

2013

NEW ZEALAND DROWNING REPORT



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Acknowledgement

Water Safety New Zealand (WSNZ) gratefully acknowledges the following organisations for their ongoing support of water safety in New Zealand.



WSNZ also thanks the following organisations for supplying data or participating as a member of the water safety sector Information Review Group.



107 lives tragically lost in 2013

It is with sadness that I introduce this, our 2013 Drowning Report. Despite earlier indications suggesting a substantially lower toll than 2012, after completion of coronial reports, the 2013 drowning toll has been finalised at 107, only one less than the prior year. A further 171 people were hospitalised as a result of water immersion incidents. This is a tragic loss of life, and we in the water safety sector believe that many of these drownings could have been prevented.

At Water Safety New Zealand (WSNZ) we record statistics in our DrownBase and classify incidents into three categories:

- Recreational (intent to be in water);
- Non-recreational (no intent to be in water); and
- Other (drowning fatalities resulting from suicide, homicide, aircraft crashes, road vehicle accidents and unknown origins that are deemed non preventable).

While in recent years New Zealand has experienced an increasing trend in non-fatal incidents and fewer fatalities; this long-term trend was reversed in 2013 with fewer non-fatal incidents and an increase in fatalities.

Despite these disappointing results, I want to acknowledge the incredible work of individuals and organisations within our sector. Without this work and investment, this toll would be much higher. Over the last year we have seen even more resources invested in educating and training kiwis of all ages to be better prepared and able to safely enjoy the water – whether in their homes, in pools, at the beach, rivers or lakes, or while enjoying boating and other water based recreational activity.

We know that there are challenges. Too many of our children don't yet have the necessary skills to swim to survive, and we need to continue our efforts raising awareness with and educating kiwis over-represented in these statistics – under five's, males, and children (5 to 13 years) – to ensure we reduce this toll further.

Our work would not be possible without the incredible support of a number of organisations. In presenting this report I would like to extend the sincere thanks of the Board and team at WSNZ to the New Zealand Police, Coronial Services, the Ministry of Health, Surf Life Saving New Zealand and the Accident Compensation Corporation.

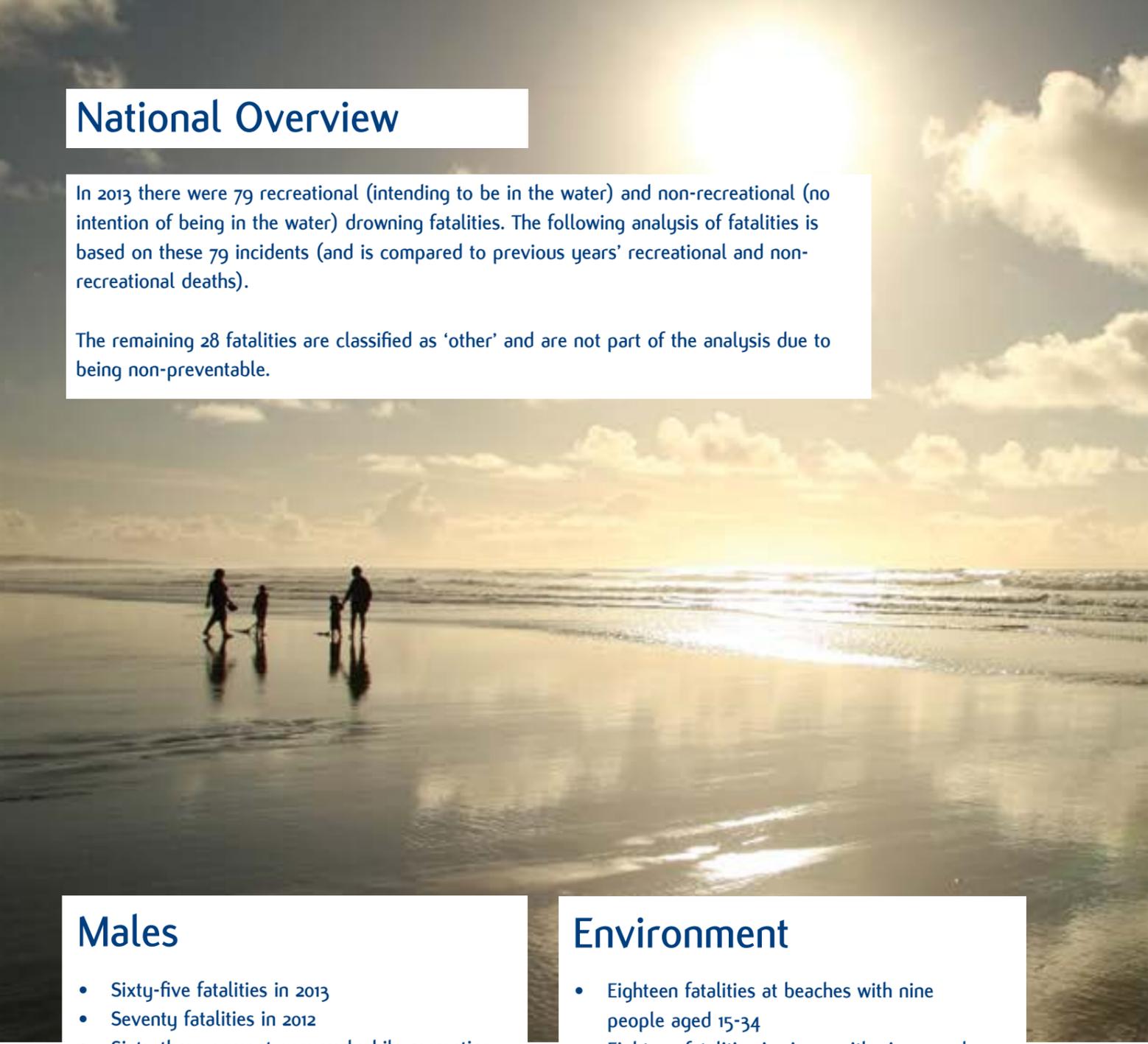
While this report summarises the key trends and statistical data, it is by no means a complete analysis of all of the information available. Figures could change due to coronial inquests that are either underway or may get reopened. Please don't hesitate to contact our team at WSNZ if you would like more statistical analysis to assist you or your organisation in helping all of us in water safety achieve our mission – to reduce drowning in New Zealand.

