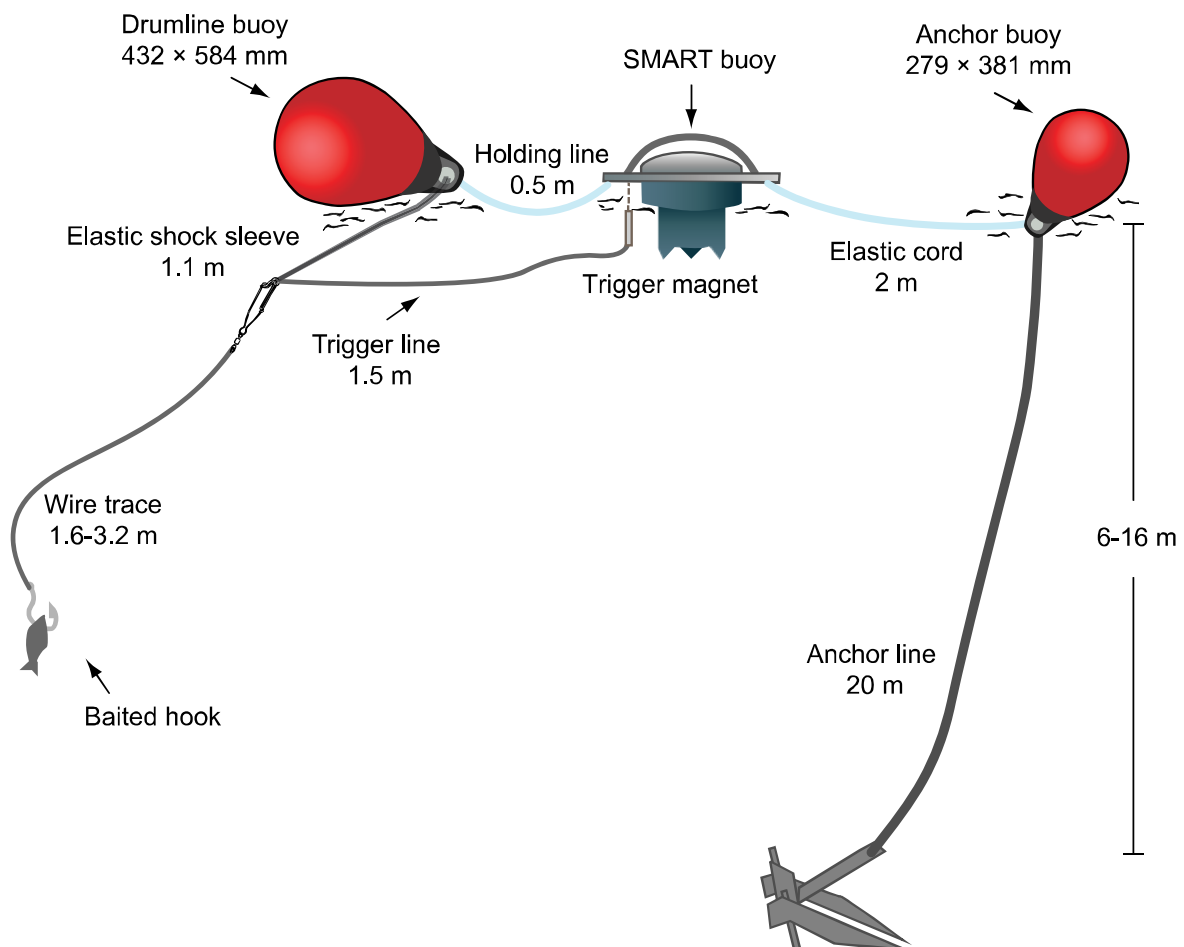
