



Dolphin Research Australia

Knowledge, Awareness, Action – Conserving Our Seas

Dolphin Watch

Bribie Regional Summary

Below is a summary of observational data submitted by citizen scientists as part of the Dolphin Watch initiative from Bribie Island, Queensland. Data were submitted via the Dolphin Research Australia online sighting report form between January 2019 and December 2019.

Sightings of Indo-Pacific bottlenose dolphin (*Tursiops aduncus*) and Australian humpback dolphin (*Sousa sahulensis*) were submitted for all months between January and December 2019, indicating year-round presence of both species along the coast of Bribie Island. Bottlenose dolphins were observed more frequently than humpback dolphins. Both species were observed generally using the same areas around Bribie Island. However, bottlenose dolphins were not seen around the south-western side of the island, but humpback dolphins were observed. Mixed species groups were only seen in the southern tip of the island.

Composition of groups varied, however, too few observations confirmed the presence or absence of calves. It is therefore not possible to summarise the overall composition of groups observed. Travelling was the most frequently reported behaviour for groups, followed by feeding, socialising then resting or milling. However, the percentage of observed behaviours of dolphin groups that were recorded as 'unknown' was only second to the percentage of groups seen travelling.

The Indo-Pacific bottlenose dolphins were seen most frequently feeding and travelling. Comparatively, socialising and milling were more frequently reported for Australian humpback dolphins. When the two species were observed in groups together the most favoured behaviour was milling, followed by socialising, feeding and then travelling.

A number of cases of regulatory breaches were also reported. Two incidents of particular concern detailed below.

These observations show the frequent use of Bribie Island waterways by both dolphin species. The large number of recorded sightings recorded by the people of Bribie Island has provided a base set of data, and if continued will help form a better idea of how the dolphins use the habitat and help to inform policies to help protect them and the environment they use around the island.

Data summary

Site: Bribie Island

Duration: 01 January 2019 – 31 December 2019

Number of sightings: 385

Number of days: 190

Observation Platform

Boat (n = 58)

Land (n = 324)

Unknown (n=3)

Observation Conditions:

The majority of observations the weather conditions were noted as unknown.

Table 1: Wind speeds experienced for observations made between January 2019 and December 2019.

Wind Speed	N	%
0 to 5kph	4	1.04
5 to 10kph	68	17.66
10 to 15kph	83	21.56
15 to 20kph	65	16.88
>20kph	86	22.34
Unknown	79	20.52

Time of Day

The majority (n = 283) of the observations were made in the morning (5am-12pm) with 97 observation made after midday (12pm-9pm), and 5 observations did not have time not recorded.

Group Observations

Species Observed

- Australian humpback dolphin (*Sousa sahulensis*)
- Indo-Pacific bottlenose dolphin (*Tursiops aduncus*)

The majority of groups observed were Indo-Pacific bottlenose (58%), with the Australian humpback dolphins making up 32% of groups observed, 5% of groups contained both species, and 5% of groups were of unknown species.

Table 2: Summary of the number and percentage of groups of each species observed.

Species	N	%
Humpback	122	32
Indo-Pacific bottlenose	221	58
Mixed	21	5
Unidentified	21	5
Total	385	100

