

IMPROVING THE APPLICATION OF THE COLREGS

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1 Introduction

For some considerable time now the topic of the current application of the International Regulations for Preventing Collisions at Sea has been a matter of vigorous debate. Over the last half-century despite improvements in navigational aids such as ARPA and attempts to raise the standards of training through the various STCW conventions, collisions still occur. The general consensus is that the Colregs are not being adhered to; looking at the MARS reports in *Seaways* the late Capt. Francis Baillod, the initiator of this project, observed that 74% of reported incidents related to uncertainty, violations and disregard for the Colregs. Calling on his own extensive experience in command, Capt. Baillod quoted a number of possible reasons for this poor state of affairs. These included inadequate manning, many unnecessary distractions, fatigue, reluctance to manage speed, over-reliance on electronic aids and just plain poor seamanship among many others. He concluded, *“that as a profession we will have to take more direct responsibility for our bridge culture”* and outlined his proposal to conduct a study, of which the survey results contained in this paper are but the first step.

1.1 Survey Objective

To conduct an international survey amongst sea staff, training staff and examiners to discover the norms, problems, and influences which affect decisions on the bridge.

1.2 Survey Description

Following the criteria outlined above a survey questionnaire was compiled. The format of the questionnaire was in five sections:

Section A. Personal Certification - details of grade of certificate, where obtained and date.

Section B. Personal Experience – details of sea service in previous 5 years, type of vessel, size, principal area of trade and busiest traffic area visited.

Section C. Conduct of the Rules – Respondents were invited to give their opinion on a number of questions:

The number of manoeuvres contrary to the Colregs observed and the perceived reasons.

The number of manoeuvres negotiated by VHF, the contrary manoeuvres resulting and the perceived reasons.

Disagreements with fellow officers in interpretation of the Colregs

Incidence of misuse of displayed signals.

Conduct in poor visibility

Perceived distractions which may interfere with the conduct of a good lookout and application of the Colregs.

Section D Scenarios – Graphic representation a three typical encounters which respondents were invited to indicate how they would manoeuvre their own vessel and how they would expect the target vessel to act within the requirements of the Colregs.

Section E. Solutions – Respondents were invited to rank in importance a number of suggested measures to alleviate the perceived problems and were also encouraged to express their own opinions.

2 Analysis

2.1 Response

A **total of 452 questionnaires** were received representing a good of cross-section of the current maritime world from 31 countries. The largest number of returns were from the UK (136), with good contributions from the Philippines (39), Ireland (28), India (50) and Greece (48).

The most cogent information emerging from the personal information is undoubtedly the **country of issue** of the certificate and the **seatime** experience. The former will hopefully give some comparison of education and training effectiveness. The latter should provide an interesting insight on the effect of experience and maturity. Do we expect knowledge and application of the Colregs to improve with age and experience? Or do we expect a peak of knowledge when an officer emerges fresh from training, from which point there is a slow deterioration as the practicalities of the profession and pragmatism kick in?

The other queries concerning **type and size of vessel** and **busiest traffic area** visited, are not directly relevant to application of the Rules but they do give some good background as to the depth of experience of the respondents.

2.2 Distribution by Country of Certificate Issue

Where returns pertaining to a particular country of issue were too small to be statistically significant they have been grouped into blocks.

The block groupings are, with number of returns for each country:

Far East	China (8), Thailand (3), Hong Kong China (1), Korea (3)
Mid East	Egypt (20), Turkey (4), UAE (1)
European Community/USA	Denmark (4), Germany (2), Italy (7), Netherlands (4), Norway (1), Spain (1), USA (4)
Eastern Europe	Croatia (3), Latvia (19), Poland (2), Russia (25), Ukraine (6)
Commonwealth	Australia (12), Canada (5), NZ (5), Pakistan (1), South Africa (2), Singapore (3)

2.3 Conduct of the Rules

2.3.1 *Contrary Actions and use of VHF*

When reviewing the response to the initial questions concerning conduct contrary to the dictates of the Rules, the most salient feature is the **almost universal**

