Aug-15. Maroochydore, Sunshine Coast (153.111°E; -26.6545°S). D2. Drowned in gill net. Calf, male. 1.00 m. Disposed at sea. Genetic samples taken.
23. W233260. Australian humpback dolphin. 29-Aug-15. Mackay (149.227°E; -21.118°S). D2. Drowned in gill net. Female, age class unknown. 2.10 m. Disposed at sea.
24. W233262. Humpback whale. 23-Nov-15. Coolangatta, Gold Coast (153.536°E; -28.15516°S). Released alive *in situ* from a gill net. Juvenile female. 7 m. Later observed east of Gold Coast seaway. Rescued by MART and SeaWorld.
25. W233283. Unidentified bottlenose dolphin. 23-Nov-15. Mackay (149.171°E; -21.027°S). D2. Drowned in gill net. Adult sized female. 2.40 m. Disposed at sea.
26. W233284. Unidentified bottlenose dolphin. 23-Nov-15. Mackay (149.171°E; -21.027°S). D2. Drowned in gill net. Calf, female. 1.40 m. Disposed at sea.

Fisheries interactions

27. W232430. Indo-Pacific bottlenose dolphin. 05-Apr-15. Hope Island, Gold Coast (153.2056°E; -27.5122°S). D1. Entangled in fishing line and hooks. Unsuccessful rescue by Sea World. Died after two days in rehabilitation. Morbillivirus negative. Post-mortem inconclusive. Juvenile female. Length unknown. Necropsy: SeaWorld.
28. W233149. Indo-Pacific bottlenose dolphin. 11-May-15. Moreton Bay (153.36011°E; -27.50296°S). Left alive *in situ*. Entangled in fishing line and fishing hooks. Line cutting into dorsal fin. Calf sized. Sex and length unknown.
29. W233245 Unidentified dolphin. 26-May-15. Port of Brisbane (153.1869°E; -27.3488°S) Left alive *in situ*. Fishing net entangled around flukes. No photos. Calf sized, sex and length unknown.
30. W233289: Indo-Pacific bottlenose dolphin. 13-Sep-15 (153.4358°E; -28.02368°S). Carcass condition unknown. Found floating dead at Broadbeach, Gold Coast. Fish hook through right thorax. Adult female. Length unknown. Necropsy: David Blyde, Sea World.
31. W233290. Indo-Pacific bottlenose dolphin. 18-Sept-15 (153.43009°E; -27.94558°S) Carcass condition unknown. Fishing line around tail and fish hooks in oesophagus. Poor condition. Probably starved to dead following entanglement. Sub-adult male, size unknown. Necropsy: David Blyde, SeaWorld.

Causes of strandings and mortality unknown

32. W230298 Unidentified dolphin. 02-Jan-15. Crystal Creek, Townsville region (146.32191°E; -18.92542°S) Released alive *in situ*. Pushed back to by MOP. Re-stranded and pushed back again. Not seen again. Age class, size and sex unknown.
33. W232413. Rough-toothed dolphin, 13-Jan-15. Halifax Bay (146.3088°E; -18.9121°S). D5. Cause unknown. Juvenile size. Sex unknown. 1.70 m. Buried on site.
34. W230325. Indo-Pacific bottlenose dolphin. 17-Jan-15. Fraser Island (153.26659°E; -24.88382°S). D3. Cause unknown. Adult sized. Sex unknown. 2.10 m. Left *in situ* for wildlife.
35. W232415. Common bottlenose dolphin. 15-Feb-15. Fraser Island (153.11193°E; -25.55251°S). D2. Cause unknown. Size and wear of teeth suggested an old individual. Adult male. 3.15cm. Left *in situ* for wildlife. Genetic samples taken.
36. W232419. Unidentified bottlenose dolphin 24-Mar-15. Turtle Bay area (148.98958°E; -20.30126°S). D5. Cause unknown. Sex and age class unknown. Left *in situ*.
37. W233150. Indo-Pacific bottlenose dolphin. 27-May-15. North Stradbroke Island (153.51276°E; -27.49638°S). D2. Cause unknown. Extensive shark damage but uncertain if this occurred ante or post mortem. Age class, sex and size unknown.
38. W232450. Common dolphin. 24-Jun-15, Brisbane (153.11652°E; -27.47655°S). D5. Cause unknown. Head found on Gateway Motorway. Head severed from body and cuts made to tissue from a knife but not known if the cuts were ante or post-mortem. Taken to the Queensland Museum. Adult sized, length and sex unknown.
39. W232449. Melon-headed whale. 29-Jun-15. Inskip Point (153.06241°E; -25.80912°S). Euthanised. Cause of stranding unknown. Unsuccessful rescue by NPRS. Assessment by veterinarian. Adult sized, sex unknown. 2.30 m. Genetic sample taken. Buried off site.

