Let's get positive...

The image of shipping is not good in the eyes of the general public, who rarely hear of any good news stories. Instead, they are informed of ships in difficulties in stormy weather, of freak waves, of groundings and of the subsequent pollution and its effect on the environment.

They may be told about acts of piracy that are taking place in various parts of the world, and occasionally, they may hear of a shipmaster being thrown into jail for some alleged misdemeanour on the high seas.

Those who are conversant with the various maritime ‘blogs’ on the internet will have read messages berating the state of shipping, and specifically life at sea today. There will be comments about over-regulation, too much paperwork and the increasing number of inspections; about reduced manning and the problems of fatigue; and some shipowners who do not care for the seafarers, and who do not reinvest their profits in the human element.

None of these are positive images of the shipping industry, although some of the less complimentary comments are perhaps based on perceptions rather than fact. Yes, there are unscrupulous employers, there are ships that should not be at sea, and there are seafarers who are badly treated. Yes, we need to guard against over-regulation, we need to overcome the problem of too much paperwork and we need to rationalise the inspection regime. We should not forget the plight of the crews who have been subjected to piracy, nor should we shirk from our responsibilities to ensure fair treatment for the master and his crew in the event of an accident.

We do not hear so much of the fact that this is a high-tech industry, in which one can have responsibility at an early age, where for those who want it, the prospects of a career for life are good, and where there are opportunities for career development, both afloat and ashore.

Because, no matter how much automation is introduced into a ship, there will always be a need for people to keep that ship going. There is also a need for pilots, ship managers, surveyors, college lecturers, regulators, accident investigators, expert witnesses - to name but a few - all of whom should ideally come from seafaring backgrounds.

The modern seafarer, however, has certain expectations of the employer, many of which have been discussed in previous issues of Alert! - and are explored further in this bulletin - to provide a safe and secure working environment, decent working and living conditions, fair terms of employment, health protection, medical care, family support and contact with home.

The modern seafarer needs to be able to ‘keep in touch with the world’ through the internet, emails or even the mobile/satellite telephone. He also expects leadership and direction from his superiors and, a full commitment to training - not just the bare minimum - and support for continuous professional development.

As stakeholders in this industry, we should all work towards promoting the positive side of shipping - it is not all ‘doom and gloom’. We need to fulfill the expectations and aspirations of the new generation of seafarers, such that they will have the motivation to do the job well and a commitment to a full career in the industry, both afloat and ashore.
Despite the glut of emails winging their way remorselessly between ship and office today, there still appears to exist a fundamental disconnect between those ashore and people serving at sea. All too often the thoughts of the modern merchant mariner remain somewhat enigmatic. Instead of dialogue and feedback, there has long been only speculation and second-guesses filling in for the ignored voices of those labouring beyond the horizon.

To counter this dearth of information, we at Shiptalk Recruitment Ltd have undertaken a series of five Life At Sea surveys, to discover exactly what serving seafarers think about their lives and jobs afloat, while obtaining up-to-date perspectives on the issues of most concern.

The first survey covered the issues of Seafarer Attraction and Retention and highlighted the fact that seafarers' concerns fall squarely into two categories: 'personal' and 'professional'. While increasing workloads and paperwork, fatigue and criminalisation are clearly still viewed as potential 'career killers', it remains the more 'human' side that is all too often neglected.

Seafarers still yearn for greater contact with families and friends above all else. In fact, even in this so-called Internet age, telephone access remains a vital key to keeping people working at sea content; while voyage lengths (too long) and shoreleave (not enough), were also flagged as being hugely significant to seafarers today.

The second in the Life At Sea series turned its attention to Salaries and Employment Benefits. The survey results proved, that money does indeed matter to seafarers, and wage levels are of fundamental importance. However the clear message from the respondents was that despite many seafarers feeling underpaid and undervalued there is more than just money at stake when considering a job at sea. Within the feedback the most quoted reason to go to sea was the desire to forge a career, while the desire to 'see the world' still beats strongly in the breast of the modern mariner.

There are cynics who swiftly dismiss careers at sea - many are embittered former seafarers, who claim they would never send their children off to join a ship. Perhaps in being too hasty to judge, we forget that shipping really can provide the basis for a fulfilling and satisfying life-long career. The surveys clearly found the overwhelming majority of respondents either expected to spend all their working lives at sea, or that seafaring would provide them with the necessary experience and qualifications for a related job ashore.