Matt Claridge
Chief Executive

National Overview

In 2013 there were 79 recreational (intending to be in the water) and non-recreational (no intention of being in the water) drowning fatalities. The following analysis of fatalities is based on these 79 incidents (and is compared to previous years' recreational and non-recreational deaths).

The remaining 28 fatalities are classified as 'other' and are not part of the analysis due to being non-preventable.



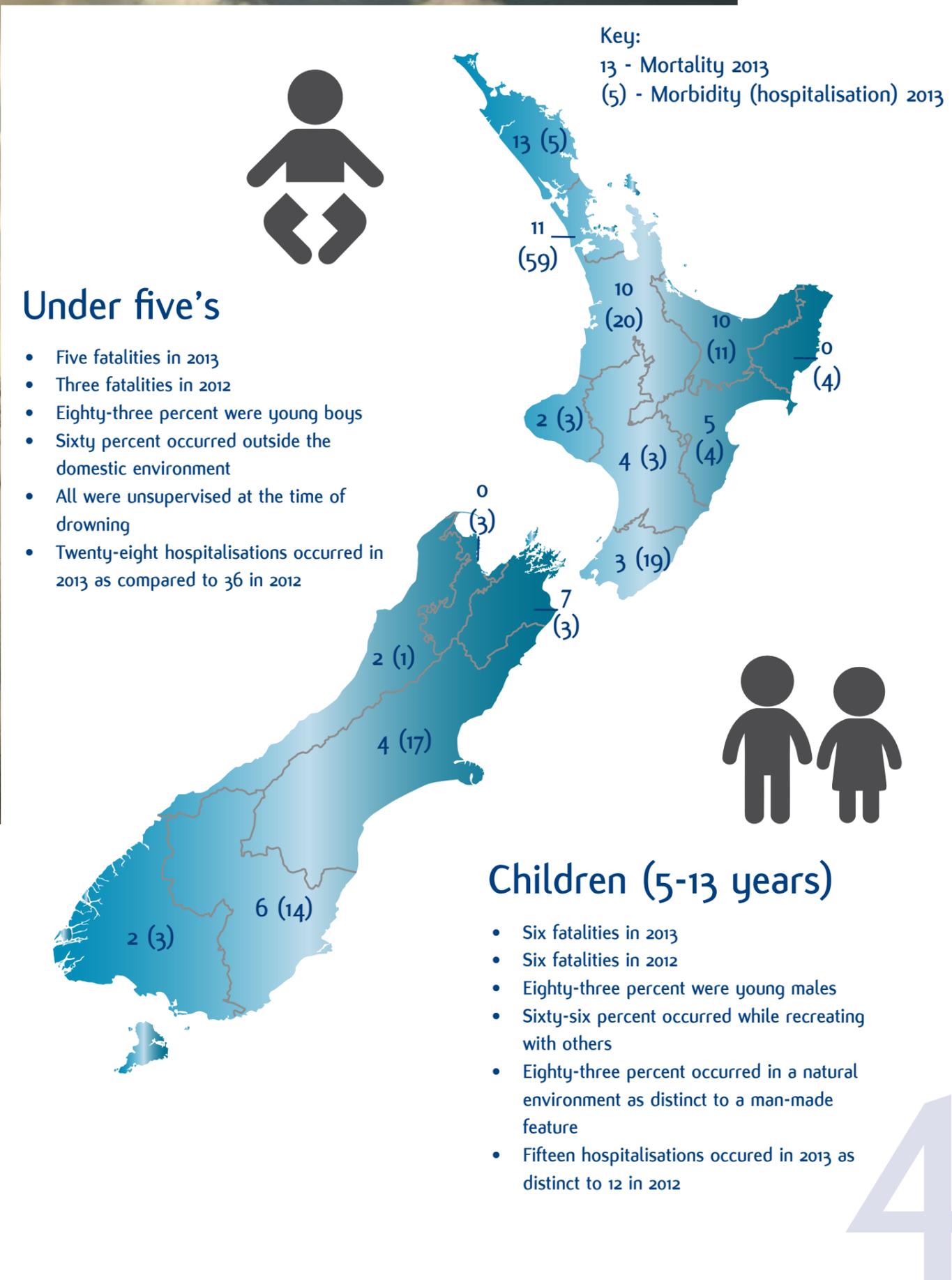
Males

- Sixty-five fatalities in 2013
- Seventy fatalities in 2012
- Sixty-three percent occurred while recreating with others
- Twenty-two percent involved alcohol or drugs
- Occured in 14 different types of recreational activity
- One hundred and fifteen hospitalisations in 2013



Environment

- Eighteen fatalities at beaches with nine people aged 15-34
- Eighteen fatalities in rivers with nine people aged 15-34
- Forty percent of males drowned at beaches or rivers
- Forty-six percent of deaths offshore had no lifejackets worn



Mortality per Capita

Mortality is where an individual has drowned through respiratory impairment of the lungs, due to immersion in liquid.

The following table indicates the fatalities on a per capita (n=100,000) basis in 2013:

Ranking	Region	2013	2008-2012 average
1	Marlborough	16.1	3.2
2	Northland	8.6	5.8
3	West Coast	6.2	9.3
4	Bay of Plenty	3.7	2.7
5	Hawke's Bay	3.3	1.2
6	Otago	3.0	2.5
7	Waikato	2.5	2.7
8	Southland	2.1	4.5
9=	Taranaki	1.8	1.8
9=	Manawatu-Whanganui	1.8	2.5
11	Auckland	0.8	1.4
12	Canterbury	0.7	1.4
13	Wellington	0.6	1.0
14	Tasman	0.0	2.8
15	Gisborne	0.0	0.5

New Zealand's per capita rate (five year average) is 2.6.