40. W232433. Humpback whale. 08-Jul-15. Eastern Beach, Fraser Island (153.08669°E; -25.63°S). D1. Cause unknown. Newborn male. 4.6 m. Assessed by veterinarian. Genetic and toxicology samples taken. Left *in situ* for wildlife.
41. W232435. Pygmy sperm whale. 11-Jul-15. Byfield National Park (150.79111°E; -22.86417°S). D3. Cause unknown. Adult sized, sex unknown. 3.01 m. Genetic sample taken. Left *in situ*
42. W232437. Australian humpback dolphin 20-Jul-15. McEwens Beach, Mackay (149.20958°E; -21.24679°S). D3. Cause of death unknown. Adult female. 2.32 m. Genetic and toxicology samples taken. Left *in situ*
43. W232436. Humpback whale. 21-Jul-15. Eastern Beach, Fraser Island (153.32567°E; -25.08059°S). D2. Cause unknown. Toxicology and genetic samples taken. Left *in situ* for wildlife.
44. W232453. Humpback whale. 29-Jul-15. Eastern Beach, Moreton Island (153.44615°E; -27.09206°S). D2. Cause unknown. Poor condition. Neonate, unsexed. 4.40 m. Genetic and toxicology samples taken. Buried on site.
45. W232448. Indo-Pacific bottlenose dolphin. 04-Aug-15, Twin Waters, Sunshine Coast (153.1021°E; -26.6344°S). D2. Cause of death unknown. Juvenile male. 1.50 m
46. W233468. Australian humpback dolphin:
1. 23-Aug-15. Bribie Island (153.19352°E; -27.10451°S). Left alive in situ. Reported to be spending significant time on the surface near the shore by various members of the public to Marine Parks, Sea World and other organisations by various people. Subsequent reports on 10-Sept-15 (153.20673°E; -27.07525°S).
 2. 6-Dec-15. Bribie Island (153.20708 °E; -27.07505°S). Subsequent report. Presumed to be the same dolphin as the earlier sightings, but high quality photos of the dorsal fin were not available for all reports. Continued reports in this area of a dolphin exhibiting similar issues suggests that it is not an acute health issue. Adult size, sex unknown. Sex, age class and size unknown. Subsequent report on 22-Dec-15 (153.20707°E;-27.07579°S).
47. W2332586. Australian snubfin dolphin. 25-Aug-15. Smithburne, Gulf of Carpentaria (141.04141°E; -16.85723°S). D3. Sex and age class unknown. Left *in situ*.
48. W233246. Indo-Pacific bottlenose dolphin. 09-Sep-15. North Stradbroke Island (153.44035°E; -27.78876°S). D3. Cause of death unknown. Age class, sex and size unknown.
49. W233288. Common bottlenose dolphin. 2-Sep-15. Moreton Island (153.4606°E; -27.05035°S). Carcass condition unknown. No obvious injuries, morbillivirus negative. Adult female, size unknown. Necropsy: David Blyde, Sea World.
50. W232458. Humpback whale. 14-Sep-15. Fraser Island (153.0773°E; -25.70329°S). D2. Cause unknown. Juvenile male. Extensive scavenging by sharks. Length (excluding tail): 6.62 m. Toxicology and genetic samples taken. Left *in situ* for wildlife.
51. W232459 Unidentified cetacean. 21-Sep-15. North Stradbroke Island (153.49042°E; -27.5556°S). D3. Cause unknown. Only two slabs of skin and blubber were found. Samples taken for genetic identification.
52. W233151 Unidentified whale. 11-Oct-15. Deception Bay, Moreton Bay (153.62767°E; -27.17681°S). D3. Cause unknown. Carcass reported several times by MOP. Not found by NPRS staff. Left *in situ*. Age class, sex and length unknown.
53. W232468. Melon-headed whale. 27-Oct-15. One Tree Island (152.08851°E; -23.50958°S). D4. Cause unknown. Adult male. Disposed at sea.
54. W233146. Fraser's dolphin. 08-Nov-15. Bulcock Beach, Sunshine Coast (153.1317°E; -26.80713°S). Euthanised. Cause of stranding unknown. Broken jaw. High toxoplasmosis titre. Morbillivirus negative. Weight 43.5 kg. Male calf, 1.73 m. Necropsy: David Blyde, Sea World.
55. W233148. Australian humpback dolphin. 25-Nov-15. Blacks Beach, Mackay (149.19456°E; -21.05625°S). D5. Sex unknown. Newborn size (approximately 1 m). Buried on site.
56. W233249. Indo-Pacific bottlenose dolphin 15-Dec-15. Boyne Island, Gladstone region (151.3339°E; -23.90904°S). Rescued by NPRS but re-stranded. Morbillivirus negative. Transferred to Sea World on 16-Dec-15. Juvenile female. 1.6 m. Remained in captivity because of age.

Discussion

The total number of stranded or dead cetaceans has declined since 2011 (Figure 1). Understanding the reasons for long-term trends requires detailed analyses on a species-by-species basis, which is outside the scope of this data report (but see Meager and Limpus 2014; Meynecke and Meager 2016; Meager and Sumpton 2016). Contributing factors include changes in population size, reporting effort, vulnerability/health and external drivers such as the environment.

The strandings assemblage continues to be dominated by migratory humpback whales and resident inshore dolphins

(mostly bottlenose and Australian humpback dolphins). As in earlier analyses, common dolphins were the main species incidentally caught in the QSCP and bycatch was comprised mostly of adult females and calves (Meager and Sumpton 2016). The remaining species were rare and represented pelagic species (e.g. pygmy sperm whales, short-finned pilot whales and melon-headed whales), migrant (e.g. dwarf minke whales and southern right whales) and vagrants (e.g. the leopard seal).

Mass stranding events are rare on the Queensland coastline. It is not known why the group of killer whales stranded in the Great Sandy Strait in 2013. Although the carcasses were examined, tests for the full range of differential diagnoses were not possible because of carcass decomposition. Adjacent Fraser Island is a recognised strandings 'hotspot', with the highest species diversity of cetacean strandings (Meager 2013). The reasons for this are not fully understood, but the proximity of the coastline to the edge of the continental shelf and East Australia Current; a local upwelling (Brieva *et al.* 2015); local bathymetry and the function of Hervey Bay as a resting area for migrating whales (e.g. Chaloupka *et al.* 1999) are likely to be contributing factors.