Question 13 - Reasons for Manoeuvres Contrary to Colregs

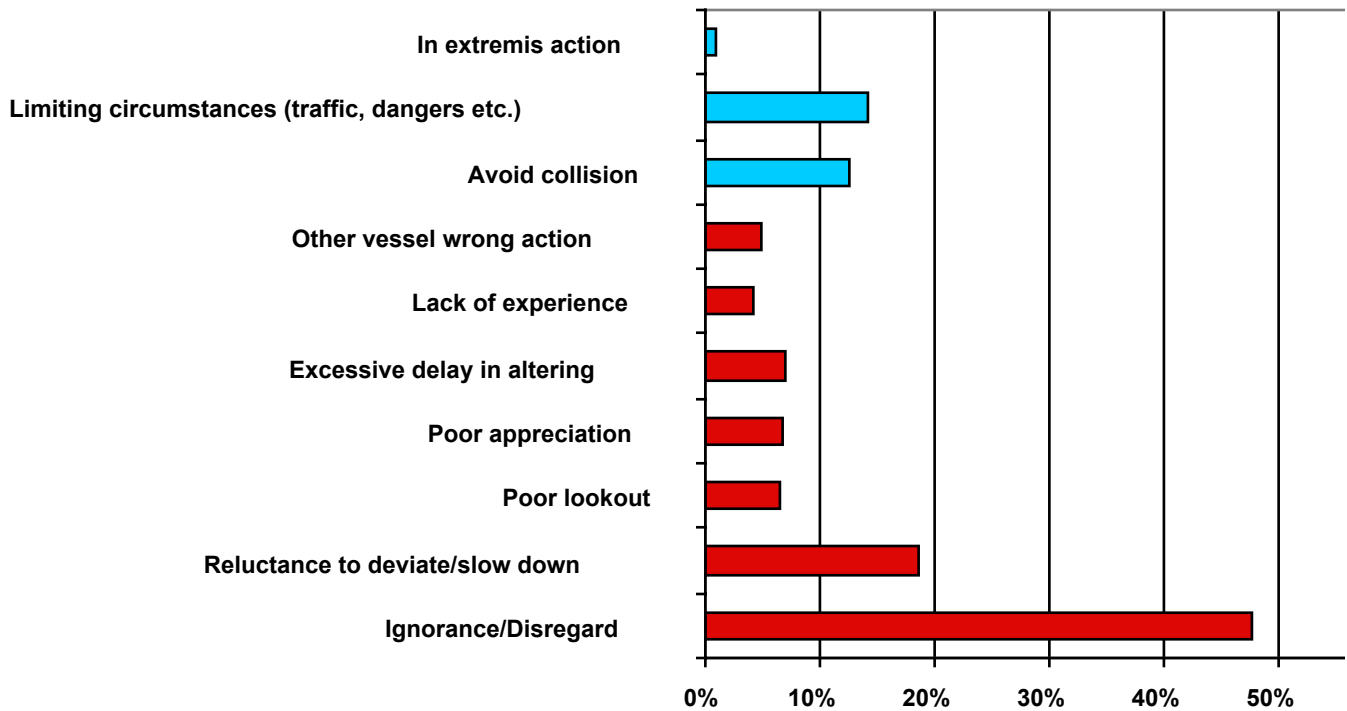


Figure 1.

tendency to blame others for infringements. (Figure 1) The questions themselves were ambiguous. Were the questions asking for the respondents' own actions? Or what they observed in others? More than 90% chose the latter commonly citing:

“Ignorance”, “Poor knowledge of the Colregs”, or “lack of training”

Under the guise of anonymity, some of these comments were very specific in **pointing the finger at certain groups and nationalities** as being the culprits.

The respondents' comments on the **use of VHF** were less accusatory, some 50% chose to blame others in much the same manner as above. However an equal number justified the use of VHF on occasions as a perfectly seamanlike use of an available tool to ensure the safety of navigation.

Another interesting aspect on the question of conduct within the Rules was the widespread belief that the advent of **stricter passage planning and GPS** had engendered a reluctance to deviate from track or slow down. That in many

instances, **track-keeping had the ascendancy over following the Colregs**. One typical comment was:

“Too many officers follow “tram line” navigation whereby they do not wish to get off the charted track. GPS has a lot to answer for....”

All in all, these answers confirm the current suspicions engendered by MARS and other sources that the **Colregs are often misunderstood, misinterpreted or just plain ignored on frequent occasions**. Although what proportion can be set against each possibility remains open.