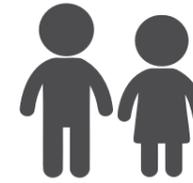
Mortality by Age Group

Under five's



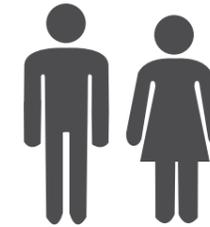
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Children 5-14



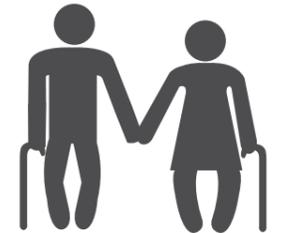
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Adults 15-54

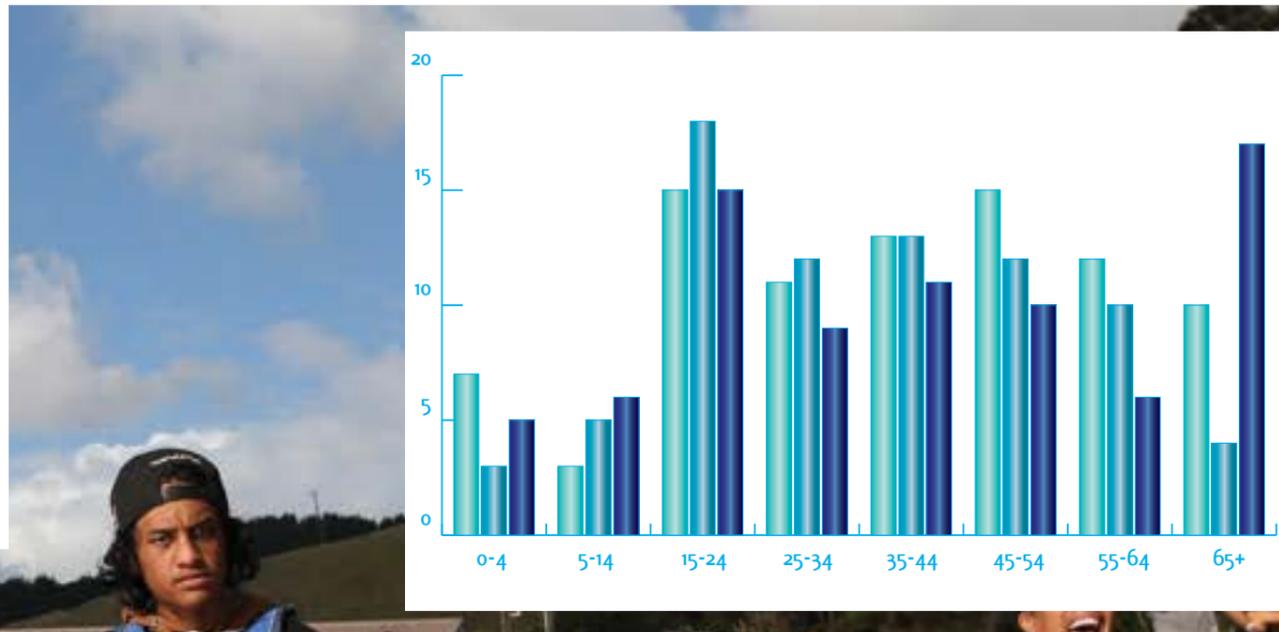


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Adults 55+



23

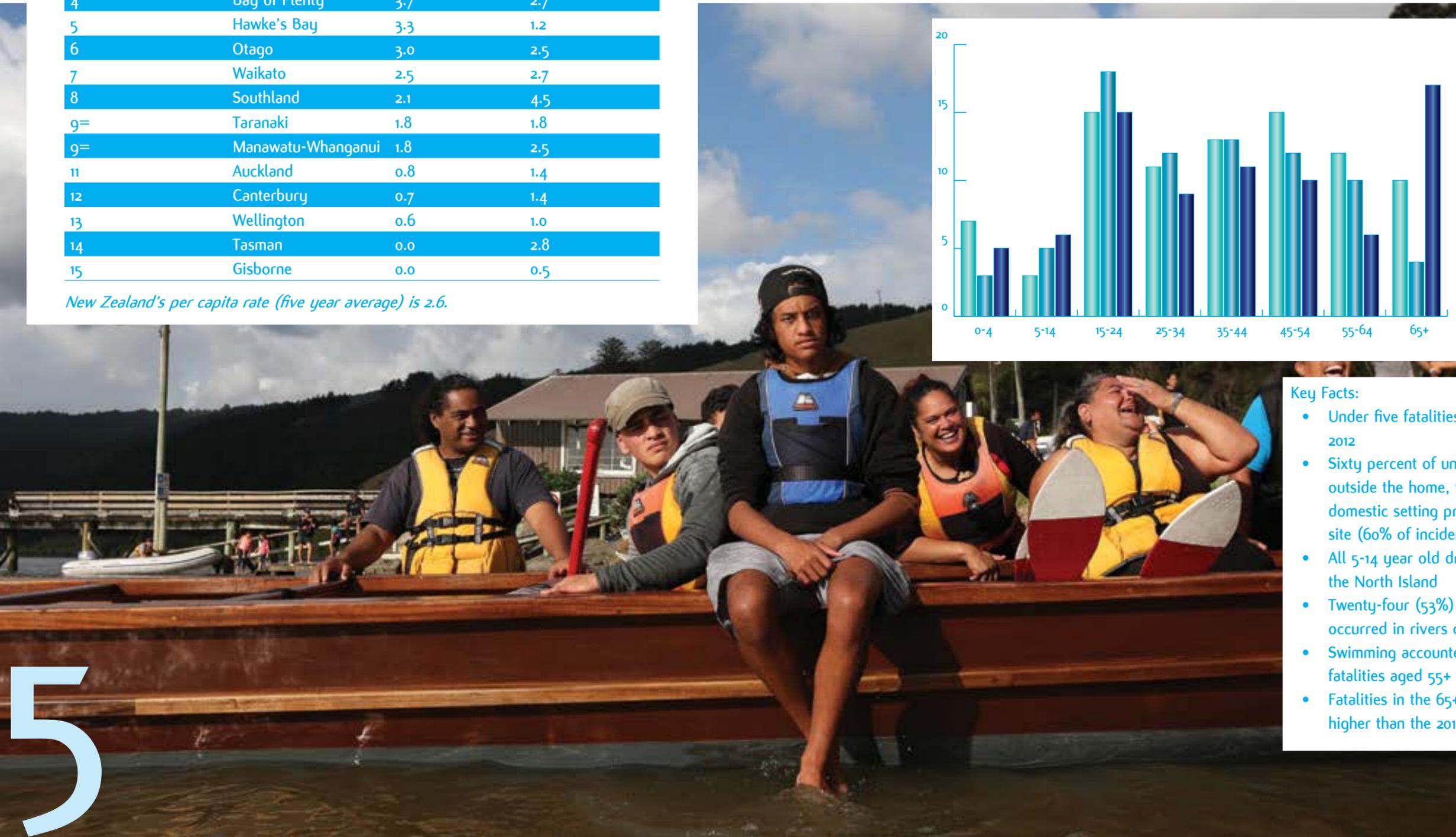


Key Facts:

- Under five fatalities increased by two from 2012
- Sixty percent of under five fatalities occurred outside the home, this is unusual with the domestic setting previously being the primary site (60% of incidents between 2003 and 2012)
- All 5-14 year old drowning deaths occurred in the North Island
- Twenty-four (53%) of fatalities aged 15-54 occurred in rivers or beaches
- Swimming accounted for the majority of adult fatalities aged 55+
- Fatalities in the 65+ age group were four times higher than the 2012 total

5

6



Mortality by Gender

Key Facts:

- Male fatalities resulted from 14 types of recreational activity, while female fatalities occurred in three
- 2013 male drowning totals decreased by five from the previous year, while female fatalities doubled on 2012 and equalled the five year average



