



# IFAW

International Fund for Animal Welfare

## **Ship speed monitoring in the Hauraki Gulf, Jan – Mar 2019**

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Report to Bryde's whale ship strike working group

April 2019

# Ship tracking data

The following slides are based on publicly available data collected by IFAW from [www.marinetraffic.com](http://www.marinetraffic.com) between Feb – March 2019\*.

\*No data was collected during January 2019 due to issues with access to the Marine Traffic website.

# Methodology

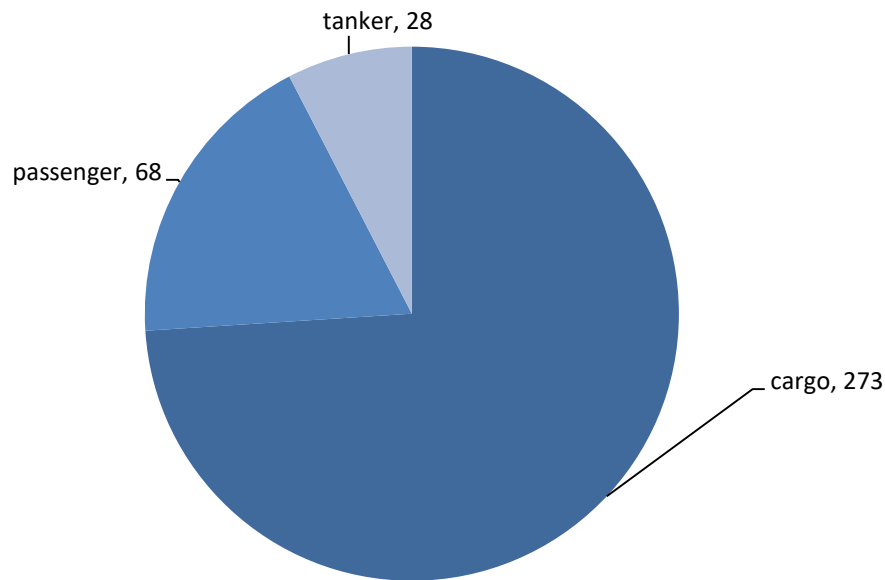
- Vessels speeds were recorded 4 times during each transit and an average (mean) speed taken.
- Vessels were recorded in real time when possible and otherwise retrospectively to vastly increase the number of transits recorded.
- The diagram shows approximate locations for speed measurements during transits.
- The green routes represent the common transits inbound to and outbound from the Ports of Auckland.
- The yellow route represents common transits for vessels crossing the protocol area. As these could only be recorded in real-time, they are likely under-represented in the data.



# Transits recorded

- A total of 369 speed records were taken across 1476 transits (4 speed measurements per transit) from 1 Feb – 31 March 2019. \*No data was recorded for January.
- The majority (74%) were cargo vessels, the majority of those being container ships (63%).
- The number of Passenger vessels increased to 68 (up from 31 last quarter).

