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Managing Safety at Sea

A project submitted to Middlesex University in partial fulfilment of the requirements for the degree of Doctor of Professional Studies

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D.Prof. – Critical Commentary

Managing Safety at Sea

List of Contents

Managing Safety at Sea

1   Introduction

1.1   *Background to the project*

Commercial shipping is very old – certainly there is evidence of trading ships existing more than 2500 years before the Christian era. To a very large extent the shipping industry has been self-regulating throughout this very long history. Traditionally ships would be subject to the laws, rules and regulations of the flag state to which they belonged. They would also be obliged to comply with the local laws of the countries they visited. During the period from the early 17th century to the latter part of the 20th century it was quite true that 'Britannia ruled the waves'. The Merchant fleet of Great Britain dominated international trade – along with the fleets of other colonial powers such as France, Holland, Spain and Portugal. The merchant marine was a vital factor in the development of international trade, the expansion of the Empire and the prosperity of the nation – as well as a number of individual businessmen. Anyone who had sufficient funds could purchase a vessel and enter the business of shipping.

Britain became a centre for the development of maritime law and marine insurance and since it was so influential in international trade it was very much the British Rules that applied internationally. The ships were often armed with cannons and carried marines – they were run very much along the disciplined lines of the Royal Navy. Against this background the Shipowners were allowed to run their companies with little supervision by the government – provided they obeyed the law.

International maritime conventions started to be developed during the late 19th century and early 20th century. However it was not until the years following the Second World War, with the formation of the United Nations that formally agreed sets of rules and regulations started to appear which would be recognised and complied with by all signatory nations. The United Nations Convention on the Law of the Sea, 1982 (UNCLOS) establishes the general rights and obligations of the flag State. Within the United Nations two specialised agencies deal with maritime affairs; the International Maritime Organisation (IMO) and the International Labour Organisation (ILO), and they have a responsibility for devising and developing conventions and guidelines under which ships can be regulated. In general, matters concerning safety at sea, pollution prevention and training of seafarers are dealt with by IMO, whereas the ILO deals with matters concerning working and living conditions at sea. While IMO and ILO set the international regulatory framework for ships, each member State bears the responsibility for enforcing the international conventions it has ratified on the ships flying its flag.

However, the industry was still allowed to regulate itself within the confines of these conventions once ratified by their flag states as well as other elements of the domestic law of that country.

Up until the period following the Second World War almost all merchant ships would fly their own national flag. However, led by the United States, an increasing number of Shipowners re-registered their ships and their companies in countries where their application of rules and regulations were a little more relaxed or provided tax advantages – these were the so called Flags of Convenience (FOC's) or Open Registries. From inception the FOC's were perceived by many as an opportunity to lower the very high, but costly, standards that had been maintained on board the national flag fleets. Even so, during those post war years there were fleets to rebuild and trades to re-establish which meant that the merchant ships were fully employed in helping to bring the world back to normality.

In the late 1960's, when I first went to sea, a 15,000 ton general cargo ship would typically have a complement of 65 officers and crew on board. Most officers, if not crew members, would be on long term company contracts and it was not at all unusual for a seafarer to remain with the same family shipping company for his entire career. The loyalty, which was reciprocal as between employer and employee, was very strong – the ships were well run with good, well-qualified and motivated seafarers.

However, by the late 1980's and into the 1990's the industry was changing almost beyond recognition. During this period there seemed to be an explosion of accidents that manifested themselves in a measurable sense as marine insurance claims. Insurance premiums rose between 200 and 400% during a three-year period – reflecting the enormity of the problem. A number of very high profile incidents appeared on the front pages of the national press and headline news on T.V. – in 1987 the cross channel ferry 'Herald of Free Enterprise' turned on her side in the harbour entrance of Zeebrugge in Belgium with 190 people killed; in 1989 the dredger 'Bow Bell' collided with and sank the river boat 'Marchioness' on the River Themes which resulted in 51 deaths; in the same year the super-tanker 'Exxon Valdez' ran onto rocks in Alaska spilling many thousands of tons of oil into the sea; in 1990 a fire broke out in the passenger ship 'Scandinavian Star' which caused the deaths of 158 people. There were many more high profile incidents which occurred during that period – there were many more very serious incidents which were not so high profile but equally shocking; dozens of large bulk carriers disappeared with all hands, within a matter of weeks of the Herald of Free Enterprise disaster in 1987 a collision occurred in the Philippines which resulted in the inter-island ferry 'Dona Paz' sinking with the loss of over 4000 lives.

For reasons that will become apparent the international shipping industry was perhaps no longer capable of regulating itself and action was needed to reverse the downward spiral of maritime calamity.

It was against the background of this catastrophic situation that I first became involved in looking at the problem of maritime accidents and felt compelled to consider what I could contribute to help remedy the situation.

1.2   Nature of the perceived problem

By the late 1980's alarm bells were ringing in many quarters – the shipping industry internationally was in a disastrous state and few could provide any rational explanation as to what was going wrong. Numerous investigations

and reports were commissioned to try and throw some light on the problem. For example in the UK alone the Department of Transport commissioned the Tavistock Institute to look into the matter and they published their report into *'The Human Element in Shipping Casualties'* in 1991 (Department of Transport, 1991). In 1991 the largest of the marine liability insurance 'P&I Clubs' – the United Kingdom P&I Club – published an *'Analysis of Major Claims'* (UK P&I Club, 1991) and in 1992 the House of Lords published the findings of its report into the *'Safety Aspects of Ship Design and Technology'* House of Lords, 1992) which had been conducted under the chairmanship of Lord Carver.

Each report came up with very similar conclusions – almost all of the accidents and incidents seemed to be attributable to 'Human Error' or at least a human element or human factors at some point in the causal chain. Depending upon which report was considered the attribution of Human Error ranged from 60 to nearly 100%.

I recall well the shock and horror at this revelation at the time. In reality I think the researchers, the media and the majority of the industry had quite seriously misunderstood the nature of the conclusions and findings in those reports. If anyone had reflected upon the matter they would, I am sure, have quickly realised that almost every single maritime accident and incident that had ever occurred since man first put to sea was as a result of 'human error' or 'human involvement' at some point in the causal chain. It may have been a very apparent error or it may have been design or maintenance problems – but these, in themselves, are inevitably 'human errors'. It would appear that the real issue was not the revelation that human beings are capable of making mistakes but rather the sheer scale of the problem and the nature of the mistakes that were being made. It is suggested that what had really been happening, and thus the real problem, was that management standards in shipping had been allowed to reduce quite quickly and with devastating effect.

At the end of the day the real problem was economics – almost the whole of the shipping industry was in deep economic recession. This had major knock-on effects as the industry tried to survive in such very difficult financial times. The nature of the economic problem is quite easy to understand – it was the most basic of economic principles – the law of supply and demand. Basically there was a surplus of ships for the number and volume of cargoes to be carried. Many traditional Shipowners sold their ships and got out of the industry. Others looked for ways to cut their operating costs to levels that might allow them to at least break even with the very low freight and charter-hire rates that they were being offered.

Flying the national flag often involved restrictive practices with regard to labour laws and such things as compliance with safety related legislation. By the late 1960's / early 1970's a flood of ship operators deregistered their ships and hoisted strange flags of convenience– registering the owning company as a 'one ship company' with a brass nameplate on a doorway in some tax friendly country.

The wages bill was an obvious and immediate target – both in the offices ashore and with the seagoing staff. In the office ashore marine superintendents, who had provided a vital link between ship and shore, found themselves redundant. Safety, training and personnel officers ceased to exist almost overnight. Legal and claims department staff found themselves

expendable and 'assistants' within the various departments were looking for other employment. Those who were left – the operations manager and technical superintendents, had to try and continue doing their own jobs but also the jobs of all those who had been casualties. On board ship the situation was even worse!

The traditional seafarers of the UK, Scandinavia, Northern Europe and the Mediterranean were perceived to be too expensive. Cheaper labour supplies were identified in 'developing' nations – particularly in South East Asia. In a very short period of time the highly skilled and well-qualified 'traditional' seafarers were displaced with seafarers having little basic education and even less maritime education and training. Of equal concern was the fact that the actual numbers of personnel on board were being reduced significantly which compounded the problem. Quite typically the number of officers and crew were being reduced by between one half and two thirds.

People were not the only cost cutting target though. The ships themselves were built to have a typical trading life expectancy of about 15 years – after which they would be scrapped and replaced with new buildings. New buildings were prohibitively expensive and so the ships were being traded well beyond their 'natural life'. Simultaneously maintenance budgets were being slashed – without vital maintenance the condition of the ships would quickly deteriorate resulting in an increased risk to people, the cargo being carried and indeed the ship itself. To compound this problem of older ships receiving less and less maintenance was the apparent relaxation of standards by the Classification Societies. The Class Societies had performed two very important roles for many, many years. Firstly they carefully monitored the construction and maintenance of ships which provided a type of 'risk assessment' and assurance / guarantee for the Hull and Machinery and P&I insurers. Secondly, acting on behalf of various flag states they monitored and assessed the compliance of the shipping company with a whole range of important safety related legislation. The Societies however are financed, and consequently their activities are strongly influenced by, the ship operating industry.

There were other factors as well which were all contributing to a cocktail of disasters for the shipping industry. However, the key factors were people and management systems.

In response to the situation I believed that a positive contribution could be made from my position within a mutual liability insurance organisation to provide support and material which our ship owner insured members could utilise to help implement their own accident and loss prevention programmes. This took the form of setting up and running a wide range of training courses – for shore-based as well as seagoing staff and producing loss prevention guide books, posters, videos and many more practical products which could be used to reduce the number and severity of accidents and claims. Although the conclusions to the various reports had been widely promulgated there were surprisingly few individuals who seemed to respond by addressing the human element and management issues. Indeed almost everyone else who did anything at all seemed to concentrate their efforts on the physical condition of the ships themselves. This seemed to me like trying to deal with the symptoms without treating the cause of the illness.

By the early 1990's I started to hear about a project that was being developed within IMO. A proposal had been submitted by the British delegation to IMO that had come out of the judicial enquiry that had been set up following the Herald of Free Enterprise disaster in 1987. A committee had been set up at IMO to devise a system that would raise the minimum standard of managing safety onboard ships to an acceptable level across the international shipping industry. The issues being addressed and considered at IMO ran in close parallel with the work I was doing within the marine insurance industry. The conceptualisation and drafting of the IMO document went through a number of stages but the final draft was accepted in 1993 as Resolution A.741(18). The full title of the document was the 'International Management Code for the Safe Operation of Ships and for Pollution Prevention' – it was more generally referred to as the 'International Safety Management (ISM) Code' or even more simply the 'ISM Code'. This IMO resolution was to have a major impact upon the way in which every ship and every shipping company in the world was to operate. It is widely accepted that the ISM Code is possibly the single most important piece of international maritime legislation ever introduced. The ISM Code was to bring with it a requirement that ship operators would have to demonstrate that they were capable of managing ships safely and only then would they be granted a licence to manage ships.

All the nations represented at IMO, virtually all the nations of the world, had ratified a major convention in 1974 – the Safety of Life at Sea, or 1974 SOLAS, Convention. In 1998 the ISM Code was incorporated as a new Chapter IX of SOLAS and as such was tacitly accepted by all nations.

The ISM Code was not only revolutionary in what it was intending to achieve but equally in its methodological and philosophical approach to achieving the end result. Up until this time the IMO had produced voluminous sets of prescriptive treatise describing in great detail what had to be done to comply with the rules and regulations. Indeed Governments and Classification Societies also produced tomes of prescriptive rules and regulations. However, ISM was quite different. The whole of the ISM Code was set out in 13 short sections on 10 sides of an A5 size booklet. The philosophy behind the Code was set out in the Preamble that reads:

> "…Recognising that no two shipping companies or shipowners are the same, and that ships operate under a wide range of different conditions, the Code is based on general principles and objectives…" (Resolution A.741(18) – Preamble)

The Code was to apply to virtually all commercial ships in the world over 500 tons – thus it would include inter-island ferries in Scotland, ultra-large crude oil tankers operating in the Arabian Gulf, luxury cruise ships carrying 3000 passengers in the Caribbean and the coastal cargo tramp in Indonesia – and everything in between. The approach taken was to provide a basic framework that would allow each individual ship operator to put its own flesh onto that framework. It intentionally provided the freedom for each ship operator to develop its own safety management system in a way which best suited that particular company's culture and philosophy – provided it fulfilled the basic requirements of the Code itself. This proved to be one of the greatest strengths and also the greatest weakness of the ISM code depending upon the company's attitude towards the Code.

From the start the international maritime industry seemed to be divided but at the same time united in its opposition to the Code. The 'good quality' operators and seafarers felt that they already managed their ships safely and did not need such a Code – they felt they were being unfairly penalised because of the sub-standard ship operators. The other side of the coin – many of the sub-standard operators, no-doubt, were opposed to the Code on the grounds that it would interfere with their ability to make short-term profits.

Interestingly, as far as the first group was concerned, the very incidents that had led to the Code being developed at all came out of their own stable. The Herald of Free Enterprise was a British ship with British Master and officers. It was owned by Townsend Thoresen which had been bought out by the P&O Group – probably one of the oldest and most prestigious ship owning companies in the World. The Exxon Valdez was commanded by a British Master with British Officers – the Exxon Corporation was one of the leading 'oil majors' in the world. The Scandinavian Star was operated by a premier league Danish company DFDS. There is a sense of misguided arrogance which seems to pervade much of the northern European ship operators and their staff.

The ISM Code was introduced in two quite distinct phases depending upon ship type:

Phase one ships included passenger ships, tankers and bulk carriers. The final deadline for phase one compliance was 1st July 1998.

Phase two ships included everything else that was not a phase one ship – primarily the cargo ships – general cargo ships, container ships, refrigerated cargo ships etc. The final deadline for phase two compliance was 1st July 2002.

The ISM Code was based upon principles developed in quality assurance and quality management type systems. The Code required each ship operator to produce a formal documented safety management system (SMS) and this would be set out in procedures manuals. The written procedures would describe how all the various aspects of on board safety are to be managed in that company. This would involve risk assessment type ideas and could be considered the pro-active side of accident prevention. The seafarers would need to be trained and familiarised with the SMS and it would then have to be brought alive into a dynamic working system to manage safety that was applied in a consistent and uniform way across the fleet. Procedures would have to be in place to ensure that the various tasks that were being undertaken within the SMS were recorded. The Code also had a reactive element which required accidents hazardous occurrences and non-conformities with the system to be reported, investigated, analysed and be the subject of corrective action – forming a cycle of continual improvement. Once a ship operator felt confident that they could demonstrate that they were able to comply with these requirements they had to submit themselves to a process of verification by the government administration of the state whose flag the ships were flying (or a recognised organisation nominated by the flag state administration). The inspectors would look at the systems both in the office ashore and on board the ships. If they were satisfied that the ship operator had developed and successfully implemented a SMS which did fulfil the requirements of the Code then the operator would be issued a Document of Compliance (DOC) and each ship a Safety Management Certificate (SMC)

– these basically provided the licence to operate the company and the ship respectively. Without these certificates the ship would not be allowed into any port in the world. If the shipowner did try to operate its ships without the correct certificate then its insurances would all become void and the individuals involved would be exposed to serious criminal penalties including fines and imprisonment.

1.3 Becoming influential in the development of ISM

Those involved in the drafting and developing of the ISM Code inside IMO rarely presented a public face during those formative years of the early 1990's. The shipping press, and many in the industry, had recognised what I was doing within the P&I Club as having many parallels with IMO project. At that time the press would frequently portray me as a lone warrior type figure – fighting the good fight whilst the rest of the industry slumbered. Whether justified or not I became regarded as one of the worlds leading authorities on safety management and was frequently called upon to write editorial articles for shipping newspapers and magazines, present lectures at seminars and conferences and to comment when anyone else dared to raise their head above the parapet and express an opinion about the ISM Code. In 1996, ahead of the phase one implementation deadline, I was invited by what is possibly the most prestigious publisher of shipping related books – Lloyds of London Press (LLP) to write a practical guide on the legal and insurance implications of the ISM Code (*ISM Code – A practical guide to the legal and insurance implications* - Anderson, 1998). This was to be the first authoritative book on the ISM Code to be published except for a commentary on the Code that had been produced by the International Chamber of Shipping (ICS) (ICS / ISF *Guidelines on the application of the IMO International Safety Management Code*, 1996). The book was finally published in December 1998 with a foreword provided by the Secretary General of IMO. The book remains, with the ICS guide and a short commentary written by a Norwegian (Sagan, 1999), the only authoritative reference source on the ISM Code in the English Language. This would seem to be remarkable if the claim is correct that the ISM Code is the single most important and influential piece of maritime legislation ever introduced.

Preparing the manuscript however produced unexpected frustrations. It became apparent that there were numerous questions to which there did not appear to be any authoritative answers. Indeed there had been a number of debates taking place in the shipping press and learned journals between lawyers, academics and other professionals in the industry as to exactly what the implications of certain parts of the Code might be. It occurred to me that it was possibly because of these uncertainties that other possible authors were steering well clear of going into print on the subject!