Such confidence and belief displayed by seafarers, places a responsibility upon industry to ensure the profession is worthy of these ambitions, that career aspirations are supported, while seafarers are afforded the guidance and opportunities they clearly deserve and crave.

The surveys are still ongoing, and the findings give an important route map for anyone looking to attract, retain or manage people at sea.

What it takes to retain your seagoing personnel

Dr Maria Pregoulaki, University of the Aegean, Department of Shipping, Trade and Transport, Greece

Results from a field survey conducted during the period of a high freight-market (2007), reveal the variety of measures that shipping companies use in order to retain their seamen. At first, shipping companies have to ensure that they have constant and safe access to one or more sources of maritime labour. This may require the contact with Maritime Education and Training Institutions and the cooperation with a network of manning agents. In order to minimise the impersonal recruitment or the illegal practices by a number of independent crewing agents (such as blacklisting), recruiting may be better achieved with the establishment and operation of affiliated crewing companies (e.g. in Manila).

The size of the company (referring to the number of vessels it manages) is a factor that affects the company’s ability to establish a subsidiary company, due to the economies of scale. The retention of the company’s seagoing personnel is further related to a variety of benefits and incentives, besides the salary. A full - and quite tempting - compensation can be enriched with stand-by wages, performance, seniority and re-joining bonus, provident fund, pension plan, training awards, etc. Moreover, non-financial benefits and incentives, such as the personal contact and support of the crew manager to the seaman’s family, career plan, internal promotions or even the regular employment by a large and well-known shipping company can have positive effects in the seafarers’ levels of job satisfaction and the company’s retention rates.

One may assume that companies with large fleets can offer more financial benefits, but also small-sized companies can benefit from offering non-financial incentives. However, one should note that the current crisis in the world economy and freight market is probably affecting the companies’ ability to retain the seagoing personnel; the last depends on the long- or short-term strategy and the company’s philosophy towards the value of the human resources.

A copy of a paper by Dr Pregoulaki: Dealing with the culture of the maritime manpower in a socially responsible manner can be downloaded from: www.he-alert.org/filemanager/root/site_assets/standalone_article_pdf_0605/he00755.pdf
The global shortage of seafarers, especially officers, has already reached significant proportions and is now a source of genuine concern to all involved in the industry.

The demand for raw materials, finished products, foodstuffs, energy and luxuries has grown, year-on-year, in line with the requirements of global trade - and I do not expect the current financial crisis to have a very serious impact on the volume of, at least, the basic commodities transported by sea. That demand has been, from time immemorial, satisfied by the international shipping industry, which, today, transports over 90 per cent of the world’s commerce safely, securely, efficiently and at a fraction of the environmental impact and cost of any other form of bulk transportation.

Without ships - and, in the context of this initiative, without the seafarers to man them - the entire half of the world would freeze for lack of the fuel to heat it, and the other half would starve for lack of the grain that gives it its daily bread.

An industry that is itself in a state of continuous growth, shipping has, since the beginning of the decade, been characterized by record numbers of new ships on order to meet the needs of an ever-expanding international trade - and for existing and new ships to operate in accordance with the high standards adopted by IMO, shipping will require additional numbers of high calibre, highly-qualified and experienced seafarers.

A stark indication of just how serious the manpower shortage is becoming came in a recent report, issued by Drewry Shipping Consultants. It assessed the current shortfall of officers in the global fleet to be some 34,000, against a requirement of 498,000. Moreover, assuming officer supply continues to increase at current levels, the report predicts that, by 2012, the officer shortfall will have risen to 83,900.

To put this in perspective, as recently as 2005, the BIMCO/IFSF Manpower Update had assessed the officer shortage to be 10,000 with the shortfall rising to 27,000 by the year 2015. The general message is clear: we are fast approaching a crisis situation.

Over the last few years, shipping has enjoyed a period of considerable expansion - so much so that, at the beginning of 2007, the world fleet reached 1.04 billion deadweight tons. New players have entered the business, drawn in by the prospect of high returns in what has been a buoyant and rewarding market. Notwithstanding the present downturn, reflecting the global economic situation, there are still serious concerns over the supply of manpower for the huge number of newbuildings scheduled to come on stream - in this and the subsequent years. One estimate has assessed that about 400,000 seafarers and 45,000 new officers would be needed to crew the 10,000 vessels forecast to join the global merchant fleet in the next three years.

