

Safety in Coastal and Marine Tourism



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Abstract Coastal and marine tourism is the largest segment of the travel industry, historically associated with the Sun, Sand and Sea imagery of beach holidays, and more recently inclusive of a broad range of boating and watercraft activities within what has been termed Blue Tourism. The health and safety of visitors in water-based environments is particularly important as the consequences of an incident can result in drowning or more serious injuries than on land. This chapter describes the activities of tourists in coastal and marine environments, where they are likely to experience difficulties and the services available through various government agencies and organisations to assist them. A particular focus is on the legal responsibilities and duties of care owed to tourists, recognising that for many visitors water-based environments are very unfamiliar settings. The chapter concludes by looking at innovations and initiatives in coastal and marine tourism in response to COVID-19 and how safety contributes to greater enjoyment of the marine environment.

Keywords Coastal tourism · Marine tourism · Safety · Drowning · Risk management · COVID-19

Introduction

Coastal and marine tourism is the largest segment of the travel industry (Honey & Krantz, 2007) and forms part of what has become known as *Blue Tourism* (Tonazzini et al., 2019). According to Ecorys (2013) coastal tourism refers to beach-based tourism and recreation activities, including swimming, sunbathing and surfing, alongside other activities taking place on the coast and for which the proximity of the sea is advantageous, such as coastal walks or wildlife watching. Coastal tourism also

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includes hotels and resorts situated in proximity to the coastline and on adjacent islands.

Marine or maritime tourism, on the other hand, covers tourism that is primarily water-based rather than land-based (e.g., boating, yachting, cruising, nautical sports), but includes the operation of landside facilities and services necessary for this segment of tourism.

In an insightful analysis, the Centre for the Promotion of Imports from Developing Countries (CBI, 2020) provides a summary of common coastal tourism activities, main features for each location and associated tangible requirements that support these activities. Table 1 presents a snapshot of their work, where we can see a clear overlap in tourist leisure and recreation activities that are traditionally viewed as either coastal or marine.

While the Centre for the Promotion of Imports from Developing Countries (CBI, 2020) report has a clear focus on destination marketing, an interesting aspect is that health, safety and wellbeing feature prominently in the table; in regard specifically to the importance of requirements for trained and qualified guides and instructors for the various activities, favourable environmental conditions, regularly maintained equipment and appropriate infrastructure. As pointed out in *Introduction: Issues in Tourist Health, Safety and Wellbeing*, these are key considerations in keeping tourists safe in general. Moreover, researchers have now well-established in tourism that visitors are most likely to experience difficulties when they participate in unfamiliar activities in unfamiliar settings (Wilks et al., 2006). The ocean is one setting that can be very unforgiving when things go wrong, so it is essential that a safety net of supervision and surveillance is in place to assist visitors.

A recent report by the UK's Maritime and Coastguard Agency (2019, p. 1) makes this point very clearly:

The UK's beaches are special places, known around the world for their beauty and attracting millions of people every year. They create lifelong cherished memories for those who visit, and are vital to the economies of both local communities and the country as a whole; they generate millions through tourism, and attract new residents who are seeking a better work-life balance, contributing directly to the survival of our seaside towns and resorts. Underpinning all of this is beach safety.

The report goes on to note that:

a huge amount of work goes on behind the scenes, involving local partnerships including landowners, local authorities, third sector bodies and local lifesaving and rescue organisations. This work is fundamental to the wellbeing of millions of people, and often is only highlighted following a serious accident or incident (Maritime and Coastguard Agency, 2019, p. 1).

A good example of this work undertaken behind the scenes was recently reported for Surf Life Saving Australia (SLSA). In 2019 SLSA members performed 10,176 rescues during beach patrols, provided 89,695 first aid treatments and 1.5 million preventive actions (SLSA, 2019). Using these figures Deloitte Access Economics (2020) calculated the value of lives saved by Australian surf lifesaving patrols to be

Table 1 Common coastal tourism activities

Activities	Main features of location	Tangible requirements
Swimming, snorkelling	Clean beaches, clear seas	Lifeguards, sunbeds/umbrellas, beach sports (volleyball, beach tennis, yoga/tai chi), beach bar/restaurant, shop, rental of snorkels and fins
Stand up paddle boarding, canoeing, kayaking, surfing	Suitable sea conditions	Lifeguards, adequate rental equipment, guides as required
Jet ski, banana/donut boats, water skiing, parasailing, other motorised water activities	Suitable sea conditions	Rental equipment that is regularly maintained, trained staff, appropriate liability insurance, marking out safe areas in sea/lake
Diving	Suitable dive sites/wrecks, availability of marine life, coral reefs	Qualified diving instructors and guides, PADI and other certification agencies affiliation, equipment that is regularly maintained (air cylinders, SCUBA jackets, weight belts, masks etc), boats, appropriate liability insurance
Windsurfing, Kitesurfing	Suitable wind conditions and suitable beaches for learning to kitesurf	Qualified instructors, suitable equipment, liability insurance
Boat trips	Places to sail, such as outer islands, less-visited beaches, cultural destinations	Qualified skippers, boats that are regularly maintained, robust safety regulations, glass-bottomed boats, appropriate liability insurance, guides as necessary
Hiking/trekking	Local marked trails in beautiful and culturally interesting locations	Trail maps
Cycle tours	Local marked trails in beautiful and interesting locations	Bicycles for hire (regularly maintained), trail maps
Community-based tourism	Daily life in local villages, markets, festivals, cooking classes, vineyards/ distilleries	Suitable guides, vehicles
Wildlife/marine life watching	Resident wildlife/marine life of interest to target market	Trained guides, vehicles/boats
Conservation activities	Availability of suitable species, e.g., turtles or other, habitat protection activities, rubbish/plastic/ beach clearing activities	Trained conservationists and staff
Wellness activities	Allocated area/building for wellness	Trained wellness practitioners, spas, range of wellness activities

(continued)

Table 1 (continued)

Activities	Main features of location	Tangible requirements
Fishing	Suitable saltwater/freshwater species	Experienced fishing guides, suitable boats that are regularly maintained, robust safety regulations, fishing equipment
Horse riding	Local stables, suitable beach (sandy)	Experienced riders, liability insurance

Source: Centre for the Promotion of Imports from Developing Countries (CBI, 2020), used with permission

\$6.1 billion. In addition, the actions performed by SLSA members are expected to prevent 1363 coastal deaths and 818 critical injuries each year.

While drowning continues to be the main safety concern in coastal and marine environments (Royal Life Saving Australia, 2020; Rubbo, 2019; World Health Organization [WHO], 2014), and tourists who are unfamiliar with local water risks and features are identified as a key target group for drowning prevention (WHO, 2020), there is also a growing appreciation that all hazards in the coastal environment must be considered in visitor safety (Australian Water Safety Council, 2020). This approach has been adopted in this chapter.