However, I persevered with the manuscript; described the issues – put forward the arguments from both sides, along with my own views, and left the questions unanswered. I had hoped and anticipated that in a relatively short time the courts would provide clarification and guidance on the correct interpretation of the Code. Only in the middle of year 2002 have we started to see one or two judgements being handed down where some of the issues are

starting to be addressed. Many of the big questions however remain unanswered and are still the subject of continual debate.

The other big question which has been asked repeatedly since 1ˢᵗ July 1998 is whether or not the ISM Code is working – i.e. are ships becoming safer and the seas cleaner – in other words are marine accidents reducing? This is the sixty four thousand dollar question.

1.4 Existing knowledge – empirical evidence v. conjecture

The answer to the big question: '…is ISM working…' is far from simple – in many ways it is extremely complex. During the period following phase one implementation in July 1998 there were certainly a number of individuals who had comments upon the success, or otherwise, of ISM and those comments would still be of sufficient interest to attract front-page coverage on Lloyds List. The comments were almost always negative. One positive statement came from the Swedish P&I Club who claimed, in 1999, that they had detected a noticeable decrease in the claims from phase one ships (see Hernqvist 2002 and *The Swedish Club Highlights*, 2001). This statement was seized upon by the press as well as the Secretary General of the IMO himself who seemed desperate for some good news about ISM implementation. Whilst I do not doubt at all the sincerity with which the Swedish P&I Club put forward its claim I must admit that I was somewhat surprised that neither the media nor the Secretary General could see the potential weakness in the claim. The Swedish Club insures the liabilities of approximately 1% of the ship owners of the world. Another 90% or more of the world fleet is insured in the other 13 P&I Clubs of the International Group of Clubs. If any of those Clubs had been able to make a similar claim to the Swedish Club, and obtain similar excellent publicity, then I am in no doubt that they would have done so. Their silence on the subject speaks for itself.

When I reviewed the other comments that were being made by the individuals then it became clear that they were not really basing their views on the success of ISM on any objective empirical evidence but rather on their own subjective views. Many of those views seemed to be based not on any first hand experience but rather on certain presuppositions that the British seafarer was the greatest amongst God's creation and that any other who dared to venture forth on the ocean waves was of a lesser order and clearly the cause of the all the problems.

Even if that is exaggerating the situation a little, the reality was that no-one had undertaken any serious research into ISM implementation by year 2001. Apart from the Swedish Club figures there was very little by way of statistics to be had to look for trends. The question was too important to be ignored any longer and I decided that if no-one else was going to do the research then I would do it myself. At that time I had little comprehension of the enormity of the task ahead.

1.5 Initial plans for the structure of the project

One of the main reasons, perhaps, why the media and others made such a big issue about the claim made by the Swedish P&I Club was that it was backed up with numbers – statistics – facts and figures. The fact that those

particular figures were balanced on a knife-edge such that one single major incident would completely reverse their trend does not seem to have concerned anyone. People like these 'hard facts' – they seem to give support and provide something that can be relied upon. I recognised that I would certainly need to search for other statistics to see if such hard facts existed to confirm, or otherwise, whether ISM implementation was achieving its desired results. From initial research I had carried out it was confirmed that no-one had yet undertaken any detailed and systematic analysis of the ISM implementation other than in a very narrow and superficial manner. I suspected that if any such statistics existed then they would already have been published and would have received attention in the media.

There were two main, potential, sources of such data:

1. The claim statistics of the marine insurers – this would include the Hull and Machinery insurers on the markets such as Lloyds as well as the Cargo insurers and the liability insurers in the form of the P&I Clubs. The insurers should have records of claims and therefore should, in theory, be able to provide excellent evidence.
2. As commercial ships move around the world – from country to country – they are likely to be subjected to visits by Port State Control (PSC) Inspectors. These government officials have wide ranging powers to detain and impose penalties upon ships if they are found not to comply with regulations relating to safety. This would include failure to comply with provisions of the ISM Code. Many of the PSC authorities publish their detention and violation results.

Certainly if such objective evidence did exist then the task would be relatively simple to show whether the ISM code was having any marked effect. Having worked in the marine insurance industry for more than twenty years I suspected that it would take a longer period of time than had so far elapsed since Phase One implementation to produce reliable figures that showed an unambiguous trend. As far as the PSC figures were concerned I was already well aware that many of the PSC Inspectors had little idea about how to audit management systems or indeed about the ISM Code itself and therefore any figures they might produce would have to be taken with considerable caution. In time they would learn how to audit management systems and how to relate their findings from such audits with their examination of the ships structure and safety appliances – which was their more usual function. Again I felt more time would be needed to be able to obtain meaningful figures. I recognised that those exercises would have to be performed and performed with an open and critical mind.

The important question that I had to consider at that time was: if objective evidence such as statistics might not be available – what other evidence might be available which could provide the necessary answers? The answer to that question was simple but daunting in the extreme.

The information I was looking for was with the individual shipping companies and seafarers and others at the sharp end who had been directly involved in the implementation process. There are approximately 75,000 affected ships, 8,000 shipping companies and in excess of 2,000,000 seafarers worldwide. Somehow I would need to obtain a representative sample of those groups if I

was to collect sufficient information that would provide some indication of how ISM implementation was having an effect.

1.6 Initial consideration of the proposed approach

Some sort of survey was going to be necessary of a wide range of interested groups across related industries and around the world. For a full time researcher with adequate resources, funding and support such a project would no doubt pose an interesting challenge – unfortunately I was not in such a favoured position. Time and other resources would have to be managed very carefully.

During the twenty or so years that I had been working in the P&I Clubs – and particularly since I had started to become a minor celebrity with my work in loss prevention and ISM – I had been most fortunate to make the acquaintance of many different and often quite influential people in the shipping related fields. These included the editors and journalists of most of the leading shipping newspapers, magazines and journals. I felt that they would be interested in a new ISM story and through them I would have the possibility of reaching a very large sector of those involved in ships and shipping. I was also going to call on help from a whole range of other friends and contacts to whip up enthusiasm for the project and participate in the survey.

The survey would involve some face-to-face contact but more importantly would involve a questionnaire that would need to be distributed. Obviously the questionnaire would have to be designed but would also have potentially significant financial implications such as printing, envelopes and postage. The numbers that were likely to be involved would mean that many thousands of pounds would need to be found to actually finance the survey (the survey and related expenditure actually cost me nearly £15,000)

1.7 Initial consideration of ethical issues involved

The potential financial implications actually forced me to confront a major ethical issue at a very early stage of the research work. I did not have adequate personal funds spare to finance the printing, postage and such like. I had become convinced that if the survey was to be meaningful and productive then it had to be on a big scale – a small, narrow survey would not produce the cross section and diversified experiences that would be necessary to form any meaningful conclusions.

As my proposed project became known about I started to receive approaches and unsolicited offers of financial help. One offer – of £10,000 up front and possibly more if I needed it – came via an old friend who was acting on behalf of an undisclosed principal. It transpired that the benefactor was a firm of maritime solicitors who would want the results of the project published in their name, to direct the way the research proceeded and to retain the right to edit and censor the final manuscript. Another 'offer' came from a trade union organisation who basically wanted to tell me what the conclusions of the survey were going to be irrespective of what the feedback from the

questionnaires might suggest. There were other carrots dangled but with serious 'strings attached'.

I could not allow my hands to be tied in any way at all – I had to retain a completely impartial and unbiased approach to the research even though it was to cost me a substantial amount of money out of my own pocket.

Of all the people or organisations who might have, or rather should have, been conducting the research I had in mind was the IMO itself. Unfortunately they did not have the necessary resources either. The Secretary General was kind enough send me a personal letter expressing his best wishes for my project and he also provided a foreword to another short book which I produced, and which I will discuss in more detail presently, providing a *'Seafarers Guide to ISM'* (Anderson and Kidman, 2002).

Another major ethical issue that had arisen at an early stage involved a major potential conflict between my main employers and myself. The P&I Club for whom I work was concerned that I could offend some Shipowners with the results of such research. I therefore undertook the research in a private capacity.

It was certainly possible that I might upset and embarrass a number of people and organisations with the conclusions I would reach – however, the alternative would have been significantly worse though. Clearly no one can tell 'what might have been' but the potential consequences of not undertaking this project were enormous. The industry had to know whether ISM was working and, if not what needed to be done to make it work. It was only a matter of time before the next major maritime disaster occurred; It may be another ferry or passenger ship with substantial loss of life or perhaps another major oil pollution. It would be an incident occurring in European or possibly U.S. waters and / or involving Europeans or Americans. The press would get hold of the story very quickly, the public anxiety generated by the media would quickly lead to political involvement – allegations, fines, condemnation and possibly criminal penalties – including corporate manslaughter – would be flying around. The question to the shipping industry would no doubt be raised at a very early stage – you were allowed considerable freedom to continue regulating yourselves under the ISM Code but you have proved yet again that you are not responsible enough to regulate yourself and therefore we, the Government Administrations, will produce a whole new set of detailed prescriptive rules and regulations to force you to manage safety in a tightly controlled and supervised way! With the exception of my own research the international shipping industry has nothing with which it could respond in its defence to such allegations. The industry had to be put into a position whereby it could respond. Since no-one else seemed to be capable of taking on the task – I really had no choice.

1.8   Initial consideration of 'management' of the project

As has already been explained, financial resources and more importantly available time were threatening to pose major obstacles to seeing the project through. I recognised at an early stage that if I received a lot of completed questionnaires then a considerable amount of time and effort would be required to input the data to the database. The inputting of the data is

something of a mechanical, but very time consuming process. I believed that such a task could justifiably be delegated without me losing anything of significance as far as personal research methodology was concerned. It also occurred to me that if the questionnaires appeared in an electronic format, say within an Internet Website, then it should be possible for respondents to complete them on line and have the data drop automatically into a database. It would have further implications with regard to finances since the person to whom the data inputting would be delegated would expect some reasonable remuneration and setting up a dedicated Website would potentially have significant financial implications.

However, I decided to proceed with these ideas and found a suitable individual who had the skills to undertake the inputting and who I could also trust. She was also prepared to undertake the task for a reasonable fee. I also found a good Website designer who was prepared to undertake the project for a reasonable fee. Up until that time I would have to admit that I had spent very little time 'surfing the net' and was unaware of the potential that a dedicated Website might provide. I started to devise an idea of a Website on which I could not only include the questionnaires which could be completed on line but also a site which would become an international focus for the ISM debate to be centred – certainly nothing similar seemed to exist.

1.9   Initial recognition of responsibility for the task in hand

I had recognised the importance of the proposed project since its initial inception – however I had not been fully prepared for the realisation of the responsibility I was taking upon myself until I read a number of newspaper articles that appeared just before I launched the survey.
The Lloyds List headline of 23.2.2001 read:

> *"One man's crusade in the cause of maritime safety"* –
> A P&I expert is rolling up his sleeves to take on a vital and ambitious research project reports James Brewer … One of shipping's best known master mariners sets out today to tackle the question gnawing at the heart of the industry – is the International Safety Management Code working?…

On the 26th January 2001 the other main shipping newspaper 'Tradewinds' carried the headline:

> *"Loss-prevention guru gearing up to scrutinise ISM"* – The International Safety Management (ISM) Code is to be subjected to the scrutiny of loss-prevention guru Philip Anderson. The insurance man means to find out if the ISM is really working.

There were many other articles which appeared at that time drawing attention to the serious lack of information on ISM implementation and the task I had set myself.
Good wishes and words of encouragement came in from many quarters including the Secretary General of IMO, shipowners organisations such as the Chairmen of the Chamber of Shipping and BIMCO, seafarer's trade union leaders and professional bodies. I included some of those good wishes on a scrolling banner on the ISM Website which I hoped would then encourage others to participate.

I was to proceed from that point with a certain amount of humility and much trepidation!

1.10 The medium of presentation of the results and conclusions of the project

It had already been agreed with the supervisory team from the National Centre for Work Based Learning Partnerships at Middlesex University that the Doctoral submission would consist of a Thesis / critique of approximately 30,000 words along with the published book / manuscript in which I had written up the findings and conclusions of my research and survey. The book would basically 'evidence' the research.

1.11 Liaison with supervisory team

Because of distances involved - me living and working on Tyneside – and the University being based in London it was not always easy to maintain 'face-to-face' contact with the supervisory team. However, help was always there whenever needed. It had also been agreed that I could be allocated a second 'supervisor' – who would look particularly at any legal issues that might arise out of my research. The individual identified was someone who I hold in very high regard, who had proof read and constructively criticised my earlier *'Legal and Insurance Guide to the ISM'* (Anderson, 1998) and who also lived and worked on Tyneside.

2   Outline of the project

2.1   Overview of the planned approach and methodology

The research involves two quite distinct approaches to run simultaneously:

1. Investigation, review and analysis of any existing statistical and other data which might provide empirical evidence relevant to the successful implementation of the ISM Code
2. Detailed survey of a wide range of stakeholders to establish subjective as well as objective evidence of how the ISM implementation process was progressing

I will describe here, in a little more detail, my planned approach and methodology that I was to apply to both of these research areas.

2.1.1 The nature and process of ISM implementation

The research that had gone into the preparation of my book '*Legal and Insurance Implications of the ISM Code*' (Anderson, 1998) had already provided me with a very good basis from which to launch into this present project. It had also provided me with many links into primary and secondary reference sources as well as access to individuals and relevant data which was not available to the general public.

Alongside Resolution A.741(18) – *The International Safety Management (ISM) Code* – the IMO also developed Resolution A.788(19) – *Guidelines on Implementation of the International Safety Management (ISM) Code by Administrations* – which was adopted on 23 November 1995. Resolution A.788(19) was intended to provide the Flag State Administration with a set of outline guidelines which they could use when looking at the SMS's of the shipping companies and ships under their flag to verify compliance with the ISM Code and the issuance of the DOC's and SMC's. The intention was to introduce some uniformity and consistency into these processes on an international level. It is important to understand however that these were 'guidelines' only without any mandatory or compulsory status. I believe that the intention of the authors and architects of the Code was that the two resolutions would sit side by side and complement each other.

Resolution A.788(19) did appear to be taken on board by many Administrations but did lead to a certain amount of confusion. The opportunity was therefore taken at the December 2000 meeting of the IMO Maritime Safety Committee meeting – MSC.99(73) – to amend the text of the ISM Code (Resolution A.741(18)) to specifically include a number of provisions from Resolution A.788(19) and to replace that Resolution with a new draft A.913(22). The new Code and amended Resolution came into full force to coincide with Phase 2 implementation on 1st July 2002.

The original intention of IMO was that the Flag State Administrations would be the bodies undertaking the verification and certification on board the ships

flying their national flag. A limited number of Administrations did undertake this work but the IMO did recognise the increasing dominance and influence of the Flags of Convenience (FOC's) and the fact that many of the FOC's had very limited infrastructure to actually undertake this task. Accordingly IMO built into the text of SOLAS Chapter IX and Resolution A.733(19) flexibility to allow Administrations to delegate the actual task, but not the responsibility, of the verification and certification to 'recognised organisation' (R.O.'s) or to other Administrations. Almost all FOC's, and many national Administrations, delegated to the Classification Societies and a small number of independent consultants. Many of these same Societies and Consultants had also set up consultancy companies in which they were selling their expertise to ship operators to set up, develop and write their safety management systems. There were, and still are, many in the industry who considered this dual role to pose a very serious conflict situation to arise. Those who were setting up the systems were then examining their own efforts and issuing certificates – many questioned the objectivity and indeed the ethics of such a practice. The implications and significance of this somewhat incestuous situation was to figure in the findings of my research.

However, to look at how ISM was being implemented would involve looking at the activities and views of the Classification Societies and independent consultants as well as the Administrations who had retained the verification and certification process themselves. This was to be achieved by reviewing the Websites and literature as well as personal contacts and meetings.

2.1.2 Analysis of existing statistics

Probably the most obvious place to look for statistical data to see if there had been any noticeable trend since phase one implementation of ISM would be the insurance claims figures. A ship operator has two main insurance requirements:

i) to provide insurance cover on the ship itself and the equipment on board

ii) to provide cover for a wide range of third party liabilities which might arise during the commercial operation of the ship e.g. personal injuries, pollution, damage to third party property, loss or damage to cargo whilst in the carriers custody and so on.

Traditionally the former risks have been covered on a 'Hull' or 'Hull and Machinery' (H&M) Policy. The liability risks have been covered by mutual liability insurance facilities – usually referred to as the Protection and Indemnity Associations or simply 'P&I Clubs.

H&M insurance is very fragmented and accurate claims figures are difficult to obtain. The P&I Clubs are quite the opposite – in some respects at least. There are only 13 P&I Clubs and between them they provide the liability insurance for somewhere between 90 and 95% of all the World's deep-sea ship operators. In theory therefore the Clubs should provide an ideal opportunity and window to obtain relevant data.

Other potential sources of data were the Flag State Administrations and more particularly the Classification Societies in their role as R.O.'s who had been involved in the verification and certification as well as the annual reviews of the DOC's and the interim reviews of the SMC's.

