

The real risks of kayaking

Ian Dewey

Risk Consultant

An analysis of 9 years of incident reports and two studies separating fears, fact and fiction



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Incidents

An incident begins

- The correct actions are taken
- In the correct sequence

An incident is successfully concluded



Ian Dewey

- Defence analyst
- Market analyst
- Outdoor education documentation writer
- Kayak company owner
- Activity risk manager for Australian Canoeing



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Can U Canoe (2009)

The latest study

- A statistical review of accidents, incidents and injuries that was undertaken as part of the review of;
 - Competition risk management
 - The National Safety Guidelines
 - The Australian Canoeing Award Scheme
 - SIS09

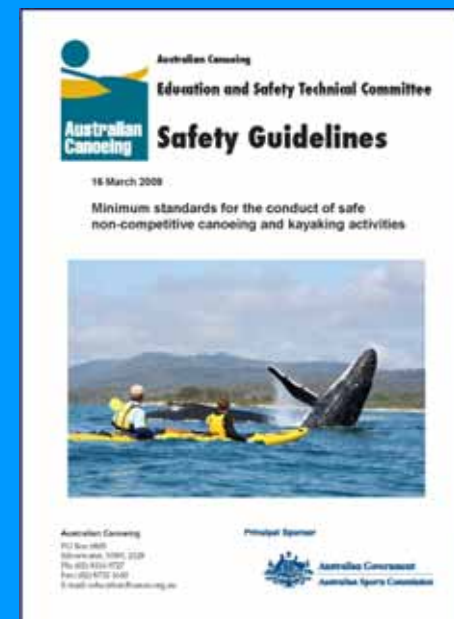


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Australian Canoeing

Australian Canoeing is tasked and funded by the federal government to;

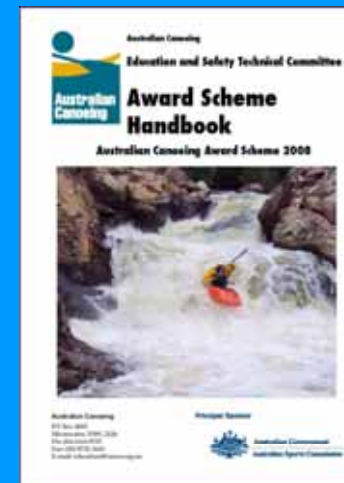
- Provide benchmarks for the sport of canoeing (in all its forms)
 - The Safety Guidelines
 - The Safety Checklists (Competition)



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Australian Canoeing 2

- Provide training in the sport
 - The Award Scheme
 - Coach training programs
 - Officials training programs
- Provide expertise for the coroner or other government agencies as requested
 - The Education and Safety Technical Committee



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What came before Can U Canoe

- Until 2000 most of canoeing hazard identification and risk management was conducted as a result of
 - Experience
 - Anecdotal evidence
 - Major incident reports



Australian Canoeing focus

Organisational focus

- Whole of sport
- Increased
 - participation
 - performance
- Decreased
 - Incidents
 - Injuries

Coaching and Education Section

- Train and equip leaders in the sport
- Educate paddlers



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2000

The first structured view of the sport (injury focus)

- Exit poll
 - Why are you leaving kayaking
- Discussions with Australian Physiotherapists Assoc.



Result

The sport had an injury problem that was

- posture and technique based
- throughout the sport
 - Canoe and kayak
 - Competition, recreation, tourism, outdoor education



Further result

- Boats were being built to be comfortable in the showroom and not posturally good on the water
- We were fitting out cruising boats making them worse
- People were learning “cruising strokes” that were inefficient and very poor technique



The “this works for me” factor

The human body is incredibly adaptive if
and only if you give it time to adapt...

But the transfer of
faults through “try
this” training is
dangerous



This works for me

- I gradually learn to do something over years
- I teach you to do it overnight
- You get injured



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NOTE

Regardless of the boat or the stroke

- Posture should include
 - A straight back
 - Upright pelvis
 - Well supported feet
 - Buttocks above feet (as much as possible)
 - Shoulders compact
 - Arm joints never fully extended

There is nothing new here but we were not doing it



3 critical points of safe power

- Upper body rotation
- Upper body rotation
- Upper body rotation



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Does this really matter in outdoor recreation and tourism

Yes

- Your duty of care extends to a duty to train, instruct and inform as required for safe participation
- Bad technique that leads to injury can lead to negligence claims



