

Safety regulations and guidelines for sailing yachts



Kim Klaka

Basic belief

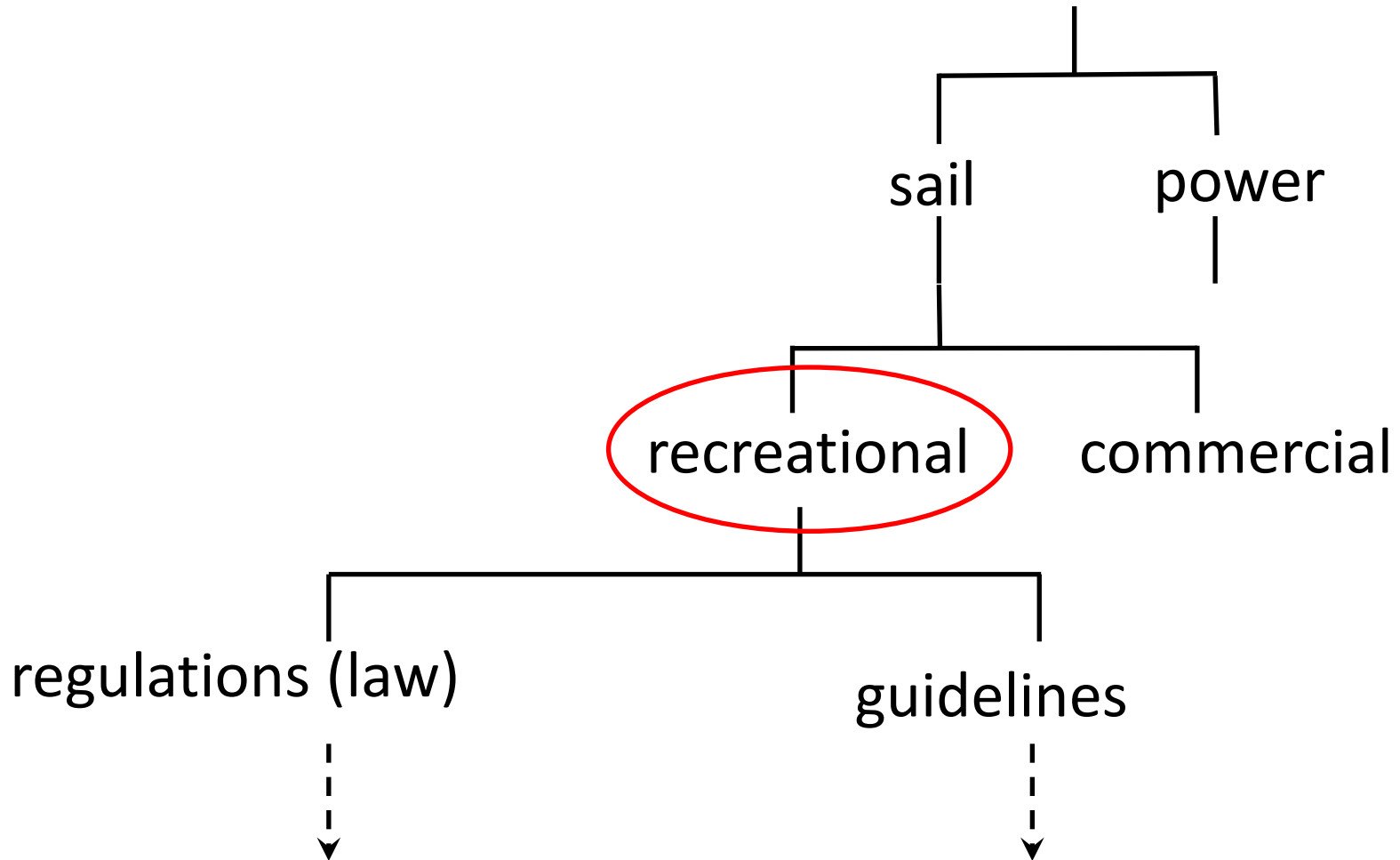
Safety guidelines and regulations must:

- a) Improve overall safety AND
- b) Not make things worse in some circumstances

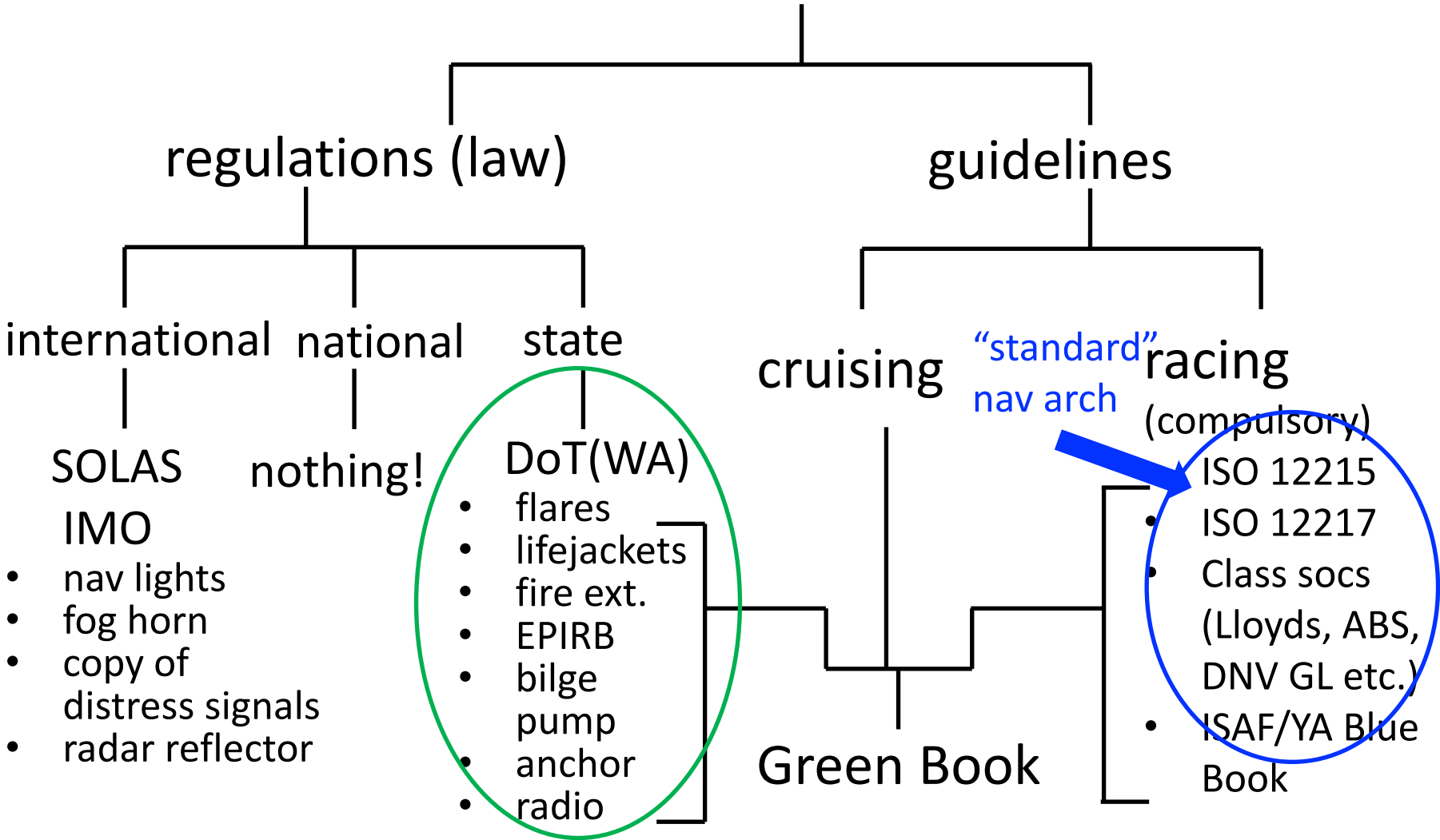
Outline

- What rules and guides are out there?
- How are they used?
- Does legislation work?
- Guiding principles
- Where do guidelines and rules go wrong?
- So what? – conclusions

What are we talking about?