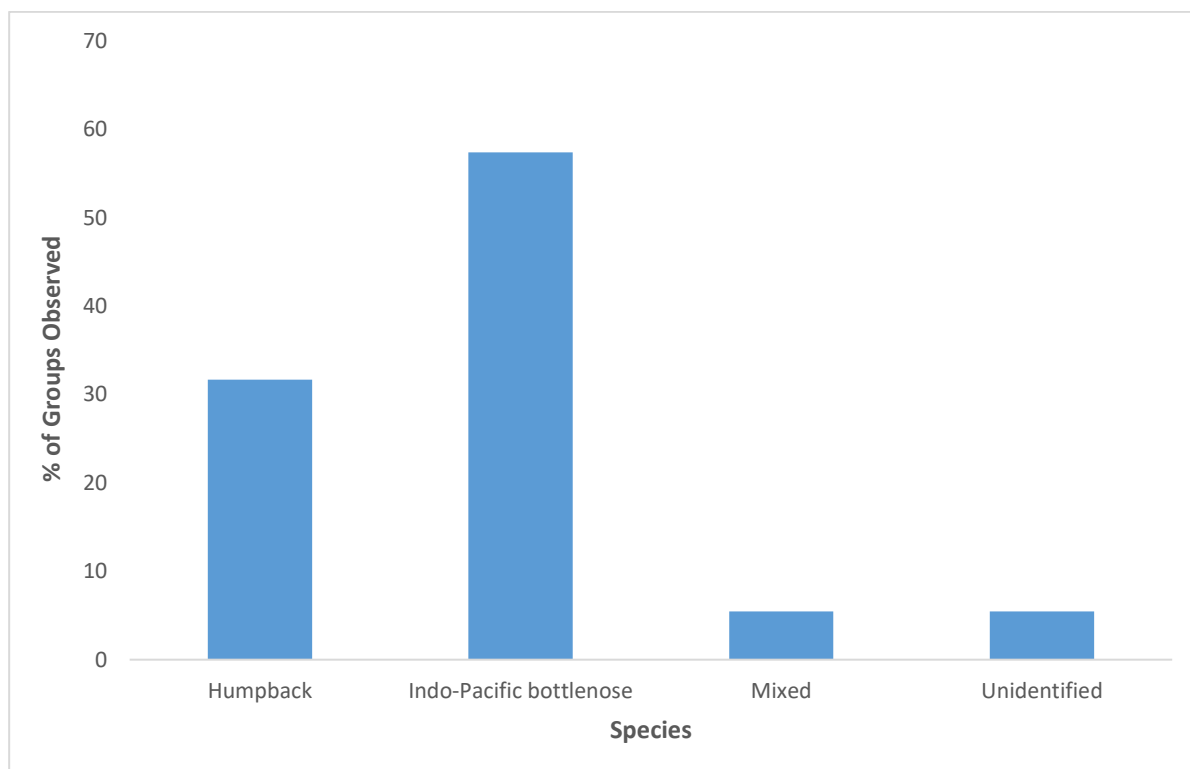


Figure 1: Percentage of groups of different species observed in 2019 along the coast of Bribie Island (N = 385).

Confidence of Species ID

Observers were confident of the species identification on 94% of observations (n = 362), with 0.5% of observations (n=2) noted as 'probable'. The remaining 5.5% of observations were recorded as 'unconfirmed' for species classification (n = 21).

Sighting Locations

Observations of both species of dolphins were made all along the southern end of Bribie Island, showing they are generally using the same areas. However, observations of dolphins at the south-western tip were almost exclusively of the Australian humpback dolphins and the main concentration of mixed groups was observed at the southern tip of Bribie Island. Where they have been sighted may be a factor of observer locations, and warrants further investigation. Indo-Pacific bottlenose dolphins are quite concentrated on the western and eastern southern end of Bribie Island, with two observations made of these dolphins in the northern part of the island.