Whilst many would argue that the primary responsibility for 'policing' ISM rests with the Flag State Administration - it would probably have to be conceded that the policing role, in most cases, has fallen upon the Port State Control authorities. Most maritime countries would have some government agency or department who would have a responsibility for visiting foreign ships calling at their ports to check and ensure that certain international conventions were being complied with. These would usually relate to such things as checking the lifeboats, fire-fighting equipment as well as the living conditions of the crew and similar matters. These agencies are generally referred to as Port State Control (PSC). The PSC inspectors have wide ranging powers to detain ships and impose fines and other penalties if violations are found to exist. Records of such violations are maintained. Since phase one implementation – the PSC also have a right to verify compliance with the ISM Code. For many years the various PSC authorities have cooperated with each other to share information on ships and companies who have been found in violation as well as statistics generally. The PSC's cooperate with each other through regional groupings – referred to as Memorandum of Understanding (MOU's)

Many MOUs conducted a 'Concentrated Inspection Campaign' (CIC) immediately following phase one implementation deadline of 1st July 1998 and a further CIC following phase two deadline of 1st July 2002 – where they would focus their attention on ISM related matters when their inspectors visited ships. They also agreed to set targets of numbers of ships to be inspected within the 3 month period of the CIC.

In theory therefore there should be very useful data within the records and reports of the various MOU's that would show any trends as to ISM related violations.

On the face of it, therefore, there was, potentially, statistical data which might be available and which could be examined to look for trends to indicate whether the ISM Code was starting to have any effect on the safe operation of ships since phase one implementation.

2.2 Devising the survey

The ISM Code applies to, or impacts upon, almost every activity that takes place on board ship as well as in the office ashore. It might be equated to the Master software package on which all other programmes are run on a P.C.. It has a requirement relating to recruitment, vetting, training and familiarisation of personnel. It has a requirement for formal procedures to be in place to cover all 'key shipboard operations' – these would vary from ship type to ship type – but would include such activities as the navigation and pilotage of the vessel, bunkering (taking on fuel), cargo operations and many more. It requires procedures to be in place to cover the maintenance of the ship and the equipment on board and much more. The difficulty therefore in devising the survey was initially to recognise that it would not be possible to produce a manageable questionnaire that would cover every aspect of the ISM requirements.

When I had been writing my '*Guide to the legal and insurance implications of ISM*' (Anderson, 1998) I had identified one aspect that I considered was the real core of ISM. I had formed the view that if this one aspect of ISM was being complied with at a satisfactory level then there was a very good chance that the rest of the SMS would be in place and working. The view was arrived at partially as a result of observations of systems in operation but more so on the understanding that this section more than any other encapsulated the 'culture' or 'ethos' which would be required if ISM was to work. The section I had identified was Section 9 which deals with '*Reports and Analysis of Non-conformities, Accidents and Hazardous Occurrences'*. The section is short and states:

> "9.1 The safety management system should include procedures ensuring that non-conformities, accidents and hazardous situations are reported to the Company, investigated and analysed with the objective of improving safety and pollution prevention.
> 9.2 The Company should establish procedures for the implementation of corrective action."
>
> (Resolution A.741(18) – Section 9)

This is a reactive approach to accident prevention by learning lessons from experience. It could be considered as a cycle of continual improvement whereby not only accidents but also non-conformities, hazardous situations and near-misses could be considered as learning opportunities.

Clearly it would be preferable to prevent the incident occurring in the first place but If an incident did occur then it should be investigated and reported. An analysis, both on board ship and ashore, should be undertaken to identify the causal factors and then corrective action should be proposed to tighten up the systems or procedures to prevent a recurrence. This may or may not involve amending the formal procedures. The lessons to be learnt should not be limited to the individual person or ship involved but should be shared as widely as possible so that everyone can benefit from the learning opportunity.

I think few would doubt that this sounds like a perfectly reasonable proposal that should help in the accident prevention program. However, it raises one of the biggest problems of all with ISM implementation. The problem goes to the very root of human nature itself – that is self-preservation.

It is unlikely that anyone could avoid reporting an actual accident – too many people would know about it and it would probably involve the injured party bringing a claim against the ship operator and / or the insurer. The reporting of a hazardous occurrence or near miss might be another matter all together – is the individual really going to report something which 'nearly happened', but which perhaps no-one else knows about, and confess that he had failed to do this or had done that and it was 'but for the grace of God' that the situation was retrieved and the actual accident was avoided on that occasion? How would such an admission be viewed by the Master or senior officers on board, by colleagues, by the Managers and Superintendents in the office ashore, by the PSC inspectors, and so on? In reality would it not be the case that the individuals career prospects and possibly his job would stand to be jeopardised? It is crucial however, for a properly working SMS to function fully, that such reporting does take place. The ISM Code anticipates a 'no-blame safety culture' being developed where safety is raised to the highest

priority. Creating an environment where safety is more important than punishment is a philosophy enshrined in the Code – once that philosophy is adopted then real progress will be made with the management of safety.

The reason why it is so important to create an environment where hazardous occurrences and near-misses are reported is that there should be many more of them than actual accidents. There are a number of versions of the 'Accident Pyramid' and the ratio's do vary between versions. The example below suggests the typical ratio's which can be anticipated.

```
        /\
       /  \     1 Fatality
      /----\
     /      \   300 Lost time injuries
    /--------\
   /          \ 3000 Near misses
  /------------\
 /              \ 30,000 Unsafe acts /
/_____\ unsafe conditions
```
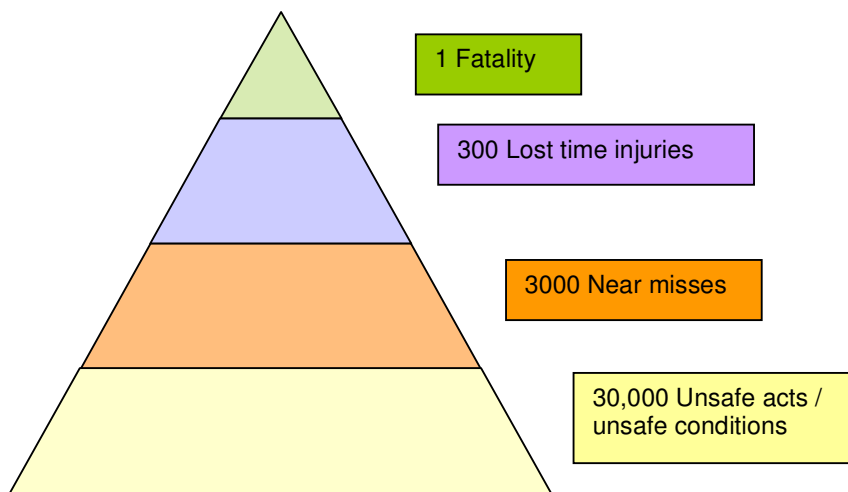
Anyone who has been involved in investigating and analysing accidents would find that rarely is there a single cause. Rather, there are a number of causal factors which all arose at the same point in time at the same geographical location. Remove any one of the causal factors and it is very unlikely that the actual accident would have occurred. It may only have been postponed though and would occur at the first opportunity when that causal factor returned. This may be a matter of minutes or weeks. The more causal factors which could be removed the less chance there is of the accident ever coming to fruition. What is actually happening in 'hazardous situations', 'near misses' and non-conformities is that a number of these causal factors are starting to come together – alarm bells are sounding – but there is something still missing which is preventing the full blown accident from happening. By investigating these incidents it will be possible to identify the causal factors. Once those causal factors are identified then corrective steps can be taken to deal with them and remove them from the equation. By doing that the accidents will be prevented. This has got to be a more efficient way of managing safety than allowing the accidents to happen – with all the suffering, inconvenience, expense and other losses which is likely to be involved as a consequence – which might include a full formal inquiry.

I wanted to design my survey to measure how much progress had been made towards the adoption of a 'safety culture' by looking at the reporting practices. However, the questionnaires would explore many other issues that would provide me with a general overview of the way ISM was being implemented and also allow the respondent to provide additional, subjective, feedback by

way of comments. For ease of inputting data into the database, wherever possible, questions would be structured in such a way that the respondent could provide answers by ticking the appropriate box.

From informal discussions with various individuals over the years I had started to gain the impression that there were often quite different perceptions about ISM between seafarers, office managers and others involved in the industry. I therefore decided to create three versions of the questionnaire – which would also be colour coded:

1. Blue – Masters and other seafarers
2. Green – Ship operators
3. Red – Other stakeholders
(Copies of the three questionnaires accompany this paper as Appendix I)

The questions would be identical, or at least very similar, which would then allow me to compare any differences of perception between these different stakeholders. Clearly the Masters / seafarers and the ship operators are at the sharp end of ISM implementation. There are however, a wide range of individuals who are also involved although maybe on the sidelines. For example PSC inspectors, flag State Administration and Classification Society surveyors, insurers, nautical college lecturers, pilots and many other categories of potential observers – it proved impossible to structure the 'Other Stakeholder' questionnaire in words which would be applicable to everyone within such a wide category range.

The questions had to be limited in number but capable of capturing as much relevant information as possible. With help I had set up a relational database using Microsoft Access software. This would allow me almost unlimited potential to interrogate the data with various permutations of questions and criteria.

The draft questionnaires were submitted to a statistician at Middlesex University who was extremely helpful in thinking beyond just the questions themselves but considering how the answers to the questions could be input and used subsequently as data. Although this was all done over the telephone it did allow me to fine tune the questions. I also submitted the questionnaires to colleagues at the Nautical Institute for scrutiny – to check that the questions were phrased in such a way that they made sense both from an intellectual point of view as well as linguistically. Again a certain amount of fine-tuning was done.

2.3 Structuring a time table

The research was intended to look at ISM implementation post phase one and to see what, if any, lessons could be learnt ahead of phase two deadline on 1st July 2002. My hope therefore was to put myself into a position whereby I could start providing feedback in the early months of 2002.

The formal launch of the survey was to commence in April 2001 and completed questionnaires would be received and the data input up until November 2001. Data would be input during that period and other aspects of the research would be conducted concurrently.

The findings and conclusions of the survey would be written up into a book by Spring 2002 and the Critique / thesis by the Summer of 2002.
This schedule did prove to be too ambitious – work, family and other personal matters joining together to delay progress.

2.4   Review of primary sources

The primary sources available for this piece of research are actually quite limited:

i)   The International Convention for the Safety of Life at Sea, 1974, as amended – Chapter IX – Management for the safe operation of ships

ii)   Resolution A.741(18) (subsequently amended by MSC.104(73) – International Safety Management (ISM) Code

iii)   Resolution A.788(19) (subsequently amended by A.913(22) – Guidelines on implementation of ISM Code by Administrations.

iv)   UK Statutory Instrument 1998 No. 1561 – The Merchant Shipping (International Safety Management (ISM) Code) Regulations 1998

Plus a few other IMO conventions and other publications along with UK Merchant Shipping Acts and research reports and guides.

2.5   Review of secondary sources

Since the publication of my own book – *'ISM Code – A practical guide to the legal and insurance implications'* (Anderson, 1998) – there had really been very little which had been published in the English Language on the subject other than various short articles and papers presented at seminars and conferences.
The one exception, perhaps, was a book written in English by a Norwegian – Arne Sagen – '*The ISM Code in practice'* (Sagen, 1999)

An additional very useful secondary reference source was a report published by the largest of the P&I Clubs – the UK Club – titled 'The Human Factor – A Report on Manning' which had been published in 1996. This was a companion publication to their 'Ship Inspection Report' which had been published in August 1995. The report focused on the causal factors in human error and set out data collected on board 555 ships by the club's ship inspectors. The report is particularly interesting as a preliminary look at how safety was managed on board ships in the lead up to Phase one ISM implementation.

A Bibliography setting out details of additional Primary Source documents as well as some of the more significant secondary sources which I consulted accompanies the text of the book – *'Managing Safety on board Ships'* – which is submitted as the main exhibit to accompany this Critical Commentary.

2.6   Limit of existing knowledge

At the time of commencing my research, in early 2001, it would appear that the state of knowledge of ISM was not much further advanced than as I left it on completion of my manuscript for LLP in 1998.

In my book I had raised a number of unanswered questions – particularly relating to the role of the designated person and how the courts would allow evidence created within a working SMS to be used against the shipping company or individuals as well as other issues. Contrary to my expectations, nothing of any significance had been handed down by the courts that would provide some guidance on these issues. This situation was to remain until the middle of 2002 when two very important cases were considered by the High Court in London – *The Eurasian Dream QBD* (Com Ct.) (Cresswell J) 7 February 2002 and *The Torepo* (Admiralty Ct.) (Steel J) 18 July 2002. Another case which was considered by the Singapore High Court was also of interest – *The Patrikos 2* heard 9 May 2002 . I will discuss the potential significance of these cases in my conclusions below.

2.7   Identifying the critical communities to contact

As explained above – the questionnaires were to be designed to include three categories of participants:

  i)   Masters and other seafarers
  ii)   Ship operators
  iii)   Other stakeholders.

I had to devise a scheme that would ensure that I contacted, and received feedback, from a truly representative sample of each of the category groups:

2.7.1 Masters and other seafarers

Through my contact with, and indeed commission from, the professional body the Nautical Institute I was guaranteed a feature article in the Institute Journal 'Seaways', April 2001 edition, along with a distribution of my questionnaire to all Members. The Institute has over 7000 Members in 63 branches located in 37 different countries around the world. The Members are mainly Masters or deck officers or Naval equivalent.

I also personally contacted the branch secretaries of all the branches around the world inviting them to organise, as part of their annual program, a discussion with their local Membership, as well as any other interested parties who might care to participate, to consider how ISM implementation was progressing. They were asked to draw upon personal experiences to identify what sort of problems had been encountered, how those problems were overcome, what pleasant surprises might have come to light and so on. In this way I hoped to draw upon experiences that might be difficult to communicate fully in a questionnaire.

The UK based trade union representing many of the UK Masters and officers were very interested in the proposed research and offered very practical help.

Not only did they agree to carry a two page feature article in their broad-sheet newspaper 'The Telegraph' but they also agreed to distribute the questionnaires by including one in each copy of the April 2001 issue of 'The Telegraph. The circulation of the Telegraph was 25,000 – clearly that provided a marvellous opportunity for distributing the questionnaire.

The International Federation of Shipmasters (IFSMA) also carried a feature article in their March 2001 issue and distributed about 500 copies of the questionnaire to its Members around the world.

The professional body of the marine engineers was the Institute of Marine Engineers (this subsequently became the Institute of Marine Engineering Science and Technology) – they carried a feature article in their journal – *Marine Engineers Review* in which they encouraged their Members to participate in the survey and provide their contributions.

Through these different sources I had the potential to reach well in excess of 50,000 Masters and other seafarers. However, it occurred to me that even though this might represent a large sample – it may not be a truly cross-sectional / representative sample. The types of seafarers I was likely to reach through the professional institutes and trade associations were the more 'sophisticated' officers who perhaps took an active interest in their professionalism. I was acutely conscious that there were many more seafarers perhaps from the developing world, without too much formal education who were maybe working onboard ships which were not being operated by the 'blue-chip' companies and who might not have access to these learned journals. The dilemma was how to reach that group of seafarers who might have some very important contributions to make to the ISM debate?

Whether divine, or otherwise, I had a flash of inspiration. In many ports around the world there exist various church organisations that provide support to visiting seafarers. The local chaplain, priest or volunteer helper would visit ships in their port and offer not only spiritual but also very practical help to seafarers. There would usually be a 'Mission station' or similar 'seafarers club' where seafarers can spend some time away from the ship in a friendly and safe environment and maybe phone home or use the internet etc. One of the largest of these Church organisations is the 'Mission to Seafarers' – which is linked with the Anglican Church with its head office in London. I had met the head of the London office of the Mission on a number of previous occasions and was well aware of his very genuine concern about seafarers welfare and the sometimes appalling conditions in which some seafarers were having to live and work on sub-standard ships. The ISM Code clearly provided a very real opportunity to eradicate the sub-standard shipping from the industry and generally improve not only the safety but also the whole environment on board for all seafarers. I contacted the Reverend Canon Ken Peters to explain what I was doing and to ask for his help. His response exceeded all expectations. The Mission publishes a newspaper every two months – *The Sea* – with a print run of 26,000. There is a mailing distribution but the majority of copies are sent out to the Mission stations around the world and the chaplains take copies with them and leave them on the ships they visit. The May / June edition of 2001 included a feature article about my research project, which appeared in a number of different languages, encouraging everyone to participate and describe individual experiences. Copies of my

questionnaire were not only distributed with that issue of *The Sea* but Reverend Peters wrote to all his chaplains around the world asking them to ensure that the questionnaire was brought to the attention of seafarers on board vessels they visited and to assist seafarers, if necessary, to complete the questionnaire. They were also asked to make their Internet connections available to visiting seafarers who could complete the questionnaires on line. This proved to be a most useful and fruitful initiative and many good and interesting comments came from the chaplains themselves.

Another potential opportunity I identified of reaching many seafarers of different nationalities and rank was through their local nautical training academy or school. I wrote to 320 such institutions around the world enclosing a handful of questionnaires for students to complete in the blue 'seafarer' category but also for the college lecturers in the red 'other stakeholder' category. This generated a very good response and provided valuable input.

Various shipowners and ship managers were asked to help by encouraging their sea-staff to participate and complete the questionnaire.

2.7.2 Ship operators

Within this category I was really looking for ship owners and ship managers rather than chartering organisations. I was looking for the company who had actually set up and operated the SMS.