Such growth has exacerbated the scarcity of human resources, both in terms of seafarers and among those who provide the shore-based technical support on which the industry relies (marine superintendents, harbour masters, maritime pilots, VTS and SAR personnel, etc). And, as the latter are almost exclusively drawn from the former, our campaign will be focusing on the need to attract seafarers into the profession - and retain them as long as possible thereafter.

The problem has both quantitative and qualitative aspects. Purely in terms of numbers, while the point has not yet been reached when ships are unable to sail and cargoes remain on the quayside, it will become an increasingly real prospect as the shortage increases - unless we act with due haste, methodically, systematically and consistently.

Currently, the shortfall seems to be absorbed by the existing workforce - but not without recourse to some excessive measures. According to reports, officers are working longer hours and, occasionally, not taking their holiday entitlements. Some are awarded exemptions to enable them to serve in positions for which they may not be fully qualified. Training periods are being shortened, hastening the early promotion of younger seafarers, who may lack the necessary experience to shoulder the responsibilities of higher ranks. Ships may receive short-term permits to sail with fewer than the required minimum crew complement. Meanwhile, the demand/supply imbalance is forcing salaries up, which has the effect of enticing older officers out of retirement, thus raising the age profile of the workforce, and giving rise to some undesirable developments.

The cumulative impact of all this can only be detrimental to the quality of service provided. In any workplace there is a direct relationship between the quantity of work required, the resource available to do it and the quality of the output. Unreasonable demands lead to stress, fatigue and a fall-off in performance. No-one is immune, least of all ships’ officers, whose jobs are challenging and demanding enough at the best of times.

I think the issue is not a simple one and there is no simple answer. To increase salaries, for example, is not enough on its own - indeed, while officer salaries are being driven to record levels by market forces, the demand/supply imbalance is worsening. At the same time, shipping needs to address other perceived ‘negatives’ that act as a disincentive to recruitment, while stressing the unique advantages of a career at sea.

A recent survey of seagoing personnel, carried out by a recruitment company, revealed that pay was not the most popular reason for going to sea. The most quoted reason was that seafarers actually wanted a career at sea; then, proving that, even in the age of air travel, romance is still alive, came “a desire to see the world”. Only after these, came the financial considerations.

Even more instructive were the responses to questions about the negative aspects of a seagoing career. These centre around, on the one hand, ‘quality of life’ issues, with ‘time spent away from family and friends’, ‘time spent away from children’ and ‘difficulties in keeping in contact with home’ all ranking highly; and, on the other hand, ‘quality of work’ issues - such as ‘too much paperwork’, ‘fatigue’, ‘fear of being treated like a criminal’ and ‘onboard living conditions’.

Although money may have emerged as the highest single factor when the same survey delved a little deeper to find out what motivated seafarers to stay at sea, it is, nevertheless, instructive to note that job satisfaction, career-related ambitions and job security all scored highly and, collectively, outscored purely financial considerations. And the idea that the shipping industry can provide the basis for a fulfilling and satisfying life-long career is borne out by the responses to whether a career at sea was viewed as a job for life: the overwhelming majority replied that they either expected to spend all their working lives at sea or that seafaring would provide them with the necessary experience and qualification for a related job ashore.

All of which would tend to suggest that recruitment, rather than retention, is the nub of the problem. I have long been an advocate of the need to promote the industry and improve its public image. The fact that shipping still tends only to make the headlines for negative reasons - accidents, environmental impacts, piracy, oppressive security measures leading to denial of shore leave, criminalization - serves only to fuel misconceptions and act as a disincentive to recruitment. Outside the industry itself, the wider public has little conscious perception of the vital role that shipping plays in everyday life and this, clearly, needs to change.
Recruitment & retention - perceptions, experience & expectations

**Attract**

**PERCEPTIONS**
- Poor image of shipping
- Criminalisation
- Piracy
- Pollution
- Major passenger incidents
- ‘Worse things happen at sea’

**REQUIRED EXPECTATION**
- Responsible employer
- Company branding
- Happy & healthy lifestyle
- Safe & secure working environment
- Decent working and living conditions
- Fair terms of employment
- Quality of life
- Health protection
- Medical care
- Family support
- Contact with home
- High tech ships & systems
- Good career prospects
- Career development
  ‘A job for life’
  ‘A job worth doing’ (respect for doing it and self-respect when working in this industry)

**Recruit**

**PERCEPTIONS**
- Poor education
- Lack of interest
- Unregulated manning agencies
- ‘Scraping the barrel’/anyone with money for certificates