It is expected that coastal areas will continue to attract large visitor numbers with the easing of COVID-19 restrictions worldwide (Hines, 2020; UK Maritime and Coastguard Agency, 2020; Zielinski & Botero, 2020) and the surging interest for spending time outdoors (Cairn Consulting Group, 2020). Indeed, leading up to summer 2020 SLSA state centres had anticipated record crowds at the beaches, and based on this prediction, expanded their drone technology services to monitor and where required assist beachgoers (Surf Life Saving New South Wales, 2021). Interestingly, the *10 National Safety Agenda Issues* identified by SLSA (2019) before COVID-19 included a mixture of activities across coastal and marine tourism (Fig. 1), as well as specifying a need to concentrate on those groups unfamiliar with the coastal environment, particularly international tourists.

Many of these health and safety issues will continue to be high priorities in the *new normal*, especially in countries where coastal and marine tourism is a principal attraction for visitors. At-risk groups will include regional and domestic tourists as well, with inexperience, poor swimming ability, alcohol use, risk-taking behaviour and failure to follow rules or instructions contributing to potential incidents in and around water (Wilks et al., 2005).

The following sections discuss the activities of tourists in coastal and marine environments, where they are likely to experience difficulties, as well as the services available through various government agencies and organisations available to assist them. A consistent observation here is that there is already a wealth of existing information and resources for the health, safety and wellbeing of visitors in coastal and marine settings—the challenge is to apply this knowledge in the new normal (Wilks, 2021).



Fig. 1 National safety agenda issues. (Source: Surf Life Saving Australia (2019), used with permission)

Responsibility for Safety

Before turning to coastal activities and settings it is important to note that prominent reports and plans surrounding blue tourism largely focus on economics and sustainability (Elcorys, 2012, 2013; National Coastal Tourism Academy, 2016; National Oceanic and Atmospheric Administration [NOAA], 2018; Tonazzini et al., 2019), with very little or no mention of the health and safety of tourists in the marine environment. There are several possible reasons for this. First, many coastal activities around the world take place on public beaches and there is a general expectation from visitors, and to a large extent tourism operators also, that local councils or public authorities will automatically provide services to keep tourists safe. In most cases councils do provide services and facilities under their duties of care to the public, but it is also important that visitors recognise that they have a personal responsibility to keep themselves safe and to follow instructions from local authorities. As noted in the following sections, the role of lifesavers and lifeguards is of central importance in coastal tourism safety.

Lifesavers often remind the public that “If we can’t see you, we can’t save you” to encourage people to swim between the designated patrol flags at the beach; these being identified areas where the most effective supervision and surveillance is available (International Life Saving Federation [ILS], 2015; Wilks, 2017). Indeed, studies show that many drowning and rescue events occur outside but in relatively close proximity to flagged areas (Wilks et al., 2007) with many visitors assuming that “near enough is close enough”. There are particular challenges for beach safety managers



Fig. 2 If we can't see you, we can't save you. (Source: Surf Life Saving Australia, used with permission)

during COVID-19 where social distancing is somewhat at odds with keeping people within the flagged patrol area where they can be supervised and assisted (Fig. 2).

A related reason for non-compliance seems to be that safety is often forgotten in the general euphoria of being on holidays and the activities at the time (Tarlow, 2006). This is supported by research showing that visitors to beaches often pass by prominent safety signs without seeing them (Brannstrom et al., 2015; Matthews et al., 2014). For this reason lifesaving organisations note that public signage is only one element in the safety net for visitors (SLSA, 2007) and signage by itself should not be exclusively relied upon (Cantrill, 2008; Taylor, 2004). The other elements in the safety net are education and information, denial of access (to go with warnings), acquisition of survival skills and provision of supervision (ILS, 2015).

Finally, while legislation in some jurisdictions directly considers the safety and wellbeing of visitors (e.g., the Tourism Services Act, 2003 [Qld].) a recent review of passenger safety on whale-watching vessels in Australia noted that most attention in related government regulations and industry codes of practice was directed to the safety of the whales rather than the safety at sea of the tourists (Wilks et al., 2020). The review concluded that this may be due to safety at sea being the responsibility of maritime transport authorities rather than being engendered through dedicated tourism services.

So, an important distinction in this chapter is between coastal and marine tourism activities that have a commercial component (e.g., the hire of a boat; guided scuba diving excursions) and those undertaken as private recreation (owning your own kayak and taking responsibility for your own safety while out paddling). The

chapter looks closely at commercial situations where there are statutory and/or common law duties of care to protect the health, safety and wellbeing of domestic or international tourists. In Queensland, for example, some of these responsibilities are covered by legislation, such as the *Safety in Recreational Water Activities Act 2011 (Qld)* (State of Queensland, 2019, p. 5) which states (inter alia):

The main object of this Act is to ensure the health and safety of persons to whom recreational water activities are provided by a person conducting a business or undertaking by—

- (a) Protecting the persons against harm to their health, safety and welfare through the elimination or minimisation of risks arising from the provision to them of recreational water activities; and
- (b) Promoting the provision of advice, information, education and training for health and safety in relation to the provision of the recreational water activities.

What this means is that a person carrying on a business within coastal and marine tourism has legal responsibilities to look after their customers, with clear guidelines for how this outcome can be achieved. Reckless conduct by those with responsibilities under the Act has very serious consequences. *Part V Government and Industry Activity: Safe Travel—The Legal Duty of Care to Keep Tourists Safe* outlines further the legal responsibilities for businesses in regard to taking care of tourists. The following coastal activities and settings have been selected based on popularity and research identifying where tourists are most likely to experience difficulties and consequently where they are most likely to need assistance.

Beach Tourism and Safety

Prior to COVID-19 beach tourism was booming. The 2019 Holiday Barometer found that the seaside dominated summer holiday destinations for Europeans, while Americans and Brazilians were almost equally interested in the seaside and city trips (IPSOS, 2019). This popularity continues a trend for Europeans spending time in the sun or at the beach as their main reason for going on holidays (European Commission, 2015, 2016). And such outcomes relate not only to international visitors, but also domestic tourism. Visit England (2015), for example, reported 11.22 million domestic overnight trips in England that involved visiting a beach, and an additional 37 million day visits to a beach comprising 3% of all tourism day visits in England.