My attempts to reach this category of potential respondent was threefold:

i)   Direct mail – both by post and by e-mail
ii)   Through national Shipowners Associations
iii)   Through specially targeted editorial in shipping magazines, newspapers and journals

There are so many individual ship operating companies around the world that available resources would not allow a wholesale direct mailing approach. However, I was able to identify about a hundred ship owning and ship management companies with a significant number of ship units in their operation and limit the direct mailing to those companies. There were also a number of companies with whom I had already established contact and had an existing dialogue.

In many maritime countries with a ship owning industry – the industry has formed Trade Associations or Chambers of Shipping to provide a voice for itself and generally promote the industry as a whole. Most shipowners of any significance would be members of their national Association. Most of these national shipowners associations are themselves members of the International Chamber of Shipping and / or the International Shipping Federation. I was therefore able to rationalise the mailing a little by sending a letter to the secretariat of each individual Association or Chamber, along with a supply of questionnaires, to ask for their help in distributing the questionnaires to their members and encouraging participation.

There are also other, more specialised, ship operator organisation who were also potential sources of help with contacting ship operating companies. The

largest and most prestigious is BIMCO – the Baltic and International Conference – based in Copenhagen. The main work of BIMCO is in drafting and regulating a whole range of standard shipping contracts such as charterparties, bills of lading and similar. BIMCO had already been quite proactive in providing training and familiarisation with the ISM Code and had also conducted a limit survey of their own members. Although BIMCO were a little slow responding to my initial approach for help – once they had considered the approach they were extremely helpful – including feature articles in their own Newsletter to their members about the project – encouraging them to participate - as well as a direct link from the front page of their own website to mine.

Intercargo is an organisation of 'dry ' cargo ship operators they also offered a lot of help and support and were to become directly involved at a later stage with the production of the *'Seafarers Guide to ISM'* which I will describe later.

Unfortunately the 'liquid' equivalent tanker operators organisation – Intertanko – did not respond to my approaches. However, I was able to contact many of the main tanker operators directly.

Most ship operating companies around the world would subscribe to one or more of the leading shipping newspapers and / or magazines – specifically Lloyds List and Tradewinds as far as Newspapers are concerned and Fairplay, Lloyds Ship Manager and Seatrade as far as magazines / periodicals are concerned. By providing the editors / journalists with an interesting and maybe a little provocative or controversial interview or article I could almost guarantee prominent editorial coverage which would reach the attention of the ship operators around the world. With the co-operation of the editors and journalists I was also able to include a personal request to ship operators to participate in the survey and provide them with the relevant contact details – including the Website address. Lloyds List were very kind and went one step further by displaying a scrolling banner on the front of their own website asking their readers to participate in the survey and provided a link direct to my website. As far as I am aware they had never done anything like that for anyone before or since.

Through these various sources and medium I was able to reach a very significant proportion of the ship operators of the world.

2.7.3 Other Stakeholders

Because of the diversity of individuals and organisations falling within this category it was going to be difficult and particularly labour intensive trying to contact them. Whilst some might have been picked up through the Nautical Institute and other distributions and possibly the other media coverage – I felt that it was important to make personal, direct contact and to supply the correct questionnaire form.

The 'other stakeholders' included a very wide range of individuals and organisations who might be in a position to witness ISM implementation as 'outside observers' – some of the more significant categories are described below:

Flag State Administrations

These are the national government departments or agencies that have the responsibility for ensuring that ships flying their national flag, i.e. ships registered in their country, comply with all the relevant rules and regulations and are issued with the correct certification – including ISM certification. Many of these flag States do not actually have sufficient infrastructure or resources to undertake their obligations and responsibilities themselves and therefore they delegate to a Recognised Organisation (R/O) – usually the Classification Society. Their contribution therefore was very important to explain how they had undertaken the verification and certification processes and to describe the types of problems they had encountered.

Each of the Flag State Administrations would have a delegate / representative at IMO – although some countries were much more active in their participation than others. Initially I sent individual / personal letters and questionnaires to each of the 158 member state delegates 'care of' the IMO address in London. That did not solicit much response and so I then sent another full set of individual / personal letters with questionnaires to their mailing address in their home counties.

Port State Control Administrations

The PSC authorities are also national government agencies / departments and I attempted to contact them in the same way as I had tried to solicit responses from the agencies handling the Flag State Administration duties – in many cases these departments were going to be one and the same or at least very closely related. Again, nearly 160 individual letters with questionnaires were sent. I also contacted the Secretariat offices of each of the seven MOU's around the world including the United States Coast Guard (USCG).

Classification Societies

The Classification Societies were very important potential contacts since they had at least three possible areas of involvement with ISM implementation:
  i)   In their role as an actual Classification Society – where they would be attending vessels in connection with Classification matters – which would provide them with an opportunity to observe how the SMS was interacting with the maintenance and other Class issues.
  ii)   In their role as Recognised Organisations acting on behalf of flag State Administrations
  iii) In their capacity as consultants to Companies where they provided a service setting up the particular SMS.

There are 10 full member Societies and 2 associate members of the International Association of Classification Societies (IACS) and letters and questionnaires were sent to the Secretariat of each. In addition over 600 individual letters were sent to separate branch offices of different Societies around the world. There had been suggestions made that there might be some irregular practices taking place in certain Classification Societies

regarding verification and certification and I considered it important to obtain direct individual feedback as well as the 'party line'.

ISM Consultants

Whilst the Classification Societies almost achieved a monopoly with regard to ISM Consultancy as well as verification and certification as R/O's – there were a number of independent ISM Consultants who did manage to break into the consultancy and R/O activities. Unfortunately I was only able to identify about 20 such individuals and organisations. Appropriate letters and questionnaires were sent accordingly.

P&I Correspondents

Whenever there is an incident onboard ship that is likely to result in a third party liability claim the P&I Club will probably be involved. In all the major ports, and most of the secondary ports, the P&I Club will have a local Correspondent – sometimes referred to as a Representative. The Correspondent would attend to assist the vessels Master on the spot to deal with the immediate problem, and ensure that the position of the Shipowner and P&I Club are fully protected.
The P&I Correspondents therefore tend to be at the sharp-end of any incident that occurs on board – as a consequence of which they have experience of seeing many ships and seafarers in situations where the SMS is under close examination. They are therefore in an ideal situation to feed back with their experiences of ISM implementation. Through my own contact network I sent individual letters and questionnaires to nearly 500 Correspondents around the world.

Surveyors and Consultants

In a similar way whenever there is a H&M or P&I type incident onboard ship, and indeed in many other situations, surveyors or specialist consultants will be instructed to investigate the incident to establish causation and to evaluate the damage. As such these individuals, who tend to be very experienced professionals, are in an ideal position to observe how / if safety management systems are working or if not what the problems might be. Letters and questionnaires were sent to about 350 individuals and surveying firms around the world.

Lawyers

Following an incident, particularly a serious incident, it is quite likely that a lawyer will be instructed to take the evidence / statements, to investigate the matter to establish causation and prepare the case for fighting in the courts or in arbitration or to enter into settlement negotiations. In a similar way to the surveyors, the lawyers are provided with an excellent opportunity to observe

how the SMS has been implemented and how it is, or isn't, working. A very handy '*International Directory of Shipping Lawyers*' (Informa, 2001) is published by Lloyds of London Press and they kindly provided me with an electronic version that was most useful for sending a large mail shot of letters with questionnaires to over 500 lawyers around the world.

Insurers

Whilst the P&I Correspondents, surveyors and lawyers may be involved at the sharp end of the investigation – their reports are likely to be presented to individuals within insurance organisations. These claims handlers, loss adjusters, managers, underwriters or whatever are also being provided with an opportunity of observing the SMS in action – or maybe inaction! A P&I claims handler may have many hundreds of claim files which he / she is dealing with. All the P&I Clubs were contacted with a request to circulate copies of the questionnaire around their claims handlers. Attempts were also made to send letters and questionnaires to H&M and Cargo insurers.

Nautical College Lecturers

Almost all seafarers will spend some part of their career attending a Nautical school, college, academy or similar institution. It occurred to me therefore that the lecturers, who would invariably be ex-mariners themselves, would hear from the students passing through what they thought about ISM and how the implementation process was going on board their ships. They would also be in a position to make their own assessment as to whether there were any cultural shifts taking place in the attitude of younger seafarers towards safety. I sent letters to well over 300 training establishments around the world.

Pilots

In the vast majority of cases, when a large ship approaches or leaves port they will utilise the services of a local pilot who can advise the Master on navigational issues in that port or harbour. In practice the pilot would usually take the ship from the pilot station to its berth. It can be appreciated therefore that any one pilot would have an enormous and varied experience of all different types, sizes and nationalities of ship. More importantly they would see first hand how the Masters, officers and crew – as well as the machinery – work and how the SMS was operating in practice. In addition to a small number of individual letters, a request was submitted to the International Pilotage Association (IPA) asking for help to encourage their Pilot members to participate and share their experiences.

Professional bodies and Trade Unions

Whilst Nautical and Marine Engineering Professional Bodies as well as seafarers trade unions and similar bodies were contacted in an attempt to get the questionnaires to the seafarers – I was also very interested in having feedback from the administrative and managerial staff of those organisations – to establish their views and observations.

Others

There were many other individuals and groups who were also contacted with a variety of backgrounds - as wide ranging as ships agents to marine biologists and conservationists.

2.8 Questionnaires

Once the questionnaires had been designed and fine tuned and the critical communities identified I then had to consider the optimum number of copies to print. A significant cost in any print operation is setting up the actual machines involved in the printing process – after that the costs are really the paper and ink. Substantial economies of scale can therefore be achieved by making a correct estimate of the quantities required at the first print run. Working through my variously identified critical commentaries – including the large quantities which were being distributed for me through the various journals, magazine and newspapers, plus some spares for contingency purposes – I found that I would require 75,000 copies in total. Each questionnaire was to be printed on six sides and there would be three different versions.

A little over 60,000 of the questionnaires were to be distributed with the journals etc. and the rest were being despatched as individual direct mail. I wanted a personally signed covering letter to go with the questionnaires being sent out as direct mail and therefore I would require personalised letter-head to be printed as well – and a rather large supply of A4 envelopes! Since many of the letters and questionnaires were going to recipients overseas I also had to have a facility for weighing and stamping the envelopes – whilst I had to pay for the postage I was most grateful to the postal staff at my employers office for their help in the weighing and franking.

Whilst I was usually able to apply a standardised wording to my letters to the different categories of 'critical communities' I did want to personalise the letters as much as possible. I achieved this by creating large data bases of address lists and using the 'mail merge' facility. This was rather time consuming – but I felt was time well spent. I have a personal dislike of receiving 'stereo-type' mail – it usually heads straight for the waste-paper bin. Again I was most grateful for help from my secretary with setting up some of the mailing address data-bases and running the mail-merge documents. I think it was at that point that I realised just how expensive ink cartridges are for desk top printers!

I took the view that if the survey was to be taken seriously and if I was to persuade people to participate then the first impressions had to be good and the letters and the questionnaire had to look professional. The costs involved in the design, printing and distribution were very significant but I was convinced there was no alternative if I was to attract the interest and participation of the industry.

What was an unknown entity at the time of sending out the questionnaire was just how many would be returned. Clearly the logistics of manually inputting the data from the paper questionnaires into the database was, potentially, a very serious matter. I had undertaken some sample exercises of entering data

from the questionnaires into the electronic database and concluded that once the familiarisation with the forms had been achieved then I could complete between four and five questionnaires per hour. If all the questionnaires were returned I would need about 16,500 man-hours or 687 days or nearly two years working constantly 24 hours per day! I took something of a possible gamble – that it was most unlikely that I would achieve better than a 10% return. Even so that would still involve a significant number of questionnaires and consequently time.

In addition to the 'ticking box' sections of the questionnaire I had also allowed the respondents the opportunity of entering narrative text to describe their experiences and /or state their views. Recognising the available resources were limited I took the pragmatic view that my available time would be best used in considering and analysing the narrative comments contained on the questionnaires and employ someone else to undertake the more mechanical process of inputting the raw data into the database on a piece-rate basis. This would mean that if the number of returned questionnaires exceeded expectation then I would have more narrative to consider but the inputting of the data could still be managed – although the costs would be escalating.

2.9   Designing the Web-Site

The original idea behind the development of a Website was to create the possibility of allowing respondents to complete the questionnaires on line such that the data would automatically drop into the database. Potentially this would save an enormous amount of inputting time. Indeed even when the 'hard copies' of the questionnaires were sent out I actually encouraged people to complete the questionnaires on line.

The design of the website and the database became very closely linked with each other – particularly in the initial stages. The website designer I had engaged was also well acquainted with relational databases. He was thus ideally suited for what I needed and was also able to teach me how to use the Microsoft Access Database software to allow me to analyse my statistical data.

Once it became apparent that I could develop the site for much more than just a utility for respondents to complete the questionnaires – the potential was most exciting indeed. As the outline plan started to take shape on my drawing board I could see great potential. In addition to a section of the site where respondents would be able to complete the questionnaire – I thought it would be interesting to allow visitors to leave narrative text messages – stating whether they were in favour, against or neutral on ISM and allowing them to describe their own experiences and to share their views with other visitors to the site. They would be allowed to do this anonymously if they so wished. There was also to be a facility whereby they could send private, or additional, comments to me through a dedicated e-mail link. There would be a section of the site that would describe the research project in some detail and in the hope that this would encourage people to participate. A reference section would be included which would allow other researchers into ISM an existing source of data and information. Links would be provided to other websites that included ISM related topics. Copies of primary source material or links to that

material on other sites would be provided. A dedicated subsection was to be developed which would become a repository for published, and unpublished technical papers on ISM related topics. Authors were encouraged to allow their papers to be published and shared with others who were interested in the subject.

The 'storyboarding' / scripting was time consuming but I was most pleased with the end result exceeded which all my expectations. I was able to obtain a most prestigious and appropriate web-address and have maintained the site at www.ismcode.net.

2.10 Setting up the data-base

Other than dabbling a little in Microsoft Excel – I really had very little knowledge or experience of working with spreadsheets or databases. Reading around the subject and discussing with those more knowledgeable than I - it became apparent that what I would need to undertake the levels of interrogation of the data I had in mind was a relational database. Microsoft Access was a readily available piece of software and it was therefore a matter of learning as much as I could about the program.

I quickly came to the realisation that the possibility of me actually designing the computer program itself was not an option. The Website designers original commission was therefore extended to include setting up the database. This would allow me to concentrate my own efforts on designing the questionnaire itself as well as learning how to actually use the database to interrogate and analyse the information. Again it was a matter of being realistic and utilising my available time in the most productive way possible.

2.11 Media coverage / Editorial

Since the concept of ISM had first started to come to light in the early 1990's it had consistently attracted very high profile media attention across the shipping related press. It was perceived, cynically or otherwise, as the panacea which was to rid the industry of sub-standard shipping, the appalling accident record, horrendous insurance claims and all its other problems. The intentions were noble and honourable but many in the industry ashore as well as seafarers were quite sceptical and were outspoken in their objection to having this additional financial burden imposed upon them. The resources of money, time and people in the shipping industry was at critically low levels and many in Northern Europe at least did not even believe that ISM could benefit their own organisations at all – believing, rightly or wrongly, that they already ran a safe ship. However, all these things were highly emotive issues which newspaper editors and journalists seem to thrive upon.

It therefore occurred to me to use this media interest in ISM to my advantage. I already knew many of the leading editors and journalists who had often portrayed me as some sort of valiant champion, although often lone voice in the wilderness, on promoting accident and loss prevention in the shipping industry. I felt confident that they would recognise the potential 'story' of this single individual taking on a task which the might of the IMO and the entire international shipping industry could not find the resources, or possibly the

will, to undertake. My confidence was vindicated and I was to receive the 'front page' treatment.

The reason I wanted mass publicity had nothing to do with boosting ego's though – it was simply a case that I wanted to raise as much industry awareness as possible about the project in order to encourage maximum participation. Whilst some editors and journalists preferred to write their own stories – I was able to submit my own editorial texts which ensured that the articles would include key issues as well as reference to the Website where the readers could participate.

As far as I am aware just about every shipping related newspaper, magazine and journal printed in the English language carried at least one major feature article on the project – some ran a series of articles – I am also aware that many non-English language publications also carried feature articles.

2.12 Seminars and Conferences

During the 1980's and 90's I had already become a fairly established speaker on the maritime / shipping seminar circuit. I therefore realised the potential for utilising this medium to help communicate my message, encourage dialogue as well as a wider spread of participation in the project.

The timing was right – the industry was between the phase one implementation of ISM of 1998 and we were in the lead up to the final deadline for phase two implementation of 1st July 2002. There would be many seminars, conferences and training courses. Indeed once the project was launched I started to receive invitations to speak on the subject not only in the UK but around the world.

In addition to seminars and conferences focussing on ISM there were two other related topical issues which were also generating much interest and which were the subject of seminars etc. – Port State Control and STCW. I was also invited to speak at many of those events.

3   Managing the project

3.1   Launching the survey

I wanted to launch the project with maximum impact such that it would be the 'buzz' of the day and people would, hopefully, want to be a part of what was happening.
I had identified 1st April 2001 as the launch date. As the date approached I was working against the clock to light all the fuses simultaneously:

- the website had to be completed and ready to go live,
- having previously secured editorial space – feature articles had to go to all the main Newspapers and magazines,
- bulk copies of the questionnaires had been delivered to the various journals who had agreed to distribute them,
- mail-shots with thousands of individual letters and accompanying questionnaires had to be prepared, signed, put into envelopes and franked with the correct postage.