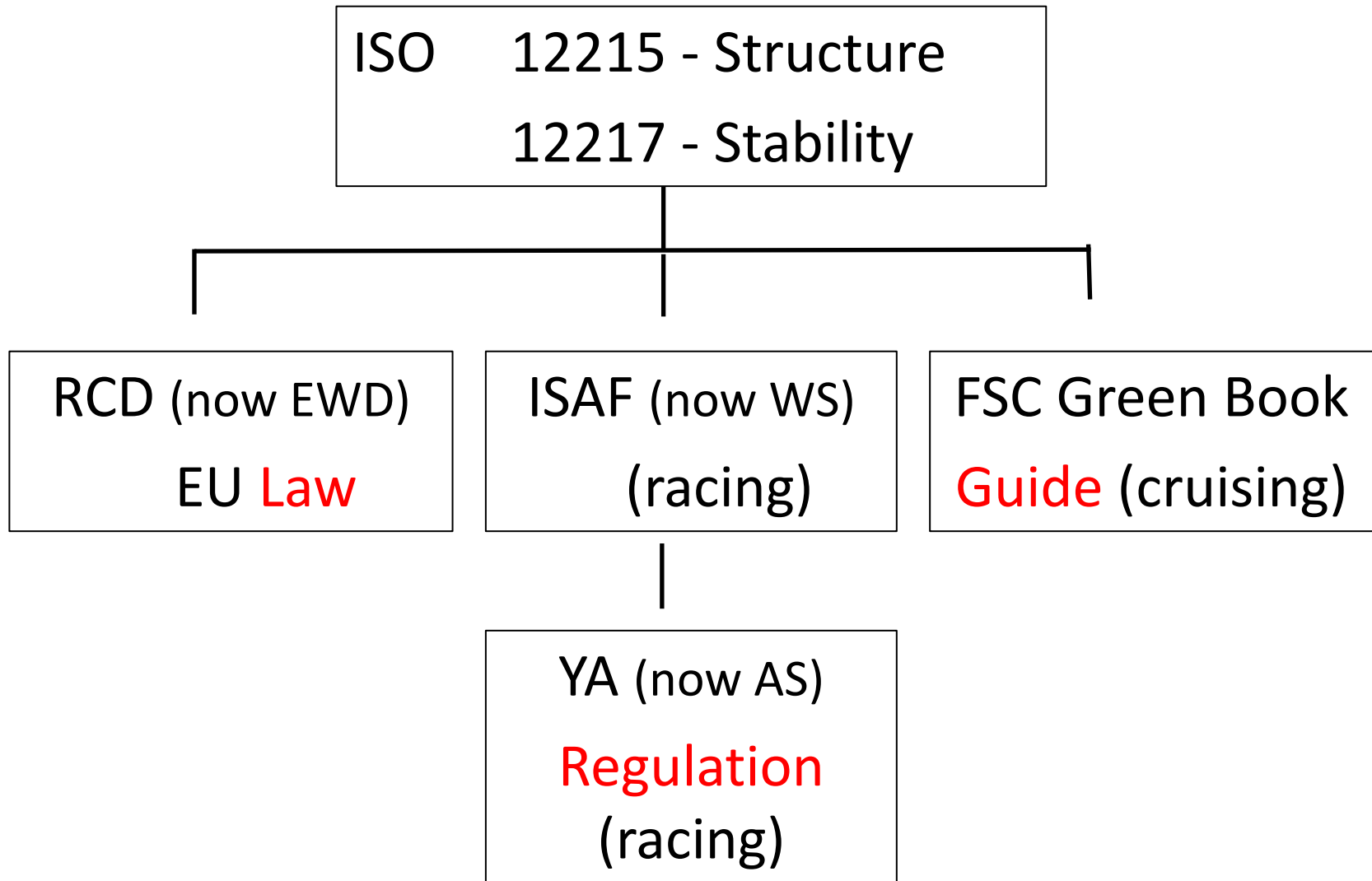


Recreational sailing boats



How are they used?