2.3.2 Disagreements with Colleagues

The purpose of this question was to ascertain the level of confusion with the current Colregs that such disagreement might indicate.

Some 243 replies indicated **disagreement over interpretations of several of the Steering and Sailing Rules**, namely the straight forward clear visibility rules governing crossing, overtaking and head-on. The most frequent comment (33%) concerned the requirements of **Rule 8(a) for alterations to avoid collision should “be positive” and “made in ample time”**. Many complained that their colleagues left alterations of course either far too late, or did not allow sufficient clearance, some even reported other officers as opting for CPAs as little as one cable!

Curiously there appears to be less disagreement over rules such as **Rule 6 (Safe speed)**, **Rule 19 (Conduct... in restricted visibility)**, or **Rule 8(f) (not to impede)**.

Whether this lack of argument is due to, everyone understanding these provisions, or no one understanding them, remains open for discussion. Some clues may be forthcoming when the answers to the scenarios are analysed below.

2.3.3 Inappropriate Lights and Shapes

In answer to this question, three areas of complaint stand out above all others. The **misuse of signals by fishing vessels** was mentioned by almost two thirds of the respondents and it would seem to be a worldwide problem. This is closely followed by concerns about **the wrong application of NUC and Deep Draft signals**, together approximating 50% of responses. Many saw these as used on numerous occasions, entirely without warranty, to avoid obligations under the other Rules, or simply to avoid bridge watches, as in the case of displaying NUC lights while drifting and waiting to enter port.

Navigation lights were variously remarked on as either being out, poorly fixed as to the correct sectors or obscured by working lights etc.

One other rather curious but frequent comment was the display at sea, by a number of tankers and other dangerous goods vessels, of **the all-round red light**. Although unlike NUC and other hampered signals, it is difficult to see what possible advantage this brings the perpetrator under the Colregs.

Question 22 - Respondents Reasons for Actions in Poor Vis

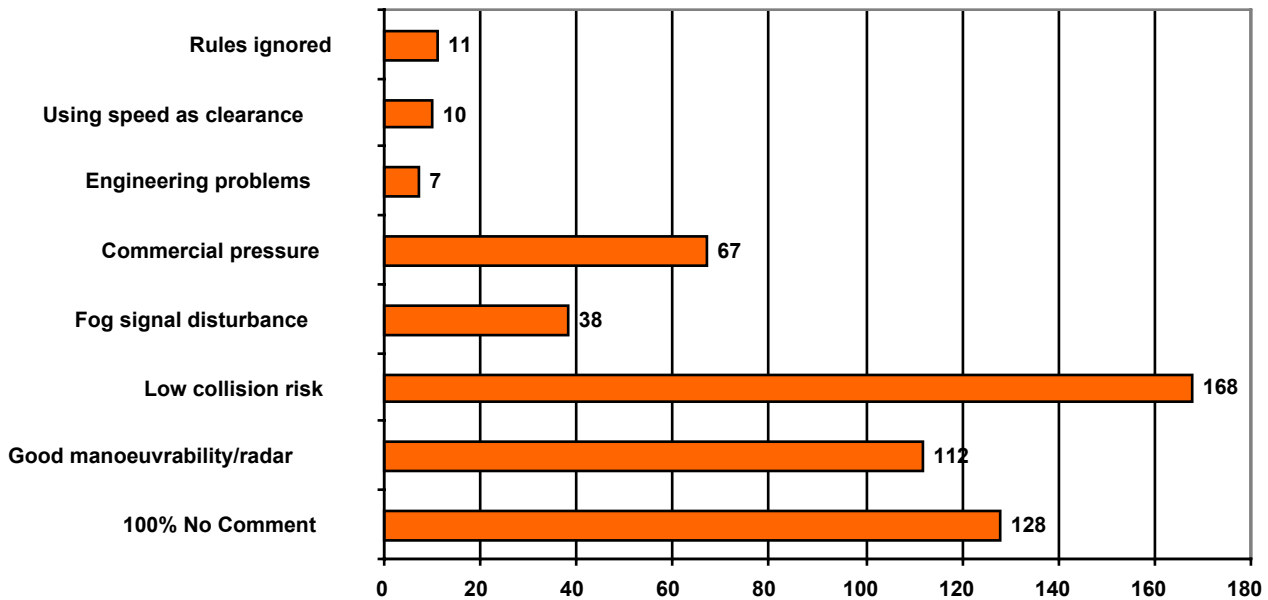


Figure 2

2.3.4 Conduct in Reduced Visibility

The remarkable feature concerning this topic was not so much the comments from those who chose to answer but the number of those who chose not to.