Many of these beach visits involve families with children so it's not surprising that researchers and local government authorities have long been interested to identify hazards at beaches and how they can be managed. Beach safety requires a combination of common sense, swimming ability and beach/surf knowledge that will vary according to location and personal experience. The main examples of hazards and potential injury in a beach environment can be summarised as:

- Water (immersion, drowning)
- Marine animal (bites and stings, jellyfish)
- Litter (cuts, broken glass)
- Wave action (broken bones, collarbone from dumping)

- Equipment (head injury, hit by surfboard)
- Cliffs (fall, trip on cliff edge)
- Water pollution (infection, gastroenteritis from faecal contamination)
- Underwater object (spinal cord injury, diving into sandbar)
- Criminal activity (assault, robbery)
- Sun (sunstroke, sun exposure) (De Nardi & Wilks, 2008a).

Interestingly, when Surf Life Saving Australia (2019, p. 15) surveyed community members about “things that come to mind when thinking of the coast” hazards including those listed above were largely ignored, suggesting that visitors would be unprepared when confronted with these hazards. When visitors think about the coast, neither life saving services nor patrol flags immediately came to mind, though when prompted 80% of adults recognised rip currents to be very hazardous.

In an insightful study Abraldes and Pérez-Gómez (2009) investigated the risk factors for injuries on a beach. Risk factors were grouped in four main categories: beach morphology, beach equipment, lifeguard service and miscellaneous aspects. The risks were evaluated by a panel of experts who concluded that the lifeguard service was the single most important component on a beach that could prevent injuries and accidents. An extensive travel medicine review by Cortés et al. (2006) supports this finding, recommending that tourists should choose to stay in lodging that provides lifeguard supervision for designated swimming areas, since the presence of lifeguards increases favourable outcomes should a submersion occur.

Moran and Webber (2014) looked at leisure-related injuries at the beach by analysing lifeguard incident report forms in New Zealand. Apart from actual rescues, they found that lifeguards provided first aid to almost 9000 beachgoers over five summer seasons, with an average of 1772 cases per annum. The main first aid incidents were related to (in order of frequency): lacerations/abrasions (47%), marine sting/envenomation (16%), bruising (11.9%), feeling unwell (5%), insect stings (4%), breathing difficulties (3%) and cramp, burns and sunburn (all less than 1%).

Studies of tourist hospital admissions (Nicol et al., 1996) and clinic presentations in coastal settings (Schmierer & Jackson, 2006) confirm this predominant pattern of lacerations, soft tissue injuries, marine stings and sunburn stemming from the hazards listed above. More recently, the Australian Water Safety Council (2020) notes the increasing need to also respond to cardiac and other emergency events in coastal settings, finding a pre-existing medical condition was present in 36% of drowning deaths. Overall, beaches accounted for 19% of drowning deaths and for every fatal drowning there are three non-fatal drowning incidents (Australian Water Safety Council, 2020).

When we look at health and safety in coastal and marine settings there is a long history of visitor care on beaches, mainly through local councils or voluntary life-saving associations. There are also some exemplary practices developed by industry associations. A good example is the *Water Safety Handbook* developed by the Queensland Tourism Industry Council (QTIC) in partnership with Surf Life Saving Queensland (SLSQ) (QTIC, 2018).

This handbook provides best practice guidelines for tourism operators to assist in keeping visitors safe in aquatic environments, with checklists to conduct regular safety audits and a companion Beach Safe App available in 72 languages (Surf Life

Saving Australia, 2020). With permission from QTIC the best practice guidelines relevant to all aquatic environments are presented in the [Appendix](#) at the end of the chapter. Interestingly, the first guideline is:

1. *Conduct a safety brief with all participants before engaging visitors in aquatic activities.*

This advice is emphasised across all coastal and marine activities, with specific examples provided in the following sections of this chapter. Failure to provide a comprehensive safety brief is one area where operators are especially vulnerable to lawsuits.

The second QTIC water safety guideline is to advise visitors to remember the FLAGS message—using the acronym FLAGS as a memory aid (Fig. 3):

- F—Find the flags and swim between them
- L—Look at and read all safety signage
- A—Ask a lifesaver or lifeguard for some good advice
- G—Get a friend or travel companion to swim with you
- S—Stick your hand up if you need help

Finally, to emphasise the value of lifeguards and lifesavers in beach safety Table 2 presents a summary of 2019 statistics from the United States Lifesaving Association (USLA, 2020a, para. 2), which includes the well-established statement



Fig. 3 The Flags Message. (Source: Surf Life Saving Australia, used with permission)

Table 2 Summary of 2019 National Lifesaving Statistics

Events	Number of people
Beach attendance	408,965,638
Rescues	71,034
Preventive actions	8,838,094
Medical aids	
Major	16,119
Minor	287,335
Lost and found persons	11,261

Source: Adapted from United States Lifesaving Association (2020b)

that “USLA has calculated the chance that a person will fatally drown while attending a beach protected by USLA affiliated lifeguards at 1 in 18 million (.0000055%)”. This is based on the last 10 years of reports from USLA affiliated lifeguard agencies, comparing estimated beach attendance to the number of drowning deaths in areas under lifeguard protection.

By way of explanation, major medical aids mentioned in the table are first aid instances which require further attention from higher levels of medical care such as paramedics, emergency transport or specialised medical response. Minor events are where first aid provided by the lifeguard was sufficient, remembering that all lifeguards are trained and accredited in first aid.

Drowning

Drowning is the second most frequent cause of injury death among international tourists, following motor vehicle crashes (Leggat & Wilks, 2013). Drowning is also largely preventable (Cortés et al., 2006). In Australia, males drown at a rate of four times that of females and 23% of drowning deaths occur while swimming and recreating (Australian Water Safety Council, 2020). Of particular concern are rip currents (“rips”) which are narrow and concentrated seaward-directed flows that extend from close to the shoreline, through the surf zone, and varying distances beyond. Each year they cause hundreds of drowning deaths and tens of thousands of rescues on beaches worldwide and are therefore the leading deadly hazard to recreational beach users (Castelle et al., 2016).

A comprehensive review of data records by Brander et al. (2013) revealed that rip currents account for more human fatalities in Australia on average each year than bushfires, floods and cyclones combined. Yet, studies consistently show that a majority of beach visitors are not able to spot a rip in a photograph (Ballantyne et al., 2005; Wilks et al., 2017; Williamson et al., 2012). Research by Surf Life Saving Australia (2019) found that the general public recognise rips as extremely or very hazardous but even experienced ocean swimmers may struggle to identify a rip (see Fig. 4).

At the same time, research by Sherker et al. (2010) found that beachgoers with basic knowledge about rip currents are significantly more likely to avoid swimming



Fig. 4 Ability to recognise a rip. (Source: Surf Life Saving Australia 2019)

in the rip. This is an important finding that supports continuing education on rip safety, but perhaps using more immersive and realistic education strategies, such as the use of virtual reality headsets showing moving imagery (videos) of rip currents rather than static photographs in order to improve rip spotting ability (Pitman et al., 2021).