Test

During a forward stroke the top hand pushes forward to add power to the stroke

True or False

If you answered true



2008-09 study

Can U Canoe

Accident, incident and injury survey



Can U Canoe parameters

Accidents

- Overview
- Any size
- Anyone
- Anywhere

A broad brush on what is happening in the industry

Injuries

- Practitioner referred
- Broken down to
 - Fitness
 - Technique
 - Equipment
 - Practices



Parameters 2

Sample size

- Questionnaire
 - 13,000 (>9,000) email addresses (E-news)
 - 3 months in E-news
 - 2 National canoeing organisations (and state affiliates)



Parameters 3

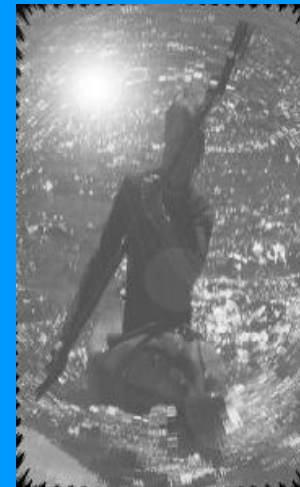
Base incidents

- We used in depth investigations of the incidents at Victor Harbor (SA), Torquay (Vic) and Burley Griffin (ACT) as baselines for major incident parameters.

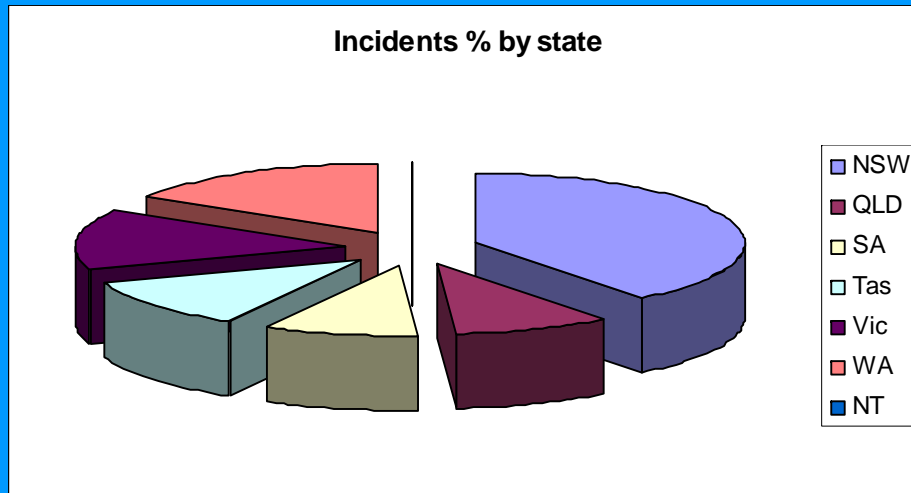


Parameters 4

- We used a well known club to check what approximate % were being reported and their relative severity
 - Approx 50% report
 - Teenagers less likely
 - 60-70yr olds less likely