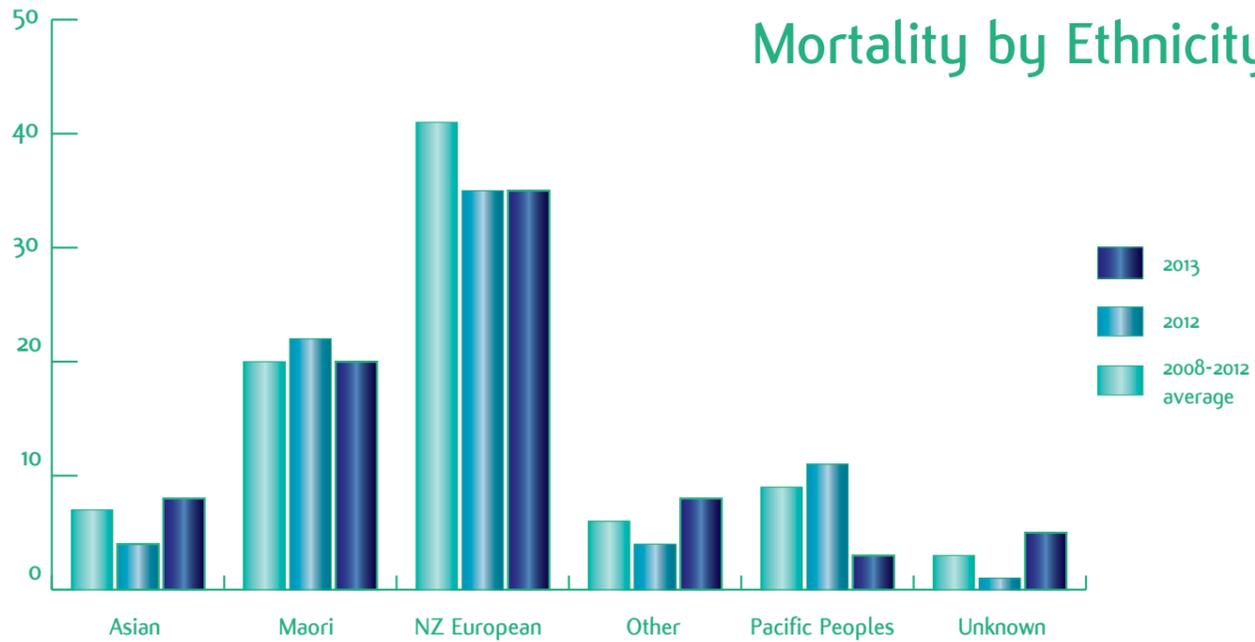
Female



Male



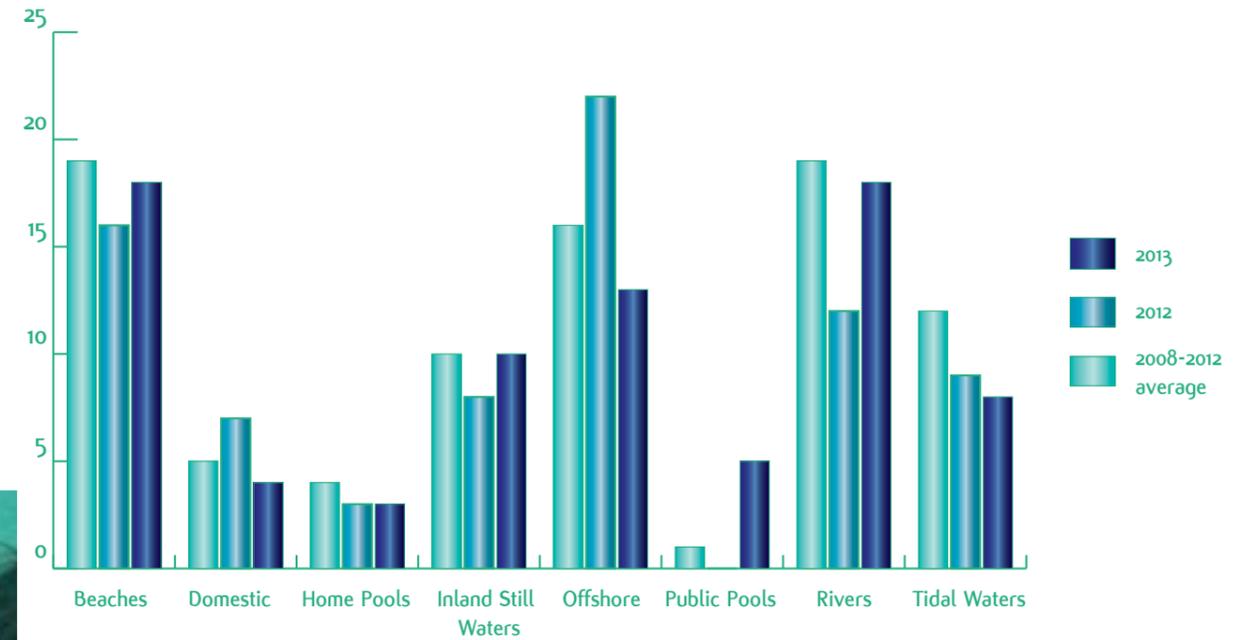
Mortality by Ethnicity



Key Facts:

- Asian fatalities (eight) rose 100% on 2012, representing a 25% increase on the five year average
- Pacific Peoples fatalities decreased by eight from 2012 and all were aged under 25
- For Maori, the age group with the largest representation was 25-34
- Swimming accounted for the highest number of fatalities in the Asian, NZ European and other (foreign) ethnicities
- Half of Maori fatalities occurred while fishing