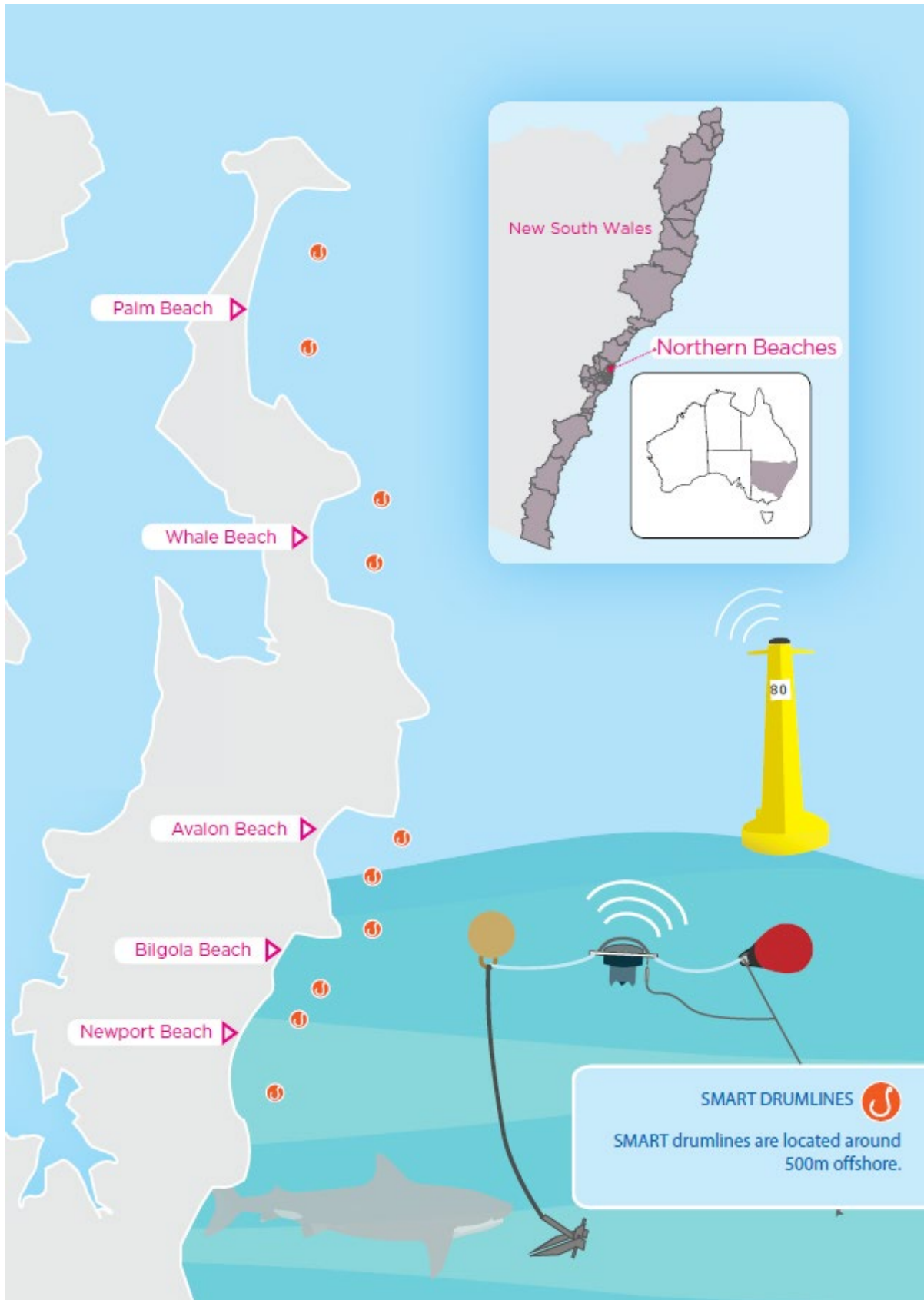