Sometimes it takes a tragic incident for tourist safety to improve, especially in relation to rips. In the case of Bavo Verheyden (see Case Study 1) a Flemish tourist who drowned at Ntafufu Beach, Eastern Cape, the High Court of South Africa found the resort at which Bavo and his brother stayed a short distance away from Ntafufu Beach, failed in its legal duty to take all of the reasonable precautions to warn the brothers of potential dangers of the sea. As part of a court-sanctioned settlement with the family, the resort agreed to erect signs both at the resort and on the beach warning of the possible presence of rips and the danger of swimming in the ocean in the absence of a lifeguard. The family's charity Safe Coastal Tourism (Danneels, 2011) continues to promote beach safety for tourists, with the work formally endorsed by the UNWTO (2012).

Case Study 1: Bavo Verheyden

Bavo was a fourth year Bioscience Engineering student when he visited his older brother Bart, a medical doctor working in South Africa. The two arrived at Khiluleka Retreat (now Ntafufu Eco Lodge) on the evening of 17 April 2011. The following day the brothers rented two canoes at the resort then took them over the river to the sea, where they were caught in a rip. Bavo drowned and Bart survived. The family filed a law suit against the resort owners claiming that they had neglected to warn the brothers of the dangers of the sea at the nearby beach. After a lengthy process a court-sanctioned settlement was concluded on 2 September 2019. The legal duty to take all reasonable measures in warning bathers of the dangers of the sea was recognised in the settlement.

Danneels & Ors v Khululeka Retreat CC (2019)

Coastal and island resorts have very clear duties of care to their commercial customers in relation to water safety, as also demonstrated in other legal cases (Wilks & Davis, 2003). As previously noted, well before COVID-19 best practice guidelines for protecting visitors were readily available (QTIC, 2018). The challenge is to use them.

Coastal and Island Resorts

Quite often coastal and island resorts are situated in close proximity to dangerous surf areas. McKay et al. (2014) investigated 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. They found that 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. This places an additional responsibility on the resorts to provide a safety net for their guests by way of education and signage, or ideally through the employment of lifeguards.

In a slightly different context Van den Enden (2009) reports that following a major incident in 2003 where two guests from a neighbouring resort drowned in a lagoon, and two staff members were hospitalised as a result of their rescue attempt, the Outrigger on the Lagoon Fiji Resort requested assistance from Surf Life Saving Australia. A lifeguard training program was provided. The program involved an aquatic safety and risk management assessment (including signage), staff training and advice on lifesaving and rescue equipment. In the months following the training program 20 guests were rescued, of which 18 belonged to nearby resorts.

In the earlier landmark case of *Enright v Hyatt Coolum Resort* an American businessman drowned at an unpatrolled Australian beach while he was a guest of the resort. His widow sued the resort and the local government council which had control of the beach. The court systematically reviewed the risk management mechanisms the resort had in place to prevent a drowning incident. Justice Moynihan found that it was reasonably foreseeable that someone might swim in the surf and drown on an unpatrolled beach, but that the facts in this case did not support a breach of the defendants' duty of care as the resort had gone to considerable lengths to provide a safe swimming environment for its guests. Again, and relevant to this case, detailed industry standards have been available to assist tourism operators for many years (Federation of Tour Operators, 1999, 2003).

One area highlighted in the case of *Roberts v Iberotravel Limited* was the provision of first aid for guests at a resort. The plaintiff Kevin Roberts, aged six at the time of the incident, suffered a near drowning event while on holidays with his family in Majorca. Kevin was found floating unconscious in the swimming pool and was carried by another guest to the hotel reception. He sustained catastrophic brain damage. Under Spanish law the hotel had a responsibility to provide pool attendants who could swim and were trained in life saving and the practice of artificial

respiration in cases of asphyxia from immersion in water. His Honour Justice Gibbs found “There is no evidence that any staff or other person connected with the hotel and who was in any way trained in lifesaving or resuscitation responded to the emergency ... In short there was, as I find, a complete absence of any significant staff, equipment or procedure to deal with any drowning emergency”. His Honour found the hotel negligent both in relation to Kevin’s immersion and their failure to resuscitate.

While lifesavers and lifeguards can deliver first aid in response to a range of beach hazards (Moran & Webber, 2014) and are clearly an effective way to provide supervision and assistance to visitors (Cortés et al., 2006) coastal and island resorts also have legal responsibilities to provide timely first aid for their guests (Wilks, 2013). The discharge of these responsibilities involves staff training and accreditation, resources (first aid kits, signage) and regular training drills (St John Ambulance Australia, 2013). In addition to drowning incidents, the ability to provide immediate first aid for identified hazards such as marine stings, sun safety, adverse effects of drug and alcohol use, slips and falls, and a range of medical emergencies is all part of customer care in coastal and marine settings (QTIC, 2018).

Boating

Boating and watercraft use are very popular activities undertaken by tourists, both international and domestic. In Australia, an estimated 20% of the population participate in boating and watercraft activities annually. Unfortunately, drowning is the leading cause of boating-related fatalities and boating safety is a national priority (Australian Water Safety Council, 2020).

In 2019, the United States Coast Guard counted 4168 accidents that involved 613 deaths, 2559 injuries and approximately 55 million dollars of damage to property resulting from recreational boating accidents (U.S. Coast Guard, 2019). Where cause of death was known, 79% of fatal boating accident victims drowned. Of those drowning victims with reported life jacket usage, 86% were not wearing a life jacket. Alcohol use is the leading known contributing factor in fatal boating accidents; where the primary cause was known, it was listed as the leading factor in 23% of deaths.

As previously noted, there is an important distinction between private recreational boating and commercial boating where, for the latter operators have specific legal duties for the safety of their customers/passengers. With private recreational boating individuals have responsibilities for their own safety, and there are clear standards and guidelines available to assist them (e.g., Transport Canada, 2019a). The Canadians have a very good system, where everyone who operates a power-driven boat needs proof of competency—something that shows they understand the rules and how to safely operate a boat. The Pleasure Craft Operator Card is the most common means and this can be obtained by passing an accredited boating safety course (Transport Canada, 2019b). A boating safety app (Boating Safety App, 2021)

is also available to download to mobile devices, covering basic safety areas. Other jurisdictions have similar personal licencing systems.