An example: ISO



Incorrect use of standards

“ISO 12215-7 was made to be used as a discussion tool between a notified body and a builder/designer to help CE marking cruising or sports boats. It frequently ends with a discussion, where the quality and experience of the builder gets <taken> into account. Applying it for ISAF without changing a word is ‘crazy’. It would needs dozens of interpretation to end with its fair application.”

Source: Personal communication from ISO Standards committee member, Aug 2014.

Legislation: does it work?

Yes

Marine Safety Victoria introduce compulsory wearing of lifejackets in Dec 2005:

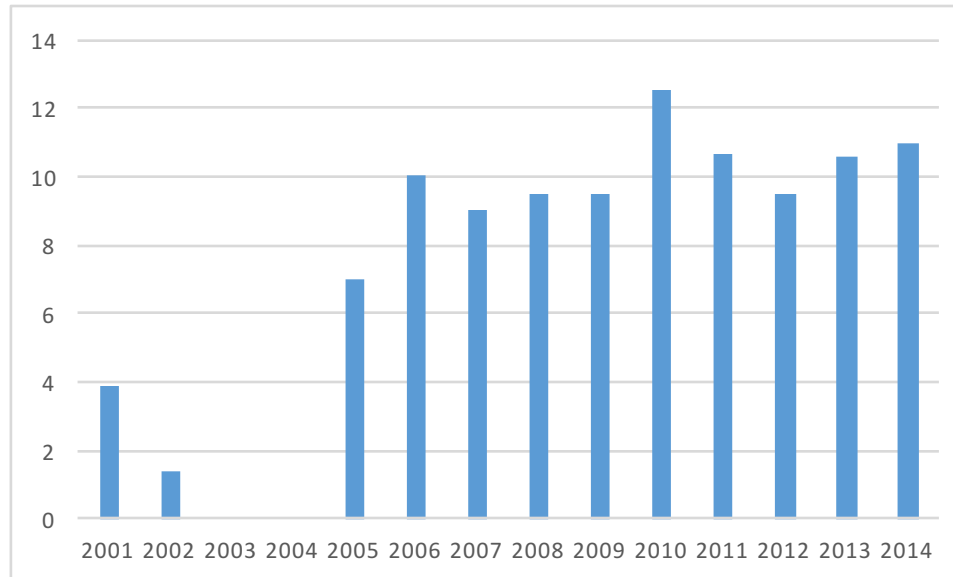
- pre Dec 2005 - 12 % of boaters wore lifejackets
- post Dec 2005 - 55 % of boaters wear lifejackets

Source: "Get on board with life jackets" <http://www.lib.uts.edu.au/gta/14037/get-on-board-life-jackets>

However, this was at the same time as an education campaign.
Was the behaviour changed by legislation or education?

Legislation: does it work?

No



Number of reported incidents on the water per 10,000 registered recreational vessels

RST was compulsory for age 14-25 by April 2007

RST was compulsory for everyone by April 2008

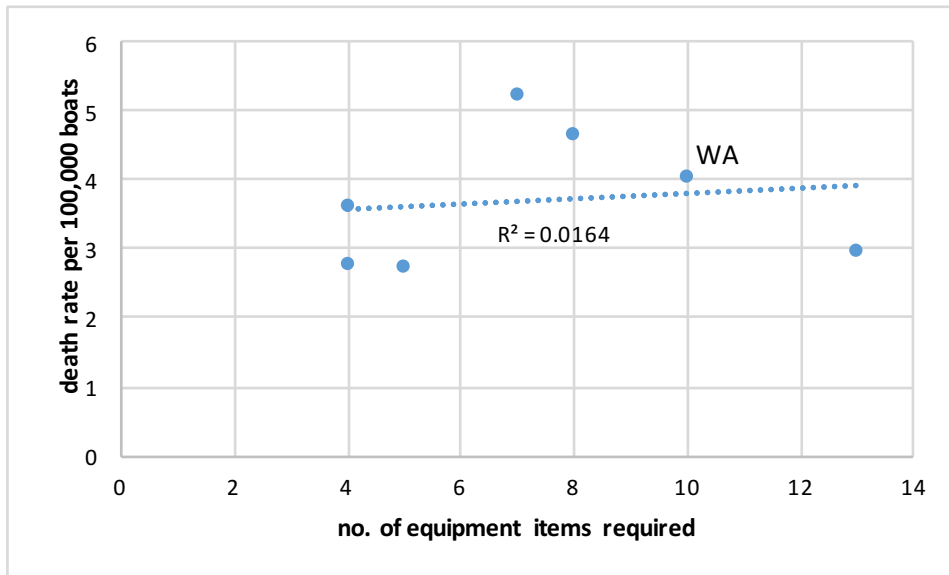
Introduction of penalty for non-reporting 2011