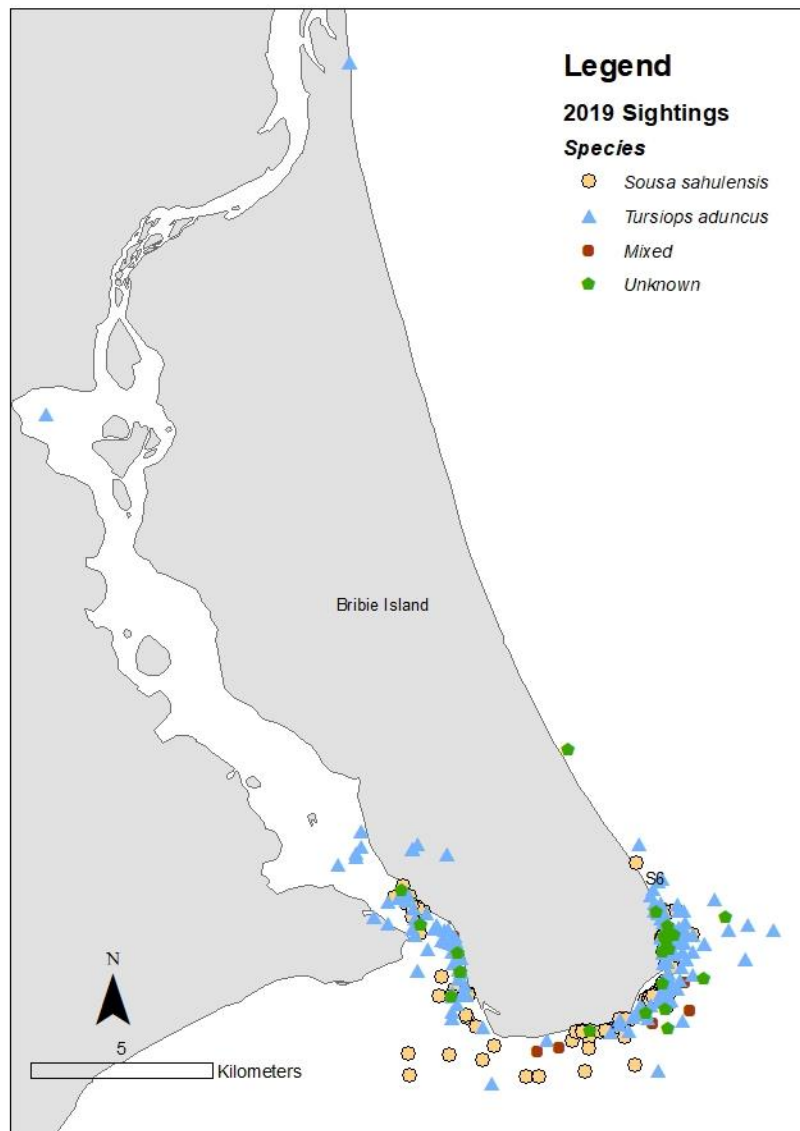


Figure 2: Approximate locations of dolphin groups observed between January 2019 and December 2019
(Note: fewer points appear due to overlay of coordinates).