In answer to the questions: “Are your engines on stand-by? Are you at reduced speed? Are your fog signals sounded? **Over a quarter of the responses ticked 100% to all three and declined to make further comment. (Figure 2)** Such evasion cannot help but be viewed with a measure of suspicion. If nothing else, this flies in the face of the perfectly legitimate construing of **Rule 6**. A number of respondents quite rightly pointed out that they were not always at slow speed in poor visibility, because **Rule 6** gave them that latitude, quoting good manoeuvring capabilities, efficient radar/ARPA and minimal traffic as justification. Whether such justifications are always correct is a different argument.

As to the queries concerning status of engines as per **Rule 19(b)** a number mentioned the fact that on many modern vessels with full bridge controls, engines were always “*ready for immediate manoeuvre*”, so their 100% reply was perfectly correct.

Several passenger ship officers stated that **fog signals were not always sounded** so as not to disturb the passengers at night. This was also noted by officers of other types of vessels, but this time in consideration of colleagues catching up on sleep.

2.3.5 Distractions

Almost a third of responses listed **GMDSS false alarms** as the major irritation. One that will come as no surprise to today’s mariner. Perhaps more surprisingly, a variety of **internal distractions** came a close second. These ranged from visitors to the bridge on passenger ships to colleagues seeking information or simply there for a chat. One would have thought that such distractions to keeping a good lookout could be easily dealt with, but perhaps they are of such a mundane nature that they are easily overlooked.

Inconsequential **VHF chatter** again is not unknown and simply endured in most parts of the world, but interestingly this particular annoyance was outvoted by problems with **legitimate radio traffic from owners, charterers, agents** etc. If other more demanding calls on the OOW’s time, such as **VHS reporting** and **routine paperwork** are included, attending to what amounts to “ship’s business” adds up to a major distraction, way ahead of that posed by the GMDSS. As with the less consequential internal interruptions, this might possibly be managed better by all concerned, both aboard ship and ashore.

2.4 The Scenarios

The principal objective of this section is to try and establish some answers to the question, whether the Colregs are simply misunderstood, or understood but disobeyed. In the answers to these scenario-based questions there is no apparent motive to disobey so any response should be purely indicative of knowledge.

2.4.1 Scenario 1

This is **fundamentally a simple crossing situation governed by Rule 15, Rule 16 and Rule 17**. However, as this takes place within the confines of a TSS, the provisions of **Rule 10** also have some relevance. In this case only in terms of the action chosen by the crossing target vessel, the own ship obeys **Rule 15**. Within the requirements of **Rule 17** and **Rule 10**, the target first and foremost must obey

Rule 17(a)(i) and “*keep her course and speed*”, but the question arises as to the precise meaning of that phrase. The courts have ruled, on more than one occasion, that in many instances, this is not to be taken literally. The lawyers’ interpretation is that it means, “to continue to carry out her obvious navigational intention”. What this suggests in this scenario, is that the crossing vessel’s obvious navigational intention is to cross the scheme and in doing so she would presumably have planned to cross “as nearly as practicable at right angles” in obedience to **Rule 10(c)**. **Therefore she would remain legitimately within the dictates of Rule 17 if she were to alter to starboard.**

To sum up the actions of both vessels:

- Own ship will alter to starboard as per **Rule 15**.
- Target ship will either maintain her course and speed as per **Rule 17**, or alter to starboard as part of her navigational intention.

2.4.2 Scenario 2

The scenario description states that the own ship can only navigate with the channel, so we must assume therefore, she will be displaying **the signals prescribed in Rule 28**. Consequently, this situation is governed by **Rule 18(d)(i)** and the crossing **target vessel is instructed to “avoid impeding”** the transiting vessel. In which case, the conduct of both own and target ship is prescribed by the requirements of **Rule 8(f)**.