Although one newspaper 'jumped the gun' and published the story a week early - everything did come together and the green button was pressed on the assigned date. The plan seemed to have the desired effect – it was THE news of the day and it put the project well and truly on the map.
Pandora's box had been opened and I stood back and waited in trepidation.

3.2   Monitoring the web-site

Very soon after its launch, It was clear from a monitoring facility linked to the website that it was receiving thousands of 'hits'. However, few people were completing the questionnaires on line and not many were leaving messages or comments on the 'discussion' page. On the other hand many completed paper questionnaires were being returned very quickly and contained some very detailed and interesting comments. I therefore decided to give fate a little helping hand to get the ball rolling. Where returned paper questionnaires contained interesting comments as well as an email address I contacted the individual to ask for permission to reproduce their comments on the web site. Most were more than happy to agree – provided they remained anonymous. This had the desired effect and the collection of comments soon started to build up.
Where possible I also asked the people who had submitted completed paper questionnaires whether they had been aware of the possibility to submit the completed questionnaires electronically – and if so what made them decide to submit a paper version. Interestingly almost all of them who answered that question indicated that they were afraid of what might happen to the electronic copy. I am still not sure what they really thought might happen to it but this element of fear and mistrust was to pervade many elements of the study.
For the first few months the website had to be monitored on a daily basis to keep up with the entries – even so it was quite apparent that there were many

more paper copies of the questionnaires being received than there were electronic versions being submitted.

Apart from the initial problem of website capacity, there were not many more operational problems other than the occasional person saying that they could not get into the site. Not very many people offered up papers for inclusion on the site although when I heard about the existence of such a paper and I approached the author then they were usually more than happy to allow me to post their paper on the site.

3.3   Monitoring the completed questionnaires

The hard copy questionnaires started to arrive back very quickly indeed – by the end of the first week of April they were already starting to pile up. When I started to review the 'comments' section I became extremely concerned. A look at the answers given to Question 8 of the questionnaire – general conclusions quickly confirmed my first impressions. Not only were the responses negative they were clearly very strongly opposed to the ISM Code with many apparent examples of very bad experiences.

Whilst I was certainly expecting some negative responses – what I was seeing here was an utter condemnation of the whole concept of ISM. I looked again at the questions to see if they had been so badly phrased – something did not seem right at all and I must admit that it alluded me for some little time. As time went by I continued to receive more and more responses – many continued to be negative and critical but more and more were starting to show a more positive response to ISM and some good experiences started to come in. I still couldn't grasp why that first wave of responses contained so much negativity. The penny eventually dropped!

The first batch of questionnaires to go out were with the Nautical Institute journal Seaways which is mailed out on a date such that it will arrive at UK mailing addresses on or very close to the 1st of the month. Seaways distributed all 'blue' - 'Masters and other seafarers' versions of the questionnaire. The next batch following very close behind was with the Union NUMAST Telegraph that also contained only 'blue' questionnaires. The majority of the questionnaires returned in that first wave were indeed 'blue'. However, this first wave was probably not made up of serving seafarers but rather retired seafarers or otherwise non-active seafarers (although it is conceded that some of those early respondents were seafarers on leave). The questionnaire would not have had time to reach seafarers actually serving on board ship and to have been returned.

A question I did not ask directly in the questionnaire was the age of the respondent. However, from the answers provided I was able to establish that the respondents were mainly British, Masters or Chief Engineers and had been with their last company some considerable time. These responses and attitudes coincided with views expressed to me by retired Masters and Chiefs on various occasions. The point is that few, if any, had actually served with ISM. They tended to hold a view that they managed safely very well in the past without any formalised safety management systems and didn't see any need for it to be imposed on them. Often this view was expanded to lay the

blame for the decline in the safety standards on 'foreign' crews and 'foreign' flags.

As more and more completed questionnaires came in there was more of a balance between some who were strongly opposed and others who were very much in favour – with the majority falling between these two extremes. I was able to generate graphs from the database without too much difficulty. After two months I had almost classic distribution curves for answers to the questions – 'Have the number of incidents reduced since ISM implementation' and 'Is ISM achieving its objectives?' with a slight leaning more towards the negative. As more time went by the trend was increasingly towards the positive. Again it did not occur to me initially why that should be – it subsequently became apparent that there was a significant cultural / national dimension to perceptions about ISM which I had not originally anticipated. I will describe the implications in the relevant section below. The significance to this part is that the responses coming in later were from serving seafarers and in particular from people living in the Middle and Far East – including specifically the Indian sub-continent.

Some of the responses from individuals were really quitebizarre. They would contain swearing and other blasphemies as well as very strong personal insults being hurled in my direction and aimed at the world at large. Some very bitter and angry people who seemed to blame the state of the industry and their own personal situation on me, on the ISM Code, on the Secretary General of the IMO and a number of other demons.

What was of much more concern was the similarity of many very serious misunderstandings and misconceptions regarding the ISM Code that were coming in, primarily from seafarers, from many different parts of the world. This aspect led to an urgent change of tack and the production of a practical Guide for Seafarers to the ISM Code (see Anderson and Kidman, 2002). I will describe the nature of the problem and the solution that was produced in the section below 'Dealing with Surprises'.

In addition to the completed questionnaires many respondents included a detailed covering letter or note expanding on what they might have said in the narrative section of the questionnaire. Sometimes these 'additional comments' ran onto many pages providing great detail. They were extremely useful, interesting but involved a lot of additional time to analyse.

3.4   Inputting the data

It became apparent at an early stage that people seemed to feel much more comfortable completing the paper questionnaires than completing the electronic versions on the Website. There was a ratio of about 5:1 paper to electronic.

I had already decided that priority had to be given to keeping on top of the dataentry. I did not know how many completed questionnaires I was going to get back and there was a very real danger that if the backlog was allowed to build up then it would grind the project to a halt.

I devised a process that was to be followed with each completed questionnaire received. Each questionnaire was given an individual catalogue number. I would initially review any comments that were contained and

include 'quotable quotes' or other extracts from the comments in a catalogue I had produced. Within the catalogue was a list of 20 different categories of comments. Each comment would be catalogued in one or more of these categories and that would include the questionnaire number which would allow the possibility for the comment to be matched up with the original questionnaire at a later date. Each comment was also colour coded i.e. blue, green or red depending upon the category of the respondent and was tagged to provide more detail about the person making the comment – not by individual name but in a generic way e.g. Indian Second Mate, or DP Norwegian Shipping company etc. Approximately 800 detailed comments were catalogued in this way.

Once I had reviewed and processed each questionnaire in that way they would be collected into batches of 100 at a time and then handed over to my helper who would input the raw data into the database.

3.5 Statistical data

I had set a cut-off date of November 2001 for inputting data. By that date the number of responses being received had dwindled off to two or three a week. The data from the paper questionnaires was combined with the data which had been automatically downloaded from the website. Nearly 3000 completed questionnaires had been received by November and I therefore drew a line at that point as far as inputting any further data was concerned although I continued to monitor narrative comments received.

The actual numbers of completed questionnaires received, which were capable of being input to the database, were as follows:

- Masters and other Seafarers 1984
- Ship Operators 527
- Other Stakeholders 464

A detailed analysis of these figures is set out in the manuscript of the book setting out the findings and conclusions of the survey which is submitted as the main exhibit to accompany the Critical Commentary.

3.6 Dealing with correspondence

With many of the questionnaires, both paper and electronic, the respondent wanted to enter into a dialogue about issues he or she had raised. I also received many other letters and e-mails where people were asking questions or otherwise were looking for me to write back to them. Other researchers contacted me wanting information or guidance on what areas they should focus upon or where they should look for information etc. Unfortunately time was at a premium and it was a matter of prioritising how I should use the limited time available. In the end I had to be fairly ruthless and selfish and keep firmly focused on the project itself.

Where time did allow and the correspondent clearly had additional information that was of special interest or importance then I would build the time into the program. Some of the contacts were very strange indeed. I received letters or

telephone calls from people who said they had information which they would only pass on in a face-to-face situation when they could be sure no-one else could over-hear. Clandestine meetings were arranged reminiscent of 1950's spy movies! Some of what I was told, if true, was of serious concern involving corruption in Classification Societies, manipulating of accident figures, pressurising and coercing DP's in shipping companies to falsify records and much more.

3.7 Conducting research

Undertaking research on a part time basis meant I had to keep myself tightly focused on my original plan. Inevitably there were going to be many unexpected opportunities and issues that had to be responded to as and when they arose.

Alongside the survey I was carrying out I was also trying to obtain additional information from a variety of sources – a few were receptive and helpful – many others seemed to be ignoring my approaches.

I had experienced considerable difficulty obtaining statistical data from insurers – both H&M and P&I. On the H&M side the Norwegians were much more helpful than the Lloyds market or the UK based companies. On the P&I side a number of clubs indicated that they would provide me with figures but these never materialised. Some clubs were kind enough to provide figures but on the strict understanding that they were to remain confidential.

It eventually dawned on me why there was so much secrecy and reluctance to release the claim figures by the insurers. There was an apparent fear that their competitors might get hold of the figures and use them to discredit the insurer. However, I came to the conclusion that the real problem was that the whole of the marine insurance industry is seriously under-funded and the figures are likely to be somewhat embarrassing.

In the year 2002 all the P&I Clubs made general increases of at least 25% and a number made additional cash calls on their Members to make up the shortfall they were experiencing. Another significant general increase is forecast for the year 2003. Even the Swedish Club who had made a very public statement that its claims were on the way down, which it attributed to ISM made a significant general increase and may possibly have to make additional supplementary calls on its Members.

The problems in the insurance industry and the clubs does have some relevance to claims experience but it is much more a result of selling insurance too cheaply in recent years and the fact that investment income has been reduced to zero – or even worse!

Against such a dire situation should we be at all surprised that the insurers might be somewhat reluctant, even if their claims figures would allow them, to make a statement that: 'ISM is working – the claims are on their way down! – and by the way your insurance premiums are to increase by 30% this year and another 25% next year'. The word incredulous comes to mind.

Other areas of research involved looking at how Flag State Administrations and Port State Control were policing the system and introducing standardisation into their verification process'. I started to conclude that their statistics reflecting detentions, or rather the reasons for detentions, of vessels

was confusing, confused and ambiguous. For example a ship may be detained because it was found to have defective lifeboats or fire extinguishers and there may be no mention of any ISM deficiencies. In my view the fact that the lifeboats or fire extinguishers were defective would be indicative of a very serious failure of the safety management system on a number of different counts – which would be a very clear non-compliance with the ISM Code. Attempts are being made to standardise the method of inspection of the different PSC authorities and the categorisation of how deficiencies are recorded. Until that time I think the PSC figures will remain misleading and of limited use when trying to establish whether or not ISM is having any effect. It is also important to note that PSC inspectors are receiving more training in auditing management systems – consequently it would not be surprising if we found that recorded ISM deficiencies increase significantly in the next year or so. Not because there are more deficiencies but simply because the PSC inspectors have learnt how to recognise / identify them, how to interrogate the SMS and properly categorise the deficiencies.

3.8   Encouraging participation

When the completed questionnaires started coming in it was very clear that the overwhelming majority were blue – i.e. from Masters and other seafarers. This was not surprising since the main mail-shots had had been targeted at those groups i.e. the Nautical Institute, IFSMA, NUMAST and through the Mission to Seafarers. Initially the response from ship operators was poor. It was crucial that I did have a significant input from this category of participants since they are, alongside the seafarers, the key players in the ISM implementation process.

Accordingly I renewed my efforts to try and encourage participation and contributions from ship operators including the Chambers of Shipping and the Ship Owner Associations.

Through the Web I was able to get my request for help directly into the offices of shipping companies around the world. The responses started to come in although I was conscious, and concerned, that the companies who were responding were tending to be from the more respectable end of the market.

I am involved in extensive overseas travel as part of my main job and so I was able to take the opportunity to meet many shipping company staff face to face to discuss issues. Also through the many seminars and conferences I participated in I was also able to meet many individuals from a range of companies – although the poorer end of the market do not tend to send delegates to such events.

In the end I was satisfied that I had a reasonable cross section of ship operators in my sample.

3.9   Opening up the debate - Seminars, conferences and editorial

The survey had been deliberately timed to coincide with the lead up to phase 2 implementation deadline of 1st July 2002. As we approached that date the debate intensified – very few days passed when there was not an article about ISM in Lloyds List and Tradewinds and there were very few issues of any other shipping related magazines that did not carry major articles on the

subject. I had strategically placed myself in a position whereby I was being regularly contacted by the shipping press on the subject and also invited to speak at almost every international seminar and conference dealing with ISM and related issues. I was therefore able to participate on centre stage in the debate. The main advantage of this was that I was in regular, direct, contact with many of the key players in the debate. It also meant that my name and my project were becoming well known which helped considerably to establish my credentials when I wanted to contact people in the industry, governments etc.

3.10 Considering objective evidence

The questionnaires were designed to try and obtain as much 'objective' evidence as possible although, inevitably, in a survey such as this I think we will always fall back on subjective opinion. This does not necessarily mean that there is anything particularly wrong with 'opinion' – it is just that we must be careful to ensure that we recognise when we are dealing with facts and when it is opinion. This is very much a philosophical issue and sometimes the boundary between the two can become a little blurred. For example if a very large number of people believed a particular proposition - was this rather than that – maybe there were no dissenting voices – does that establish it as a fact? Probably not – it is still a subjective opinion – although one widely held.

In the questionnaire there certainly were objective questions – such as asking the respondents to state the number of ships in their company, or to identify the position of the DP in the company. There are certainly some questions which are very clearly subjective – such as 'Do you feel a sense of ownership of the SMS on board your vessel?'

There are other questions however that might be either – for example – 'In terms of number of hazardous occurrences / near misses – approximately how many would be reported each year?' It maybe that if the Master or on board safety officer were answering this question then they may have access to actual, exact figures, which would provide a factual objective statement. Sometimes though it may be just wishful thinking. On the other hand if the Cook was answering the question then he / she may be just guessing since he / she does not really know and does not have access to the actual records. Clearly such an answer, although given with good intentions and may even be correct, is subjective in nature.

The objective evidence as far as ISM implementation is concerned would be the actual claims records, for example, from specific insurers or individual shipping companies or ships. This data seems to be generally unavailable and probably inconclusive – at least as far as insurers are concerned, and it is probably fair to say that it is too early following implementation to see any global trends. Individual shipping company figures should be available but there seems to be reluctance to share that information with the outside world.

We are therefore left mainly with subjective answers.

3.11 Considering subjective evidence

Provided we recognise subjective answers for what they are and do not try and attach any incontrovertible properties to them then they can give us some very useful and interesting data to work with.

Ideally, each questionnaire should be considered in its entirety when we are considering subjective answers in order to view the big picture or start to understand a little of the individual person behind the answers. The significance of this can perhaps be seen in the way in which some Masters and seafarers answered Questions 5.5, 6.5 and 7.5 on the questionnaire. They were being asked whether they were reluctant to report the different categories of incident. Many respondents actually stated that there was no reluctance but then immediately went on to tick various boxes stating why there was reluctance to report. Those same individuals, when answering questions A4.6 and A4.7, for example, claimed to be working in a 'no-blame safety culture'. Such answers when considered together appear to be inconsistent with each other. If they are considered in an holistic way, with all the other answers provided in the questionnaire then it may very well be possible to understand what the respondent really meant by his / her ambiguous answers.

3.12 Initial analysis of results

Many of the initial findings did confirm what I already suspected. The predicted gripes and complaints, which were confirmed, can perhaps be summarised in the followed list:

- too much paperwork
- too many forms to fill in
- too many manuals
- not enough time
- not enough people
- no support from the company
- no confidence in junior officers
- the SMS is alien to the company
- just a paperwork exercise

Clearly I take the responses at face value and respect them as a reflection of the individual's experiences and understanding. Some of the views however are very seriously in error. I will address that issue below under 'Dealing with surprises'.

There were a number of unexpected issues that came to light though – possibly the most important of which involved a possible cultural dimension.

Because of the way the database had been set up, I had been able to run sets of figures without too much difficulty throughout the period that the survey was taking place. I had realised that there was a shift taking place from a rather negative attitude towards ISM to a more positive one. When I generated graphs showing the results of the answers to the big questions where the respondents were asked for their view on the success of ISM with

similar graphs generated at an earlier stage of the survey, the differences were quite remarkable. The reasons for the shift did not occur to me immediately. It subsequently became apparent there were major differences in perception of ISM between different cultural / national groups. OECD seafarers tended to be quite negative whereas, for example, Indian and Filipinos seemed to be very positive. This issue is covered in detail in Chapter 6 of the manuscript setting out the findings and conclusion which is submitted as the main exhibit in support of this Critical Commentary.