Sources:

2000-2003: Pikora T.J. & Cercarelli L.R. UWA Injury Research Centre report RR154, Oct 2004

2005 onward: DoT annual reports

Legislation: does it work? Or is it just irrelevant?



Basic belief:

Safety guidelines and regulations must:

- a) Improve overall safety AND
- b) Not make things worse in some circumstances

Guiding principles

- Good rules must encourage safe behaviour.
- Circumstances dictate “best” choice -> skipper must be allowed to decide.
- Operator behaviour/knowledge is more important than equipment.
- Regulations should be evidence-based (but there is very little hard evidence.)

Personal freedom v. duty of care

“Every West Australian has the right to go to sea and drown themselves”.

- But does the skipper have the right to endanger their crew?
- Does the crew have responsibility for their own safety?

Big questions!

Occupational Health and Safety (OHS): Differences with recreational boats

- Strong voluntary component of activity
(volenti non fit injuria)
- No financial reward, so no contract
- Duty of care is limited, blurred, shared

Where and why things go wrong

1. Typecasting - one size doesn't fit all
2. Ill-informed
3. Technology lag
4. Awareness and trade-offs
5. Blinkered view
6. Legacy – it was always thus
7. Marketing – confusing the message

Where and why things go wrong

1. Typecasting. One size doesn't fit all:

Trampoline lashings.....



Where and why things go wrong

1. Typecasting. One size doesn't fit all: Fitting a trysail...



Where and why things go wrong

2. Ill-informed: medical kit in YA Blue Book (regs for racing yachts 2013-2017)

Oxycodone suppositories (per rectum) 30 mg (e.g. Proladone)