*There is a possible argument that this is a narrow channel and therefore **Rule 9** applies, not **Rule 18**. This is largely irrelevant, as regardless of which rule applies here, the obligation of the crossing vessel not to impede remains the same and both vessels clearly fall under the requirements of **Rule 8(f)**.*

To sum up:

- Own ship will alter to starboard as per **Rule 8(f)(iii)** and **Rule 15**. (When it is clear the target vessel is honouring her obligations under **Rule 8(f)(i) and (ii)**, and altering to avoid impeding, own ship can return to her original course)
- Target ship will obey **Rule 8(f)** and either slow down, stop or alter to starboard. She cannot go to port as this would be in direct contravention of **Rule 8(ii)**.

2.4.3 Scenario 3

This is a straightforward “not in sight” situation and as **such comes under Rule 19**. Unlike the first two scenarios there is no ambiguity here, **Rule 19(d)(i)** requires both vessels to avoid “*an alteration to port for a vessel forward of the*

beam” and therefore there is nothing in the circumstances displayed to prevent both vessels altering to starboard.

The target to starboard of own ship might be considered an impediment, however she is 4 miles off and overtaking at speed. Therefore, any reasonable alteration to starboard (20°?) would only serve to increase her clearance rate ahead. It should also be noted that **there is no obligation concerning this vessel under Rule 19(d)(ii)**.

To sum up

- Own ship alter to starboard.
- Target ship alter to starboard.

2.5 Scenario Responses

2.5.1 Analysis Process

The analysis of the response to the scenario questions was approached from three perspectives:

- The Answer Spectrum – the spread of all possible answers to the scenario.
- Illegal or Ineffective – those answers which chose options directly contrary to the Colregs, or that would be ineffective, such as both vessels slowing down.
- Legal Actions – actions in accordance with the Rules for own ship only. Further divided into positive and non-positive actions. The former being strictly in accordance with the Colregs, the latter not illegal but also not clearly following the Rule, such as slowing down.

2.5.2 The Answer Spectra

This was a good overall indication of confusion. In all scenarios there was a spread of options across all the possibilities, with the possible exception of altering to port, the avoidance of which seems to be ingrained in the seafaring psyche.

- Scenario 1 **seemed to give the least trouble** with more than half of the respondents (60%) choosing the correct actions for own ship and target.
- Scenario 2 probably caused the most difficulty and it is very clear that very **few seem to understand the provisions Rule 8(f)**, regardless of

background or experience. No one, in fact, picked the requisite actions and although some opted correctly for own ship to alter to starboard, this was in conjunction with expecting the target ship to stand-on. These few were **clearly viewing this as a simple crossing situation under Rule 15.**

- Scenario 3 showed a small improvement on the previous abysmal showing but **less than a quarter choosing the correct solution** is hardly cause for celebration.

To summarise the above the spread of answers shows an **in-depth confusion** with these situations and the various Rules that govern them. Even the best-performed Scenario 1 has 40% wrong answers, hardly an examination pass mark at anyone's standards. As to the others, **Rule 8(f)** as a comparatively recent amendment (1989) seems to have passed most people by, while **Rule 19** is only barely understood.

2.5.3 *Illegal or Ineffective*

Looking at the results on strictly non-compliance basis also gave the opportunity to examine the differences if any between the various certificate issuing nations.