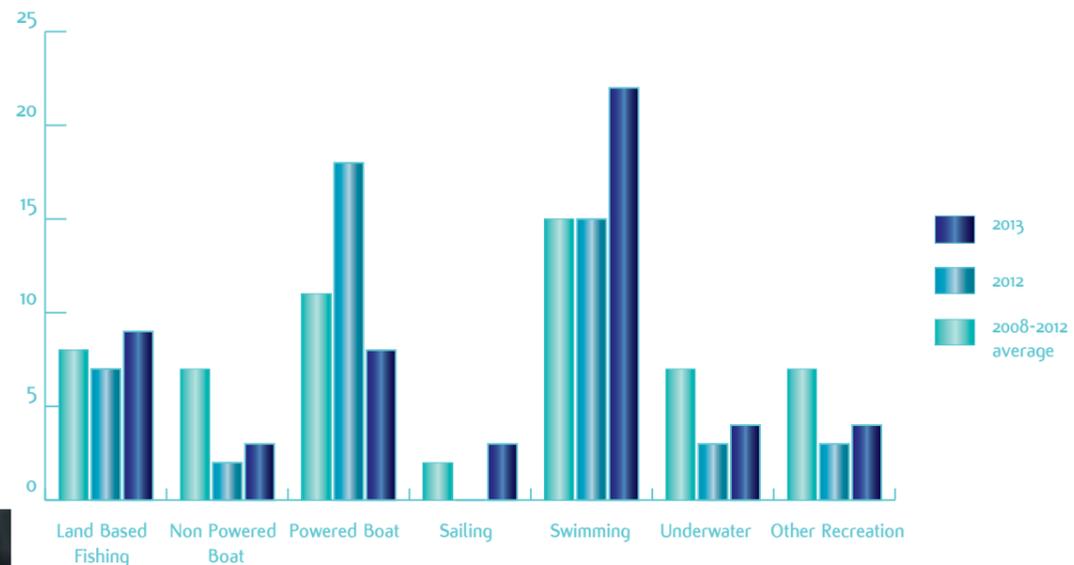
Mortality by Environment



Key Facts:

- Public pool fatalities (five) were significantly higher than the five year average
- Three public pool fatalities were aged 65+, a large increase on the five year average
- River fatalities increased by six, a 50% rise on the 2012 toll, with the majority occurring in the North Island (67%)
- Offshore deaths decreased by nine from the 2012 toll, with no single incident resulting in more than two deaths in 2013

Mortality by Activity



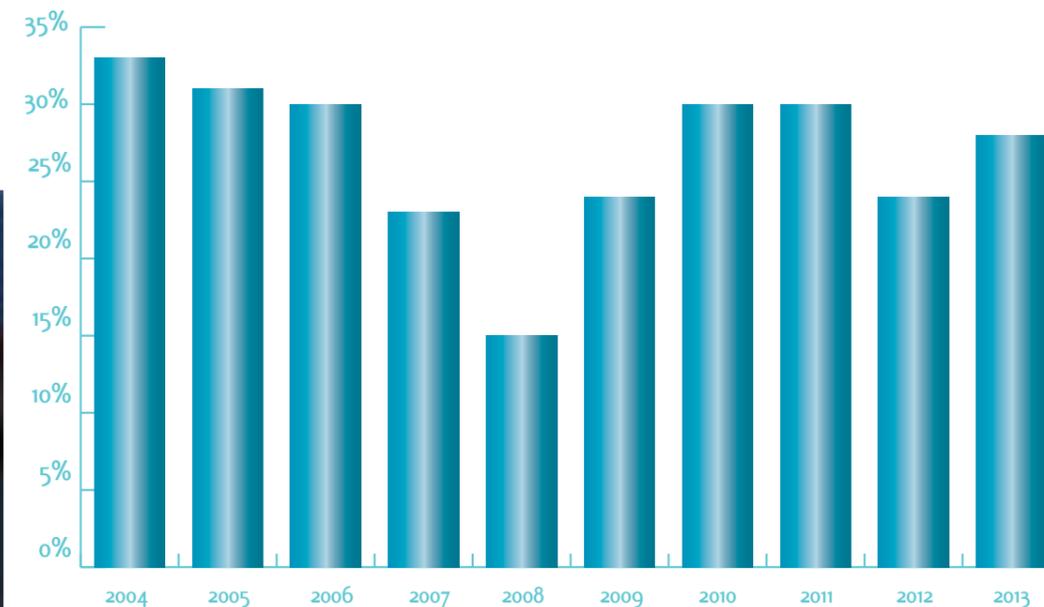
Key Facts:

- Fatalities while swimming increased by seven on both 2012 and the five year average
- Non powered boating whilst increasing by one in 2013 continues to decrease on the five year average of seven
- Powered boating fatalities decreased below the 2008-2012 five year average
- Six of the powered boating victims were aged 45+
- Eight deaths from land based fishing (89%) in 2013 were of Maori ethnicity (the five year average is two)

Mortality (Other)

Drowning fatalities arising as a result of road or air vehicle accidents, homicide, suicide or of unknown origin are classed as 'non-preventable' as the water safety sector has no authority or ability to deliver interventions in these areas.

'Non-preventable' as a percentage of the annual total



Analysis of non-preventable fatality data for 2009-2013

	Total	Percentage	Five year average
All drowning fatalities	540	100	108 per annum
Non-preventable	147	27	29 per annum

- On average, there have been 30 'non-preventable' drowning fatalities per annum over the last ten years
- During the last five years, the average number per annum of vehicle accidents and homicides has decreased from the previous five year average
- During the same periods, the average number per annum of suicides and unknown drowning fatalities has increased

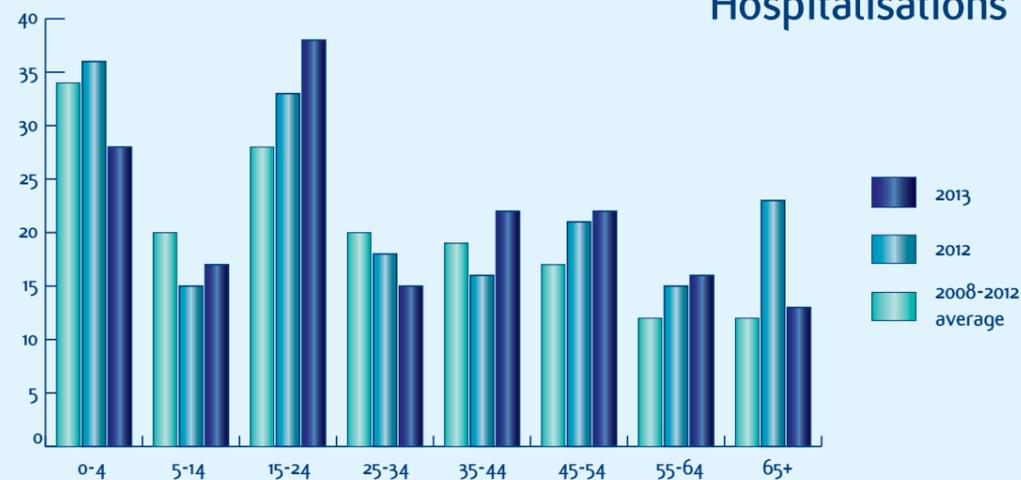
Hospitalisations per Capita

WSNZ receives hospitalisation data, where a drowning results in a non-fatal outcome, and a stay of 24 hours in hospital. Data is sorted using the ICD-10-AM/ACHI/ACS international coding system. A large amount of environmental coding is set to large body of water which does not allow for a more specific data breakdown. The system is based on internationally established codes.

The following table indicates the top regions for hospitalisations on a per capita (n=100,000) basis in 2013:

Ranking	Region	2013	2008-2012 average
1	Gisborne	9.2	6.4
2=	Otago	6.9	2.7
2=	Marlborough	6.9	2.3
4	Waikato	5.0	4.6
5	Auckland	4.2	3.8
6	Bay of Plenty	4.1	5.7
7	Wellington	4.0	2.5
8	Northland	3.3	7.5
9=	Tasman	3.2	2.1
9=	Southland	3.2	1.9
9=	Canterbury	3.2	1.8
12	West Coast	3.1	5.0
13	Taranaki	2.7	5.3
14	Hawke's Bay	2.6	5.7
15	Manawatu-Whanganui	1.3	2.8