An analysis of cause-specific trends in strandings and mortalities comes with the caveat that it is easier to diagnose some causes than other causes. Collisions with vessels or incidental fisheries catch may be directly observed, whereas other causes of death such as viral/bacterial infections or biotoxins are much more difficult to detect or confirm as the ultimate cause of a stranding or mortality. This problem can be compounded in subtropical-tropical climates, where rapid autolysis of carcasses can make diagnoses difficult even when a necropsy is performed. Hence, the fact that net entanglement was reported more often than disease does not necessarily mean that the latter is less prevalent.

A total of eight mortalities and three strandings were attributed to natural causes. Identified natural etiologies included pneumonia (pathogen unidentified), morbillivirus, shark attack, poor condition/high parasite load, suspected birthing/mothering failure and becoming trapped in a lagoon. Incidental catch in the QSCP in 2013 and 2015 was below the long-term average (1992-2012, mean \pm SD: 17.3 \pm 6.8), but was elevated in 2014 (14 mortalities and eight releases, Table 3). Other than the QSCP, the major cause of direct anthropogenic mortality was from collisions between vessels and cetaceans, with seven recorded in the time period. While there was no evidence that the number of vessel-related injuries or mortalities has increased in recent years (Table 4) the number of vessel interactions with cetaceans is likely to be underestimated because (a) not all collisions are reported by vessel crew, (b) it is not always possible for crew to ascertain exactly what a vessel has interacted with (especially for small cetaceans) and (c) not all carcasses of cetaceans killed by vessels drift into areas where they are likely to be reported.

In the current reporting period, all vessel-related records involved collisions with migratory whales (humpback, dwarf minke and southern right whales), and six of the seven records occurred in southern Queensland. Four cases involved medium-sized commercial vessels (three involved passenger ferries and one a tugboat), but information on the vessel type was not available for the other three cases. Three of the seven reports of vessel interactions were not confirmed, because a necropsy was not undertaken to determine if the interactions occurred ante or post-mortem. Vessel crew or other observers confirmed interactions with live animals in the remaining four cases. Accurate data on the location of the vessel-whale interaction was available for six of the seven reports. Three reports occurred near Peel Island in Moreton Bay, one at Hay Point and two occurred in the waters offshore of the Sunshine Coast/Moreton Island.

Vessel speed reductions are known to reduce the risk of collision with marine wildlife (Vanderlaan and Taggart 2007; Work *et al.* 2010; Conn and Silber 2013; van der Hoop *et al.* 2015) and have been implemented to protect turtles and dugongs in the Moreton Bay and the Great Sandy Strait Marine Parks ('Go Slow' areas). The scale and movement patterns of migratory whales make static protection areas difficult to implement in Queensland, and suggest that dynamic speed rules based on when and where whales are present may be more appropriate. Regulations are already in place for vessel approach distances to dolphins and whales, but vessel skippers are not always aware of the presence of cetaceans— especially at night, when visibility is poor or when animals are submerged.

Fisheries interactions over the reporting period were mostly because of inshore dolphins entangling in line-fishing gear or humpback whales entangling in ropes that were mostly associated with floats or crab/lobster pots. Some of the humpback whales, especially those reported in southern Queensland on the northwards migration, may have become entangled outside of Queensland. Line-fishing entanglement was suspected to have caused the death of three bottlenose dolphins and ingestion of fishing line was suspected to have caused the death of a melon-headed whale. Two mortalities and one suspected entanglement of an inshore dolphin were attributed to net fishing. One of these mortalities was of a threatened species (the Australian snubfin dolphin) and resulted in an infringement notice being issued, the other mortality occurred in a remote area and it was not known if the bottlenose dolphin died before or

after becoming entangled.

The number of records of line-fishing entanglement has increased since 2012 (Tables 4 and 5), with 14 records in the reporting period. It is possible that the rate at which fishers report entanglements has increased in recent years with the availability of smart phones and increased public awareness. Yet it is unlikely that all incidents are reported. Most recorded incidents involved bottlenose dolphins, with two incidents involving a threatened species (the Australian humpback dolphin). The survival of dolphins entangled in recreational fishing gear depends on factors such as the severity and location of entanglement, or where hooks are embedded (Wells *et al.* 1998; Powell and Wells 2011; Stolen *et al.* 2013). Simple measures that anglers can undertake to reduce the risk of dolphin entanglement include (a) not fishing close to dolphins, (b) not feeding dolphins, (c) not discarding fishing line and (d) using corrodible, barbless and/or non-offset circular hooks (see also Rec Fish Australia, 2014 and http://www.nmfs.noaa.gov/pr/pdfs/education/dolphin_friendly_tips.pdf.)

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Table 1: Number of strandings and mortalities recorded by species from 2013 to 2015 (% of occurrence in parentheses). Repeated sightings of known individuals are counted as one case.