**REQUIRED EXPECTATION**
- Good education
- Motivation
- Commitment
- Ability
- Self discipline
- Aspirations
- Professionalism and pride

**Induct**

**PERCEPTIONS**
- No interest in new recruits
- No sense of Company brand

**REQUIRED EXPECTATION**
- Welcome into the Company
- Join the Team
- ‘You’re a sailor now’
Recruitment & retention - perceptions, experience & expectations

**Train**

**PERCEPTIONS**
- Minimum training to comply with regulations
- No ship/system specific training
- No onboard continuation training
- No career development training

**REQUIRED EXPECTATION**
- Competency
- Ship/system specific training
- Onboard continuation training
- Company seminars
- Career development
- Continuous Professional Development

**Retain**

**PERCEPTIONS**
- Bad employer
- Badly run ships
- Poor working and living conditions
- Poor pay & conditions
- No support
- No career prospects
- No career development

**REQUIRED EXPECTATION**
- Company branding
- Happy & healthy lifestyle
- Safe & secure working environment
- Decent working and living conditions
- Fair terms of employment
- Quality of life
- Health protection
- Medical care
- Family support
- Contact with home
- High tech, usable ships & systems
- Good career prospects
- Career development
- ‘A job for life’ in the industry
Dr Stephen Cahoon, Department of Maritime and Logistics Management, Australian Maritime College

Practically, criminalisation, accidents at sea, no long-term career path, separation from family and friends, little internet connectivity, increased regulation, long hours, and fatigue. Who would want to be a seafarer? We all lament the insufficient numbers of recruits entering the industry, yet how many of us encourage our sons or daughters to take over the family business and see the industry as a career path? Once we understand the answer to this question we begin to realise the difficulty the industry faces in attracting applicants to offset the current 34,000 shortfall of officers.

The challenges facing the recruitment and retention of competent seafarers have received wide coverage in the maritime press, but generally not elsewhere. This is because we work in an essentially an invisible industry that for many people presents a poor image or no image at all. To offset this, a strong brand and renewed reputation is required to raise the industry’s profile.

We need to become an industry of choice, much like IT was in the 1980s. To do this requires a planned effort firmly targeted at attracting future competent professionals. This raises a number of points of having to reverse the labourer status of seafarers in the eyes of the general public to that of a tertiary qualified professional who has gained valuable transferable skills and who is positioned to take advantage of various future career paths.

This is another mindset change that some in the industry do not want to accept - seafaring for the majority should no longer be considered a career for life. Instead, a formal career path option for seafarers should seamlessly enable a planned onshore career progression to at least retain their skills in the maritime industry.

More attention should also be focused on how to engage Generation Y - those born between 1978 and 1994 - about opportunities seafaring can provide. Generation Y are not interested in a single career for life; instead, they are searching to address a short term need for an interesting job and good salary, a medium term need for a job that leverages them into a better position, and a longer term need for a satisfying career across multiple industries that provides many interesting experiences and an acceptable work/life balance.

There is a need for a much longer term strategy to reach into the hearts and minds of the youngest generation - Generation M - who are currently entering school. Greater interest should be shown for visiting schools to help educate and provide practical applications about international trade and business which, by extension, includes seafaring - thus exposing these young minds to a profession that prepares them for multiple jobs and careers in an interesting and dynamic industry.

There are many career choices for young people. The answers to the problems of recruitment and retention of seafarers are clearer than we assume - the real challenge is how do we package the job prospects and career opportunities to address the needs of Generations Y and M.

A longer paper: Shipping, shortages and Generation Y can be downloaded from: www.he-alert.org/filemanager/root/site_assets/standalone_articles_pdf/0605/he00760.pdf

Corporate Social Responsibility - a tool for recruitment and retention of seafarers

Carla S Limaco, Vice-Chairman & Executive Managing Director, Philippine Transmarine Carriers Inc

In December 2004, DNV Research group released a Technical Report: Corporate Social Responsibility in Shipping, which pointed out that while CSR has been raised higher on the agenda of most land-based industries, this has not been the case in the maritime sector. Shipping or shipping-related companies comprised only 0.4% of the subscribers to the UN Global Compact; 0.4% of registered reporters in the Global Reporting Initiative; and, 2.9% of the members in the World Business Council for Sustainable Development.

The DNV Report defines a socially responsible shipping company as one that works actively to integrate human, social and environmental concerns in their business operations in order to create a positive impact on society.