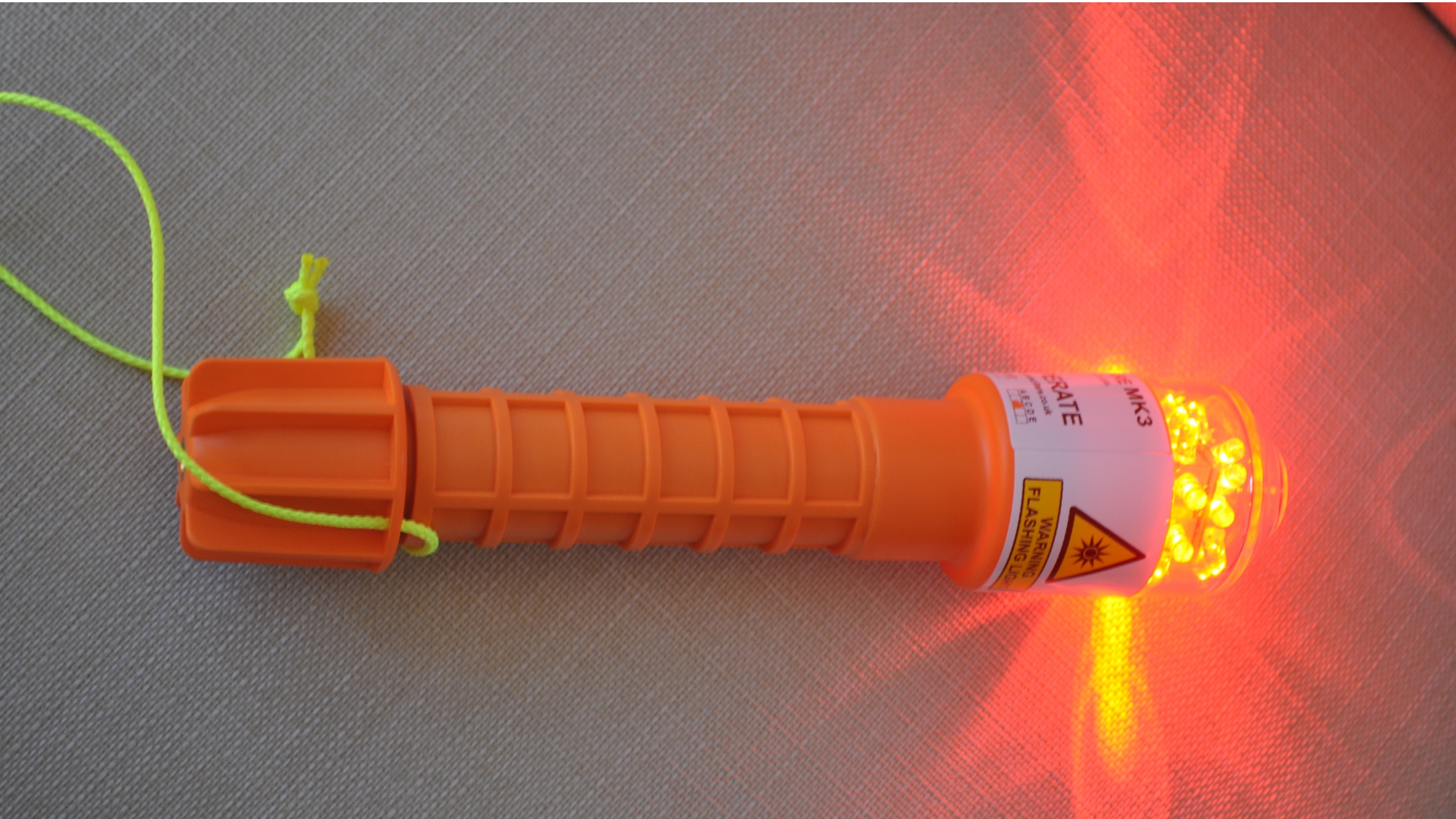
- Should be 10mg dose. Many people are over-sedated on 25mg, and others can always take two 10mg tablets if required.
- The temperature/environment on a yacht is likely to melt them and lose effectiveness. 5mg tablets are available, which do not melt.

Prochlorperazine suppositories 25 mg (e.g. Stemetil)

- Prochlorperazine suppositories are either not being stocked or manufactured.