Species	Common name	2013	2014	2015
<i>Megaptera novaeangliae</i>	Humpback whale	20(27)	13(23)	11(19)
<i>Delphinus delphis</i>	Short-beaked common dolphin	10(13)	13(23)	7(12)
<i>Tursiops</i> spp.	Unidentified bottlenose dolphin	9(12)	2(4)	5(9)
<i>Tursiops aduncus</i>	Indo-Pacific bottlenose dolphin	4(5)	4(7)	11(19)
<i>Tursiops truncatus</i>	Common bottlenose dolphin	0	1(2)	2(3)
<i>Sousa sahalensis</i>	Australian humpback dolphin	7(9)	6(11)	6(10)
<i>Orcinus orca</i>	Killer whale	8(11)	0	0
<i>Physeter macrocephalus</i>	Sperm whale	3(4)	2(4)	0
<i>Kogia breviceps</i>	Pygmy sperm whale	3(4)	2(4)	1(2)
<i>Orcaella heinsohni</i>	Australian snubfin dolphin	3(4)	0	1(2)
<i>Peponocephala electra</i>	Melon-headed whale	0	0	3(5)
<i>Eubalaena australis</i>	Southern right whale	1(1)	2(4)	0
<i>Globicephala macrorhynchus</i>	Short-finned pilot whale	0	3(5)	0
<i>Steno bredanensis</i>	Rough-toothed dolphin	1(1)	0	1(2)
<i>Lagenodelphis hosei</i>	Fraser's dolphin	0	1(2)	1(2)
<i>Pseudorca crassidens</i>	False killer whale	1(1)	0	0
<i>Mesoplodon densirostris</i>	Blainville's beaked whale	1(1)	0	0
<i>Balaenoptera acutorostrata</i>	Dwarf minke whale	0	0	1(2)
<i>Balaenoptera edeni</i>	Bryde's whale	0	0	1(2)
<i>Balaenoptera bonaerensis</i>	Antarctic minke whale	0	1(2)	0
<i>Ziphius cavirostris</i>	Cuvier's beaked whale	0	1(2)	0
<i>Grampus griseus</i>	Risso's whale	0	0	1(2)
<i>Hydrurga leptonyx</i>	Leopard seal	0	1(2)	0
Unidentified whale	-	2(3)	0	2(4)
Unidentified dolphin	-	2(3)	4(7)	2(4)
Unidentified fur seal	-	0	0	1(2)
TOTAL		75	56	57

Table 2: Cetacean and pinniped strandings and mortality with identified sources of mortality for Queensland in 2013. Numbers in parentheses represent additional animals that were released alive. Note that not all identified sources of mortality are confirmed by necropsy, refer to main text for individual case histories.

Species	Natural causes	Human related				Unidentified causes
		Vessel interaction/ fractures	Fisheries-related activity and entanglement*	Shark Control Program	Other/presumed anthropogenic activities	
<i>Megaptera novaeangliae</i>	(1)	(1)	(5)	(5)		7(1)
<i>Delphinus delphis</i>				8(1)		1
<i>Tursiops</i> spp.	(1)		(1, 3 ^r)	1		2(1)
<i>Tursiops aduncus</i>	2		(1)			1
<i>Sousa sahalensis</i>				1	1	4(1)
<i>Orcinus orca</i>						3(5)
<i>Physeter macrocephalus</i>						3
<i>Kogia breviceps</i>						3
<i>Orcaella heinsohni</i>			1			2
<i>Eubalaena australis</i>						1
<i>Steno bredanensis</i>						1
<i>Pseudorca crassidens</i>						1
<i>Mesoplodon densirostris</i>						1
Unidentified whale						1(1)
Unidentified dolphin			(1)			1
TOTAL	2(2)	(1)	1(11)	10(6)	1	32(9)

*includes commercial netting, crabbing, entanglement in fishing line or ropes, and ingesting hooks or fishing line. ^r includes known repeated observations of an individual.

Table 3: Cetacean and pinniped strandings and mortality with identified sources of mortality for Queensland in 2014. Numbers in parentheses represent additional animals that were released alive. Note that not all identified sources of mortality are confirmed by necropsy, refer to main text for individual case histories.

Species	Natural causes	Human related				Unidentified causes
		Vessel interaction/ fractures	Fisheries-related activity and entanglement*	Shark Control Program	Other/presumed anthropogenic activities	
<i>Megaptera novaeangliae</i>		(1)		(7)		3(2)
<i>Delphinus delphis</i>				10		3
<i>Tursiops</i> spp.				2		
<i>Tursiops aduncus</i>			1(1)	(1)		1
<i>Tursiops truncatus</i>						1
<i>Sousa sahalensis</i>			(2)			2(2)
<i>Physeter macrocephalus</i>						2
<i>Kogia breviceps</i>						2
<i>Eubalaena australis</i>		1(1)				
<i>Globicephala macrorhynchus</i>						3
<i>Lagenodelphis hosei</i>	1					
<i>Ziphius cavirostris</i>	1					
<i>Balaenoptera bonaerensis</i>				1		
<i>Hydrurga leptonyx</i>	1					
Unidentified dolphin				1		2(1)
TOTAL	3	1(2)	1(3)	14(8)		19(5)

*includes commercial netting, crabbing, entanglement in fishing line or ropes, and ingesting hooks or fishing line.

Table 4: Cetacean and pinniped strandings and mortality with identified sources of mortality for Queensland in 2015. Numbers in parentheses represent additional animals that were released alive. Note that confirmed and suspected causes of death or stranding are pooled.

Species	Natural causes	Human related				Unidentified causes
		Vessel interaction/ fractures	Fisheries-related activity and entanglement*	Shark Control Program	Other/presumed anthropogenic activities	
<i>Megaptera novaeangliae</i>	2	2	(2)	(2)		4
<i>Delphinus delphis</i>				5(1)		1
<i>Tursiops</i> spp.				4		1
<i>Tursiops aduncus</i>	1		3(1)			4(1)
<i>Tursiops truncatus</i>						2
<i>Sousa sahalensis</i>				1	(1)	2(2 ^r)
<i>Kogia breviceps</i>						1
<i>Orcaella heinsohni</i>						1
<i>Peponocephala electra</i>			1			2
<i>Steno bredanensis</i>						1
<i>Lagenodelphis hosei</i>						1
<i>Balaenoptera acutorostrata</i>		1				
<i>Balaenoptera edeni</i>	(1)					
<i>Grampus griseus</i>	1					
Unidentified whale						2
Unidentified dolphin			(1)			(1)
Unidentified fur seal						1
TOTAL	4(1)	3	4(4)	10(3)	(1)	23(4)

*includes commercial netting, crabbing, entanglement in fishing line or ropes, and ingesting hooks or fishing line. ^r, includes a suspected re-sighting of the same individual

Table 5: Cetacean and pinniped strandings and mortalities by year and identified sources of mortality for Queensland, 2006-2015. Numbers in parentheses represent additional animals that were released alive or escaped unaided. Note that confirmed and suspected causes of death or stranding are pooled.