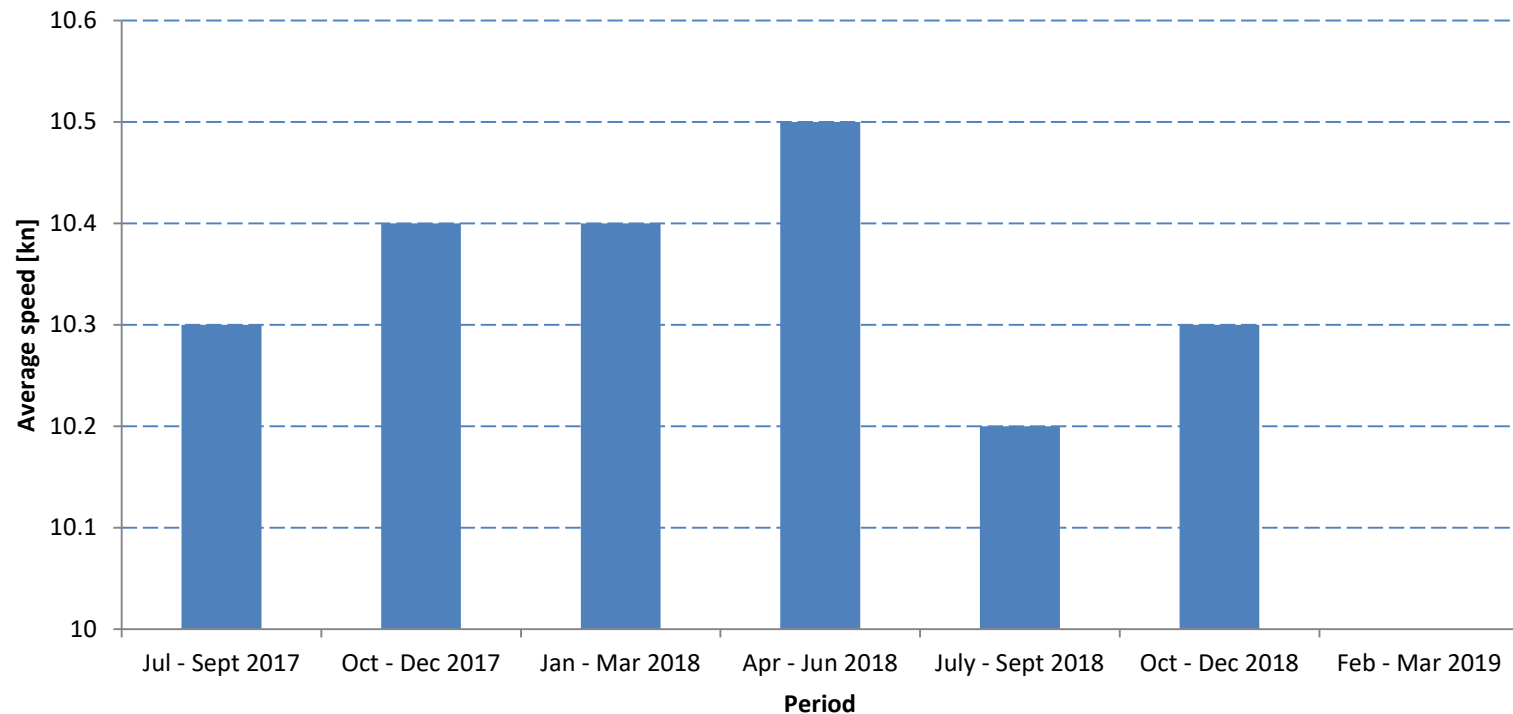
**No. of transits by vessel type**



AIS type	Detailed type	No. of transits
Cargo	Bulk carrier	19
	Cement carrier	19
	Container	173
	General Cargo	9
	Reefer	6
	Vehicles carrier	45
	Ro-Ro	2
Passenger	Passenger	68
Tanker	Oil / Chemical tanker	25
	LPG	1
	Asphalt	2

# Average (mean) speed over time (all vessels)

Period	No. Transits	Records per transit	No. records	Average speed (kts)
July – Sept 2017	306	Multiple	1220	10.3
Oct – Dec 2017	399	Multiple	1596	10.4
Jan – Mar 2018	385	Multiple	1540	10.4
Apr – Jun 2018	375	Multiple	1500	10.5
July – Sept 2018	329	Multiple	1316	10.2
Oct – Dec 2018	384	Multiple	1535	10.3
Feb – Mar 2019	369	Multiple	1476	10.0



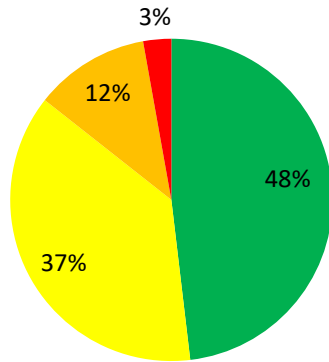
# Risk of whale fatality in the event of collision with a vessel, trends over time (all vessels)

■ Low Risk ■ Medium Risk ■ High Risk ■ Very High Risk

\*Risk of whale fatality based on probability of death as a function of vessel speed, adapted from Vanderlaan & Taggart, 2007.