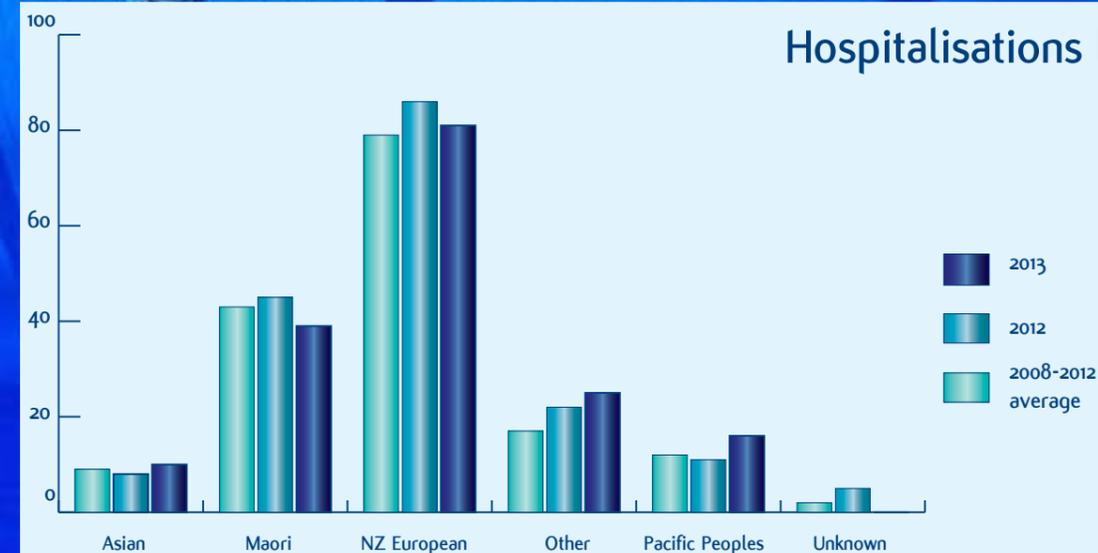
Hospitalisations by Age Group



Key Facts:

- Under five's decreased on the 2012 toll by eight, and the 2008-2012 five year average by six
- For the first time since 2003, under five's are not the highest age group for hospitalisations
- The 15-24 age group has the highest number of hospitalisations in 2013 and has increased on the 2008-2012 five year average
- The 65+ age group decreased by ten hospitalisations from 2012
- Thirteen (59%) of those aged 45-54 were hospitalised due to boating incidents

Hospitalisations by Ethnicity



Key Facts:

- Maori hospitalisations reduced by four, while all other ethnicities increased against the five year average
- Swimming resulted in the highest number of hospitalisations for Asian (three), Maori (15), Pacific Peoples (ten), and other' (11) ethnicities
- Boating accounted for the highest number of New Zealand European recreational hospitalisations (26)

- Thirty-two (or 82%) of Maori hospitalisations were aged under 25; 15 were aged under five
- Forty-six (or 57%) of New Zealand European hospitalisations were aged 35-64
- Nine (or 56%) of Pacific Peoples hospitalisations were aged 15-24

Hospitalisations by Gender



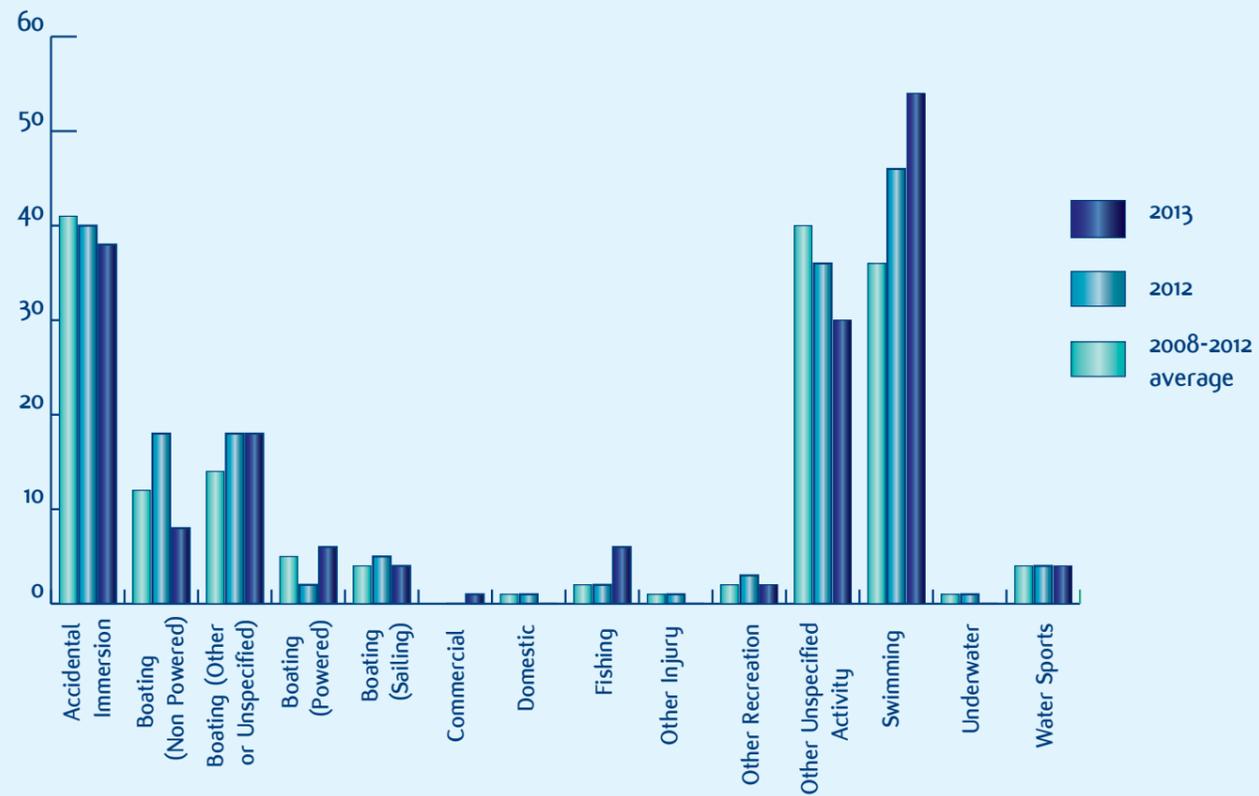
Key Facts:

- Both males and females had a total of 19 hospitalisations due to accidental immersions; the larger male total results from more recreational hospitalisations

- For every female, two males were hospitalised; the 2012 ratio was 1:4
- Swimming accounted for the highest recreational hospitalisation toll for both females (18 – 32%) and males (36 – 31%)

¹ 'Other' ethnicity is defined as an ethnicity that is known, such as German or South African, but is not one of the preset fields in DrownBase.