Possibly the most important finding was, quite simply, confirmation that we are working with a very diversified industry. It became clear that many individuals and organisations are struggling to make ISM work as it was intended – for a variety of reasons. They are achieving little or no benefit at all – it can be considered as nothing more than an additional administrative burden. On the other hand there are a number of individuals who are reporting that they are working in safety management systems that really do appear to be functioning as intended. They are reporting that their accidents and claims are down, that their productivity and efficiency is up – as is the moral amongst their staff. Some have even been so bold and go so far as to claim that their profits are up which they directly attribute to their ISM implementation. One ship owner, for example, told me in absolutely unambiguous terms, that they are saving $1,000,000 per ship per year that he directly attributes to their ISM implementation. That is language which will be understood by ship owners and may well be the carrot which is needed to encourage the real commitment and investment that will be needed to implement a proper, dynamic, functioning SMS.

3.13 Dealing with ethical issues

There were a number of serious 'ethical' issues which arose during the course of the research some of which, if what was reported to me is true, are of great concern.
Some of the very early responses to the survey were clearly from individuals for whom ISM implementation was more than just a passing interest – they had things they needed to get off their chest and they perhaps saw my survey as an opportunity to get things out into the open. I received detailed independent reports from two individuals who were geographically separated by many thousands of miles but who basically told me the same story. Similar, but less detailed reports were also received from others. The two detailed reports were from independent ISM consultants who had been subcontracted in by leading Classification Societies to undertake verification audits as R/O's for the issue of SMC's for ships. Having completed the audit of the SMS on board the respective ships the consultants advised the Master that they had encountered major non-conformities with the SMS and therefore they could not recommend that the Flag State Administration issue the SMC. This is a very serious matter since without the SMC the ship cannot trade.
Within a relatively short period of time the consultant received a telephone call from the Classification Society asking for an explanation as to why they could not recommend the issue of an SMC. Following the explanation the Society

suggested that the consultant was mistaken or was being a little over zealous and should reconsider his decision. When the Consultant insisted on maintaining his original decision he was told that the SMC was going to be issued in any event and that the consultant should not expect any more sub-contract work in the future. On one of those occasions the consultant apparently informed the local PSC who conducted their own examination of the SMS and promptly detained the ship on account of the major non-compliances found and the ship remained detained for some considerable time.

The other, similar, reports received were from actual Classification Society surveyors who were somewhat disillusioned with their experiences. Again they were telling very similar stories. The scenario depicted was that they would conduct the SMC verification audit – find major non-compliances and declare that they could not recommend the granting of an SMC. Again, within a relatively short period of time, they would receive a telephone call from the head office of their Society asking for clarification. Once the surveyor had explained what he had found the suggestion was made to him that he was mistaken and that the SMC should be issued. When they maintained their position the conversation would turn to the surveyors personal circumstances with questions about the large mortgage that the surveyor had outstanding and what would his wife and kids think if Dad found himself without a job and was he really sure that he did not want to issue the SMC.

There were other reports from Masters and Chief Engineers who told of incidents where the R/O's had attended to conduct an SMC verification audit but never moving further than the Masters cabin – having brought the completed SMC with them! The respondents would then tell me of the major non-conformities which actually existed on board.

I have a number of personal contacts within Classification Societies at very senior levels and I confronted them with these stories. Understandably they were deeply concerned and I am sure very genuinely unaware, on a personal level of any such activity taking place. Indeed they said that if they did become aware of any such activity within their own society then the individual responsible would almost certainly be dismissed.

This actually raises an ethical issue of some serious concern with regard to the Classification Societies. The Societies are mutual organisations which are owned by the members of that society i.e. the ship owners. Although the Societies are acting on behalf of the Flag State Administration when wearing their R/O hat – it still doesn't change the fact that they are owned by the very ship owners whose ships are being audited.

Another matter of possible concern with regard to the Societies is their role as consultants. Leading up to phase one implementation in July 1998 many ship owners really did not understand what was required with regard to setting up a Safety Management System and they did not believe that they had suitable expertise in house. In response to this many of the leading Classification Societies set up subsidiary organisations that would provide ISM consultancy work. Basically they would be employed by the ship owner to prepare their procedures manuals and get their systems up and running such that they would be ready for the Flag State Administration verification audit in advance of the DOC's and SMC's being issued. Then along comes the Classification Society wearing their Recognised Organisation hat acting on behalf of the

Administration. Can an organisation who has set up a system really exercise objectivity when verifying that very same system with the view in mind to granting a certificate confirming compliance? There would appear to be a rather serious conflict situation here. The Societies argued that they would not normally act as R/O verifying a system on which they had acted as consultant. But even if they did, they insist that the consultancy side is quite separate and distinct from the R/O auditor side.

It is a fact that in the months leading up to phase one implementation many thousands of ship owners had left it too late and would not be ready in time. Indeed at the time the Societies said that if they had all their surveyors working 24 hours a day, seven days a week they would not be able to undertake all the verification audits that still needed to be done. Miraculously, by 1st July 1998 almost all the ships had been issued with their SMC's.

The ethical dilemma goes even deeper. In their capacity as R/O's the Classification Societies are answerable to the Flag state Administrations for whom they are acting. The Flag State Administrations do not have the knowledge, skills, resources or infrastructure to undertake the verification work themselves – that is why they subcontract to the Societies – so it is most unlikely that the Administrations will have access to any other facilities to oversee what the Societies are doing and whether they are doing a good job. Indeed in all the roles that the Societies play they are answerable to no-one except perhaps their ship owner members. They not only train their own staff but they also examine and certificate their own staff. They write their own rules and regulations, interpret and apply their own rules. One cannot help but think of an analogy with the position of the Rulers of the Society in Plato's Republic. The Philosophers were put in charge to oversee things and to keep an eye on everyone else. However, the inevitable question had to be asked - well who is keeping an eye on the rulers? *'Power corrupts and absolute power corrupts absolutely'*. I am not suggesting for one moment that the Societies are corrupt but I would have to say that, for the sake of the credibility of the Societies themselves, there should be checks by independent observers to ensure that they are indeed doing what they are supposed to be doing to an acceptably high standard beyond reproach.

Considering this situation, and for the protection of the Societies as much as for the benefit of the shipping industry and all who might rely upon the certificates and verification, it occurred to me that an obvious organisation who could, and perhaps should, undertake such a task would be the IMO itself. After all the IMO is an organisation representing all the Flag State Administrations as well as being custodians of international public policy with regard to maritime safety and pollution prevention matters.

A task force could be established within IMO who could have a number of functions:

- Oversee the training of ISM auditors who intend acting as R/O 's
- Be responsible for the examination and certification of the ISM auditors
- Issue an operating licence to the Classification Society or independent ISM consultancy company to act as R/O
- Have a flying squad of inspectors who would undertake random 'spot checks' on the Company office as well as on board ship very soon after verification by an R/O to ensure that proper standards are being

maintained. They would have the authority to impose punitive penalties against both the individual auditor and the Society – with the ultimate sanction of cancelling / suspending the individuals certificate and / or the Societies operating licence.

I have informally discussed the proposal with a colleague inside IMO who doubts very much that such a scheme could ever get off the ground. He explains that such a scheme would require considerable resourcing / funding and the IMO basically has very little funding available to it. He also explained that, contrary to popular belief, the IMO has no power. He explained that it has a facilitative function only and if any actions are to be taken then they need proposing / sponsoring by the most powerful members of the assembly i.e. the large FOC's.

Whilst I hear what my colleague says – I see no reason why such a body as anticipated in my proposal could not be self-funding. Flag State Administrations who need to delegate to R/O's could be levied a fee per ship. A licence fee could be charged to those who require an operating licence – e.g. the Classification Societies. Examination fees could be charged. If irregularities are found on post audit inspections then fines could be imposed.

Turning now to another ethical issue that arose – suggestions that a range of ISM related records are being falsified both on board the ships and in the offices ashore.

The allegations ranged from relatively minor attempts at completing paperwork to say that certain checks had been done when in fact they hadn't to some very serious, probably criminal, deceptions. A few examples might help to illustrate the type of things that have apparently been going on:

- The SMS contains a procedure that requires all the fire extinguishers on board to be checked every month. The third mate has a checklist which needs completing to confirm that he has inspected each fire extinguisher on board with a date to be inserted when he conducted his inspection. In fact the third mate never inspects the extinguishers at all – he just ticks the boxes and inserted dates whilst sat in his cabin. These lists are shown to the company superintendent who is responsible for auditing the system and he accepts them as a proper record. Apparently PSC inspectors have also looked at the list and accepted it as evidence that the SMS was being complied with.
- A Chief Engineer reported that there was a major problem with one of the hydraulic rams on the steering gear that would involve some major work with interruption to the vessel's trading. The Engineer Superintendent decided that the work was to be deferred until the next dry-docking that was scheduled for nine months later. Before the dry docking the steering gear jammed resulting in the ship running aground with a full cargo on board. All records of the report of the Chief Engineer both in the office ashore and on board were destroyed prior to the underwriter's surveyor attending.
- The SMS procedures require formal permits to work to be used when anyone is to work aloft. All the permits were signed by the chief officer and given to the bosun at a meeting on the bridge before breakfast.

The job actually started after breakfast. Prior to signing the permits the chief officer should have inspected the actual work place, checked the equipment, ensured that those undertaking the work were wearing the correct personal protective equipment and were properly trained and familiar with working aloft and that the work was to be properly supervised. Only then should the permit to work have been signed and issued.

There were many other reports of records of 'hours of work', 'training and familiarisation' and such like having been deliberately falsified. I was contacted by one gentleman who had held a senior management position in a British shipping company and who had been sacked because he refused to alter any more records or cover up for various illegal practices that he had been instructed to carry out.

There are in fact some very serious penalties available, in many jurisdictions, against anyone who generally fails to properly implement the ISM Code. These include not only fines but very long prison sentences. (see SI 1998 No 1561)

3.14 Dealing with surprises

Many of the issues that were reported were very much as anticipated. However, what started to become apparent was that many individuals, particularly seafarers, held some quite erroneous and seriously misleading ideas about the very concept of the ISM Code as well as about the detail. What was remarkable was that the same misunderstandings were coming up with seafarers of different nationalities and apparently working in different sectors of the industry. Many of the most serious examples of erroneous views were actually being put forward by British seafarers including Masters and Chief Engineers. With such misconceptions about the Code it is little wonder that many companies, and individuals, were struggling to properly implement an SMS successfully.

I tried to investigate where these strange understandings could have been coming from – presumably there was some common source? What I found surprised me and caused me much concern. The thing I was looking for i.e. a common source document probably does not exist. In fact I could not find any practical reference source that was readily available to the seafarers to explain what the ISM Code was about and how it was meant to work. Of course there is the Code itself and other related primary source documents such as the 'Guide to Administrations' – but these are rather dry and written in very general and rather legalistic terms. There is the commentary produced by the ICS / ISF – 'Guidelines on the application of the ISM Code' (ICS / ISF Guidelines, 1996) – which is an excellent reference source but not ideally suited for a seafarer to pick up and read as an introduction to the concept. Then there is my own book – 'A practical guide to the legal and insurance implications' – this was certainly never intended as a first step introduction to the Code.

It does appear that a number of shipping companies have produced their own introductory guides but these are not generally available outside of those companies.

What also became apparent, in many cases, was that the seafarers were not involved at all in the design and preparation stages of their SMS. Rather their first contact was when boxes full of procedure manuals arrived on board. These boxes of manuals appear, in many cases, to have been accompanied by a message which basically said '…here it is, now get on with it…'

I decided that urgent action was needed to address the situation and to provide some practical advice by way of an introduction to ISM and to dispel the myths and misunderstandings that had grown up. It had to be done in such a way that it would be understandable and accessible to any seafarer, of any rank and of any nationality – provided they had some basic English Language skills.

During the earlier part of year 2001 I had come across a small book providing an excellent introduction to 'Port State Control' (Kidman,2001) as well as a more detailed explanation of some of the more complex issues. It had been written by one of the management team at Intercargo – Peter Kidman. I liked his writing style and presentation very much indeed and we reached an agreement whereby my employers would incorporate the book into its loss prevention guide series of books – and so I had experience of working with Kidman.

I had an idea for a book that would be a practical guide to seafarers but I was already heavily committed on the writing side with the D.Prof. project. Accordingly I approached Peter Kidman to establish whether he would be interested in coming in as joint author. Fortunately he was interested by the prospect and readily accepted the invitation.

The idea that I had in mind was to find some everyday activity to which seafarers could relate, against which I could map out an analogy with the ISM Code. The idea started to take shape in my mind of the football team in the 1st Division training and preparing for the big cup match which, if they won, would take them into the Premier League. The analogy with setting up an SMS, preparing for the verification and then the situation post certification seemed to work very well. However, it was pointed out to me that 1st Division and Premier League etc are rather parochial to the UK. It then occurred to me that year 2002 was World Cup year. The outline idea was in place.

For many years one of my personal 'trade-marks' in the industry has been my use of cartoons and humour to make the very serious subject like accident prevention a little more interesting and attractive. Over the years I have received many accolades – particularly from Seafarers – who do not perceive the use of cartoons as in any way 'dumbing down' the subject but rather they see it as making the subject entertaining. I therefore conceived of the idea of utilising cartoon to illustrate the football analogy. I had a colleague available locally who would be an ideal cartoonist / illustrator for this project and who had worked with me on many projects previously. Peter Dixon therefore joined the production team.

For a number of reasons it was important that we turned the project around very quickly. It was decided to present the guide in three quite distinct sections:

i)   A narrative section explaining the background and concept of the ISM Code and how it was intended to work with good quality illustrations. This would provide a good, straightforward, introduction to the ISM Code and would be structured such that the Master or onboard training / safety officer could use as a training aid to introduce the concept onboard.

ii)   The second section would be a series of 'frequently asked questions' (FAQ's). These FAQ's would actually be the main issues which had manifested themselves as misunderstandings in the comments I had been receiving in the survey. Answers would be provided setting out in simple and straight forward language what the correct position really is.

iii)   The third section, which would also be published as a stand alone, was to be an American style comic strip book setting out the story of how 'ISM United' overcame the 'Hazards' in the World Cup.

The whole production was to be done as a team – Peter Kidman was to write the first part, myself and Kidman would write the second part and I would write the story board and work with Dixon in preparing the comic strip. The Secretary General of IMO kindly provided a Foreword and one of the most highly respected journalists in shipping – Michael Grey – an introduction.

As far as I was aware no-one had ever produced anything quite like this before for onboard training and I must admit to being a little nervous at the time of the launch. However, Lloyds List carried a feature article covering nearly a full broadsheet page giving it an excellent review. Other magazines followed suit. A Copy of 'A Seafarers Guide to ISM' and 'What have the World Cup and ISM in common?' are submitted with this critique in the form of a second exhibit.

3.15 *The realisation of the responsibility of the conclusions – political and commercial implications*

During the research program I have received an enormous amount of help, kindness and support from very many people – seafarers, shore staff, journalists and Chaplains in Seafarers Missions in out of the way places but to name a few. The fact that about 3000 individuals took the time and trouble to complete and return the questionnaire and 800 who provided detailed comments, demonstrates that there is considerable interest in the ISM Code in all sectors of the industry. Lack of time and other resources prevented me from sending a personal thank you to each one as I truly would have liked to have done.

Reading the various articles in newspapers and magazines about my project and listening to people at seminars and conferences and just meeting people – it becomes clear that there was a sense of expectation and hope in their minds that the results of my research would somehow help to move the ISM Code along with a bit more whoosh! – to make ships safer and seas cleaner. People want to see that light at the end of the ISM tunnel. They want reassurance that all their hard work and investment is going to pay off in the longer term and they are hoping that the data, information and knowledge which I now have as a result of the research will provide some of the missing

answers. I hope so but I fear some ship operators may have to realise that they may have to basically throw away their original SMS manuals and start again. The one thing above all else that I feel my research has achieved is that it confirms that the ultimate goal is achievable and once you are there then the rewards are considerable.

4 Preparing the findings and conclusions

4.1 Designing and planning the book for publication

My first attempt at writing up the results of my research started in November 2001. I had been clear from initial conception that this was going to be a book for seafarers and other professionals working in the shipping industry and not an academic treatise. I wanted to bring the whole ISM debate alive – to dispel many of the myths that had grown up around ISM and to get the penny to drop about ISM that it really is not complicated. The book had to be easy to follow, accessible, entertaining and capable of feeding back important messages about ISM in language which can be easily understood. I would have lots of background data to put things into context, the colour coded questionnaires from the questionnaire would be reproduced and then followed with graphs and diagrams setting out the findings from the survey. Extensive use of quotes would be used from the 800 detailed comments I received, which would also be colour code and would allow the seafarer, D.P., PSC inspector etc. the opportunity to have their say in their own words. Unfortunately such an approach was to prove impractical – I had reached page 500 before I conceded the point though!

If the book was to stand any chance of being read and utilised by the intended audience then it would have to be simplified and shortened considerably. However, I was still keen to keep as much of the original methodology as I could within a condensed version.

In the lead-up to the final deadline for Phase 2 implementation and in the post implementation period there were many interesting developments that prompted me to rethink some of my earlier views. However, I realised that unless I drew a line under the research I would never get it finished. It does mean however that there are more areas and chapters still to be written on ISM and its implementation – but this may have to be left to a second volume and / or other researchers.