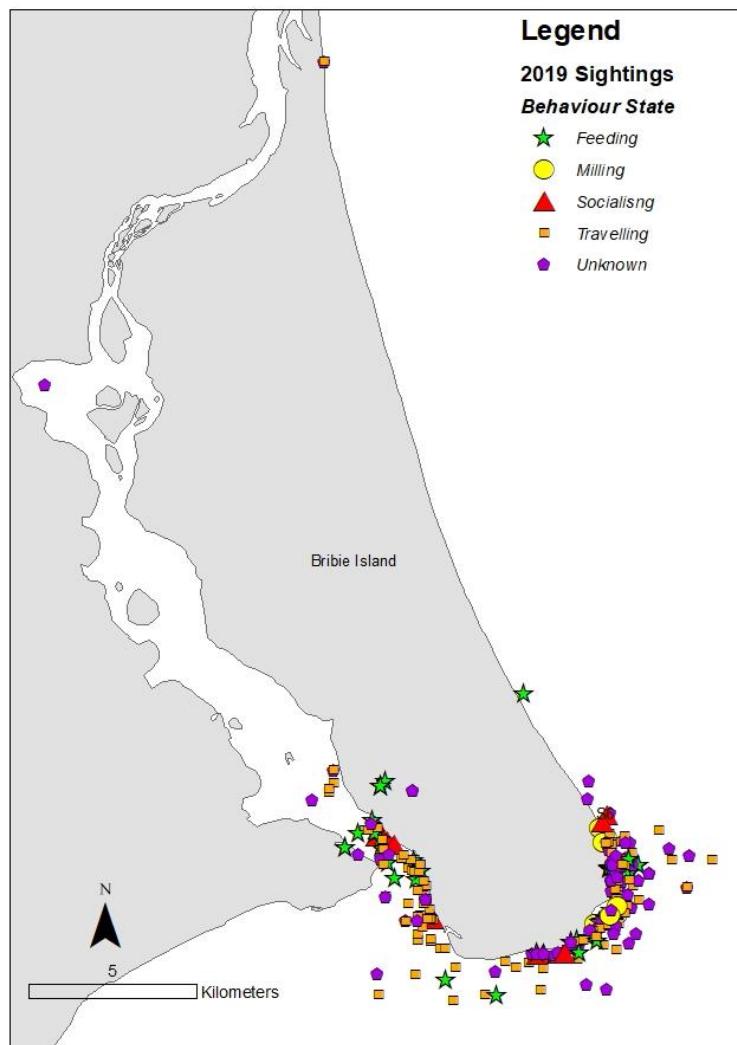


Figure 3: Approximate locations of dolphin groups observed and their corresponding behaviour states between January 2019 and December 2019 (Note: fewer points appear due to overlay of coordinates).

Milling, or resting behaviour of dolphins was observed only on the south-west side of Bribie Island, with other behaviour states showing no such preference for site, and a large number of sightings the behaviour state is unknown.

Group Size & Composition

Groups ranged between 1 and 46 individuals with average sizes of 6.14 individuals (S.D. = 6.36). For 90.65% of groups, it was not known if calves were present.

Table 3: Number and percentage of groups observed with calves (labelled as 'yes') or without calves (labelled as 'no') or unconfirmed (labelled as 'unknown').

Calf Present/Absent	# Groups	Percent (%)
Yes	36	9.35
No	0	0
Unknown	349	90.65

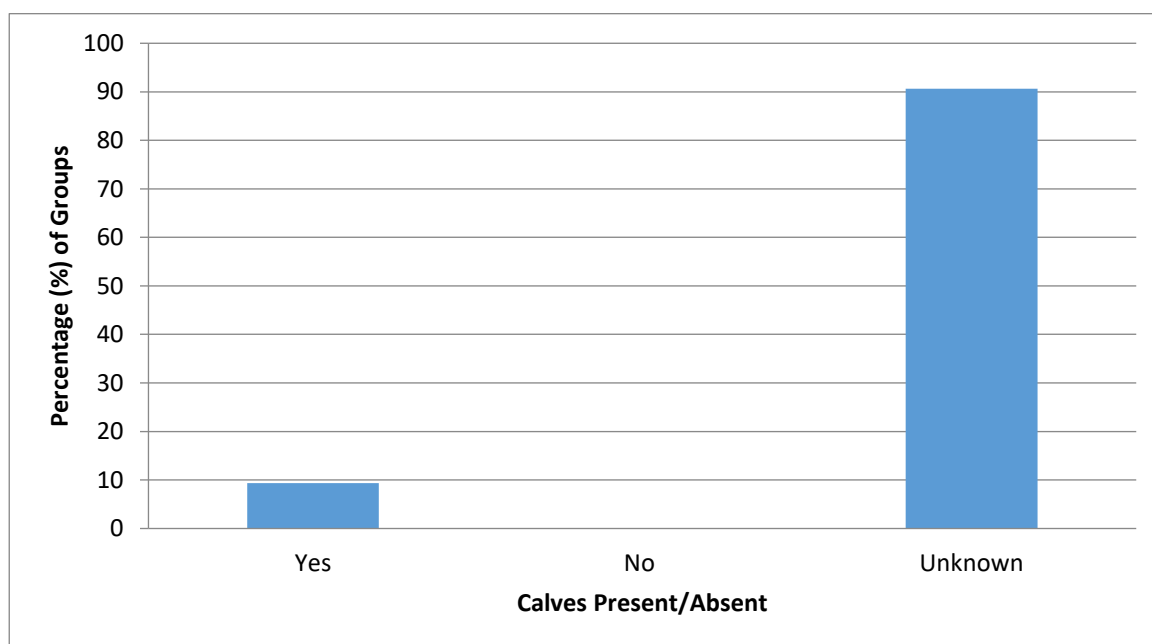


Figure 4: Calves Present (n=36), Absent (n=0) or Unconfirmed/Unknown (n=349)