SMART drumline trial results for Sydney, September to December 2019

Paul Butcher, NSW Department of Primary Industries





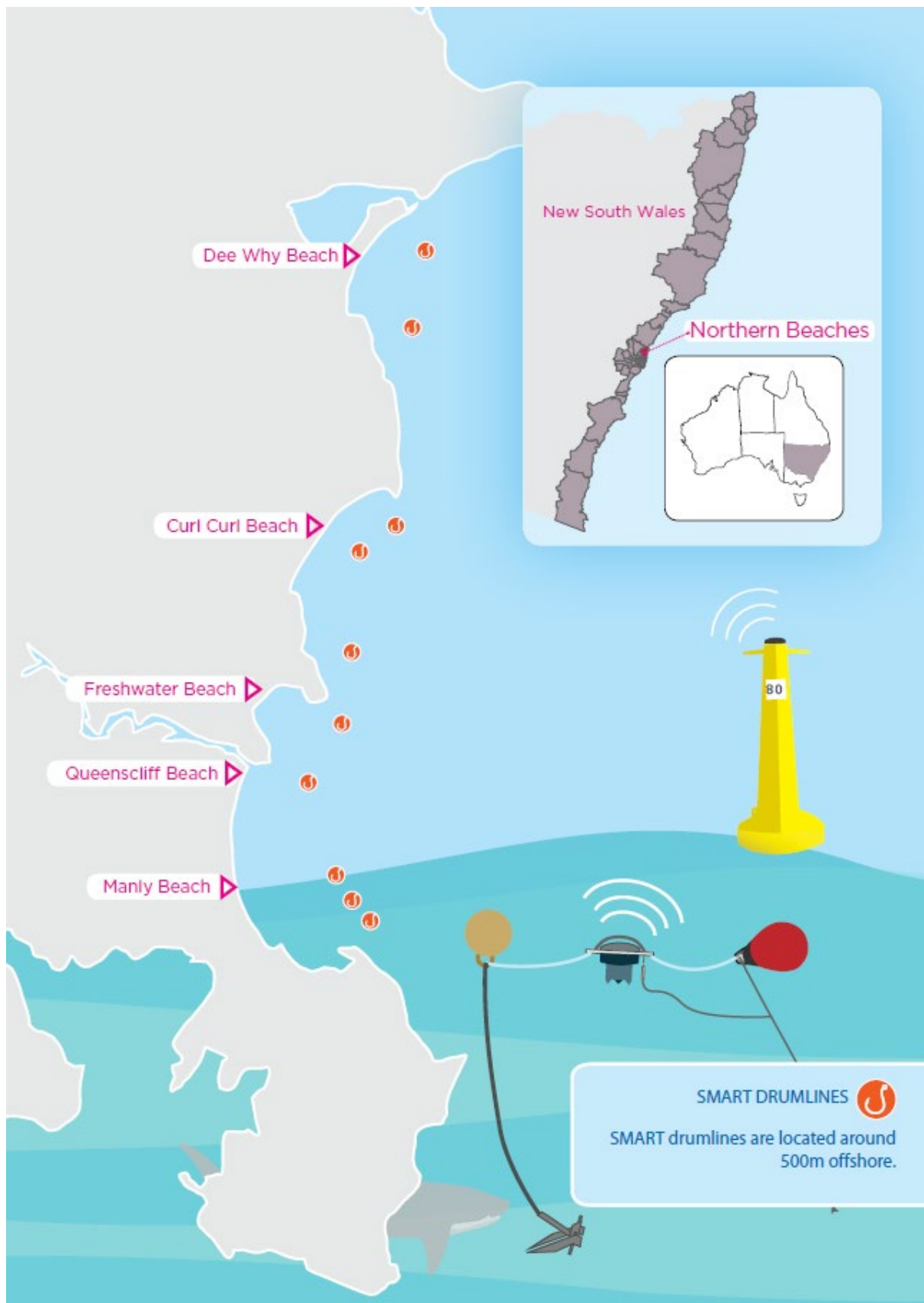


Figure 1: Maps showing positions of the SMART drumlines in the two areas (Barrenjoey-Newport and Manly-Dee Why) of the Sydney trial, 1 September - 1 December 2019.