Suspected or confirmed cause of stranding and mortality	Year									
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<i>Natural causes</i>										
Disease or ill health	4	3	3	4	1	9		2	2	3
Trapped by natural event	(1)	(3)						(1)		(1)
Stingray barb										
Predation/ predator attack				(1)		1	1	(1)		
Undetermined or other natural cause				1	2		1			1
<i>Anthropogenic causes</i>										
Vessel interaction (collision report, or blunt and/or sharp trauma)	(2)	(3)	(5)	1		(2)	1 (2)	(1)	1(2)	3
Incidental catch in net fishery or entanglement in fishing net	(1)	(2)	(2)	2(2)		(4)	1	1	1	(1)
Entanglement in fishing traps, ropes or floats (suspected to relate to fishing)	1(4)	(7)	(1)	1		(1)	(4)	(4)		(2)
Incidental catch in line fishery, entanglement in or ingestion of line-fishing gear		(1)					1(6)	(6) ^r	(3)	4(1)
Incidental catch in Queensland Shark control program	21(6)	21(4)	28 (8)	14(8)	21(1)	15 (5)	8 (7)	10(6)	14(8)	10(3)
Ingested foreign material or entangled debris (excluding fishing gear)		(1)								(1)
Undetermined human cause	3	3	(1)	1		2		1		
<i>Undetermined cause</i>	20(4)	31(8)	20(10)	31(3)	34(3)	43(4)	42 (8)	32(9)	19(5)	23(4 ^r)
Total	49(18)	52(29)	48(26)	55(14)	58(4)	70(16)	55 (27)	46(29)	38(18)	44(13)

*Data for 2001-2012 were taken from previous reports (Greenland and Limpus 2008; Meager *et al.* 2012; Meager 2013). ^r includes known repeated reports of an individual (separated by ≥ 3 months)

