



# Putting tourists in harms way – Coastal tourist parks and hazardous unpatrolled surf beaches in New South Wales, Australia



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## HIGHLIGHTS

- Many coastal tourist parks in NSW, Australia are situated close to hazardous surf beaches.
- Many of these hazardous beaches are unpatrolled or only partially patrolled by lifeguards.
- Existing beach hazard rating systems need to incorporate human factors.
- Improved beach surveillance and education for coastal tourist park visitors is needed.

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## ABSTRACT

This study investigates relationships between coastal tourist parks in New South Wales (NSW), Australia and the hazard rating and extent of lifeguard patrols of their nearest surf beach. The vast majority (91%) of NSW coastal tourist parks are closest to surf beaches rated as hazardous to swimmers. Of these beaches, 35% are completely unpatrolled by lifeguards while another 61% are only partially patrolled (<25% per year). Visitors to tourist parks in the Southern Region of NSW are at greater risk when bathing due to a higher percentage of unpatrolled beaches. These findings raise important questions regarding the provision of lifeguarding services on these beaches, the availability and dissemination of beach safety material, and the duty of care of tourist park operators. It also highlights the need to further incorporate human usage and interaction variables into existing beach hazard rating systems.

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## 1. Introduction

Australia is a coastal nation with an estimated 80% of its population of 23 million living at or near the coast (Chen & McAnaney, 2006). Not surprisingly, the allure of Australia's coast and beaches and their varied recreational usages is an integral component of Australian culture (Booth, 2001; Huntsman, 2001). It is also a significant drawcard for both domestic and international tourists alike with an estimated 100 million visitations per year (SLSA, 2011). However, the Australian coast and its' beaches come with inherent hazards as 121 coastal drownings were reported in 2012–2013, most of which were associated with recreational activities such as beach swimming, rock fishing, and boating (SLSA, 2013).

At first glance, the incidence of coastal drowning may seem surprisingly high given that Australia has a large beach safety presence in the form of professional lifeguards and volunteer surf lifesavers

and a well-established “swim between the red and yellow flags” system and message (Booth, 2001; Ford, Giles, Hodgetts, & O'Connell, 2007; Huntsman, 2001). Supervised areas of beaches are designated by a pair of poles flying red and yellow flags that define a “safe” area for swimmers. The same system is used in many other countries including New Zealand, the UK and South Africa. However, of Australia's 11,877 beaches, only 3.8% are patrolled by professional lifeguards and volunteer surf lifesavers (SLSA, 2013) with many of those only patrolled seasonally. Furthermore, many Australian beaches are long, being in excess of 1 km (Short, 2006a), and often have only a single, comparatively narrow, patrolled area. As such, vast lengths of Australian beaches outside major coastal cities and tourist destinations are unpatrolled. This is problematic given that many sections of the Australian coast are subject to significant and energetic wave and tide activity resulting in large waves, offshore flowing beach rip currents, strong tidal inlet flows and deep channels. Furthermore, many of these beaches are located significant distances away from emergency services (e.g. ambulance, police, rescue helicopter) resulting in a potentially substantial lag time between the reporting of an incident and arrival of help at the scene.

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Beach patrols (lifeguards, lifesavers and flags) are an effective method for reducing the incidence of drowning. Of the 121 coastal drownings Australia in 2012–2013, 39% occurred >5 km away from the nearest lifesaving service, 15% were 1–5 km away, and 46% were less than 1 km away (SLSA, 2013). Essentially, almost all drownings in Australia occur either on unpatrolled beaches, outside the flags, or after patrol hours. For example, on the Queensland coast, all international tourists who drowned between 1999 and 2004 did so in unpatrolled environments (Wilks, Dawes, Pendergast, & Williamson, 2005; Wilks, De Nardi, & Wodarski, 2007). This type of statistic is common internationally with Hartmann (2006) noting that 63% of coastal drownings in Israel between 1995 and 1998 occurred in unpatrolled locations. Indeed, according to the US National Centre for Injury Prevention and Control, the chance of drowning at a beach protected by lifeguards trained under United States Lifeguard Association standards is less than one in 18 million (Branche & Stewart, 2001).

While coastal safety education is viewed as the key to reducing fatalities (Moran, Quan, Franklin, & Bennett, 2011) the application of direct beach safety educational interventions within Australia is at times ad hoc and inconsistent geographically. Therefore not all Australians receive this information and concern has been raised about the decline in water safety education and awareness in school children and the general public (Peden, Franklin, & Larsen, 2009). This is particularly true in relation to rip currents – the major cause of beach drowning (Sherker, Brander, Finch, & Hatfield, 2008). It is also difficult to target and engage overseas visitors with important beach safety information for similar reasons. While some airlines and tourist regions do provide beach safety information to visitors, others do not (Williamson, Hatfield, Sherker, Brander, & Hayden, 2012).

