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## Visitor Drownings in Spain 2013-2018


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### Visitor Drowning in Spain 2013-2018

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#### **Background**

The number of international visitors to Spain has risen from 60 million in 2013 to 78 million in 2017. Tourism is one of Spain's main sources of income. While drowning is the second cause of accidental death<sup>1</sup>, after transport accidents, we have very little information about the attitudes, behaviours and water safety knowledge of the foreign tourist who come to Spain every year. International research into drowning<sup>2,3</sup> suggests that tourists have a higher risk of drowning than locals. It is estimated that 70% of Europeans<sup>4</sup> spend their holidays close to water and drowning is the third highest cause reaching up to 36% of fatalities of tourist injury, 15 times greater than for local residents (15 versus 1/100000 person/year)<sup>5</sup>. Data from some studies report that British children<sup>6</sup> are at greater risk of drowning when on holiday overseas than they are in UK, and that 72% of hospitalized children in Portugal due to a drowning incident were visitors<sup>7</sup>. Canary Island visitors' also account 34.70% of total spinal injuries<sup>8</sup>.

#### **Method**

From our collection of 3758 drowning incidents in Spain, with a total of 4736 victims, between January 1st, 2013 and August 15th, 2018, we extracted 819 cases (21.79%), resulting in 981 (20.71%) victims.

This selection did attend to those victims who had been classified as “foreign visitor” (832 - 88.47%) or “foreign resident” (149 – 15.13%) -when it comes to foreigners with habitual residence in Spain.

#### **Findings**

Of the 981 people studied, 710 (72.38%) were male and 259 (26.40%) female. A total of 581 (59.23%) people suffered a fatal drowning, of which 448 (45.67%) were men and 133 (13.56%) women. Up to 14.68% of the victims were transferred to hospital. Fatal drowning numbers of foreign residents are higher (77.18%), but there were fewer who needed hospital care (4.78%).

Beaches are the places where there are more incidents: 73.35% and drowning with fatal outcome are reported: 73.15%. Pools gather 10.76% of the incidents with the 10.84% of deaths, while inland water have 10.05% of incidents with 12.90% of the fatalities.

Recreational swimming 56.47% was the most common in-water activity, and 16.11% of people were around water but without doing a water-related activity (suffering accidental or unexpected falls). Although the aquatic environment conditions were not reported in 54.42% of cases, water conditions (like rip current, dumping waves) was the main cause of the incidents 20.61%, followed

by accident, accidental fall or dive in 16.04%. Red flag flew in 11.27% of the cases for 10.66% with yellow flag. Incidents were mostly detected by an untrained witness (44.57%) or companions (30.86%) rather than by Lifeguards (20.30%), while the extraction of the water was performed almost equally by lifeguards (25.89%), witness (24.87%) or emergency services (25.69%).