While some may argue that the demand for seafarers will decline as a result of the current global financial crisis, I believe that it is an opportune time to adopt the definition of Corporate Social Responsibility in the management of our human resources and allow this to redefine current legislation as well as redirect the focus of education and training.

It is encouraging to note that there is a sincere interest on the part of all stakeholders to ensure the ratification of the ILO Maritime Labor Convention of 2006, where for the first time in history, there will be a global understanding of and agreement to the various conventions governing employment in the maritime sector.

Following this initiative, governments and other regulatory bodies must give due consideration to seafarers rights in the approach to maritime pollution investigations; employers must institutionalize their human resource development and training programs and view these as investments for the future; and, equal opportunities must be available to female seafarers who continue to be an untapped resource.

Through the involvement of educational institutions, the youth can be made aware of the importance of the industry and the vast career opportunities available in shipping. Seafarers should be encouraged to maximize programs for training and development so that they are able to assume executive positions after their careers at sea.

In February 2007, Brandt Wagner, Senior Maritime Specialist of the ILO stated that in order to sustain the seafaring profession, seafarers must be valued and treated with respect. This is the essence of CSR. It is my hope that in light of today’s global economic crisis coupled with the projected deficit of officers in the years to come, industry stakeholders will come together to fulfill this obligation to our seafarers and in so doing, make the environment in which they are employed more attractive and conducive for their growth as individuals and professionals.

It was Martin Luther King Jr. who once said that: “The time is always right to do what is right.” At no time has this been truer than now.

Wallem Shipmanagement manages about 350 ships and over 6,500 seafarers, from India, Philippines, China, Russia and the Ukraine. Managing Director Jim Nelson, reflects on a number of recruitment, training and retention issues.

Our main interest is in the retention of our people. I spend a lot of time and money on new recruits before they join their first ships training them on our Wallem specific systems and our quality management system - having done that, I do not want to lose them.

We conduct Fleet officers’ meetings at every Wallem centre at least once every year - that is for all officers including cadets. I try to go to them all - if not, the Group Managing Director will go in my place - and I will normally be accompanied by at least two of the directors, together with fleet managers from the technical side and others from the crewing side.

It is a chance to meet a large number of our seafarers in a relatively informal manner. We go ‘smart casual’ because we feel that it breaks barriers down. We hold workshops to encourage information flow; we do not stand up and lecture people because we do not feel that it works - we really need people to understand what it is we are trying to achieve, and not feel intimidated. We ask them to actively criticise us, simply because if we do not know what their problems are, we cannot help them to improve.

We have a full agenda - safety related matters, welfare related matters, nationality specific problems etc. At the end of the day, what is important to me is my seafarers; they need to know that we are there to look after them, such that if they have a problem of any kind, they can come to us.

We have a free email service for all of our seafarers which they can use both ashore and onboard - they all have their own Wallem email addresses. We did this, not because we had to do it, but because we wanted to do it and because we knew it would help with the retention of our seafarers.

Our monthly newsletter gives a breakdown of what is happening across the Wallem Group, and in the industry. This is sent out to the ships and to all our offices. We try to keep them as personal as possible to create a family feel. We feature profiles on what individuals do for the company, items of interest to other people who work in different parts of the Wallem Group - they do not always know what the seafarers do (and vice versa) so it is nice to bring them all a little closer.

All our crews are covered for medical protection by P&I when they are onboard. In the Philippines and India we also cover them when they are at home; and we provide cover for family members all the year round. It is not easy to do that everywhere; in China for instance, you cannot do it, but the Chinese social care system looks after their people anyway.

We have very high standards when it comes to pre-employment medicals. We do not want our seafarers to suffer when they are at sea. So, by doing good pre-employment checks, if we can find something out, we can have it treated before the seafarer goes onboard. The Clubs have their own standards, but ours are much higher. If you keep the highest standards it pays for itself - you get returns well in excess of that because you have happy, healthy ships.

Training is our business - it is part of our ‘True North values’ - it is what we believe in as a company. Before they go onboard one of our ships for the first time - and as refreshers - crews have to know what is expected of them and what they expect of us. At our training schools in India, China and the Philippines, we have full mission simulators, both for bridge and engine control room operations. We conduct bridge team management and engine room team management exercises, or we can link both and carry out maritime resource management exercises.