Therefore, in the absence of comprehensive beach safety education programs it would seem reasonable that the most efficient form of ongoing protection for domestic and international tourists and local residents alike would be an increase in the spatial and temporal extent of beach patrols. Unfortunately, this is not logistically possible or practical in small coastal towns and regions with low population densities and limited financial resources. There is however, a growing need for beach patrols outside major urban and tourist centres that is driven by seasonal (holiday) and permanent (retirement) population migration to the coast (Prideaux & McClymont, 2006; Walmsley, Epps, & Duncan, 1998). These groups are the main users of the network of tourist accommodation parks found along the Australian coast.

The diverse Australian tourist park industry is generally comprised of caravan parks, camping areas and on-site accommodation (including lodges, cabins, holiday flats, chalets and bunkhouses). It is estimated by the Caravan, RV and Accommodation Industry of Australia that 87.5% of Australians have stayed in a tourist park at least once (Breen, Bergin-Seers, Roberts, Frew, & Carlsen, 2006). To put this in context, since 1996 this has been the fastest growing tourism sector in Australia with 60% of users aged between 15 and 44 and 7% of all international tourists spending at least one night in a caravan park (CCIANSW, 2011). Many tourist parks are situated in locations close to natural features such as rivers and beaches, which provide users with a range of recreational options, but are also characterised by a number of hazards. While the risk and impact of flooding on tourist parks in Australia has been examined (Faulkner & Vikulov, 2001), relatively little has been documented on the potential risks associated with tourist park proximity to surf beaches.

As this sector of the tourism industry has expanded there has been a growing emphasis on the legal obligations of coastal tourist park proprietors in their duty of care towards their clients' use of adjacent beaches (Wilks, 2007). While various educational devices,

such as signage, may prevent legal responsibility of any death being placed on the proprietor, overall these do not inhibit an incident from occurring (Wilks & Davis, 2003). Furthermore, many tourism operators may not be aware of either the coastal hazards in their area or their legal responsibilities, which often results in insufficient interventions to mitigate the potential hazards (Wilks, 2007). It is certainly true in Australia that no standardised beach or coastal safety education intervention material (e.g. warning signage, brochures, posters) is available or provided to every coastal tourist park.

It seems likely that the coastal tourism sector of Australia will continue to grow with a particular emphasis on tourist parks supplying an affordable and informal holiday experience. Most of Australia's tourism revenue is earned within New South Wales (NSW) (ABS, 2004) with much of the state's coast now serviced by numerous tourist parks. In general, beach safety in NSW is focussed on lifeguard patrols of beaches adjacent to large, permanent population centres along a north–south transect between Newcastle and Wollongong (Figs. 1–3). Most beaches outside this region are patrolled seasonally or not at all, but nonetheless are easily accessible to the public. Furthermore, most of the open ocean surf beaches in NSW are characterised by a high energy wave climate with strong swells impacting the coast (Short & Trenaman, 1992). The ubiquitous presence of rip currents results in an average of 21 confirmed rip current drownings each year in Australia (Brighton, Sherker, Brander, Thompson, & Bradstreet, 2013) with NSW having the highest number of any state in Australia with 40% ( $n = 48$ ) of all drownings in 2012/2013 (SLSA, 2013).

This study investigates the relationship(s) between the location of NSW coastal tourist parks and the characteristics of their adjacent surf beaches with particular reference to the extent of lifeguard patrols and the relative physical hazard rating of each beach. In doing so, we effectively ask the question: are coastal tourist parks in NSW unintentionally putting tourists in harm's way?

## 2. Data sources

Data collected for this study consisted of:

- i) the number and location of coastal tourist parks in NSW and their closest surf beach;
- ii) the amount of time the nearest surf beach to the tourist park is patrolled/unpatrolled by lifeguard and lifesaver services; and
- iii) the quantification of the relative physical hazard rating of that beach.

This study does not include motel, hotel, holiday home or non-authorised camping facilities, which are additional contributors to tourism in coastal NSW. The Caravan and Camping Industry Association NSW (CCIANSW) website (<http://www.caravan-camping.com.au/>) provides a directory of tourist parks in NSW including their descriptions and locations. We define a “coastal” tourist park as being located within 5 km of an open ocean surf beach. These parks were identified from the CCIANSW website and were associated with the closest open ocean surf beach by taking into account access routes determined by natural and anthropogenic boundaries such as bridges, roads and inlets. In total, 231 tourist parks and their adjacent open ocean surf beaches were identified and assigned numbers of 1–231 sequentially from north to south (Table 1). It should be noted that parks 1–4 are associated with Kirra Beach which lies in the state of Queensland (QLD), just north of the NSW/QLD border.

The website BeachSafe (<http://beachsafe.org.au/>) provides information about Australian beaches, their hazard rating, and

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