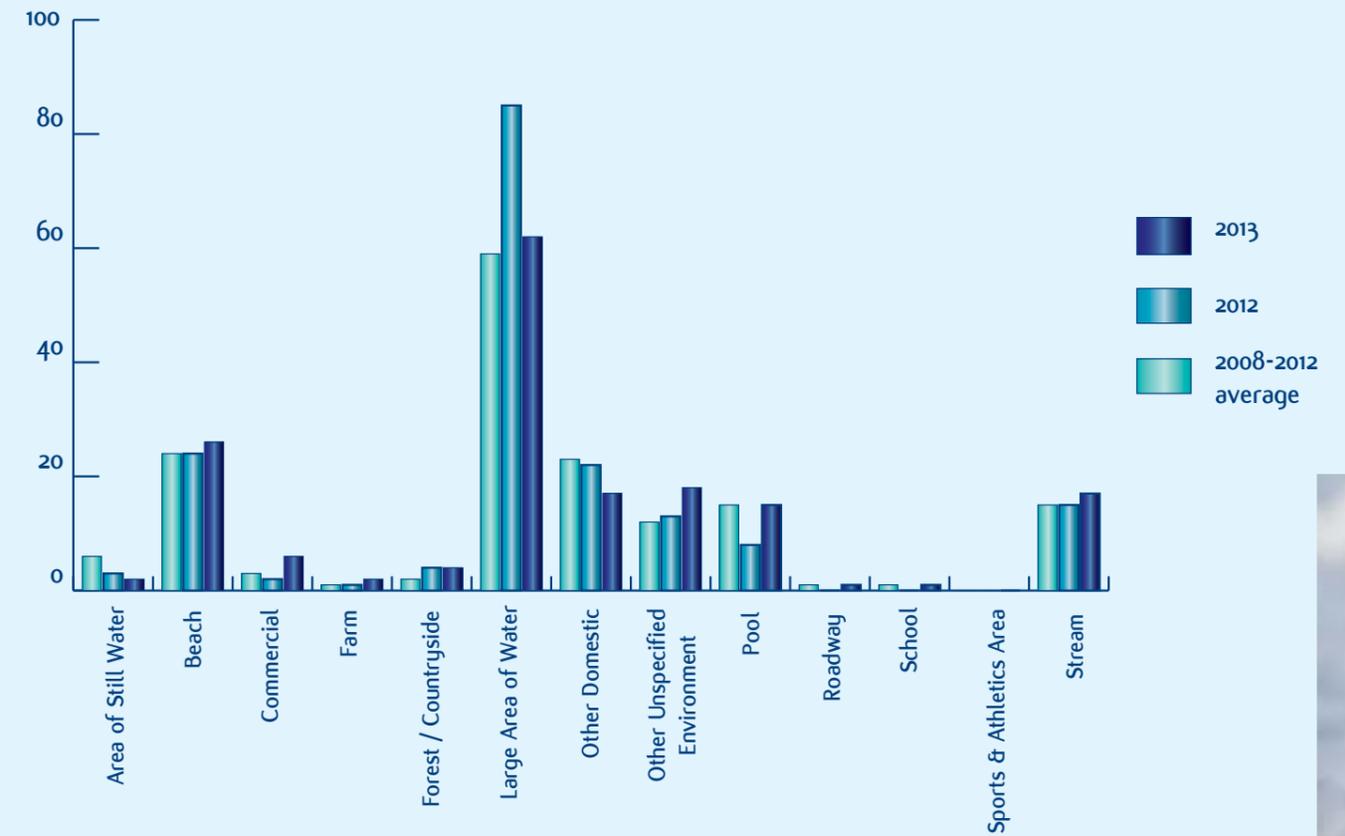
Hospitalisations by Activity



Key Facts:

- Swimming resulted in the most hospitalisations during 2013 (54), increasing by eight on the 2012 total
- Thirty-five (65%) of swimming hospitalisations were aged under 25
- Hospitalisations due to fishing incidents rose by four, both on the 2012 total and the five year average
- The boating hospitalisation total was equivalent to the five year average, however it decreased by seven from the 2012 total

Hospitalisations by Environment



Key Facts:

- Large area of water decreased from 2012 by 23; however, it is still above the 2008-2012 average (59)
- After a decrease in 2012 for pool hospitalisations, the 2013 total equalled the five year average (15)
- Hospitalisations in commercial settings increased by three on the five year average

Quick Facts

	2013		Five Year Average	
	Numbers	% (rounded)	Numbers	% (rounded)
Recreational Activity				
Land Based Fishing	9	8	8	7
Non Powered Boat	3	3	7	6
Powered Boat	8	7	11	10
Sailing	3	3	2	2
Swimming	22	21	15	14
Underwater	4	4	7	6
Other Recreation	4	4	7	6
Non Recreational Activity				
Immersion Incidents	23	21	27	25
Occupational	2	2	1	1
Other				
Other	29	27	25	23
Total	107	100	110	100
Environment				
Beaches	21	20	23	21
Domestic	8	7	7	6
Home Pools	4	4	4	4
Inland Still Waters	10	9	14	13
Offshore	16	15	17	15
Public Pools	5	5	1	1
Rivers	26	24	29	26
Tidal Waters	17	16	15	14
Total	107	100	110	100
Ethnicity				
Asian	10	9	8	7
Maori	21	20	23	21
NZ European	53	50	59	54
Other	11	10	7	6
Pacific Peoples	7	7	9	8
Unknown	5	5	4	4
Total	107	100	110	100
Gender				
Female	26	24	23	21
Male	81	76	87	79
Total	107	100	110	100
Age Group				
00 - 04	5	5	8	7
05 - 14	6	6	3	3
15 - 24	23	21	18	16
25 - 34	10	9	15	14
35 - 44	15	14	16	15
45 - 54	17	16	20	18
55 - 64	9	8	15	14
65+	22	21	15	14
Total	107	100	110	100