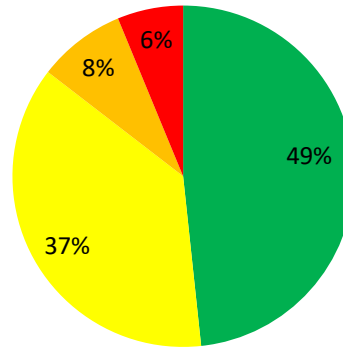
## Oct – Dec 2017

IFAW, multiple points, 399 transits



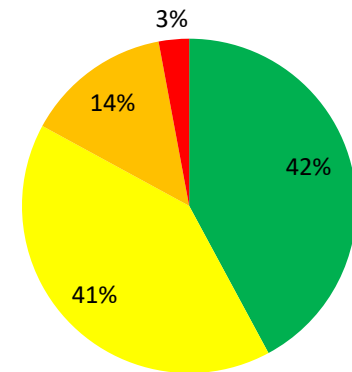
## Jan-Mar 2018

IFAW, multiple point, 385 transits



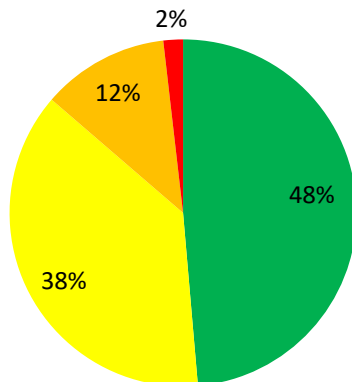
## Apr - Jun 2018

IFAW, multiple point, 375 transits



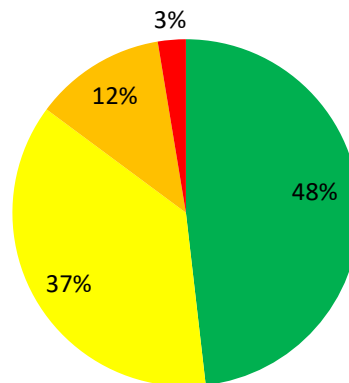
## July - Sept 2018

IFAW, multiple point, 329 transits



## Oct - Dec 2018

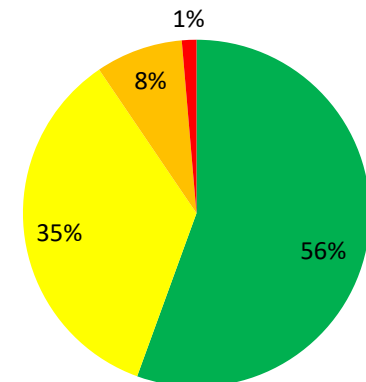
IFAW, multiple point, 384 transits



## Feb - March 2019

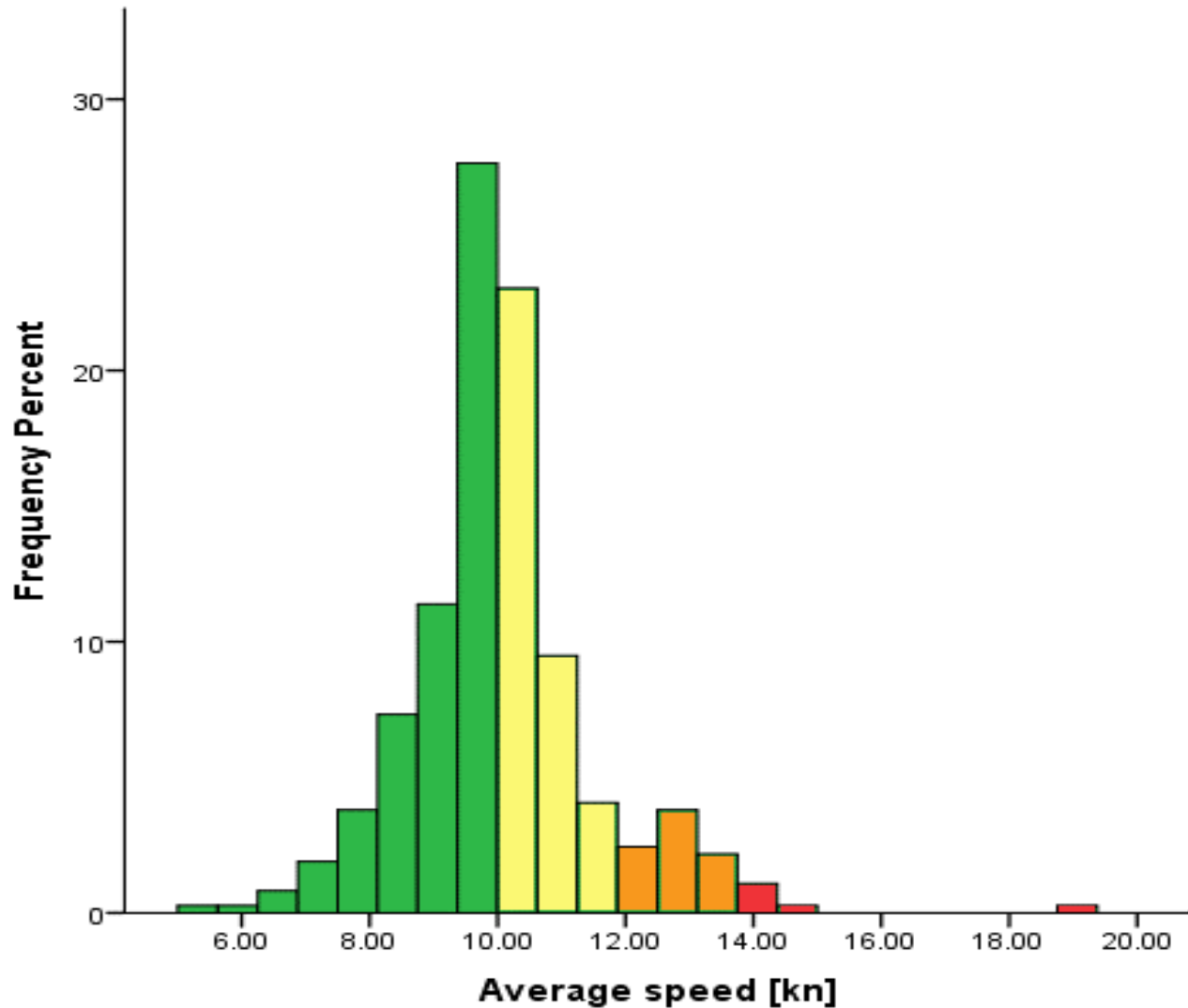
IFAW, multiple point, 369 transits

\*No data recorded for Jan



# Risk/speed Feb – Mar 2019 (all vessels)

\*No data collected in Jan



Low	<10
Medium	<12
High	<14
Very High	>14

# Summary

- Unfortunately no data was able to be collected for January 2019. This report therefore covers February – March 2019 only.
- Average speed for all vessels Feb – Mar 2019 was lower than the previous quarter, with a recorded average of 10.02 knots (down from 10.3).
- 56% of transits averaged 10 knots or less remaining steady on last quarter. Transits in the high risk (>12 knots) and very high risk category (>14 knots) accounted for 9% this quarter representing a 6% decrease on last quarter. Only 1% of vessels were recorded in the very high risk category.
- Passenger vessel numbers increased to 68 this quarter (up from 31 in the previous quarter), and remained in the Medium risk (<12 knots) category this quarter with an average speed of 10.4 knots
- Average speed was below 12 knots (medium risk) across all recorded vessel categories with the Cargo category recording the lowest average speeds and sitting in the low risk (<10 knots) category this quarter.
- All vessel average speeds sit within the low risk (<10 knots) category regardless of direction of travel this quarter.
- Only 5 vessels – 2 cargo and 3 passenger recorded speeds averaging greater than 14 knots (very high risk category) – the highest being an inbound passenger vessel – the Golden Princess - with an average speed of 19 knots.