Where and why things go wrong

3. Technology lag: distress signals....



Where and why things go wrong

4. Awareness and trade-offs: harness tethers.....

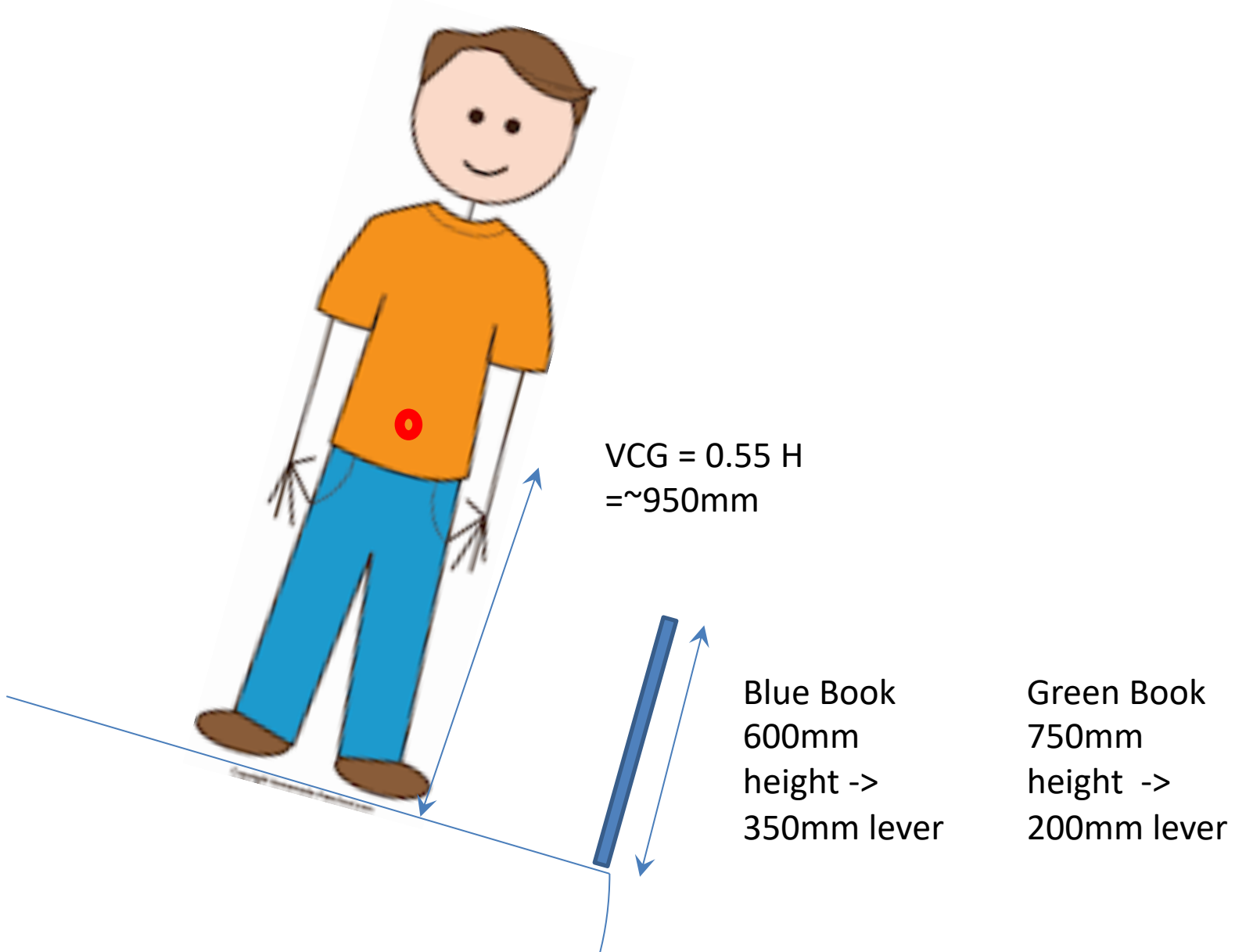


Where and why things go wrong

5. Blinkered view: wearing lifejackets

Where and why things go wrong

6. Legacy – it was always thus: stanchion height.....



Where and why things go wrong

6. Legacy – it was always thus: stanchion height.....



Why things go wrong

7. Marketing – confusing the message
 - a) advertising that doesn't work



Why things go wrong

7. Marketing – confusing the message b) advertising that works

I am your Lifejacket.

When we are on the water,

I will make you feel safe.

And when we are in the water,

I will keep you alive.

I will stop you from panicking.

I will keep you afloat.

Even in rough weather.

Even if you are unconscious.

I will support and protect you
until help arrives.

All this I will do for you
if you do one thing for me.

Please, put me on.



Lifeboats

Where and why things go wrong.

8. No idea why: flotation....

YA regs (Blue Book) on flotation

For multihulls:

- “Adequate watertight bulkheads and compartments in each hull shall be provided to ensure that a multihull is effectively unsinkable and capable of floating in a stable position with at least half the length of one hull flooded” (3.05.1)
- “A hull shall have a watertight bulkhead either within 15% of LOA from the bow....” (3.05.4)

And for monohulls:

- Nothing!

So why do YA safety regs require flotation for multihulls (which probably float) but not for monohulls (which probably sink)?

