How much regulation should we have?

Kim Klaka, PhD MRINA 5th August 2016

1. BACKGROUND AND SCOPE

This document is a submission to the DoT WA Recreational Vessel Safety Equipment Review of Regulatory Requirements ERG Draft 1 of 18 July 2016. It has been prepared without consultation with anyone else. It is illustrative rather than comprehensive, owing to shortage of time and money.

2. DOES LEGISLATION ACTUALLY WORK?

This is a particularly difficult question to answer. It could be determined by looking at death and injury rates before and after enacting a piece of legislation. However, in almost all occasions the new legislation is accompanied by an education and awareness program. Therefore it is not usually possible to determine whether a reduction in accidents is due to the new legislation or the education campaign. However, if the new legislation results in an increase in accidents, it is reasonable to conclude that the legislation has not achieved its desired outcome (except for the extraordinary situation where the awareness campaign itself has had negative impact). There is an illuminating example very close to home – the introduction of the Recreational Skippers Ticket (RST) in WA:

year	05/06	06/07	07/08	08/09	09/10
no.	7	0	9.05	9.46	9.51

source: DoT Annual Reports 2007/8 and 2009/10

Table 1: Number of reported incidents on the water per 10,000 registered recreational vessels:

The RST was introduced in 2006 and became compulsory for everyone by April 2008. Table 1 shows the incident rate increased significantly with the introduction of the RST. Whilst this may be due to increased reporting of incidence due to increased awareness, a more plausible explanation is that once a person obtains their RST they stop trying to educate themselves further, unlike the pre-RST environment.

Another example, though largely anecdotal, relates to wearing of lifejackets. In several countries wearing is compulsory for many situations, but in the UK there is no requirement to even have lifejackets on board, let alone wear them. Yet the rate of wearing lifejackets is anecdotally very high and their recreational boating death rate is lower than the average of countries with lifejacket legislation. This is probably because of an extremely effective education and awareness campaign run jointly by the RYA and the RNLI.

3. DO THE VOTERS WANT MORE LEGISLATION OR LESS?

The volume of legislation in a jurisdiction is a bit like the cost of living – they both seem to increase relentlessly. Safety legislation is no exception; it has increased in volume, scope and complexity over the years. Whilst the intent has been sound – to reduce the number of accidents and their associated emotional and financial trauma – this has been at the expense of reduced individual freedom, diminished personal accountability and increased up-front costs. This is where the “nanny state” label comes from. Australia has moved from the easy going, can-do image to become one of the more bureaucratic places in the western world. Over the last decade the appetite in the community for new legislation has decreased, with an increasing body of opinion that the time has come to reverse the swing of the pendulum by reducing the amount of legislation. Whether those voices are strong enough to warrant a change is not clear, but the issue needs to be raised with an increasingly louder voice. We are already a safe country by world standards - Australia is ranked 10th out of 34 OECD countries for lowest rate of premature mortality rate.

4. BANG FOR BUCK – WHERE TO PUT THE EFFORT?

One of the driving factors often given to creating new safety legislation is the need to reduce the level of risk. Evidence is provided in Klaka, 2016 that refutes the link between increased safety legislation and reduced death rates. Whether the effort is expended on legislation or on education, the question arises of how best allocate the finite resources available. There is unresolved debate as to what metric should be used in deciding allocation e.g. should the effort be placed in the activities where the greatest absolute number of preventable deaths occur across the nation, or would it be better applied to those activities which are most dangerous for an individual to undertake? If we consider the former approach, statistics reveal the following premature deaths by cause in Australia (AIHW, 2014).

Cause	**No. of potentially avoidable deaths (PADS)**
Heart disease	5169
Suicide	2266
Land transport accidents	1268
Accidental drowning	174
Recreational boating accidents	*80* (O'Connor, 2002)
Hang gliding accidents	8 (Brandon J., 2015)

(AIHW Figures are per year, averaged 2010-2012, from table S2 of Supplementary tables)

Table 2: Potentially avoidable deaths by activity

So applying this metric to resource allocation would imply expending about 15 times more effort on land transport safety than recreational boating safety.

An alternative approach is to apply effort in proportion to the risk of the activity. There is some informative data from the US on this issue (NASBLA, 2015):

Activity	**Death rate**
Hang gliding	59.33
Motor bikes	19.26
Scuba diving	14.43
Swimming	2.45
Cycling	1.31
Commercial fishing	1.16
Recreational boats	*1.0*
Motor vehicles	0.96
Working agriculture	0.29
Train travel	0.13

baseline is Boating =1.0

Table 3: Relative death rates per exposure hour

Applying this metric to resource allocation would imply expending about the same effort on land transport safety as recreational boating safety.

5. WHERE DO YOU STOP?

At present there are fewer than a dozen items of safety equipment specified in the NWR (exact number depends on boat type and area of operation). How many more (or fewer) items do we want? The Yachting Australia Special Regulations for Racing Boats (YA, 2012) has 61 clauses on safety equipment, covering 50 pages. The simplified section of the Green Book of Safety Recommendations for Cruising Yachts (FSC/Klaka, 2016) has 47 sections covering 16 pages. This is just for one type of boat, the list would be longer when motorboats, jet-skis, sailing dinghies, paddle craft etc. are considered. That is just for safety equipment, not vessel design, construction or operation.

6. . CONCLUSIONS

The culture of legislating for safety might be changing.

The apportionment of effort in regulating safety varies hugely with the metric used.

It is very difficult to extract and process data in a manner that can link legislation to risk reduction. Examples of negative correlation have been found.

7. REFERENCES

NASBLA, 2015

Recreational Boating Fatality Statistics: an exploration of fatality rate calculations and comparisons APPENDIX: ERAC-2015-C1. NASBLA Engineering, Reporting & Analysis Committee 2015 C1 NRBS Charge--Research Brief, July 2015

http://www.nasbla.org/files/ERAC/APPENDIX ERAC-2015-C1 NRBS Research Brief_Rate Normalization_July 2015.pdf

AIHW, 2014

National Mortality Database, Australian Institute of Health and Welfare, 2014.

http://www.aihw.gov.au/deaths/premature-mortality/causes/ and

http://www.aihw.gov.au/WorkArea/DownloadAsset.aspx?id=60129552769

O'Connor, 2002

O'Connor P. *Assessment of fatal and non-fatal injury due to boating in Australia*. NMSC, February 2002

Brandon J., 2015

http://www.recreationalflying.com/tutorials/safety/intro2.html

Klaka, 2016

Klaka K. *Global benchmarking: How much regulation do other countries have?* Submission to Recreational Vessel Safety Equipment Review of Regulatory Requirements, DoT WA, August 2016.

FSC/Klaka, 2016

Klaka K. *The Green Book Cruising Safety Recommendations. v4.1.* Fremantle Sailing Club, 27 April 2016 http://www.fsc.com.au/cproot/3944/3/FSC Cruising Recommendations Green Book v4.1.pdf

YA, 2012

Yachting Australia. The Yachting Australia Racing Rules of Sailing for 2013-2016. October 2012. ISSN 2201-0149.