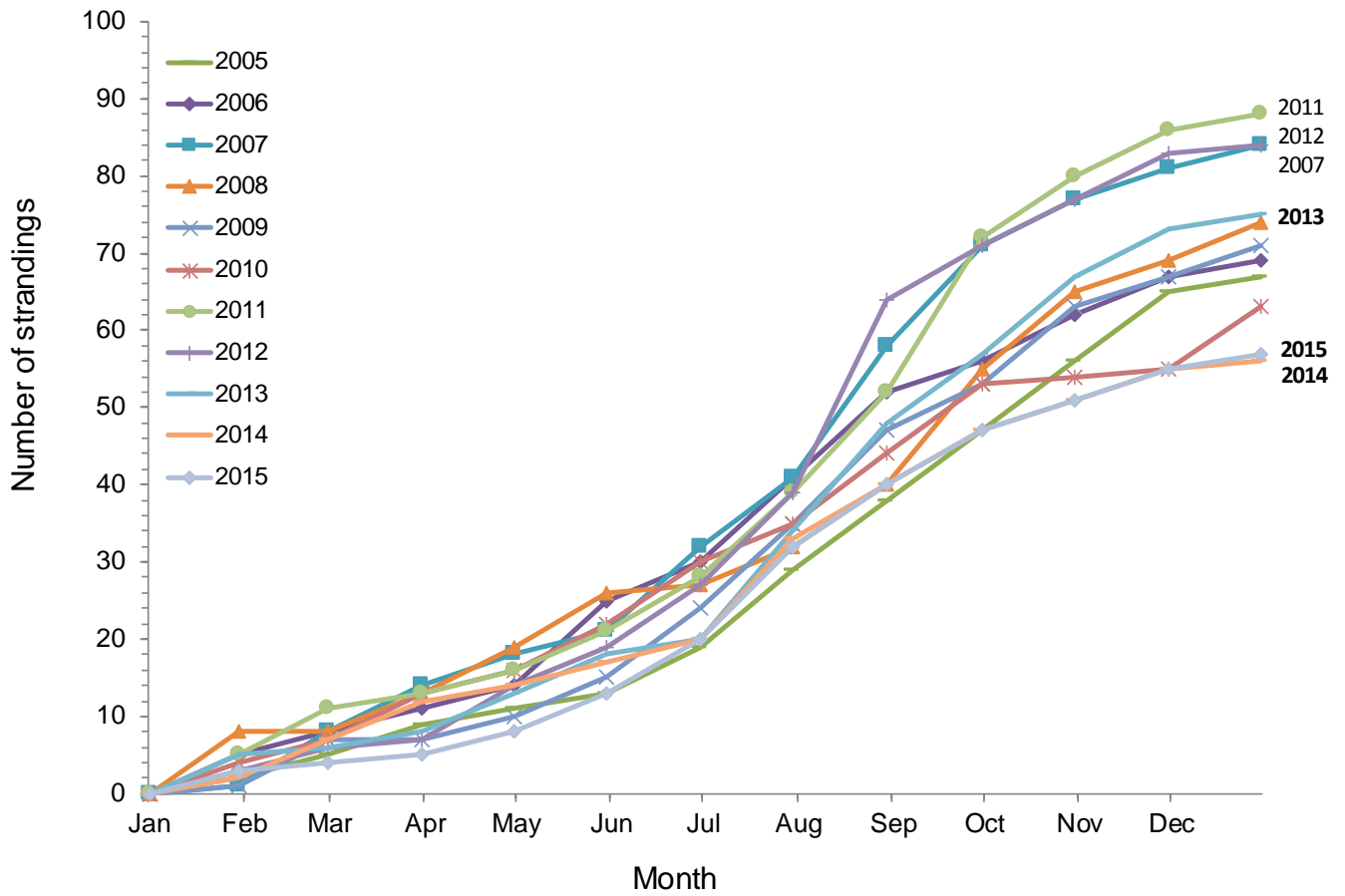


Figure 1: Cumulative cetacean and pinniped strandings and mortalities in Queensland per month and year for the 10 year-period between 2005 and 2015.

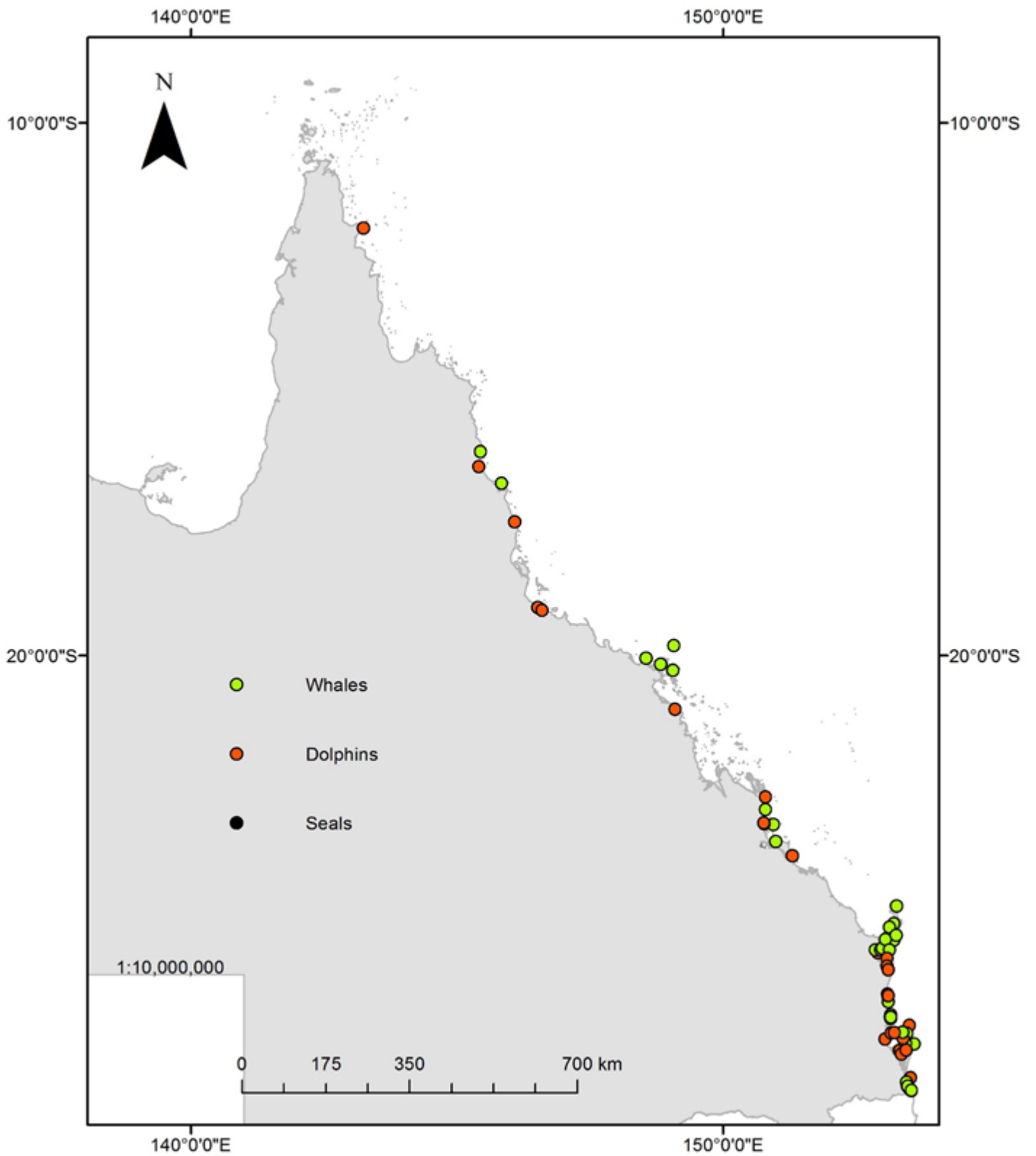


Figure 2: Distribution of cetacean and pinniped strandings and mortalities, 2013.