Reflecting upon the completed manuscript, and after receiving constructive criticism and feedback from professional colleagues as well as my publisher – the Nautical Institute, I came to the conclusion that the manuscript lacked an important ingredient if it was to be a really useful book for the shipping industry. It was recognised that the manuscript does set out well the findings and conclusions of my research and provides an accurate snapshot of ISM implementation during the period between Phase one and Phase two implementation dates. To that extent it highlights many of the problems that appear to exist with ISM implementation and although it does identify some successes and common factors that appear to be associated with those successes, it does not provide many answers or guidance for the industry on how to help successfully implement a Safety Management System. Accordingly, I decided that I needed to incorporate additional chapters that would provide that positive guidance.

However, I felt that those answers could not be satisfactorily derived from the data I had collected during the research. I felt that such advice had to come from first hand practical experience. My theoretical knowledge of the ISM

Code is widely recognised and I am a qualified lead auditor on ISM systems but I do not have first hand, direct, experience of either implementing or operating ISM Safety Management Systems. Accordingly I did not feel myself suitably or adequately qualified to write the extra chapters. Fortunately though, during my research, I had encountered three individuals who would be ideally qualified and experienced. They were subsequently approached and did confirm their willingness to cooperate and participate under my guidance.

I will describe here the three additional authors and provide an outline of the content of those chapters:

1. 'Setting up and running a successful Safety Management System'
   By Captain Sean Noonan

   In my opinion Sean Noonan had set up what I consider the finest Safety Management System I had ever encountered and his chapter will describe what he and his shipping company did.

   Captain Noonan had been recruited by a relatively small shipping company, operating out of an office in Edinburgh, running about 12 medium sized chemical and gas tankers. He was to assume the role as ISM Designated Person and be responsible for designing, developing, implementing and running the companies Safety Management System (SMS).
   At the time of Captain Noonan entering the company there was quite a serious problem with accidents and claims. His first task therefore was to measure both the insured as well as the uninsured losses and to analyse the reason why those losses were arising. His task was then to devise an SMS that would address those problems and plug the holes through which all that money was unnecessarily flowing out of the company.
   He identified that there was work to be done both in the office ashore and onboard the ships. The ships staff were Filipino from top to bottom – i.e. everyone on board including the Master.   He identified one Master and one Chief Engineer and arranged for them to spend about three months in the head office receiving training in ISM procedures and auditing techniques. The opportunity was also taken to solicit input from the Master and Chief Engineer to the writing of the first draft of the procedures manuals. When their training had been completed they were sent back into the fleet as 'on-board training officers' to start training the other Filipino officers and crew. Simultaneously another master and Chief Engineer were brought ashore for training. When they completed their training they were put back into the fleet as training officers and the original two were re-commissioned into their original jobs as Master and Chief Engineer. And so the company worked through all their Masters and Chiefs in a similar way. The drafting of their procedures manuals went through various stages of 'fine tuning' taking

advantage of having the sea staff available to contribute and participate.

The internal auditing process was also placed on board the ship rather than remaining exclusively with the visiting staff from head office. In this way the 'ownership' of the system was well and truly vested in the hands of those who were at the sharp end of its implementation – the seafarers themselves.

The company had set itself financial targets to reach that would be a measure of the success of the SMS implementation. What was being measured was the reduction in the insured and uninsured losses that had been flowing out of the company. In the first year they not only achieved their target but significantly exceeded all their expectations. That success was repeated during the second and subsequent years. By year 2001 the company was running almost accident and claim free. The company was actually returning an operating profit which they could trace back to the implementation of their ISM systems – that is language which ship operators, and their accountants, will be very interested in.

I agree with Captain Noonan that the secret of the success was the empowerment that was given to those onboard the ships to run 'their' SMS – they had ownership of the system. In the vast majority of other systems I have looked at the systems had been designed, developed, written and produced by 'consultants' ashore with very little input from the sea-staff. The manuals were invariably delivered to the ships with a note basically saying 'here it is, now get on with it!' Such systems will never work.

2. 'A comparison of how safety is managed in two industries'

By Captain Stuart Nicholls

In the middle of year 2001 Captain Nicholls left his position as Master of trans Atlantic cargo liners to enter a new career as manager on board an offshore oil drilling platform. His chapter will describe and compare how safety is managed at sea with the way it is managed in the offshore drilling industry.

Captain Nicholls had been enthusiastically involved in developing the ISM procedures and implementing the SMS on board his ship that was operated by a 'blue-chip' shipping company. He genuinely believed that the end result was very good and a significant improvement on the way safety had been managed prior to the introduction of the ISM Code. He believed that he managed safety very well.

He decided that the time was right for a career change and was attracted to a job as manager of an offshore drilling unit. He was successful in being recruited by a US oil company that operated a number of rigs in the North Sea. Standard procedures of the

company, and the industry, dictated that, initially, he had to undergo an intensive initiation and training programme in a shore establishment before he would ever be allowed to step foot on a rig. The whole programme was geared around safety and it became clear that safety really was paramount. Even the vice-president of the company paid a special visit from the US to make a personal statement on behalf of the company that everyone in the company must place safety first and anyone who doesn't can expect instant dismissal! This whole attitude was far beyond anything he had ever encountered or even imagined at sea. Indeed he was sceptical and suspicious that the ultra-high standards of safety being advocated in the classroom ashore could not realistically be capable of actual implementation on site. When he did complete his training and joined his first oil rig he was proved very wrong – those very high standards of safety were indeed in place and much more. On his first day on the rig he was challenged by a relatively junior worker who challenged Captain Nicholls about an apparent unsafe act he had just committed and who advised that he would be making an appropriate hazardous occurrence report. At sea such behaviour by a junior member of staff to the Captain would have been considered a very serious case of insubordination – on the rig there was no room for such sentimental formalities. The safety culture was such that everyone lived and breathed safety and it was everyone's individual responsibility to promote the safety culture. Part of this included identifying any 'learning opportunities' to identify potential hazards and to deal with the causal factors before it became an accident.

The offshore oil industry went through a major shake up of the way safety was managed following the disaster on the rig 'Piper Alpha' oil platform in 1988 that was the subject of a formal inquiry and report by Lord Cullen. Thus that industry had a ten-year lead on the shipping industry in introducing safety management systems.

Captain Nicholls does not believe that the shipping industry should try and adopt 'lock, stock and barrel' the systems which are in place on the offshore oil rigs. However, he does believe that there are many important lessons that can be learnt and implemented which he believes will improve significantly the way in which safety is managed on board ships.

3. 'Crew resource management and motivation'

By Captain John Wright

Captain Wright is widely recognised in the industry as a leading pioneer in training Masters and officers in modern management skills – in particular the value of synergy and communication. From my study it had become apparent that one of the major

barriers preventing effective implementation of the ISM Code was the lack of motivation by ships staff to get involved in the implementation process. Captain Wrights chapter will suggest various practical tools which can be used to help motivate both ship staff as well as shore staff to accept ownership of the system and responsibility for its implementation and success.

Captain Wright has very wide experience of working not only with the shipping industry but also with a number of other high risk industries such as the offshore oil industry, the nuclear industry, petrochemical industry and other transport industries. He also works closely with the Health and Safety Executive (HSE) – which is the UK Government department with responsibility for operational safety matters, and accident investigation, in just about every industry except shipping. His expertise is developing, by experiential learning, human resource management skills in managers and team players – including ships Masters and officers.

The traditional approach to managemnt on board ships is very autocratic. The Master is in command and no-one dares question his decisions or orders. That same autocratic attitude permeates down the line of command such that, in the absence of the Master, no-one dare question the decisions of the Chief Officer and so on. The synergistic approach taught by Captain Wright demonstrates very clearly the value of being able to delegate functions and work as a team where everyone's input is valued and respected – although the Master will still remain in command. Also he will emphasise the importance of empowerment and 'ownership' of the system by those who are actually involved in the implementation process.

It is very likely that there will be a certain amount of repetition in what these three additional authors will be saying but I consider that an important part of their message. The solution requires quite a major shift in the culture and working practices of those employed in the shipping industry. The lessons being advocated by the three authors will help to move the implementation process forward for any company or individual who is prepared to listen.

My origninal manuscript accompanies this critique. I am acting as chairman and facilitator for production of the three additional chapters. The schedule which has been set requires the chapters to be completed by the end of April 2003 with the book being published in June 2003.

4.2   Analysing and assessing the data

The use of the Access relational database was a considerable help – the possible permutations of queries that could be run seems almost endless. With the benefit of hindsight I would have phrased some of the questions differently since there are elements of ambiguity in some of them that I think can justifiably lead to criticism. For example the 'big' questions at the end of

the 'Masters and Seafarers' and 'Ship Operators' questionnaires asking whether ISM has achieved its objectives and whether incidents have reduced – the questions may contain a presupposition that the way in which safety was managed onboard the particular vessel was deficient in some way and that improvements could be made. It is possible that the way safety was being managed on board that particular ship, or within that particular company was very good – maybe there were no accidents. The question may have required another option in the answer section to allow the respondent to actually state that they did not believe that the ISM Code could offer any improvement on the way they already managed safety.

Once the decision had been taken to 'condense' the original version of the analysis it then posed the problem of deciding exactly which data was to be included in the presentation and how that data should be displayed. This was not just a matter of deciding whether it should be a bar chart or a pie diagram – it was deciding where to draw the line. A further difficulty was with the 'quotable quotes' – there were so many which were extremely interesting and important - which would allow people a voice that may not have been available to them before. It was clearly going to be necessary to be very selective in the filtering process.

4.3   Preparing the text

The report of the research was not being prepared as a purely academic piece of work. I wanted to prepare something which would receive wide attention throughout the shipping and related industries and professions across the world – to personnel on board ship as well as those working ashore. It had to be eminently practical in its approach and written in a style and in language which could be easily understood and assimilated by individuals who might not be used to reading research studies and who might not have English as their first language.

The intention was to provide feedback – to identify areas where problems were perhaps being experienced and to be able to demonstrate that others were sharing similar problems but, hopefully, also be able to show that there is a way through - that others have overcome the problems and are making the systems work – that it really is worth persevering. I wanted to paint the big picture in such a way that the individual could see where they fitted into the scheme of things and where they could go from their present position.

I wanted to prepare the text in such a way that I could initially put the relevant issues into context – I could not assume, for example, that every reader would be fully acquainted with the role which the Classification Society was playing as an R/O etc. I then wanted to display the results of the analysis of the data and to see some of the good as well as the bad experiences that others have reported.

However, as was stated in 4.1 above, a decision was subsequently taken to invite additional authors to contribute extra chapters.

4.4   Checking facts

A very real problem with research into ISM implementation is that there was very little by way of established 'facts' or data that could be checked to verify

my own findings. As I discussed in the sections above dealing with the interpretation of 'objective' and 'subjective' data there is sometimes difficulty in drawing the dividing line.

Much of the information and data that has been sent to me is of a subjective nature. The individual's perception or belief was always going to be just as important to my research as any hard facts. Often the perceptions and beliefs of individuals do not have any basis in fact but often irrational fear and other psychological factors. These factors, and the reasons why such beliefs are held, are of considerable importance. As such, much of the information that was provided is difficult to verify and empirical testing is somewhat difficult.

Also the reports or allegation about corrupt or other bad or illegal practices are difficult to verify because I had promised total confidentiality to the respondents. By conducting specific investigations would run a serious risk of breaching that confidentiality agreement. If similar 'stories' came in from a number of independent sources then I would perhaps start to give the issue some cognisance - although maintaining a certain amount of scepticism. For example, the reports I received about pressure being applied by the head office of a Classification Society on their inspectors to issue certificates against their own judgement – it is possible that these stories had been fabricated – maybe the individual had reasons to hold a grudge against the Classification Society and perhaps wished to discredit them – on the other hand they may have been based on truth.

4.5   Checking copyright position and checking permission to quote

Apart from certain sections of the ISM Code itself, I have not reproduced large tracts of text from either original or secondary sources. Where extracts have been quoted I have duly acknowledged the original source.

4.6   Proof-reading

In addition to using the spell-checker and 'grammar checker' function on the Microsoft Word P.C. program – I have also carefully proof read the entire document and have recruited a colleague to read through to ensure that the text flows in a coherent and logical manner and is capable of being understood.

4.7   Designing, planning and preparing critical commentary

I had left the detailed planning of this critical commentary until the final stages of the project since I wanted to maintain flexibility and dynamism in what I was doing. I did not intend the commentary to regurgitate what I had already said in the text of the report but rather to describe how I structured and implemented the research program. There were problems along the way some personal crises – as well as frustrations trying to obtain information from various sources.

The project has provided me with many amazing opportunities and experiences – meeting many interesting people and generally gaining the impression that what I was doing was important for the current state of the

shipping industry and would have a significant contribution to make to the future of the industry.

I have tried to build those issues into the critical commentary that I hope will complement the report of my findings.

4.8   Liaison with supervisory team

I felt confident that the supervisory team were always there when I needed them. Contact was maintained although it could have been closer. Any failure to maintain closer contact though was on my part. Working as a part time student, at a distance of some 300 miles from my main Supervisor, is not easy but not impossible. Occasional meetings would be held when I visited London on business and contact was always possible by e-mail and phone.

5   Survey Conclusions

5.1   Where the project reached and possible impact

Prior to my conducting the research I perceived much despondency and almost resignation by many people in the industry. For many, ISM was an unwelcome and unnecessary burden which had been thrust upon them; this added to their problems of things to deal with amongst so many other things and with significantly reduced manning and a perception of inferior quality junior staff. There was little, if anything at all, which could be shown to these sceptics that would demonstrate convincingly that there was another possible way. That ISM could work and that if it was allowed to work then it could be a most valuable tool, rather than a burden, to help manage most things on board with the limited resources available.

Similarly, if another major, high profile, incident did occur – then could the industry produce anything which it could use in its defence against allegation that it had been given the opportunity to regulate itself with regard to managing safety as allowed for in the ISM Code but it had failed? If the answer was no then I could see the media, general public and politicians making out a very strong case to impose a much more regulated and prescriptive system on the industry – which I would suggest would be disastrous. As far as I have been able to establish the industry has nothing it could use to raise in its defence. What I hope the results of my research will allow the industry to do, should they need to, is show that the ISM Code can and does work – but that different companies and individuals are at different levels of achievement. Thus the solution is not to introduce more prescriptive sets of rules and regulations but rather to find ways to encourage those who are at the wrong end of the scale to start making more rapid progress towards the positive end.

I think the results will also allow people to see and understand that part of the problem and partial explanation as to why implementation has been protracted in certain quarters is probably because of prejudices, fears and a general reluctance on the part of some to recognise the need for change. That in a relatively short period of time many of those individuals will move into retirement and be replaced by individuals perhaps more responsive to change and to the culture of formalised safety management.

I would make a little analogy – a hundred years or so ago few people would believe that machines could actually fly – such ideas belonged to science fiction or lunatics. However, a handful of visionaries believed that it was possible and could see the enormous potential if it could be achieved. Many unsuccessful attempts were made but eventually one or two of the machines got off the ground and were able to stay airborne. It only took one or two to prove beyond any doubt that it could be done – machines could fly. I think we now have evidence that ISM can work – those original doubters and sceptics will perhaps have to take flying lessons.

I think one of the most important lessons that people need to learn – and which I think rings out loud and clear from my research - is that the ISM Code

is identical, word-for-word, for every ship operator and for every ship around the world. What is different is the way in which the Safety Management System has been designed and implemented. Those companies who bought 'off the shelf' manuals and managed to obtain their certificates on the back of those manuals will probably need to start again from scratch.

5.2 Off-shoots

ISM is in an early stage of development – understanding, attitudes and general acceptance are moving forward – although in some cases rather slowly. There have been a small number of judgements that have eventually been handed down from the courts which I think help to clarify a number of very important points and principles related to ISM – although many more issues are still in need of judicial interpretation.

The first case related to the Car Carrier *'Eurasian Dream'* which was heard by Cresswell J in the Commercial Court QBD - on 7th February 2002 (although the judgement was not made available until the early summer). In the second case the tanker '*Torepo'* ran aground fully loaded with a cargo of oil in the Patagonian Channel in Chile. The case was heard by the Admiralty Judge, Steel J, in the Admiralty Court QBD – on 18 July 2002.

A detailed study of these two cases is undertaken in Chapter 7 of the manuscript setting out the findings and conclusions of the research which is submitted as the main exhibit to accompany this Critical Commentary.

In the case of the Eurasian Dream it was demonstrated that the ship operator had failed to implement a properly functioning SMS on numerous counts – as such the Court found the ship to be unseaworthy. However, in the case of the Torepo – the judge concluded that the ship operators and their staff were trying hard to implement a good SMS – but the reason the ship ran aground was because of an isolated mistake and not a failure to fulfil the requirements of the ISM Code.

These two cases are extremely useful and interesting to compare and contrast. The lesson which every ship operator and seafarer needs to learn is quite simple:

Properly develop and implement the SMS and it will be the best friend you have ever had; pay lip service to the SMS or ignore it and it will be the worst enemy you could ever imagine.

Not only will the ISM Code be the benchmark used by the courts – it will also be the standard expected by claimants and indeed insurers. If ISM has not been complied with then not only would the ship operator lose their legal defences but may very well lose their legal right to limit their financial liability and indeed their insurance cover.

The question of insurance cover and ISM is a vexed one with many grey areas. It is clear that without the DOC and SMC the ship operator's insurance cover is void. However, there may arise many non-compliances with the Code which, depending upon their severity, may be considered as 'imprudent trading' as such could also lead to insurance cover being withdrawn.