Staying with Canada, the *Small Commercial Vessel Safety Guide* (Transport Canada, 2017) illustrates the difference between private and commercial vessel safety, the latter for owners and operators of small commercial vessels because they are responsible, by law, for knowing, controlling and defending against the risks related to their vessel and its use. One of the most important responsibilities in tourism is the pre-departure passenger briefings. *The Guide* (para. 1–9) notes:

Holding safety briefings before the voyage begins—similar to those given on an aircraft—is a legal requirement. Show and tell your passengers how to react in an emergency. Give the briefing in English, French or both, as needed.

You must tell passengers:

- where to find lifejackets closest to their position on the boat, including children’s lifejackets
- how to properly put on, secure, and, if you have inflatable and hybrid lifejackets, how to operate, each type of lifejacket onboard
- not to put lifejackets on until they are outside the cabins and out from under canopies
- where the liferafts are, if you have any, and where they are to gather to get onboard the liferaft (muster stations); and
- how to reduce the effect of their movement on vessel stability and how to avoid potential hazards, such as ropes and docking lines.

Whether you talk, distribute handouts with pictograms, use a recording or show a video to give the briefing, you must show your passengers how to put on each type of lifejacket onboard.

Keep your passengers safe by keeping them informed.

The critical role of passenger briefings in tourism, especially for international tourists who may not speak or understand the local language, has been highlighted often in recent years (Maritime New Zealand, 2008; Wilks, 2008; Wilks et al., 2020; Workplace Health and Safety Queensland, 2017). There are now some excellent resources available to assist tourism operators. For example, the Australian Maritime Safety Authority (2020) has recently published an updated *Guidelines for a Safety Management System* which includes a very detailed passenger safety briefing form using a whale-watching eco-tourism vessel as the example template. The safety briefing emphasises the critical importance of crew training, practice drills and practical demonstrations for passengers.

Reviews of recreational boating accidents show a consistent pattern of contributing factors, including:

Failure to wear [...] a lifejacket

Failure to take adequate safety precautions, such as proper lookouts and excessive speed

Poor or unexpected weather conditions

Inadequate maintenance of equipment

Inexperience with equipment, waterways and weather conditions

Risk-taking behaviour

Alcohol and drug consumption (Australian Water Safety Council, 2020, p. 32)

Tourist briefings that address these issues are essential for all types of boats; from the hire of sailing vessels (see Case Study 2) through to passengers on adventure jet boats (see Case Study 3).

Case Study 2: McElwee and Anor v Ansett Transport Industries

In the case of *McElwee and Anor v Ansett Transport Industries* a paying guest at an island resort was injured by a boom on a catamaran supplied by the resort for guests. The court held that the defendant had breached their duty of care owed to the plaintiffs as there had been insufficient instruction regarding use of the vessel, insufficient advice regarding dangers involved generally, and specifically to the conditions on the day, and that there was lack of signage as to the topography of the bay. The plaintiff was awarded damages.

Source: *McElwee and Anor v Ansett Transport Industries (Operations) Pty Ltd* (1997)

Failure to take adequate safety precautions was tragically highlighted in September 2019 when a scuba diving boat caught fire off the coast of Santa Barbara, California. A crew member and all 33 passengers sleeping below deck died. The captain was charged with 34 counts of seaman's manslaughter. A grand jury cited three federal safety violations: failure to, assign a night watch or roving patrol, to conduct sufficient crew training or to conduct adequate fire drills (BBC News, 2020).

Case Study 3: Talwar v Ox Two Pty Ltd

In the case of *Talwar v Ox Two Pty Ltd* (t/as Ocean Extreme) there was a successful claim for damages arising from a boating misadventure on Sydney Harbour. The plaintiff was a passenger on an adventure tour. As the vessel travelled northbound in the western channel of Sydney Harbour the person in control carried out a jump manoeuvre over a large swell of water, at speed, which resulted in the vessel landing heavily flat on the water surface. This caused the plaintiff to be thrown from her seat, in the course of which her face and head struck a metal handhold bar structure on the vessel. As a consequence, she suffered physical and psychological injuries. The plaintiff secured a finding that the defendants were negligent and received a verdict and judgment in the sum of \$435,630 plus costs. An interesting aside was the evidence presented by the plaintiff's General Practitioner, who in his notes commented about the accident—"no seat belts, no life jackets, no instructions as to what to do in an accident".

Source: *Talwar v Ox Two Pty Ltd* (t/as Ocean Extreme) (2017)

Recalling the earlier observation that safety at sea is the direct responsibility of maritime safety authorities rather than tourism bodies or promoters per se (Wilks

et al., 2020) the Australian Water Safety Council (2020) recommendations around legislation and enforcement of lifejacket use, drink and drug driving of vessels and comprehensive safety campaigns to promote safe behaviours are pertinent to all coastal and marine tourism activities.

Scuba Diving and Snorkelling

Scuba diving is one of the world's most popular adventure tourism activities, involving the voluntary immersion of a person in salt or fresh water. The acronym SCUBA stands for Self Contained Underwater Breathing Apparatus and refers to the fact that a diver has an independent source of air while underwater (De Nardi & Wilks, 2008b). Many people only dive on their vacations (Coghlan & Prideaux, 2008; Wilks & Atherton, 1994), with large numbers taking an "introductory" or resort scuba dive that does not require certification but provides a closely supervised "one-off" experience (Fig. 5).

Asked what they most enjoyed about their introductory dive on the Great Barrier Reef, first time divers in one study mentioned enjoying seeing fish and coral close up, and were pleased with the colour and beauty underwater (Wilks & Beecham, 1992). Many divers replied that they also enjoyed the excitement and adventure of their first scuba experience. For some, especially males, there was a sense of achievement in taking the plunge. For others the dive was enjoyed because it was relaxing and peaceful. Feeling weightless and free was considered a unique experience. These benefits align very positively with new research interest in the promotion of health and wellbeing through exposure to blue spaces (Grellier et al., 2017).

Client safety has always been a key concern for the dive industry, recognising that this is an equipment intensive leisure activity that requires a basic level of fitness to enjoy the underwater experience. There is also a growing appreciation that many dive customers may have pre-existing health conditions that need to be assessed before they go underwater. The Australian Water Safety Council (2020) has recently stressed this point, including diving and snorkelling as a national focus for water safety and identifying the following risk factors:

- Poor medical fitness, especially age-related cardiac issues (often undiagnosed)
- Poor planning and failure to take adequate safety precautions
- Inexperience and inadequate skills
- Equipment inadequacies
- Hypoxic blackout from extended breath-holding
- Anxiety

Medical fitness for diving has been addressed in recent times through standard requirements to complete a medical screening questionnaire that asks candidates "Have you suffered from, or do you now suffer from, any of the following" and a list that includes: asthma or wheezing; fainting, seizures or blackouts; chronic sinus conditions; chest surgery; epilepsy; diabetes mellitus (sugar diabetes); heart disease



Fig. 5 Introductory diving provides a closely supervised underwater experience. (Image courtesy of Kyrra Wilks)

of any kind; collapsed lung (pneumothorax) and ear surgery (PADI, 2013). High blood pressure, alcohol use in the previous 8 h and pregnancy are also on the list. If the answer is *yes* to any of the conditions then the diving instructor seeks medical advice and the candidate is usually referred to a doctor for a dive medical examination to assess their fitness or suitability for diving (Wilks, 2018). There are also medical declarations that operators can use for snorkelling (Workplace Health and Safety Queensland, 2016) with additional safety information in 15 languages.