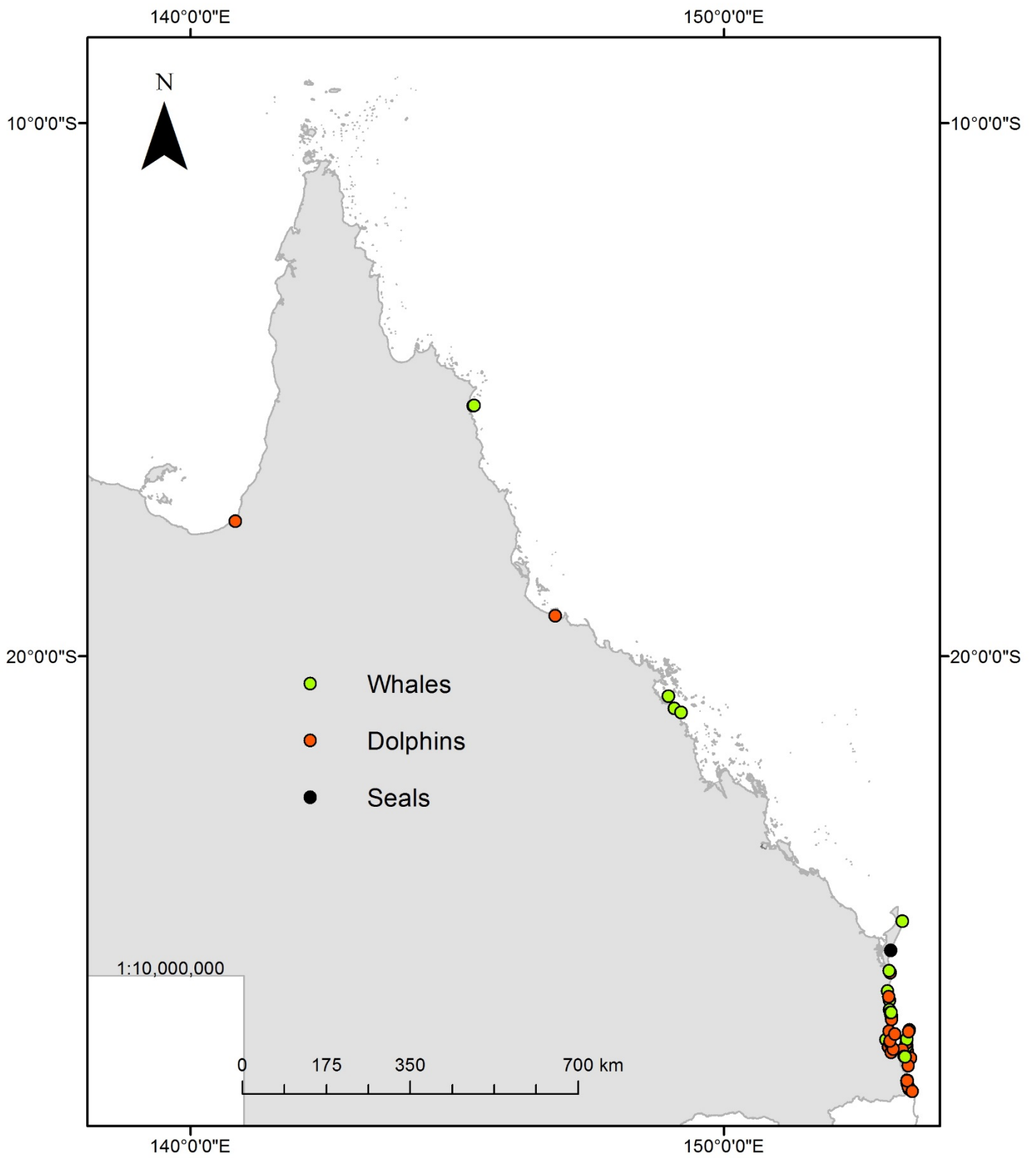


Figure 3: Distribution of cetacean and pinniped strandings and mortalities, 2014.