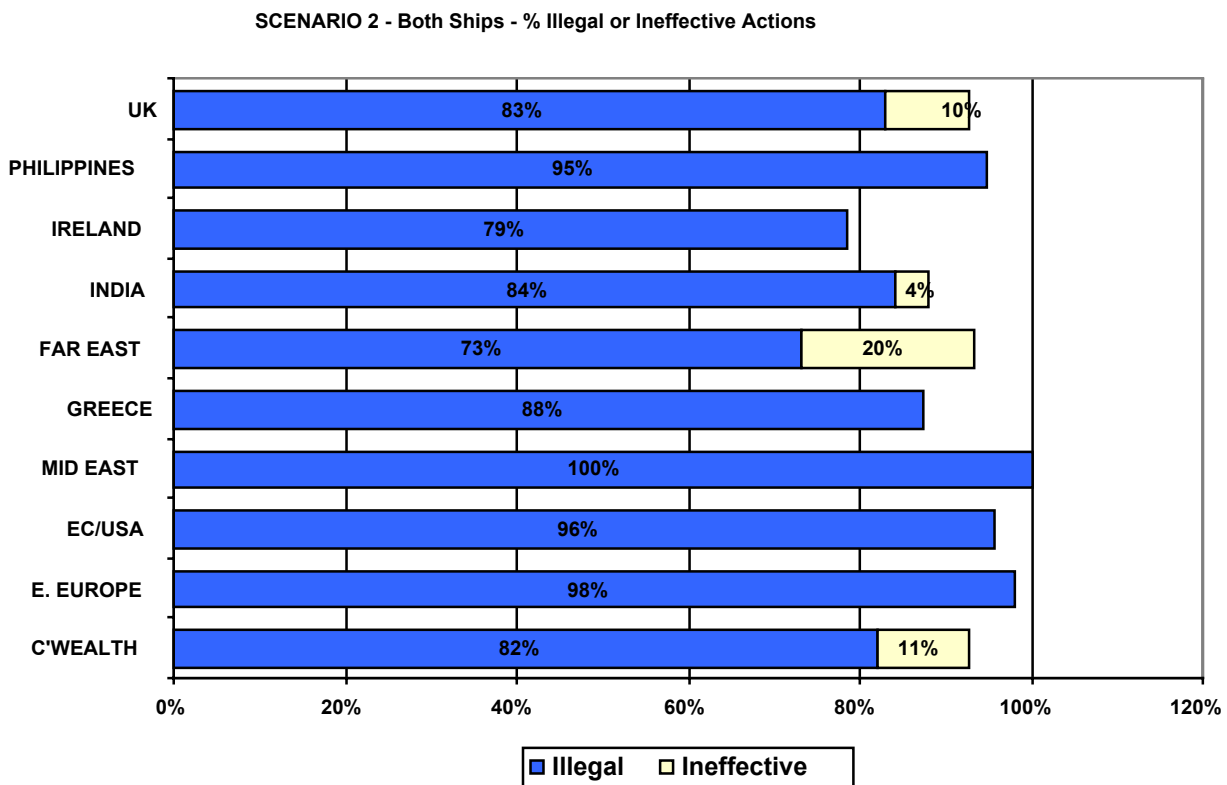


Figure 3

Ineffective actions, such as opting for own and target to slow down although strictly legal, in as much as they usually don't contravene anything, still tend to be an indication of ignorance. "I don't know what the rules require, but I won't do anything illegal".

- Scenario 1 was **dealt with particularly well by the UK respondents**, some 3% wrong answers. Ireland, India and the Commonwealth countries did reasonably well with 14% wrong. The rest however give some cause for concern with the Far East block (80% wrong) and the Philippines (56% wrong) into **worrying proportions**.
- Scenario 2 is **the eye-opener (Figure 3)**, the UK and Commonwealth block achieving 83% illegal choices and around 10% ineffective. This time, the Far East scored best (although that's hardly the term!), with 73% non-compliance, although they then evened the score by adding 20% ineffective choices.
- Scenario 3 showed a fairly **even spread of non-compliance** and although the UK results at 38% wrong were better than most, it cannot be said to be brilliant and if ineffective choices of 13% are added, this brings it much into line with everyone else.

2.5.4 Legal Actions – Positive/Non-Positive

This part of analysis adds little that needs to be discussed in this paper. Other than perhaps to point out that, as with the ineffective choices previously, the non-positive actions, eg, slowing down when there is no impediment to altering to starboard, show a degree of confusion and opting for a safe manoeuvre rather than one in strict compliance. In some cases this adds a new perspective to what may look at first sight a good result. For example the UK's overall legal score of 82% correct, for own ship's action in Scenario 3, appears in a totally different light when it is noted that more than half of that score is made up of non-positive actions. In fact, only 38% really know what they are doing.

2.6 Solutions

Of the suggested solutions improving education and training proved to be the most popular, scoring 7 on a 1 to 10 scale. The other ideas scored equally around 3 to 4 on the scale.