Looking at the other risk factors mentioned above, especially poor planning and inexperience, an early observational study of 192 certified tourist divers by Wilks and Christie (1992) found the most common problems in the pre-dive preparation were failure to complete a “buddy” or pre-dive safety check (BCD/Buoyancy; Weight; Releases; Air; Final Check), lack of buddy assistance and faulty equipment assembly. Traditionally, new divers learn a mnemonic device such as “**B**egin with **R**eview and **F**riend” to easily remember the steps in a buddy check (PADI, 2021). Unfortunately, safety checks are often forgotten in the excitement of getting ready to enter the water.

This fact was evidenced in a recent study by Ranapurwala et al. (2017) that found an overall incidence of major and minor mishaps was 11.2 and 18.2 per 100 dives, respectively in a sample of 426 divers. Major mishaps included rapid ascents and lost buddy contact, while minor mishaps included changed buoyancy due to dive suit, equalisation problems and mask flooding/dislodgment/panic. The study also compared mishaps according to whether divers used written pre-dive checklists,

memorised checklists or used nothing. The conclusion was that written checklists appear to be more effective in preventing mishaps.

As with lifesavers and lifeguards on the beach, the importance of direct supervision and support for tourist divers has been highlighted in the last 20 years (Lucrezi et al., 2018), with many jurisdictions now having codes of practice and regulations in place to guide operators in their duty of care responsibilities (Workplace Health and Safety Queensland, 2018).

Jet Skis

Motorised personal watercraft (PWC) or jet skis are very popular in outdoor recreation and as an adventurous activity in many coastal tourism destinations. They provide thrills riding the waves and an exciting adrenaline rush moving at high speeds across the water. Unfortunately, the number of accidents related to jet skis continues to rise and the Australian Water Safety Council (2020) has included them as a national focus for water safety in the boating and watercraft area. In 2019, the United States Coast Guard counted 660 personal watercraft accidents, involving 46 deaths (24 drowning, 22 other deaths) and a further 614 injuries. According to the Coast Guard, the primary contributing factors in personal watercraft accidents, in order, were: operator inexperience, excessive speed, improper lookout, operator inattention, and navigation rules violation (see Fig. 6). Interestingly, alcohol ranked a much lower (sixth place) in total US personal watercraft accidents, though it was the main contributing factor to fatal boating accidents across all vessel types.

This pattern of operator inexperience, inattention and improper lookout has previously been noted for tourists hiring jet skis (Wilks, 2010, 2012) and is reflected in Table 3 which summarises recent media reports of tourist jet ski accidents where loss of control and collisions between jet skis are highlighted.

In a review of 127 inpatients with orthopaedic injuries associated with jet skis Donnally et al. (2018) noted that PWC account for a disproportionate amount of water-based injuries and that current literature suggests those with less PWC experience are more at risk for injury. They observed that riding PWC is especially popular among tourists and as a result numerous inexperienced drivers will take to the crowded waters in these high powered aquatic vehicles. Industry comments suggest that the relaxation of COVID-19 restrictions is already resulting in crowding and jet ski safety issues (Gold & Norman, 2020).

In the Donnally et al. (2018) study the majority of PWC injuries resulted in extremity fractures, with the most common cause being direct collision. In another review Branche et al. (1997) found that in PWC injuries severe enough to require hospitalisation, 33% were due to direct collisions. Of the collision cases 75% were reported to have occurred between PWC.

At many tourism destinations there is no requirement for a tourist to have a licence or any prior experience before renting a jet ski for the first time. From a regulatory standpoint, Whitfield and Roche (2007) point out that overall

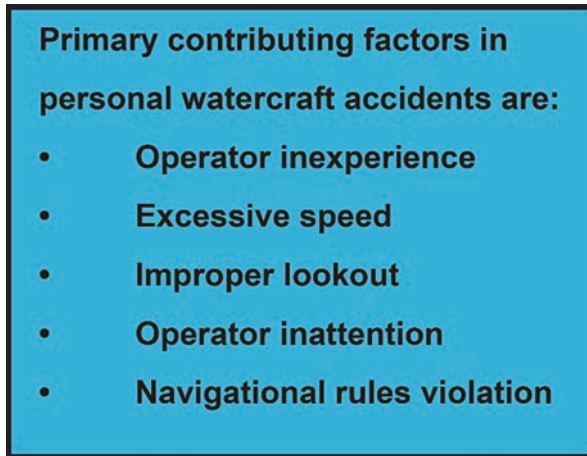


Fig. 6 Primary contributing factors in PWC accidents. (Source: U.S. Coast Guard, 2019)

responsibility for managing coastal areas often lies with the Local or Harbour Authority, which means there are variations in approach, resource availability and success in relation to PWC management.

There seems to be an increasing willingness for tourists injured in jet ski accidents to take legal action against hire operators (Kelleher, 2012; Lean, 2019; Maldives Independent, 2018) and for local law enforcement to hold tourists responsible for reckless driving (The Nation Thailand, 2019; Sakoot, 2017). As a popular tourist activity in coastal and marine settings, jet ski safety must be assigned a high priority, while giving attention to detailed briefings and the opportunity for customers to practice under supervision, and then demonstrate their competency, before heading out independently (Wilks, 2010, 2012).

Fishing

The Australian Water Safety Council (2020, p. 44) has identified fishing and rock fishing as a national water safety priority area, noting that:

Despite the benefits, fishing can also be very dangerous. In fact, rock fishing alone has been dubbed Australia's most dangerous sport and is responsible for drowning deaths every year. Many boating- or watercraft-related drowning deaths occur during fishing trips. The range of recreational fishing activities highlights a number of water safety challenges and the need for diverse, multi-faceted and targeted approaches to ensure safe fishing practice.