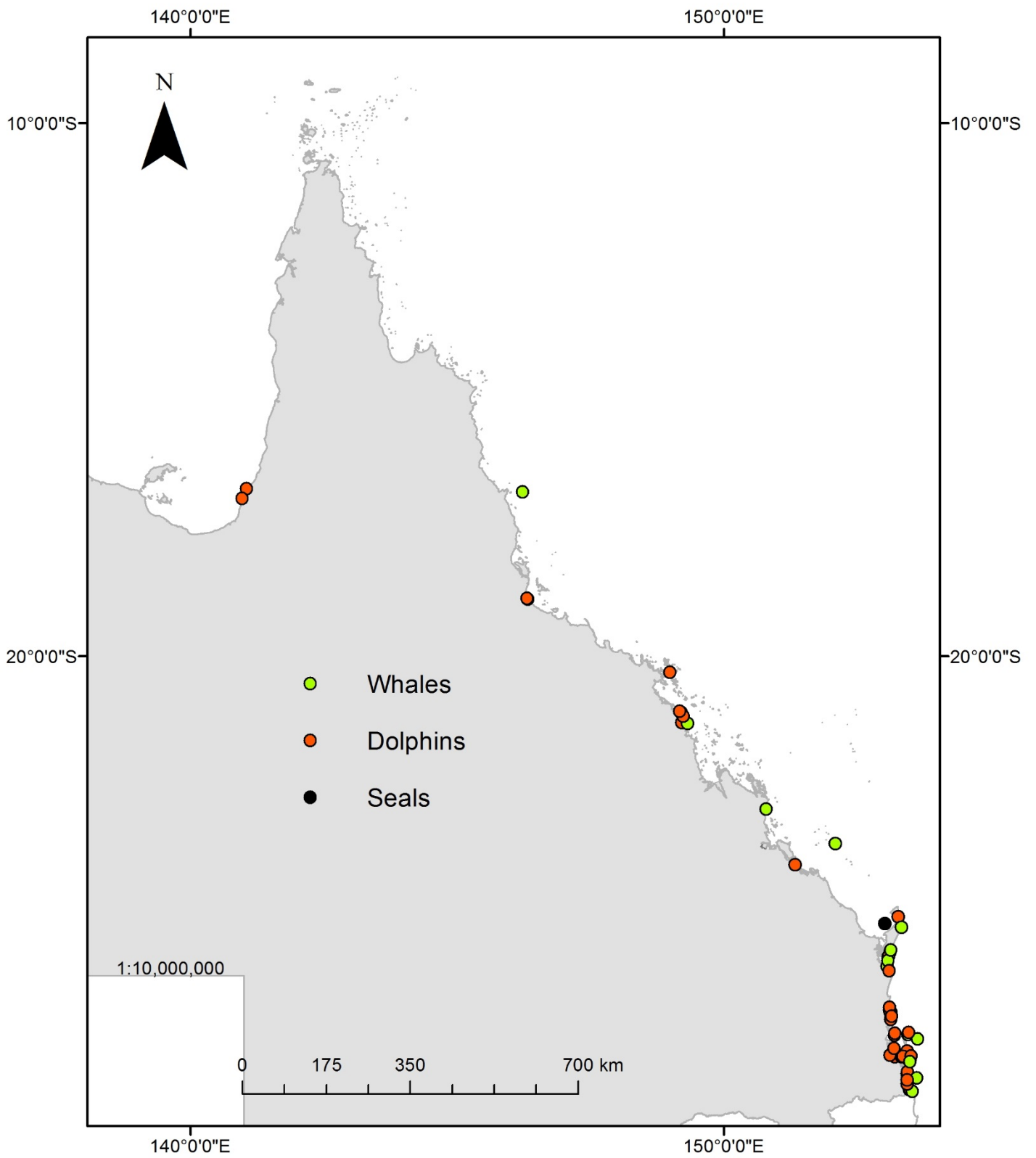


Figure 4: Distribution of cetacean and pinniped strandings and mortalities, 2015.

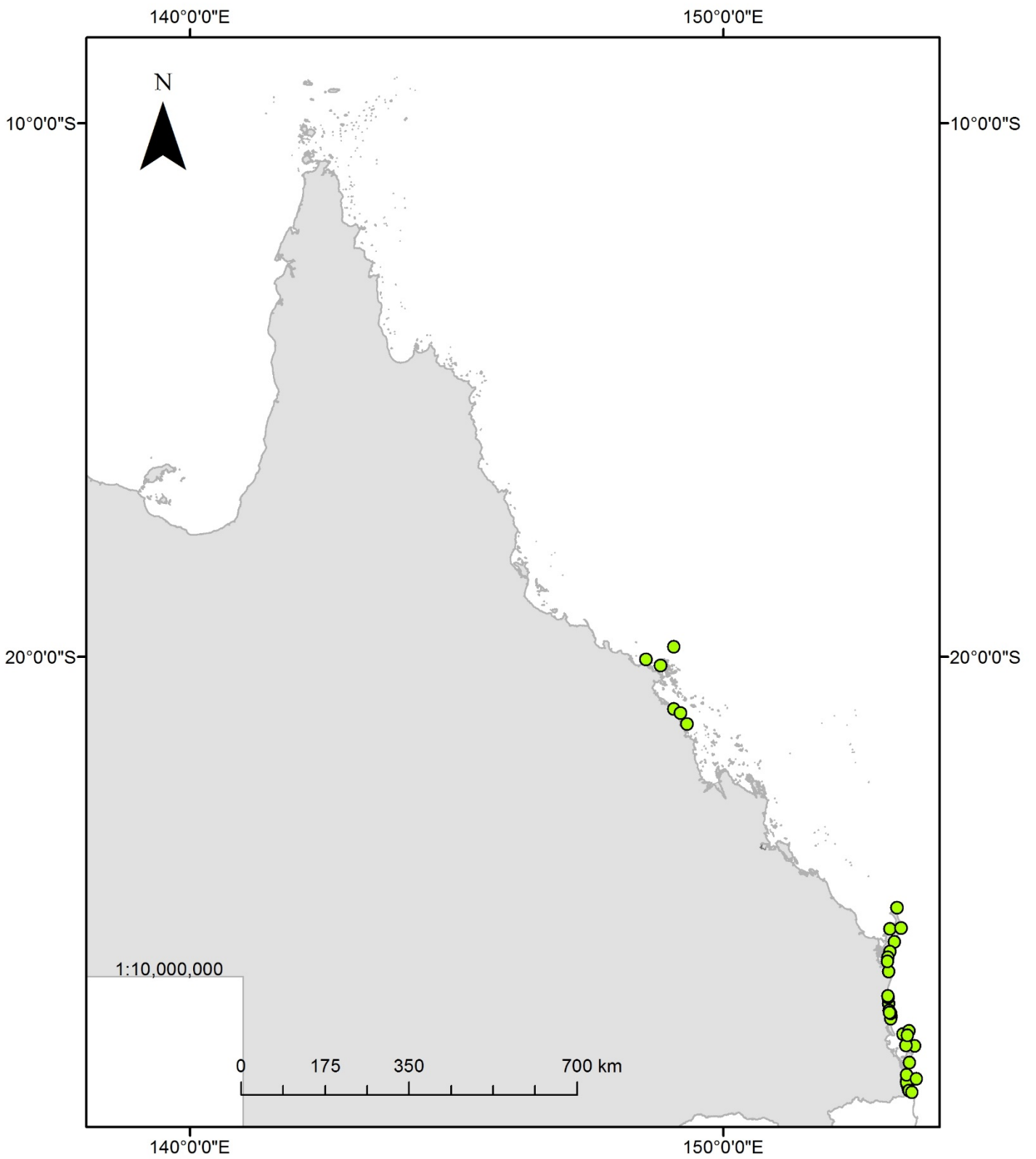


Figure 5: Distribution of humpback whale strandings and mortalities, 2013-2015.

