



▶ guide to the singapore maritime week 2010 ▶ heart at sea ▶ eleven men and a list

Environmental performance – challenges and solutions



Environmental issues are top priority for DNV. Our vision is "Global impact for a safe and sustainable future." DNV is already serving the industry extensively within this field, and we are spending considerable resources to develop state-of-the-art competence and services. We are pleased to service the shipping industry with a wide range of environmental services and contribute to sustainable development that benefits all of us. Let us see how we can support you in developing your competitive edge.

CONTENTS

No: 11

PAGE

04

SHIP'S LOG
NEWS AND EVENTS
AT MPA



PAGE

08

PORT & STARBOARD
GREEN SHIPPING
HIGH ON THE
AGENDA



PAGE

11

MARITIME SERVICES
THE SINGAPORE BALTIC
EXCHANGE

PAGE

14

FEATURE
GUIDE TO
THE SINGAPORE
MARITIME WEEK



PAGE

22

COMPANY SPOTLIGHT
ELEVEN MEN AND A LIST

PAGE

25

TECHNOLOGY
• WHEN MINDS MEET
• UPPING THE GREEN ANTE



PAGE

28

PERSONALITY
FORESIGHT AND VISION

PAGE

32

PERSONALITY
HEART AT SEA

PAGE

34

COMMENTARY
SHARE AND LEARN

PAGE

36

COMMUNITY TALK
SAFE AND SECURE SEAS



PAGE

40

THE BACK PAGE
SEA SNAPS

publisher



MPA
SINGAPORE

**Maritime and
Port Authority of
Singapore**

460 Alexandra Road, #19-00,
PSA Building Singapore
119963. Tel: +65 6375 1600,
Fax: +65 6275 9247
www.mpa.gov.sg

executive editor

Lam Wee Shann

advisory committee

Lam Yi Young
Khong Shen Ping
Tan Beng Tee
Yee Cheok Hong
M Segar Abdullah
Toh Ah Cheong
Tan Cheng Peng
Cheong Keng Soon

managing editor

Gary Low

publishing agent

SPH magazines

managing director
Dennis Pua

general manager
Christopher Tay

group editor
Joanna Lee-Miller

senior editor
Azreen Noor

executive sub-editor
Esther Lew

associate creative director
Alex Goh

art director
Ginny Gay

group account manager
Charmaine Soh

**manager,
client management**
Mavis Liang

**manager,
business development**
Petrina Hu

**senior coordinator,
publishing services**
Wendy Ong

Singapore Nautilus is published quarterly by SPH Magazines Pte Ltd (Registration No: 196900476M) for Maritime and Port Authority of Singapore (MPA). Copyright of the materials contained in this magazine belongs to MPA. Views expressed may not necessarily be those of MPA nor SPH Magazines Pte Ltd. All rights reserved. Enquiries should be directed to the Editor, Maritime and Port Authority of Singapore, 460 Alexandra Road, #19-00, PSA Building Singapore 119963. Tel: +65 6375 1600, Fax: +65 6276 8927, Email: SN_feedback@mpa.gov.sg All information is correct at time of printing. Printed in Singapore by KHL Printing Co. Pte Ltd (Registration No: 197801823M). ISSN 2010-1120

**For advertising enquiries,
please email jrani@sph.com.sg**

SINGAPORE maritimeweek 2010

Singapore Maritime Week takes centre stage in 2010, with the 5th edition from 25 to 30 April.

Steered by the Maritime and Port Authority of Singapore, Singapore Maritime Week (SMW) is an exciting gathering of the international maritime community in Singapore for a week of conferences, dialogues, exhibitions and social events in celebration of all things maritime.

This is why SMW is all about People, Ideas and Opportunities for the maritime community.

Visit us at www.smw.sg for more details.



PEOPLE **OPPORTUNITIES**
IDEAS

25-30
APRIL 2010

5th SINGAPORE MARITIME WEEK



MPA
SINGAPORE

www.smw.sg

Like bees to honey

Recently, I caught up with some friends over dinner. We got to chatting about the red hot property market in Singapore and how people – including some at that table – were capitalising on this opportunity. One of my friends in the renovation line gave us the insider story on the progress of various projects in Singapore, while another, an engineer in a construction firm, lets us in on how his sector is doing. Others, like me, added spice to the conversation based on our own personal experiences.

On my way home, it dawned on me how people from varied backgrounds could be drawn into a conversation given a topic they were passionate about, much like bees to honey. Unadulterated ideas and opinions would flow freely and

inadvertently; many opportunities would arise from it.