Among the risk factors for fishing are:

- Failure to wear a lifejacket
- Fishing alone
- Failure to take adequate safety precautions and equipment

Table 3 Recent media reports of tourist jet ski accidents

Date	Location	News heading	Incident details reported
5 October 2020	Sand Hollow State Park, Utah, USA	UPDATED: 11-year-old dies from injuries following watercraft collision at Sand Hollow.	Officials said three people, a man and two boys, were injured when two personal watercraft collided. An 11-year old boy later died of his injuries. The trio was part of a large family group that had travelled up from Arizona on vacation. The watercraft were rented. Source: Richards (2020).
14 August 2020	off La Carihuela Beach, Torremolinos, Spain	Dutch tourist, 32, dies in jet ski accident in Torremolinos	Apparently the young man lost control of the jet ski and was thrown for several metres, hitting the back of the jet ski as he fell. The Yamaha vehicle had been rented from a firm that also offered nautical training. Source: Torres and Cano (2020).
18 August 2019	Super Paradise Beach on Mykonos Island, Greece	Young Italian man tragically dies after jet ski overturns in Mykonos	A 21-year-old Italian man has tragically died after the jet ski he was riding overturned at Super Paradise Beach on Mykonos Island. The tourist was on holidays with his girlfriend when the couple decided to hire a jet ski for the day to ride around the Cycladic island. According to reports, the young man was riding the watercraft with his partner holding on behind him when the jet ski overturned. The pair both fell off and attempted to swim to safety but unfortunately the 21-year-old drowned as he tried to make it back to shore. Source: Greek City Times (2019)
28 January 2019	Off Kata Noi Beach, Phuket, Thailand	Russian tourist injured in Kata jet ski crash	A Russian woman was injured and taken to Chalong Hospital this afternoon after she and her friend crashed their rented jet skis into each other at Kata Noi Beach. Source: Thongtub (2019).
11 March 2018	Mission Bay, San Diego	Tourists hospitalised after jet ski crash	Two tourists were hospitalised after crashing their rented jet skis in Mission Bay on Sunday. Four people had been riding two jet skis when they collided at a high rate of speed. Two of the riders, who were visiting from Japan, suffered leg injuries. Source: Fox 5 Digital Team (2018)

(continued)

Table 3 (continued)

Date	Location	News heading	Incident details reported
11 January 2018	Off Tritrang Beach, Patong, Thailand	Australian tourist suffers broken leg in Patong jet-ski collision	An Australian woman on holiday with her family in Phuket suffered a broken leg in a jet-ski collision off Tritrang Beach, south of Patong. The accident involved two jet-skis colliding into each other, mid-afternoon. The other two people injured were both men. One had a sore neck, the other suffered chest pains. Source: Thongtub (2018).
27 June 2017	Ibiza, Spain	Stranded Brit tourist with broken leg winched to safety after horror jet ski accident in Ibiza	A British jet skier who broke his leg was winched to safety by helicopter in a dramatic rescue after he became trapped in a small cove in Ibiza. The Spanish Coastguard helicopter was called out to rescue the 50-year-old after receiving reports a man had lost control of his jet ski near S'Estanyol close to the village of Jesus. Source: Couzens (2017)
5 February 2017	Off Kata Beach, Phuket, Thailand	Australian tourist dies in jet ski crash with husband	An Australian jet skier died after a high-speed collision with another jet ski driven by her husband off Kata beach on this resort island. Source: Chuenniran (2017).
31 December 2016	Rainbow Beach, Queensland, Australia	German tourist injured in jet ski accident	The 47 year old male sustained a suspected broken leg after he was knocked off his jet ski by a wave in the surf off Rainbow Beach. Source: RACQ Life Flight Rescue (2016).
23 September 2016	Cairns, Australia	Japanese woman dies in Cairns jet ski crash	A dream Cairns holiday turned to tragedy when a Japanese tourist was killed after crashing a jet-ski into a packed tourist boat. The 27-year-old woman and her husband were taking part in a popular jet-ski tour yesterday morning when she is believed to have lost control and hit the side of the Sunlover Reef Cruises vessel just after 9 am. Source: Mason (2016).

- Poor or unexpected weather conditions, including poor visibility
- Inexperience and poor understanding of hazards
- Unfamiliar environments
- Risk-taking behaviour
- Alcohol and drug consumption

In 28% of the drowning deaths with fishing there was a pre-existing medical condition (Australian Water Safety Council, 2020). Borch et al. (2008) observe that

tourism fishing is largely unstudied both from a recreational fishing research perspective and from a tourism research perspective. Where tourism fishing is discussed, narratives tend to focus on the potential economic benefits to a destination (e.g., Gomei & Bellia, 2019; González & Antelo, 2020), while fishing injuries in the literature are mostly concerned with commercial fisheries in the context of workplace or occupational hazards (e.g., *Maritime Injury Guide*, 2019). This is an area of tourism safety that requires further research, educational partnerships with maritime authorities and legislative enforcement of safety standards.

Evolution of Coastal and Marine Tourism

In 2014 the European Commission outlined a strategy for coastal and marine tourism recognising that changing demand requires attractive and sustainable products that provide unique and customised experiences. They noted the growing public interest in water-based sports, such as recreational fishing, boating and diving, highlighting the importance of quality service, and the promotion of skills and innovation (European Commission, 2014). The Centre for the Promotion of Imports from Developing Countries (CBI, 2020) has more recently expressed a similar view. Post-COVID-19 these factors are especially relevant as the tourism industry works to regain the trust of customers through safety as a core value (WTTC, 2020).

Key to regaining customer trust is the guarantee of safety in marine environments (Wilks, 2021) and as pointed out in this chapter best practice guidelines and checklists are already available (QTIC, 2018). In particular, providing visitor briefings, having qualified instructors and guides, communicating about hazards, running regular practice drills, providing supervision and surveillance, and ensuring in advance the capacity for emergency response are critically important. These actions are not just required for lifeguards or lifesavers but also for staff where there are commercial duties of care such as in hotels and resorts (Wilks, 2018). Again, these responsibilities for operators are well-documented and often enshrined in workplace health and safety legislation (State of Queensland, 2019).

The impact of COVID-19 on surf-related drowning in the Great Lakes region of North America was recently examined by Houser and Vlodarchyk (2021). They found that the pandemic changed the number and behaviour of beach users, with an increase in drowning associated with the reopening phases. Specifically, they argue that the increase in drowning is due to a combination of reduced local lifeguard resources, cancelled swimming lessons, large beach crowds, warm weather, high-water levels and self-isolation fatigue. With social distancing requirements and fewer lifesavers available on beaches (Kilgannon, 2020), safety managers have had to rely more on technology to assist with water safety.