Incident snapshot



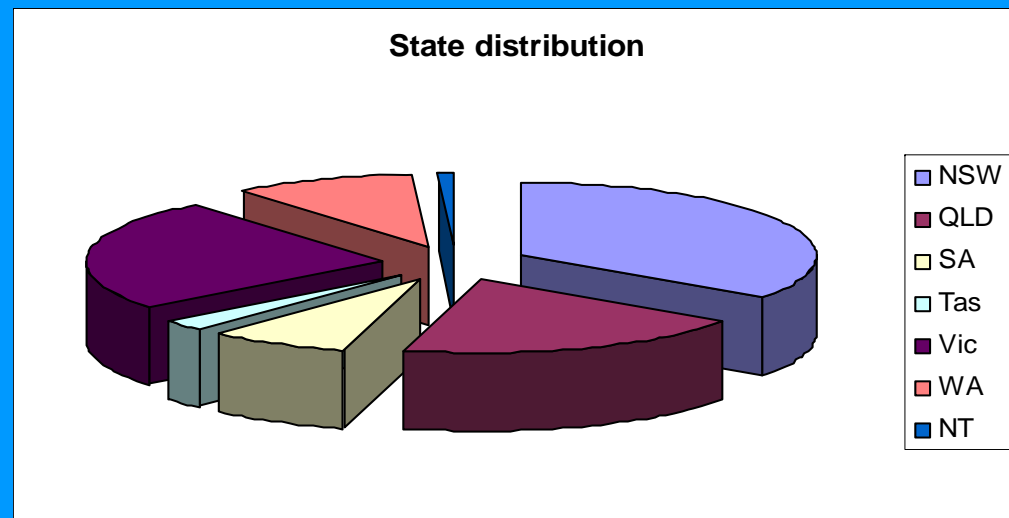
Over performers

Tasmania

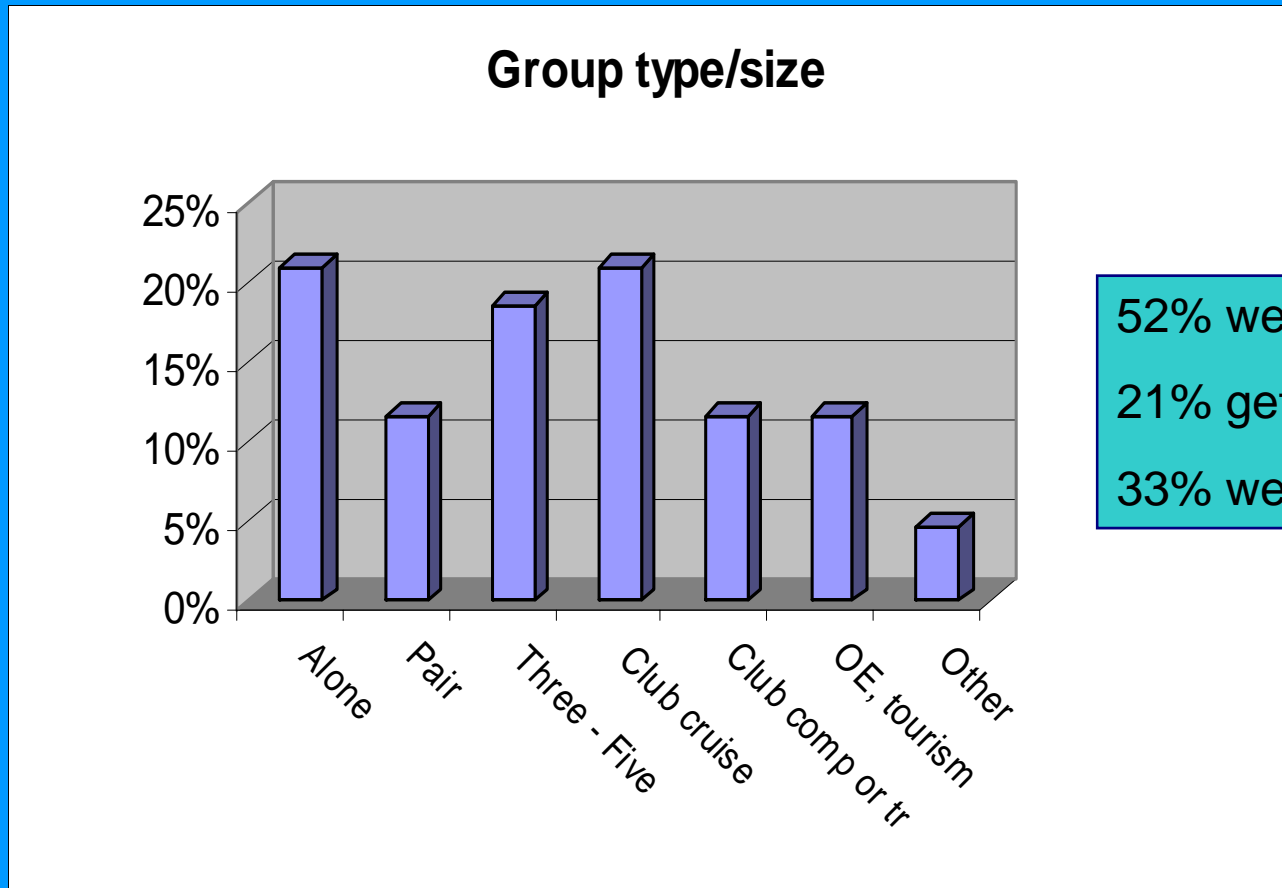
South Australia

Western Australia

New South Wales



Incident group type

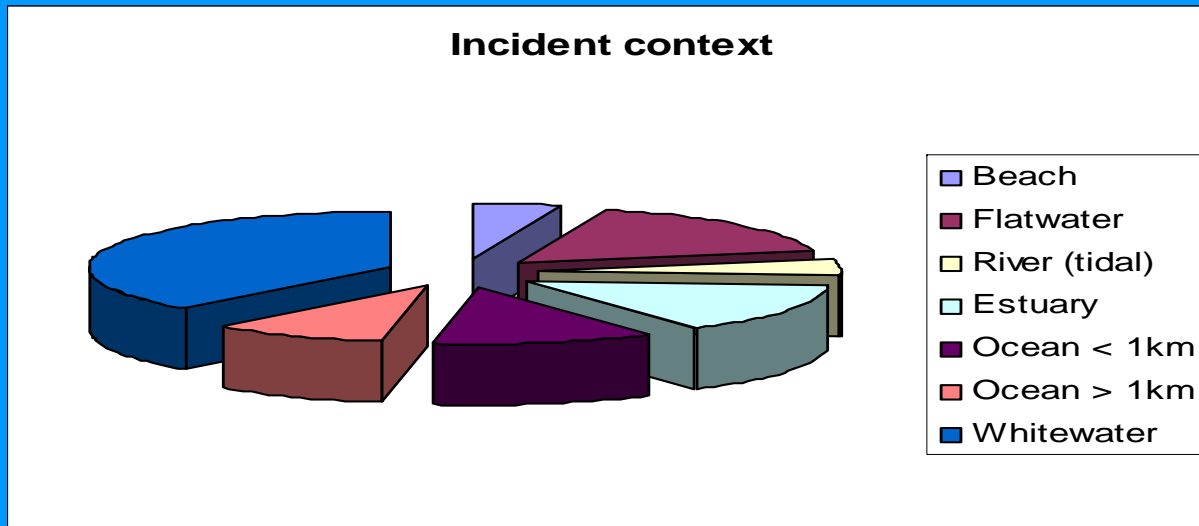


52% were peer groups
21% get into trouble alone
33% were club activities

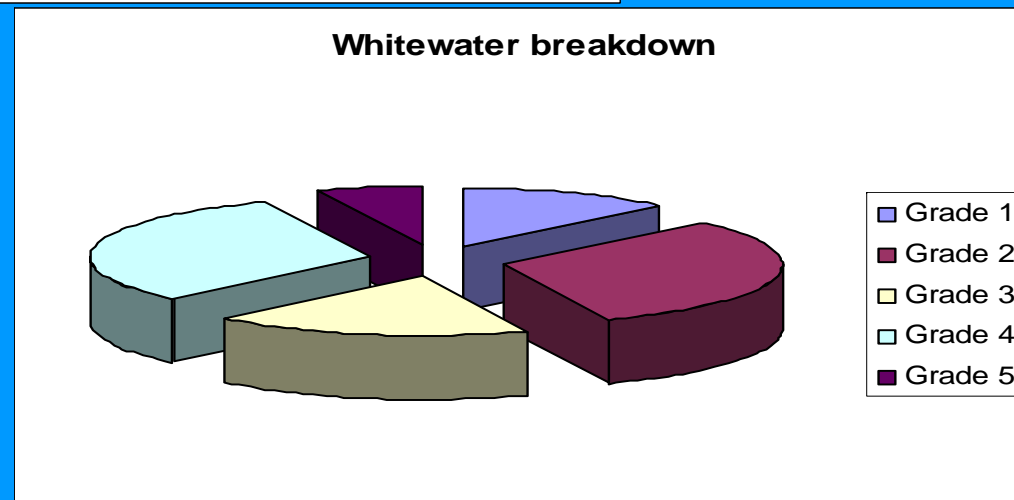
~9% of paddling covered
20% of sample OE/tourism



Incident context



42% of incidents occurred in air temperature below 22 degrees



Critical findings

1. we are invisible (26%)

- Wear type 2 PFDs
- Use bright yellow helmets
- Wear bright clothing
- Use brightly coloured boats
- Invest in retro reflective tape
- Paddle where you will be seen (don't rely on group size)

Be seen prior

Be found after

Critical findings 2

2 Correct knowledge stops incidents*

3 We don't keep our skills up (8%)

- If its over 6 months its not current
- It has to be in tough conditions

4 (Sea) offshore winds are very dangerous (factor in 50% of sea incidents)

