

Inland waterways drowning prevention project: A 12-month observational study of urban waterway users in two Australian states

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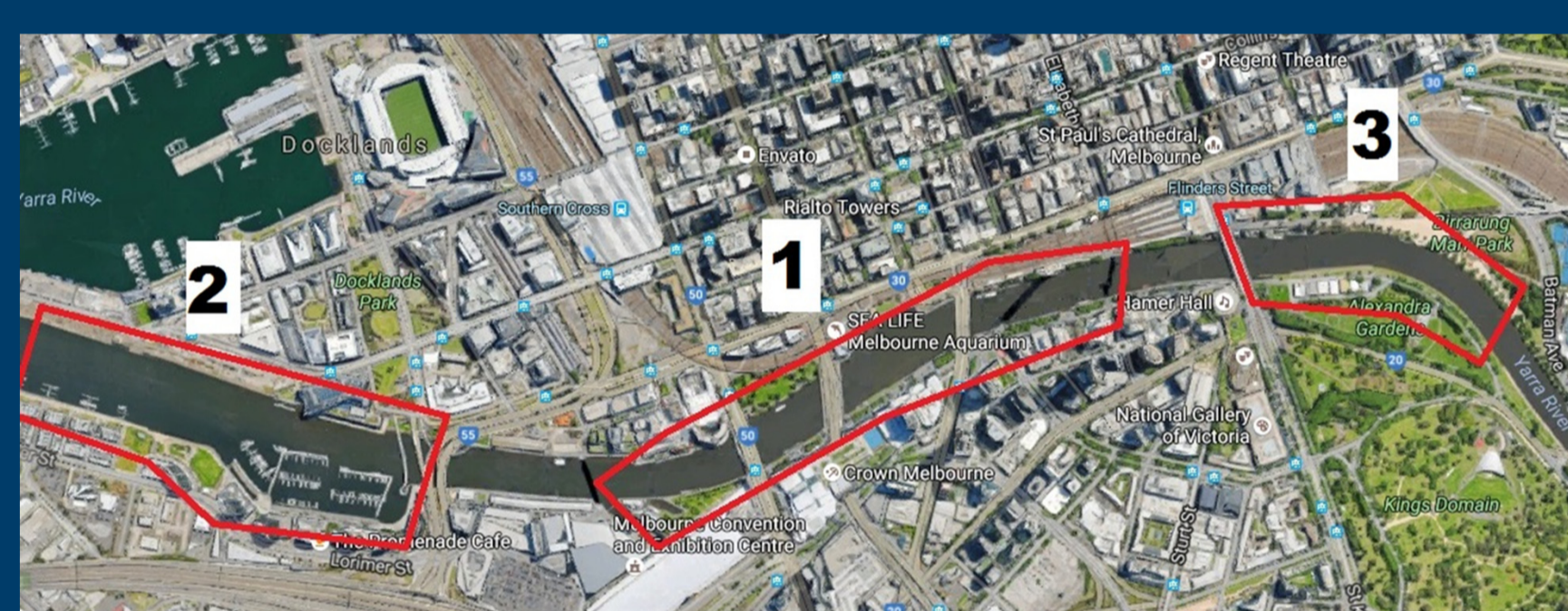
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Background

- In Australia, one-third of aquatic fatalities occur at inland waterways, accounting for more drowning deaths than beaches, oceans and harbours combined.
- As Victoria's Yarra River and Western Australia's Swan River remain national drowning blackspots, analysis of inland waterway exposure is necessary to identify high risk users, and determine applicable strategies to reduce aquatic injury and death.

Aim & Methods

- To investigate *in situ* behaviours that may place persons at high drowning risk for the Yarra and Swan Rivers, with a specific focus on alcohol consumption and lifejacket use.
- Based on known usage patterns and drowning data, water users for the two river locations were recorded simultaneously by direct observation, at randomised times and days over twelve months.
- Each river had nine observation points (high traffic areas and known drowning locations) and data collected included the number of people present, activities undertaken, and observable demographic factors.



Clockwise from top: Yarra high risk zone; Swan CBD zone; map of Yarra zones; recreation zone data collection along the Yarra.

Table 1 Activity type, similarities and differences for the Yarra and Swan

			YARRA	SWAN
Activity type	Recreation		52%	86%
	Transit		42%	10%
	Work-related		6%	3.5%
Activity detail similarities	Walking		21%	22%
	Talking/ device use		20%	16%
	Relaxing		15%	13%
	Rowing		7%	0.2%
Activity detail differences	Picnics		0.2%	4%
	Sightseeing		2%	10%

Table 2 Recorded risk factors for the Yarra and Swan

		YARRA	SWAN
Risk Factors	Consuming alcohol	4%	3%
	Not wearing lifejacket	1,273 combined	
	Company – alone	42%	28%
	Company – with children	8%	22%
	Company – children aged 0-9 not actively supervised	15%	17%

Results

- Data was recorded for 15,104 individuals (7,515 Yarra; 7,589 Swan).
- Males were most frequently observed in, on or around the waterways (57% Yarra; 53% Swan) and those aged 18-59 years (85% Yarra; 70% Swan).
- Land and water usage did not vary significantly by river, though Swan observations showed higher rates of recreation (86%; Yarra 52%) (Table 1).
- Persons in transit accounted for a higher proportion of activity type at the Yarra (42%) compared to the Swan (10%) (Table 1).
- Inadequate child supervision was noted in 15% of instances and 84% of boaters were not wearing a lifejacket (Table 2).
- In addition, overt alcohol consumption was observed in 4% of Yarra and 3% of Swan users (Table 2).

Conclusion

Differences in usage and exposure patterns for the Yarra and Swan Rivers suggest that countermeasures such as education and media campaigns, installation of safety equipment and environmental upgrades should be tailored for each of these locations.



Differences can be seen between the Yarra River (left) and Swan River (right) recreation zones.