Group Behaviour

Observers classified the behaviour of groups into four main behaviour states defined as feeding, milling (or resting), socialising and travelling. If the behaviour state could not be ascertained, it was recorded as 'unknown'. Feeding and travelling were the most commonly observed behaviours, with very small percentage of groups observed to mill and socialise. Over 30% of observations were recorded as unknown.

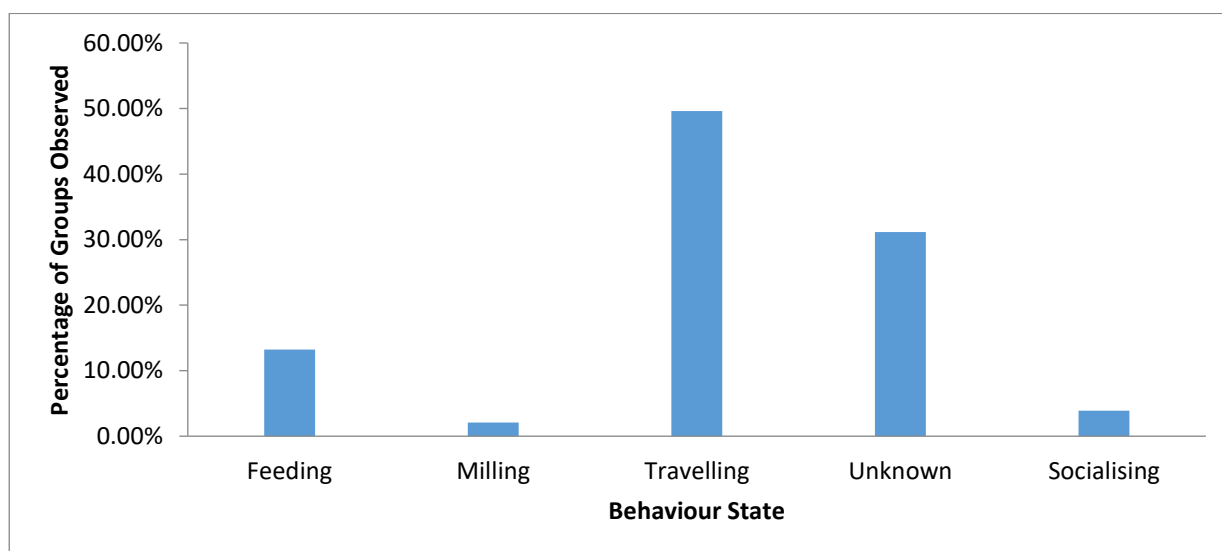


Figure 5: Percentage of groups observed engaged in different behaviour states.

The Indo-Pacific bottlenose dolphins were observed to have the highest percentage of milling, feeding and travelling behaviour states compared to the Australian humpback dolphins. Comparatively, socialising was the behaviour state where the Australian humpback dolphins had the higher percentage of observations. The behaviour recorded the most for dolphins in mixed groups was travelling, followed by feeding, and then socialising. The Indo-Pacific bottlenose dolphins had the highest number of sightings with behaviour states recorded as unknown.