Conclusions

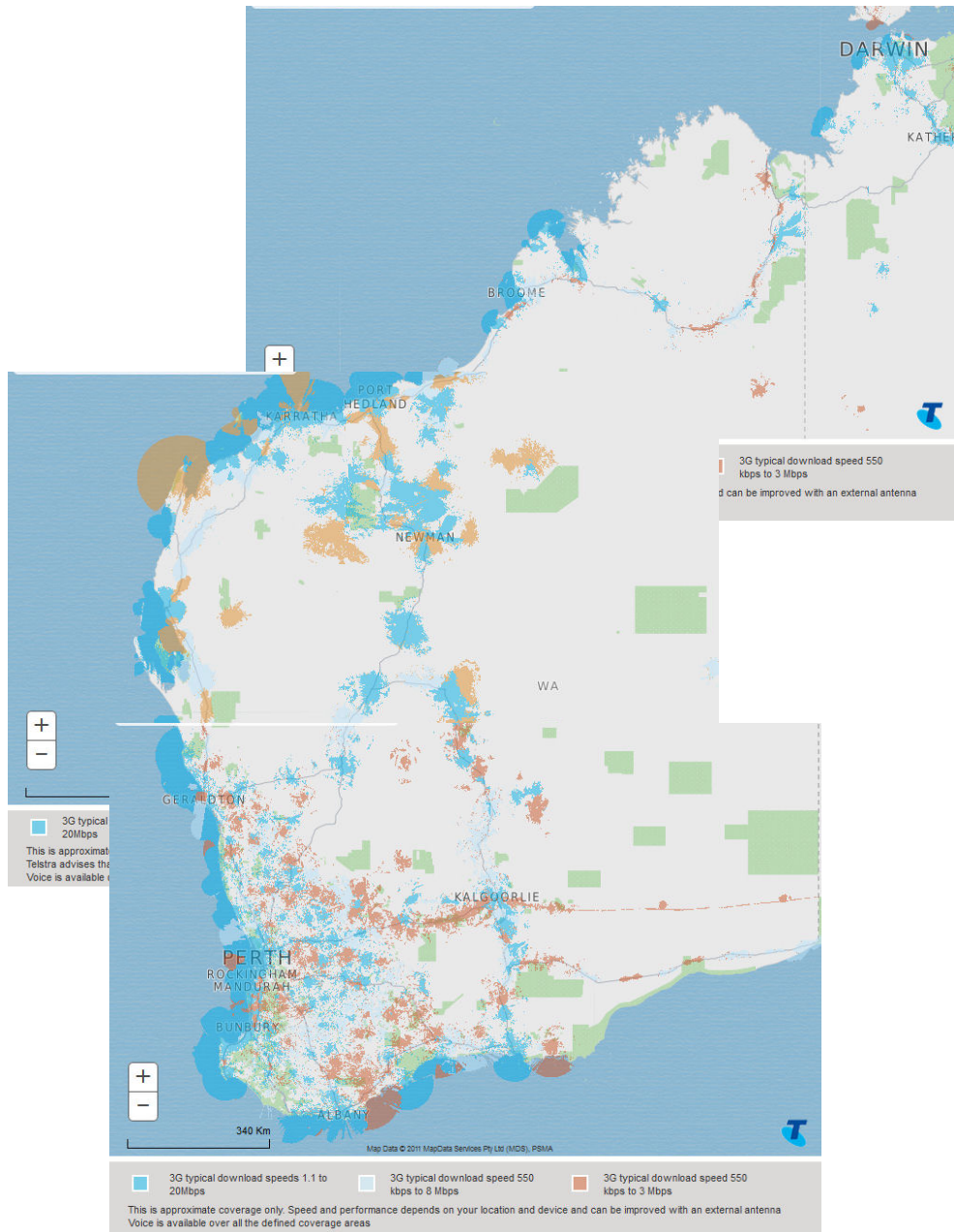
- Regulations do not of themselves make things safer.
- Changing behaviour is the goal and the correct behaviour depends on the circumstances.
- Black and white does not work, different circumstances require non-prescriptive regulations (“deemed to satisfy” options).
- Naval architects have a professional obligation to contribute to improving guides and regs.



Contentious areas some examples

- Comms: VHF/27MHz/mobile/satphone
- POB: AIS v PLB

Telstra 3G device only



Telstra 3g: external aerial