Operation

During the trial from 1 September to 1 December 2019 in two areas of Sydney's Northern Beaches (Figure 1), weather and ocean conditions allowed SMART drumlines to be deployed by DPI contractors for 84 days (91% of days) at Barrenjoey–Newport and 85 days (92% of days) at Manly–Dee Why. Environmental conditions determined how long SMART drumlines were deployed on any given day in each area, ranging from 5:20h to 12:15h at Barrenjoey–Newport and 5:03h to 11:47h at Manly–Dee Why. On average, SMART drumlines were deployed for 9:27h/day at Barrenjoey–Newport and 9:06h/day Manly–Dee Why.

Total catches

A total of seven target sharks were caught (Tables 1 & 2): two Tiger Sharks were caught at Manly Beach and Curl Curl Beach, and five White Sharks from Palm Beach, Freshwater Beach and Dee Why Beach. No Bull Sharks were caught at either area of this Sydney trial.

A total of ten non-target animals were caught (Tables 1 & 2), including one Bronze Whaler, four Mako Sharks and five Dusky Whalers.

Comments

When the contractors responded to eight alerts that had no catch, 5 at Barrenjoey–Newport and 3 at Manly–Dee Why, they found that 2 hooks at Barrenjoey–Newport had no bait, 1 hook at Barrenjoey–Newport had 20%, and 2 hooks at Barrenjoey–Newport and 3 at Manly–Dee Why had the bait fully intact.

Four sharks failed to set off an alert (Table 1). When the contractor arrived at the respective drumline for retrieval at the end of the day, a Tiger Shark and two Dusky Whalers were found alive on the line while a Mako Shark was found dead (Tables 1 & 2). The trigger was still intact and had not been dislodged by the movement of the shark. All other sharks triggered alerts as normal and were released alive and in good condition.

The contractors arrived at the SMART drumlines within an average of 17 minutes at Barrenjoey–Newport and 16 minutes at Manly–Dee Why following an alert.

Table 1: The date and time of capture of species and their sizes (total length in m), sex and status during the SMART drumline trial in Sydney, 1 September - 1 December 2019.

Beach name	Date	Time	Species	Size (TL) and sex	Status
Barrenjoey - Newport					
Palm Beach	14/10/2019	17:29	Dusky Whaler	1.6; Male	Alive
	15/10/2019	06:40	White Shark	2.8; Male	Alive
	28/10/2019	15:59*	Dusky Whaler	1.5; Male	Alive
	14/11/2019	15:48	White Shark	1.7; Male	Alive
Whale Beach	13/10/2019	17:57	Dusky Whaler	1.4; Female	Alive
	02/11/2019	12:43	Mako Shark	1.8; Male	Alive
	29/11/2019	10:43	White Shark	2.0; Female	Alive
Avalon Beach	04/09/2019	16:18	Shortfin Mako	1.2; Female	Alive
	26/10/2019	14:28	Shortfin Mako	1.5; Male	Alive
	09/11/2019	18:12*	Mako Shark	1.1; Male	Dead
	15/11/2019	10:38	Dusky Whaler	1.6; Male	Alive
Bigola Beach	20/09/2019	11:12	Bronze Whaler	2.5; Female	Alive
	28/11/2019	16:38*	Dusky Whaler	1.7; Male	Alive
Manly – Dee Why					
Manly Beach	19/11/2019	17:15*	Tiger Shark	2.3; Female	Alive
Freshwater Beach	07/11/2019	14:42	White shark	1.7; Female	Alive
Dee Why Beach	28/10/2019	16:12	White Shark	1.7; Female	Alive
Curl Curl Beach	06/11/2019	16:36	Tiger Shark	3.0; Female	Alive

*No alert. Time is indicative of when the contractor arrived to pick up the gear at the end of the day.

Table 2: Cumulative totals of animals caught in the Sydney SMART drumline trial, 1 September to 1 December 2019.

Common name	Barrenjoey–Newport	Manly–Dee Why
TARGET SHARKS		
White Shark	3	2
Tiger Shark	0	2
Bull Shark	0	0
Sub-total	3	4
NON-TARGET ANIMALS		
Bronze Whaler	1	0
Shortfin Mako	4 ^d	0
Dusky Whaler	5	0
Sub-total	10	0
TOTAL	13	4

Note: all animals released alive unless otherwise noted by 'd'.