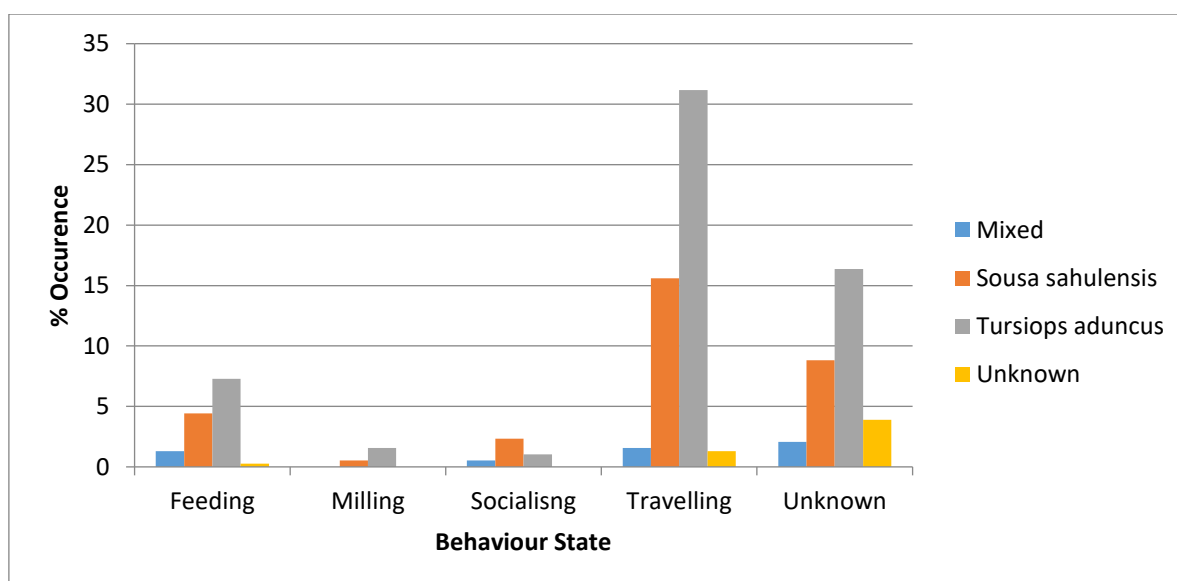


Figure 6: Comparison of behaviour states observed for each species group

Cases of Harassment

Dolphin Watchers recorded several incidences where Queensland Dolphin Watching Regulations were breached. Of particular concern were two cases of harassment which are detailed below. The definition of harassment is defined as follows, as set out in the USA Marine Mammal Protection Act:

(A) The term “harassment” means any act of pursuit, torment, or annoyance which—
(i) has the potential to injure a marine mammal or marine mammal stock in the wild; or
(ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioural patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering.