Training is our business - it is part of our ‘True North values’ - it is what we believe in as a company

We also have very practical things such as electronics, combustion control, refrigeration systems, pneumatics and hydraulics. We have lifeboat on load release systems set up in the training centres - so that our seafarers can have some idea of how they work.

Our training centres provide exactly what is needed, which is well beyond the requirements of STCW. We provide Value Added training - it adds value to the seafarer’s skill sets.

Our superintendents, our safety training superintendents and our quality safety people - are all former seafarers. That is important because some people connected with the industry do not understand what it is like to be in a Force 8 gale and maybe do not understand that you just cannot do something simply because the weather doesn’t allow you to do it. It is important to understand these things.

We currently have about 695 cadets under training. Nearly eighty per cent of our superintendents were cadets, so we have a continuity of personnel all the way through. Two of our directors started as junior officers with Wallem. So we have a career path for seafarers not only onboard but beyond that.

I ask our seafarers what are the most important things to them. Firstly, they want to feel that they belong, they want to feel that they can be trusted, they want to feel that someone is going to look after them.

At our Fleet officers’ meetings, I ask our seafarers what are the most important things to them. Firstly, they want to feel that they belong, they want to feel that they can be trusted, they want to feel that someone is going to look after them - it is about security.

Then it is about long term not short term commitment, it is about feeling that they are going to be here today, tomorrow, next week, next year etc. Then it is about the family, looking after them as individuals, having the peace of mind of knowing that if anything happens to them their families will be looked after properly. It is from the heart; it is not necessarily about money.

From the first day that I ever set foot onboard a ship I loved it. I loved the responsibility at a young age; it gave me freedoms or chances that I would never have got had I gone into another profession. But, there are an awful lot of personal sacrifices involved when it comes to your family - you need to love it and you need a partner who will put up with it. And that is a difficult combination to find; there are not that many people who would put up with that today.

Finally, do I see my crews as an investment or as a cost? As a shipmanager, what do I have? Tables, chairs desks, computers - that is it. And then I have my people - they are really all that I have. I invest heavily in them.
Factors contributing to fatigue and its frequency in bridge work

In a number of accidents investigated by the Accident Investigation Board (AIB) of Finland, it was noted that fatigue had contributed to the alertness of the navigating personnel, and that work shift arrangements also had an effect. To this end, the AIB conducted a survey amongst Finnish deck officers, based on a questionnaire, in order to determine the extent of the problem.

185 persons responded to the questionnaire, with a median age of 40 years (varying between 22 and 64), of which 21.1% were under 30 years of age and 27% were over 50.

This comprehensive study reveals that 17% of the respondents had fallen asleep at least once whilst on watch, and that over 40% had been near ‘nodding off’ during their watch at least once during the past 5 years. Near-miss incidents due to fatigue had happened at least once to some 20% of the respondents.

The most important factors affecting alertness during a watch were the time of day, the length of the previous sleep period, and the time since the person had last woken up. The effects of the watch system (e.g., 6/6, 4/8) on alertness were dependent on individual factors (age, ‘morningness’, ‘eveningness’ and likelihood to nod off), the special risk groups with regard to night-time alertness were in the 4/8 system - those aged from 50 to 62 years - and in the 6/6 system both morning persons and persons with a generally high tendency towards nodding off.

The report does not advocate the use of the 6/6 system. 22 respondents requested changing the watch system from 6/6 to 4/8. Others suggested: a weekly rest period when one could sleep off any fatigue; proper use of the off-watch period, including the provision of gymnasium facilities; the placement of cabins in a peaceful area; and less numbing work practices.

The total working time of a seafarer and especially the uneven stress caused by port visits are seen as significant factors. Many responses related to insufficient manning and the busy-rhythm work with loading; 30 respondents stated clearly that there should be one more mate on board the ship, especially to ease the work load of the chief mate.

Questions relating to the general improvement of the working environment revealed that most of the answers dealt with tidal air: ‘Good air-conditioning would facilitate concentration’ (27 responses); ‘There should be a possibility to go outdoors’ (22 responses). The study concludes that the need for good-quality tidal air has not adequately been observed in the design of bridges. General ergonomics on the bridge received some comments: eg, ergonomic working positions, the adjustment of the lighting of the equipment and the control of alarms.

The report concludes that a comprehensive management plan of alertness and fatigue is needed for seafaring; the cornerstone of such a plan being training, which gives the seafarer a possibility to manage the systems of the workplaces as well as his personal life better than at present.

Those who are involved in the management and operation of ships are strongly advised to read the whole report.