The option of **"better supervision by senior officers"**, supported by many, presumably is based on the assumption that they can act as mentors and thus improve the performance of their juniors. If this is the case, then another part of the scenario analysis casts considerable doubt on the suitability of such an action. When analysing the scenario responses by seetime (**Figure 4, shows the Scenario 3 results**) it transpires that invariably senior officers with over 15

years experience score worse than those with less. Why this should be so is open to debate but it does put a very different perspective on the senior's many criticisms of those under their control. It could be that **what they consider to be examples of poor education and training of junior officers, may in fact be correct**, and it is they themselves that are in error.

In a similar vein the **largely unsubstantiated criticisms of other countries**, although in some isolated cases partially justified, is by no means supported by the results of this survey. If we are to improve what appears to be an endemic world problem, gratuitous finger pointing, such as this, is unnecessary and unhelpful.

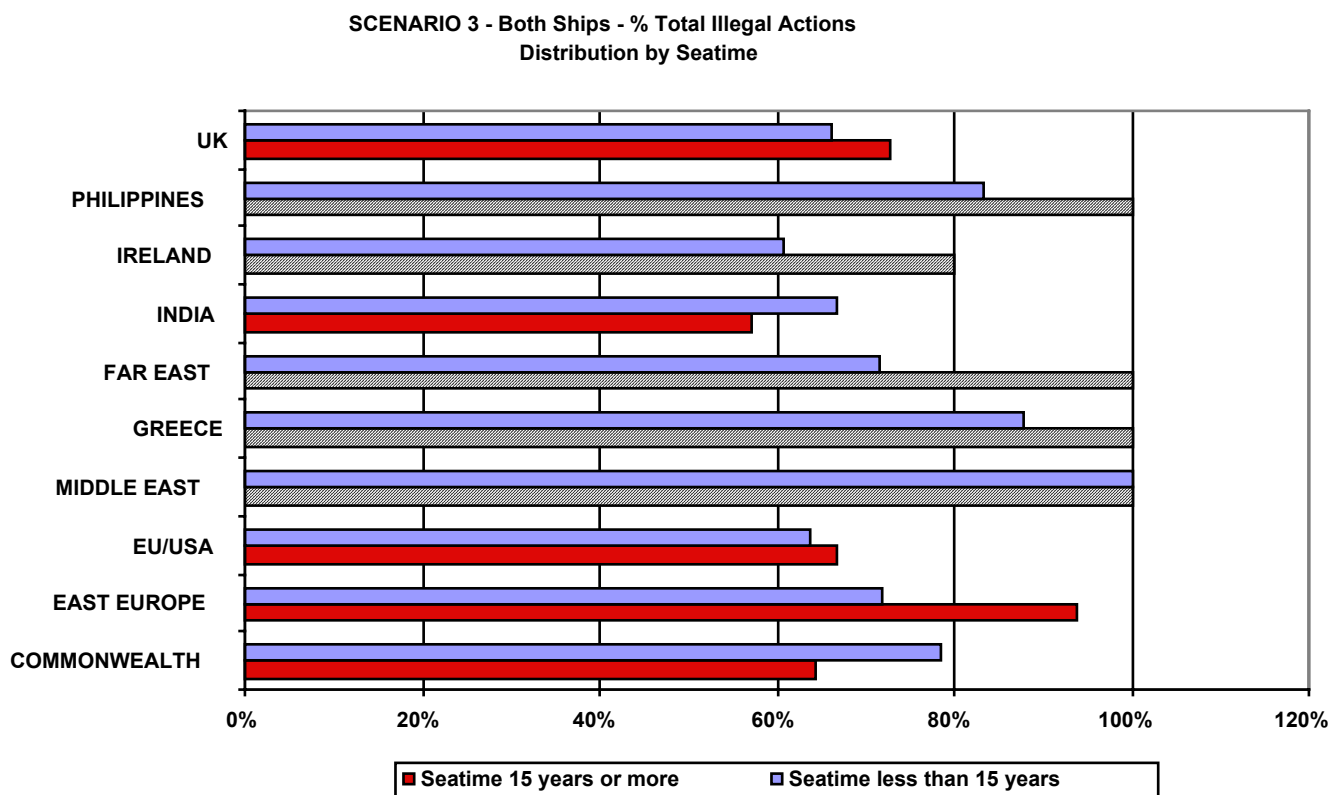


Figure 4 (Hatched bars indicate samples below 10)