Significant Incident #1: Bongaree, 23 March, between 9am and 11am

<https://www.facebook.com/groups/CetalFauna/permalink/2150357098417824/>



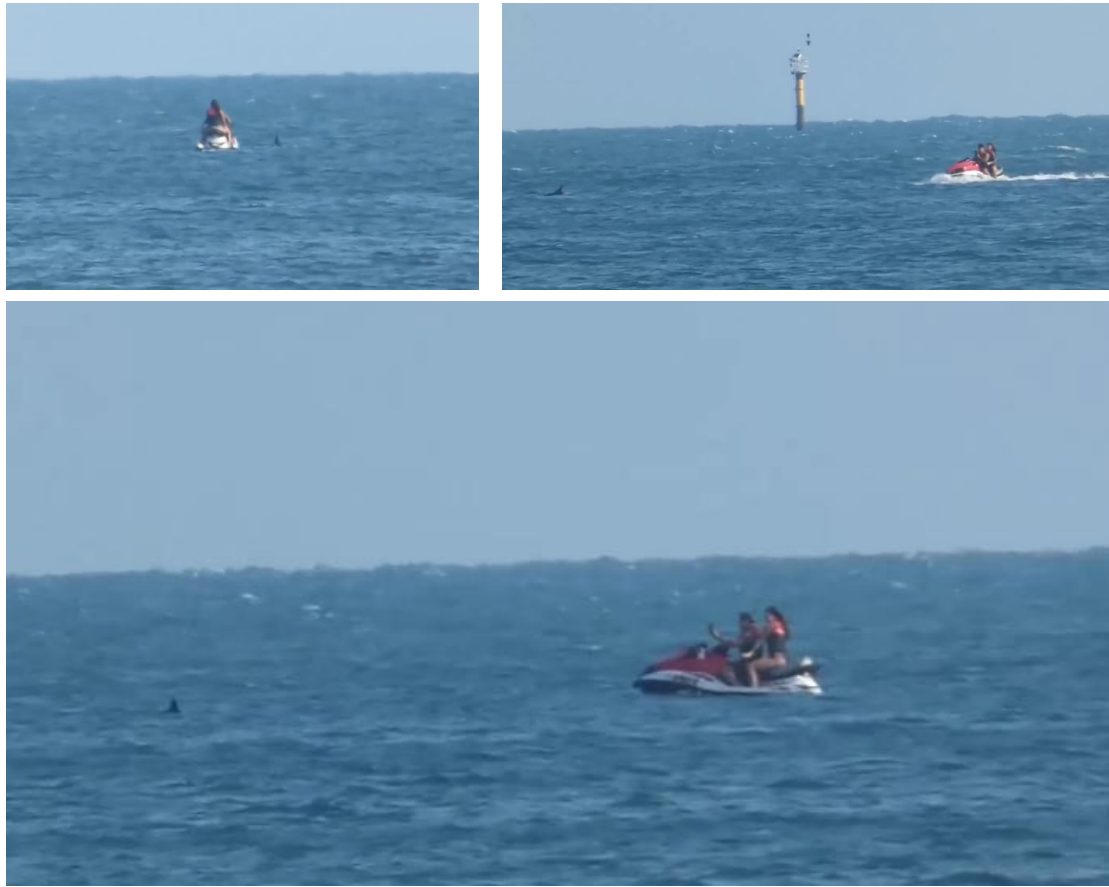
An observer watched from shore as boats, jet skis, kayaks and people harassed the dolphins close to shore, and further out in the boat lanes, on numerous occasions. Once when the dolphins were far out in the boat lanes, 2 boats converged on them, one towing a tube, kid jumping in the water toward them, boat doing donuts around the dolphins, driving over top of them on purpose...cheers were heard from shore. A third boat joined in, but seemed to take off relatively quickly, and the other two left with them. Then when the dolphins came near to land, two kayakers paddled out and chased them, right in front of where I was standing. Motor boats joined them from either side going toward the dolphins, trying to box the dolphins in; even the coffee boat was participating. There was one small boat with kids where a teen was hanging off the boat, then jumping in the water, looked like he was trying to catch a dolphin when it went by. One of the onlookers yelled at the coffee boat man from shore, who got a bit toey. Coffee man did leave the area, and the teens left after a few more stunts with the dolphins, who took to the centre of the passage again. These vessels, many times, and many people, were literally harassing the dolphins specifically, on purpose. The police boat went by once, but of course everyone was on good behaviour at that time, then went right back to it once they were gone.

The Queensland regulations breached in these instances are:

- Approaching a dolphin within the No-Approach zone (no closer than 150m directly in front or behind a dolphin, and not within 50m surrounding the whole animal)
- Restricting the path of a marine mammal and causing it to change direction
- Driving a vessel into a group of dolphins and causing it to divide into smaller groups.
- Attempting to touch a marine mammal
- Making loud and sudden noises around a marine mammal

Significant Incident #2: Buckleys Hole area, 19 November, at approximately 3.45pm

<https://www.facebook.com/groups/BribieIslandDolphinSightings/permalink/449447358907834/>



A group of at least 4 bottlenose dolphins observed from Renton Lane, being harassed and actively pursued by a jet ski.

The Queensland regulations breached in these instances are:

- Driving a prohibited vessel, in this instance a jet ski within 300m of dolphins.
- Approaching a dolphin within the No-Approach zone (no closer than 150m directly in front or behind a dolphin, and not within 50m surrounding the whole animal)
- Restricting the path of a marine mammal and causing it to change direction
- Driving a vessel into a group of dolphins and causing it to divide into smaller groups.