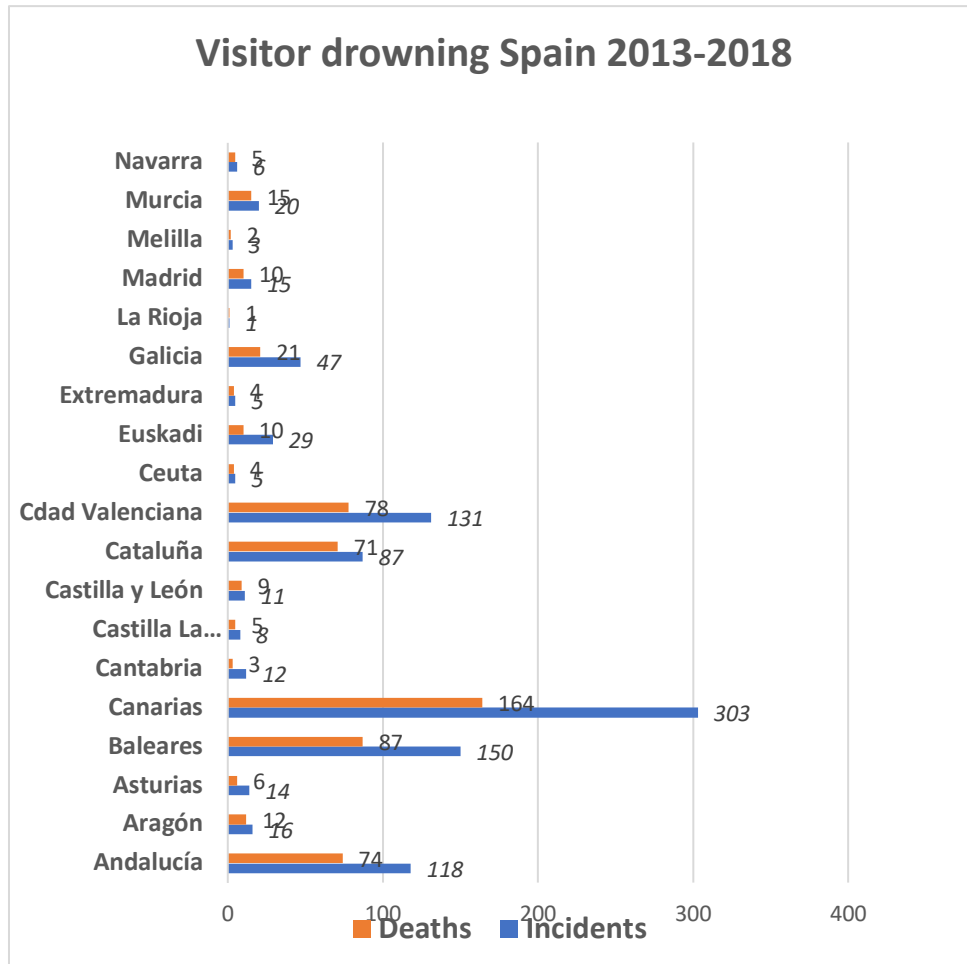


Fig.1 – Incidents and fatal drowning by regions

Once rescued, 44.67% were reported as drowning with water aspiration, 19.80% of cases were classified as "possibly drowning" (meaning that drowning could have been triggered by a previous issue as heart attack -AMI- or cerebrovascular accident -CVA-) and 18.58% of victims were rescue in loss of aquatic control (affecting breathing, displacement or flotation, but without signs of aspiration or respiratory impairment).

63.76% of victims were at unguarded beaches or locations where the surveillance was not possible or present. On guarded environments 30.15% incidents happened during the supervised hours, whilst 5.38% were out of the surveillance schedule. Lifeguards performed 22.54% of CPR interventions; 24.26% of victims had no CRP and 22.03% were recovered already as a corpse.

Regarding the location, the regions with the highest number of incidents and deaths were Canary island (303 incidents/164 deceased, with 17.22% of visitors); Balearic Island (150/87, 17.38% visitors); Region of Valencia (131/78, 10.20% visitors) and Catalonia (87/71, 24.65% of visitors). (Fig 1)

The countries that provide the largest number of tourist visitors are also those with the greatest number of incidents: Germany (185 incidents/107 deceased); France (123/62) and United Kingdom (117/62), followed by Morocco (44/36) and Romania (40/34). Victims of up to 76 different nationalities were involved in drowning incidents, while fatalities were from 68 countries.

### **Intervention**

Although several initiatives have been launched to reduce the incidence of visitor drowning by some regional government, mostly in producing multi-language preventive material or signalling, there is no consensus or coordinated effort in drowning prevention in Spain<sup>9</sup>.

The most important is the campaign: “Canary Island, 1500km of beaches”<sup>10</sup>, that involved regional government, tour operators, hoteliers, emergency services and the media focus on beach safety with preventive and educational audio-visual and advertising material on 7 languages.

### **Conclusions**

The creation of our drowning in Spain database is a very useful tool in addressing issues that lead visitors to a drowning incident and implementing preventive measures through analysis of activities, recognizing the at-risk population and contributing factors.

Although we are increasing our knowledge on where, when and who are most at risk, we still must understand the psychological factors that make some visitors choose to ignore or underestimate risk management interventions put in place. Some studies<sup>11</sup> suggest that visitor’s perception work in different risk dimensions than safety managers and tend to assess the natural setting rather intuitively and seek more for a positive outdoor experience, with the sense of freedom and choice associated to a vacational period. Also, the increasingly presence of lifeguard at ocean beaches may encourage risky swimming behaviour due to a perception of shared responsibility in their safety. We must be able to achieve that this feeling be associated with the need to understand, respect and follow all preventive and security measures.

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