The use of drones is becoming more common in beach management, especially through their use of mobile cameras to monitor social distancing and carrying

capacity on beaches during COVID-19 (Kane et al., 2021; Szuster et al., 2021). Drones are also being used in beach rescues. For example, the Little Ripper Lifesaver (Ripper Corporation, 2021) provides broad coastal surveillance, spotting sharks in real-time through AI systems, and dropping rescue pods down to swimmers struggling in the water. The pods include a flotation device that can support up to four people, an automatic light, high-visibility retro-reflective tape, a sea anchor, and a shark shield. Of course, technology does not replace lifeguards, who in their traditional roles remain the most effective means to reduce injuries on a beach (Abralde & Pérez-Gómez, 2009) and are currently being trained to operate the drones (Fig. 7).

Del-Real and Díaz-Fernández (2021) surveyed beach users to measure public acceptance of rescue drones and found that there was moderate acceptance of their use. Participants from beaches without lifeguard services were more likely to accept the use of rescue drones. The drones appear to be particularly effective as a platform for spotting sharks (Butcher et al., 2019). In Israel, AI and image recognition technology are being piloted to provide lifeguards with a current picture of swimmer whereabouts and real-time data on changing winds, waves and hazards (Leichman, 2020). The technology identifies real-time hazards for beach users, crowd management solutions, updates on weather conditions and estimates how many lifeguards are needed on a given day.



Fig. 7 Drone surveillance at the beach. (Image courtesy of Paul Hardy, Australian UAV Service (Surf Life Saving New South Wales), used with permission)

WHAT'S PAR for the Course?

Coastal and marine tourism is expected to further increase in popularity following COVID-19 as a response to a greater appreciation of nature and with travellers increasingly looking for unique experiences which they can enjoy in a sustainable manner. In addition to COVID-safe measures to protect health there will be an increased reliance on public services such as lifeguards to keep visitors safe. For commercial operators it is important to remember their legal duties of care to customers, many of whom will be inexperienced and need assistance in and around water. Operators and destination managers will need to *Pivot, Adapt* and *Recalibrate* in the delivery of their services for the new normal, but at the same time draw on the considerable resources already available to them through codes of practice and industry standards. The use of technology such as drones in beach safety, for both surveillance and rescue, is an example of innovation increasingly used in the new normal.

Appendix: Best Practice Guidelines

Guidelines Relevant to All Aquatic Environments

WATER SAFETY	
1.	Conduct a safety brief with all participants before engaging visitors in aquatic activities.
2.	Advise visitors that a great way to keep safe at Queensland beaches is to remember the F.L.A.G.S. message F —Find the flags and swim between them L —Look at and read all safety signage A —Ask a lifesaver or lifeguard for some good advice G —Get a friend or travel companion to swim with you S —Stick your hand up if you need help
3.	Advise visitors to swim between the red and yellow flags at patrolled beaches and waterways.
4.	When swimming, snorkelling or diving, teach the guests to make a reference point on shore to avoid drifting outside of supervised areas.
5.	Make visitors aware of rips and currents. Reinforce that swimming between the flags is the best way to avoid getting into trouble.
6.	IF IN DOUBT, DON'T GO OUT! Advise guests if you think conditions are too rough for them to enter the water. The same rule applies if you are taking guests on an activity and you think it's too rough for them. It's not worth the risk. If possible, let them know what other great things they can do in Queensland! A good rule of thumb for visitors is, if their feet can't touch the bottom—they are out too far and should make their way back to shore immediately.
7.	Never enter the ocean at night and only swim in well-lit pools, lagoons, and the like.
8.	When visiting beaches, lakes, rivers, estuaries and canals, advise guests not to swim at dusk or dawn as this is when dangerous marine creatures are most active.

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| 9. | Advise visitors that it is best to swim with light clothing on as baggy clothing makes them heavier in the water and it's more difficult for them to swim.
Operators need to be aware that this is only a recommendation. Some cultures do not allow members of their community to wear clothing that is considered revealing.
Please advise visitors wearing baggy and light clothing to bathe in knee deep water only. |
| 10. | Advise guests that they should not swim if they have any medical condition that could affect or impede their abilities. |
| 11. | Ensure guests are aware that when swimming in rivers and lakes they may experience dangerous cool water temperatures and should always be alert to the dangers of flash flooding. |
| 12. | Regularly monitor weather and tide conditions (twice daily—morning and afternoon) so you can advise guests on where the most enjoyable and safe conditions are.
Guests need to be made aware that conditions can change quickly. What might be safe swimming at one time could change to unsafe in a short period of time. |
| 13. | Advise guests on how to avoid marine creatures such as stingers, sharks, crocodiles, sea snakes, and stingrays as outlined in the SLSQ Dangerous Marine Creatures (pages 13–22) and Marine Stinger (pages 23–31) fact sheets |
| 14. | Advise all guests to take notice of and understand safety warning signs and explain the meaning of the signs to visitors.
Remember! Safety signs are great but they do not replace the need for verbal instruction. Be sure to offer written and verbal communication about local dangers wherever possible. |
| 15. | Visitors should always enter the water slowly, feet first and never dive in when the depth is not known |
| 16. | Reduce the risk of spinal injury. Prior to allowing guests to enter an aquatic environment ensure staff check the area for dangerous objects. Advise visitors of the risk of spinal injury by erecting notices or signs. Notices and signs should be explanatory—for example, do not just say DANGER, say SUBMERGED ROCKS, LOGS, or SHALLOW WATER |
| 17. | Ensure all equipment used is checked and maintained regularly. |
| 18. | Minimise the risk of infection from animal faeces. Make guests aware that the water may not be drinkable because of animal faeces and promote the drinking of bottled water. |
| 19. | Ensure multilingual water safety information is available for your guests. Details on Surf Life Saving Queensland's range of multilingual Fact Sheets and Beachsafe smartphone app can be found in this resource. |
| 20. | Develop a risk management plan whereby risks are identified and assessed; and control measures are developed, implemented and monitored for effectiveness.
Ensure you regularly assess all possible risks in an area so guests receive the most up-to-date information. |
| 21. | If you have activities that operate in or near rivers, construct a Safety Line downstream consisting of heavy duty rope and a floatation device. |

SUPERVISION

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| 22. | Where possible, provide trained lifeguards or appropriately qualified personnel around water areas as required and encourage visitors not to swim alone |
| 23. | Ensure you are aware of the lifeguard/lifesaver beach patrolling hours and advise guests not to swim outside these hours |
| 24. | Advise guests to follow all instructions given by lifesavers, lifeguards, and trained personnel. |
| 25. | When visiting the beach, encourage your guests to obtain additional information about the local swimming conditions from the qualified personnel on duty. |
| 26. | Children should be supervised at all times. |

Source: QTIC (2018). *Water safety handbook: Best practice guidelines for tourism operators* (8th ed., pp. 4–5). Reproduced with permission

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