- Abort trips with offshore winds



Critical findings

4 The two minute rule

- What the senior leader at the incident does in the first two minutes is usually the decider
 - Currarong
 - VH

Equipment comment 1

Failure

- Number 1 equipment failure was rudder cables and systems
 - Check your rudder every time you paddle (age of rudder or craft irrelevant)
 - Learn to paddle without one (in bad conditions)



Equipment comment 2

Follow the book

Safety equipment

- Where safety equipment
 - was there **and**
 - was usable in the situation **and**
 - the users knew how to use it
- Then it worked as a first line of defence



The Big Issues

Experience

- All victims had at least 3 years "experience"

Finding

- Current experience in similar conditions (in the last 6 months) is critical

BUT IS ONLY EFFECTIVE WITH

- Correct technique and knowledge



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Knowledge comment

An incident example

- Two paddlers (competition incident);
 - Same kayak design
 - Same division (thus similar speed/skill?)
 - Similar age
 - Similar weight
 - Similar time paddling
 - Similar training programs
 - Same coach



The incident

- Marathon race
- 100+ competitors
- Gale warning
- Man made lake (concrete sides)
- Early winter



The people

FB

- Pilot trained (weather, aeronautics)
- Coach trained
- Well read

COS

- Admin assistant
- Out of date (non-practicing coach)
- Un-read



The result

FB

- Chose a safe track through a gale and finished well

COS

- Capsized multiple times eventually leaving his boat on the shore, hitching to his car and retrieving the boat later



Dig deeper – clothing, area

- COS is better equipped clothing wise, hence should be more physically comfortable in the conditions.
- COS trains on the lake in question regularly (but not in the race conditions)



Dig deeper

Critical difference between the two people;

Its all between the ears;

- **Current knowledge**
- **The ability to use it in crisis**



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Knowledge 2



- Knows what to look for
- Understands hydraulics
- Knows the route to take

Thus

- The path is easy
- Incident probability is greatly reduced

Head space

- The ability to make the right decisions fast is critical to the outcome.
 - Eat right
 - Drink right
 - Sleep right
 - Dress right
 - Prepare, consider, analyse, predict
 - Read, study, learn, write it down, review it



Big issue

Kayaking is not intuitive

- Qualified instruction can be the difference between accident and or injury and safety
- Experience without training;
 - Correct knowledge
 - Correct skills (technique)

has little value



Get Trained



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Future study

The 400m line

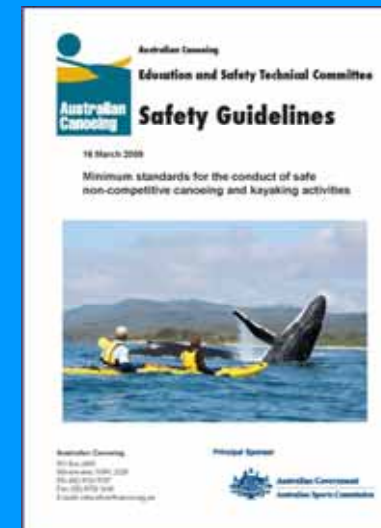
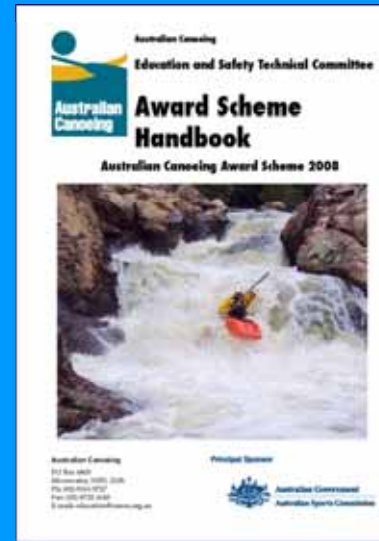
- Offshore winds; developed sea
- Cross shore winds; developed sea
- Onshore winds; still a 30 minute swim

- Still being looked at; however 400m from shore appears to be sea (need to be fully self contained)



Incident Conclusions

- Be seen Be safe
- Stay current
 - Skills
 - Knowledge
- Equipment
 - Know how to use it
 - Carry your equipment where you can use it
 - Check your equipment



Injury conclusions

- Get accredited training/coaching
- Be regularly assessed
 - We all creep toward poor technique
- Don't buy your boat based on your TV habits
- Think of the paddle as the thing that hurts your shoulders



Questions



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