There are reports of H&M underwriters, at least, closely scrutinising claims being made against them by ship operators in order to try and find ISM non-compliances that they could use to reject the claim and avoid paying. I feel

fairly confident that I could examine almost every incident and find a number of non-compliances with ISM. At this point in time though I think it would be unwise and counterproductive for insurers to try and use ISM as a reason not to pay claims. All that will happen is that Shipowners will focus their efforts to try and ensure that deficiencies in their systems will be harder to detect – rather than using their energies for good and useful purposes.

My own view is that, as P&I insurers, we should work with the shipowner Members of the Club to help them develop and properly implement their SMS's.

6 Summary of the Research

By way of a summary I list below some of the more significant factors arising out of the research project:

- The findings and conclusions of the current research which has been undertaken as part of the Doctoral project will be published by the Nautical Institute probably under the title: '*Managing Safety at Sea – The findings and conclusions of an international survey into the Implementation of the ISM Code'.*
The book is eagerly awaited by many in the industry both ashore and afloat and has the propensity for generating considerable debate.

Many issues have arisen out of the research: –1. The evidence collected from the research will provide the shipping industry with a possible answer should it ever need to demonstrate to Governments, the media or the public that it has made progress with ISM implementation. 2. Whilst many companies, ships and individuals might be experiencing difficulties with their ISM implementation – there is now evidence to confirm that ISM can and does work and the potential rewards are well worth working for.

3. The problems which are being experienced are not necessarily with the ISM Code itself but rather with the individual Safety Management Systems (SMS) which companies have developed, or bought, pursuant to ISM.

4. Problems are being experienced with many SMS's because of voluminous / irrelevant paperwork. This must be addressed.

5. There appear to be quite significant differences of perceptions about what is happening between the seafarers and the office staff and more significantly with outside observers. General communications appear to be a major concern in some companies.

6. There are many problems arising because of the lack of any perceived 'common standard' between shipping companies, flag State Administrations, Classification Societies, Recognised Organisations and port State control authorities. More effort is required to achieve an international common standard.

7. The evidence suggests that certain factors will always be present in a properly functioning SMS – Leadership and commitment from the top of the company, continuity of employment, ownership of the system and good communication between ship and shore.

8. There appear to a number of serious misunderstandings and misconceptions held, particularly by seafarers about the very concept of the ISM code. Education and training programs are needed to address some of these issues.

9. There appear to be quite significant cultural / national differences in peoples attitudes towards ISM and its effectiveness. Generally people from OECD countries, particularly the UK, appear to be rather negative about ISM whereas people from India and the Philippines tend to be very positive. Since the vast majority of ships are likely to be commanded by Masters and senior offices from non-OECD countries within the next decade – this provides very real hope for the future. Age may also be a similar factor - if that is so then the passage of time should remove any related obstacles.

7   **Details of Personal Contribution**

In addition to the contribution I have made as set out in the summary above I believe there are numerous additional contributions I have made in advancing an understanding and awareness of the implementation of the ISM Code. Some of the more significant contributions are set out below:

- My first major work on the ISM Code: '*ISM Code – A Practical Guide to the Legal and Insurance Implications*' (Anderson, 1998) remains, as far as I am aware, the only authoritative reference source of its kind on the ISM Code in print in the English Language.

- I set up a dedicated Internet Website - www.ismcode.net which provides the only web-based international focal point for ISM debate and a research reference source.

- In January 2001 I presented details of my proposed research, and the need for it, to a Seminar organised by the London Shipping Law Centre at University College London. Lord Justice Tony Clerk (formerly the Admiralty Judge – now Appeal Court Judge) chaired the seminar which was attended by many members of the judiciary, leading maritime lawyers and academics.

- The President of the Nautical Institute invited me to develop a specific project within the Institute's 'Strategic Plans and Projects for the Future – 2001-06 – with the title '*How can the ISM Code be made more effective*'

- There have been numerous lead / feature articles and editorials in almost all the maritime / shipping press throughout 2001 and 2002 about my research project.

- I have presented papers on ISM related subjects at numerous conferences and seminars during 2001 and 2002. These took place not only in the UK but also in Belgium, Denmark, Germany, Greece, India, Iran, Norway, Spain and the United Arab Emirates.

- I was recruited as a lecturer at the BIMCO – ISM Residential Training Course in Copenhagen in September 2001.

- During 2001 - at the invitation of the Maritime and Coastguard Agency (MCA), on behalf of the British Government, I was recruited to a joint Government / Industry initiative to consider what might need to be done ahead of the Phase 2 ISM implementation deadline of 1st July, 2002.

- Pursuant to the Government / Industry initiative - joined a working group organising a major international conference on ISM implementation which was organised to coincide with the main Maritime Safety Committee meeting of the IMO. The conference was

held in London on 13 / 14 May 2002. I also presented a paper at that conference providing feedback on my research.

- Following the relationship which developed with the MCA, on behalf of the British Government, I am frequently consulted on ISM related topics. For example I was called to make an ISM presentation to a high level Government delegation from the Peoples Republic of China who visited the UK in January 2002. I am also advising a team working within the MCA who are looking at human factors in ISM.

- In February 2002 I was invited to Brussels to present my initial findings to a 'Thematic Network' group. The group were commissioned by the European Commission to draft a Common Maritime Safety Policy that would apply to the European Union. The ISM Code would have to be the core of any such policy.

- I presented the Nautical Institute Annual Lecture in June 2002 – in which I provided feedback on the research.

- As an urgent response to an apparent serious problem regarding the misunderstandings and misconceptions amongst seafarers on the basic concepts of ISM – I devised and co-authored a novel introduction to ISM – *'A Seafarers Guide to ISM'* plus '*What have the World Cup and ISM got in common?'* (Anderson and Kidman 2002).

- During 2002 I acted as adviser and consultant on the production of a maritime training video – which was being produced by the World leading provider – on ISM implementation for Seafarers.

- I developed an ISM familiarisation and training program within the offices of my employers which involved the participation of all managerial, executive and legal staff. This is part of a longer term project to encourage insurers and lawyers to look at accidents and claims through 'ISM eyes' and to explore ways in which the P&I Club, through its staff, can work closer with the Shipowner Members (the insured) with their ISM implementation.

- I have developed a further project with my employers whereby I offer 'ISM Health Checks' to the Shipowner Members. This is basically a look at the SMS the Shipowner has developed – to review its effectiveness and to see if there are any areas that could be improved. This project has been subsequently expanded to include on board ship inspections of their systems and practices. This is a labour intensive project and I am therefore training two other people to also undertake these 'health checks.

- The industry standard commentary on the ISM Code is the 'Guidelines on the application of the IMO International Safety Management (ISM) Code' – published by the International Chamber of Shipping and the International Shipping Fedeartion. It is currently in its third edition which

was produced in 1996. It has been recognised that it does need updating, in light of post implementation experience and plans are in place to produce a fourth edition. I have been approached by a member of the industry led team who will be overseeing the production of the fourth edition to enquire whether I would be prepared to participate in the rewrite and thus utilise the knowledge and information which has come out of my research.

8   The future

In global terms I do not think we are going to see sweeping changes or significant reductions in accidents and claims in the short term. However, it will happen. As more and more ship operators and their staff recognise that non-compliance is not an option then steady progress will be made.
Clearly there are different reasons why ship operators may be motivated to comply with ISM - some may respond to sticks and some to carrots:

- They may recognise that it is good for business – properly implemented, a SMS will help reduce accidents and other losses, will improve efficiency, will increase motivation amongst personnel, will improve market reputation and may even increase profits

- If they do not comply they may seriously jeopardise their defences to claims which might be brought against them

- If they do not comply they may prejudice their insurance cover

- If they do not comply the individuals within the company, in particular the DP and the most senior management may find themselves personally exposed to fines, imprisonment and even corporate manslaughter charges

- It is mandatory and they have no choice

In my view, if any ship operator does still need persuading that they should make the commitment to fully and properly implement a functioning SMS and to fully comply with the ISM Code, then it will be much better if they do it for good, positive reasons rather than because of some threat.

I believe the work I have already done has helped to move the ISM Implementation process forward. However, there is still much to be done. Much of the work will require further investigations by full time, adequately funded, researchers – hopefully the data I have available will be utilised for the general advancement of the research work. Some of the areas requiring further work, which have been identified, are listed below:

- Undertake a detailed and extensive study of shipping companies who claim to have successfully implemented the requirements of the ISM Code to establish what they have done and how they have done it. The intention would be to prepare more detailed general guidelines on how to do it, rather than to try and produce a 'blue print' to copy.

- Further study into the cultural / national differences in perceptions of the ISM. Particularly what can be done to harness and encourage the development of the enthusiasm shown for ISM by the Indian and Filipino seafarers.

- A more structured approach to providing familiarisation and training to seafarers in the basic concepts of the ISM Code. This includes 'training the trainers' by providing suitable training to the Nautical College lecturers. Similar training should also be provided to shore based staff.

- Training and familiarisation should be provided to the Judiciary, maritime lawyers, insurers and others in similar positions who will be involved in analysing accident / claims and thus interpreting the relevance of the ISM Code.

- Conduct a campaign to raise public awareness of what the shipping industry is doing to make ships safer and seas cleaner. The intention being to raise the safety profile of shipping, in the public eye, to that enjoyed by the airline industry. In this way some of the perceived pressures associated with the development of a safety culture could be removed.

- Encourage the commission of an independent Inquiry into the role of the Classification Societies with regard to the ISM Code. With the view in mind of considering the establishment of a body who could oversee the training, certification, licensing and activities of Classification Societies, their staff and other Recognised Organisations.

- Encourage the commission of an independent Inquiry into the possibility of providing certain privilege status to documentary evidence produced pursuant to a properly functioning SMS. This could remove some of the concerns that presently inhibit the reporting or recording of certain accidents, hazardous occurrences and non-conformities as required under the Code.

9   Post Research Personal Reflections

The research project has been most satisfying, rewarding and extremely interesting in many respects – in many other ways though it proved frustrating for various reasons. On the personal side, the necessary commitment with regard to time that was required compared with the actual 'spare' time I had available was perhaps my greatest underestimate. Working in a full time and very demanding job with a P&I Club would certainly have been enough to contend with but that problem was compounded by the fact that I also had commitments to a second job as a part time lecturer at a local marine college. On top of that I was committed to senior official positions, both locally and internationally, with my professional body the Nautical Institute that made demands on time. A possible major career change started to introduce additional stress and distractions from the middle of 2001 through until April 2002 with a whole series of intensive interviews and tests. It was also necessary to spend quality time with my family – including three sons who are at important points in their lives.

Whilst my employers had agreed to cover the University fees it was made very clear that they could not be seen to be supporting me with the project – they feared that I would be a potential source of embarrassment to them if my findings revealed that the shipping industry was not doing enough to properly implement the ISM Code. I therefore had to make statements whenever I was being quoted in the press or making a presentation at a seminar or conference that I was undertaking the research in a private capacity and it had nothing to do with North of England P&I Association. I actually undertook the research wearing my hat as Vice President of the Nautical Institute.

The initial attitude of my employers did create a most uncomfortable 'atmosphere' that increased tensions and raised stress levels. Interestingly, by the summer of 2002 my employers had come around completely and were actually encouraging me to develop ISM related projects. This appears to have been as a result of encouraging words coming from our Shipowner Members. I was also made a full Director of the Company in July 2002.

Another personal factor that I had not fully considered at the outset was the costs that were to be involved. The survey part of the project involved printing and distributing over 70,000 questionnaires around the world. This not only involved the printing costs of the questionnaires but also envelopes, address labels, postage and carriage costs. The dedicated Website with a linked relational database was also a significant expense – and employing someone to input the data into the data base proved significant. The North East Branch of the Nautical Institute helped to sponsor part of the development costs of the Website. The head office of the Institute asked for agreement to publish the 'findings and conclusions' as a Nautical Institute publication – in return for which they would provide me an advance on Royalties on potential future sales. A maritime charity - The Marine Society – also assisted with a relatively modest – but much appreciated financial grant. I still had to fund most of the project out of my own pocket though which had not been properly budgeted for.

It was certainly of concern that whilst the project was very widely recognised throughout the shipping industry and by Government and International bodies as being extremely important, and long overdue, there was no one apparently prepared to commit adequate resources to properly fund the project. The international shipping industry perhaps needs to reflect upon its ability or willingness to face up to the responsibilities associated with the 'self regulating' opportunities provided by the ISM Code, and the implications if that opportunity is lost.

However, the survey did take place and most of the research project I had originally mapped out was followed through. An enormous amount of help was offered by a very wide range of individuals and organisations. In addition to the 3000 respondents who participated in the survey there were numerous other people who contacted me wishing to share their experiences and to offer me advice. One of my greatest regrets of the project was not being in a position to personally thank everyone who did participate. Often I had to make a conscious decision to either enter into what I am sure would have been an extremely interesting dialogue with someone or to make progress analysing and writing up results of the project. Available time was something in short supply and had to be managed in the most efficient way possible to make progress with the project.

The other most regrettable issue arising was that I was often contacted by other ISM researchers or otherwise people with ISM related problems who wanted my help and advice. Whilst I responded when and where I could, on many occasions I had to adopt a selfish attitude and remain focused on the work in hand if I was to make progress with my own project.

There were many disappointments to be experienced along the way as well as some very pleasant experiences. On the disappointment side I think one of the greatest was to come to the realisation that there was such a negative perception of ISM amongst many Ship Masters and Chief Engineers, particularly British. On studying their completed questionnaires and reading their detailed comments it became apparent that their negativity did not seem to be based on any genuine failure of the ISM system but rather on ignorance and arrogance. They demonstrated serious levels of misunderstanding and held misconceived ideas about the very basic concepts of the Code. Often their remarks could only be described as bigoted and in some cases racist. The responses were perhaps a reflection of a generation of seafarers who are suffering still from anger at what happened to the shipping industry that they knew 20 or 30 years ago.

On the other side of that coin – it was extremely refreshing and encouraging to encounter so many Masters, officers and other seafarers – particularly from India who were very positive about the Code – even though many did say that they were indeed experiencing problems with implementation. I have had the fortunate opportunity of working with Indian seafarers on many occasions during recent years and am in little doubt that if these are the Masters and Chief Engineers of the future then ISM has a real chance of succeeding with the resulting improvements in safety.

I had the opportunity, on a number of occasions, of experiencing companies who really had fully embraced the 'ethos' of ISM and they were clearly working within the ISM safety culture. These experiences left me in no doubt at all that, given the right circumstances and motivation, ISM really can work. My encounter with some of these organisations is reported at various points in the manuscript setting out my 'findings and conclusions'. However, much more time is needed to identify these companies and to conduct detailed analysis of what they are doing, how they have done it and what measurements are available to establish their levels of success. The few companies I came across insisted that their efficiency was up, the moral of their staff was up, their accidents and claims were down. They claimed that their profits were up which they directly attribute to their ISM implementation. That is language which many ship owners will understand and is most likely to be the sort of thing that will prompt many to take ISM implementation more seriously than they perhaps have done thus far.

As time moves on I am seeing attitudes changing. I believe that my findings, as set out in the manuscript of the book to be published by the Nautical Institute, will highlight a number of areas where companies and individuals have been mistaken in what they have been doing. These identified problems relate particularly to systems involving complicated and voluminous sets of procedure manuals and large amounts of paperwork. By listening to the testimony of others who have overcome those problems and who are now

reaping the benefits of ISM the doubters and sceptics may well be prepared to realise that it is worth persevering.

In order to keep the manuscript a manageable size such that it would attract the interest of seafarers, office staff and others in the shipping and related industries and professions – it was necessary to limit the amount of data processing to focus on the questions as raised in the questionnaires. However, there is enormous potential for the data to be used for a very wide range of related studies. The possible permutations of queries that could be run on the relational database are almost limitless. It is important that this data is made available to other researchers – although I would need to ensure that my original promise of confidentiality of the respondents is preserved. I would certainly be prepared to share the information and work with other researchers in the future in developing and advancing the work I have already done.

Also, I would like to see the ISM dedicated website maintained and developed to provide a dynamic international focal point for ISM research and debate.

My employers are now showing much more positive support for the ISM Code in general and my efforts in trying to encourage its implementation. As such I believe this will allow me to develop a range of ISM projects from within the marine insurance sector that will make a very significant contribution to seeing the implementation process move forward. Twelve years or so ago, against a certain amount of scepticism, I established the first Loss Prevention Department in a P&I Club. This proved to be so successful for my employers that the Club has grown from a position in 1987, when I first joined them and started to introduce my loss prevention initiatives, of insuring just under 4 million tons of shipping to a position today where we insure over 40 million tons of shipping. The management and indeed the market openly recognises that much of that expansion has been linked to the perceptions of what I was doing with the Loss Prevention projects. All the other P&I Clubs have now copied that initiative and established their own departments or at least employ dedicated staff to run loss prevention or risk management initiatives. I believe that I can take a similar lead with the ISM initiatives and influence the way in which the insurance industry, particularly the P&I Clubs use ISM to the advantage of not only themselves but their Shipowner Members and the industry in general. The research undertaken as part of the Doctoral project will provide the foundations upon which the future projects can be built.

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N.B – A detailed and extensive Bibliography accompanies the main exhibit submitted with this Critical Commentary

APPENDIX I

SURVEY QUESTIONNAIRES