In many ways, it is the same for the upcoming Singapore Maritime Week (SMW). You can almost already feel the buzz of exciting fringe events like the photography competition, informative conferences and by-invitation-only social events. SMW is really about people coming together to interact, share ideas, and seize opportunities.

To the gathered international and local maritime community, students, and other participants, I wish you all an enjoyable and fruitful SMW.

Wee Shann

executive editor

Workshop highlights best management practices to combat maritime piracy



► The escalating number of maritime piracy and ship hijacks in the Gulf of Aden and off the east coast of Somalia has been threatening the safety of seafarers and disrupting international shipping.

In view of these concerns, the Singapore Shipping Association (SSA) with the Maritime and Port Authority (MPA) of Singapore, organised a half-day "Workshop on Maritime Piracy and Ship Hijacks in the Gulf of Aden and in the Indian Ocean" early this year to update the shipping community here of the latest developments and policies in meeting this piracy challenge.

More than 200 participants from the

Singapore shipping community benefited from the insights given by representatives from shipping companies, namely Pacific International Lines, APL and Ocean Tankers, on their experiences and best practices in dealing with piracy and hijacks.

Highlights of ongoing efforts, new policies and updates on pirate activities were also provided by representatives from MPA, the British High Commission in Singapore and the Combined Maritime Forces. SSA and MPA previously organised a similar forum in 2008.

SGX fuel oil futures contract commences

► Singapore Exchange (SGX) started trading its new Fuel Oil 380-centistoke futures contract (FO 380 Contract) on February 22.

"The launch of our Fuel Oil futures contract will put SGX closer to becoming Asia's commodity futures trading hub. The new contract provides our global participants an attractive price discovery and hedging product. This launch is timely and will bolster Singapore's position as a commodities trading and clearing gateway," said Mr Magnus Bocker, Chief Executive Officer of SGX.

This contract is based on Residual Marine Grade 380 ISO 8217, primarily bunker fuel oil supplied to ships. Physical delivery will be via Free-On-Board or inter-tank transfer at Exchange-designated Singapore oil installations. The minimum tradable contract size is 100 metric tonnes per lot and the minimum deliverable size is 2,000 metric tonnes or 20 lots. Market makers and liquidity providers will be available for the contract.

The trading session for the new contract starts from Singapore time

9.30am to 6.30pm (T-session) followed by 7.30pm to 1.00am (T+1 session). The extended trading hours provides participants, such as shipping companies, bunker suppliers and oil trading companies, an efficient and transparent pricing mechanism for the Singapore fuel oil market from Asia open to Europe close.

Mr Lam Yi Young, Chief Executive of Maritime and Port of Authority of Singapore (MPA) said: "SGX's fuel oil futures contract will encourage greater participation in Singapore's marine fuel market from both local and international shipping and bunkering communities. This complements Singapore's position as a top bunkering port and is in line with MPA's effort to develop a conducive and progressive environment for the bunkering industry."



*To Serve Human Well-Being And
Create Wealth At The Same Time*



A Leading Asia-Focused Diversified Group Committed To Innovative And Customised Solutions

- Dry Bulk Shipping • Wet Bulk Shipping • Ship and Crew Management
- Offshore and Marine Engineering • Oil & Gas Assets and Services
- Resources • Logistics • Lifestyle/Real Estate • Investments



Visit by Port of Rotterdam Authority



Delegation from the Port of Rotterdam Authority, led by President and CEO Mr Hans Smits, visits MPA.

Visit by Norwegian Honorary Consul-General



HE Otto Gregard Tidemand, Singapore's Honorary Consul-General to Norway, calls on Mr Lam Yi Young, Chief Executive, MPA.

Visit by China Ministry of Transport



Delegation from the Ministry of Transport, People's Republic of China, visits MPA.

Visit by Abu Dhabi EAA



Delegation from the Abu Dhabi Executive Affairs Authority visits MPA.

Visit by Shanghai Maritime University



MPA hosts delegation from the Shanghai Maritime University, led by Prof Yu Shicheng, President.



Delegation from the Brunei Ministry of Communications led by Honourable Pehin Abu Bakar Apong, Minister for Communications, Brunei, visits MPA.

Visit by Brunei Ministry of Communications



Visit by NIMASA



Mr Temisan Omatseye, Director-General / CEO, Nigerian Maritime Administration and Safety Agency, leads the agency's delegation in a visit to MPA.

MPA Workplan



The MPA Workplan Seminar was held on February 9 with the theme: *Seizing Opportunities. Positioning for the Upturn.*

Visit by PSIA Japan



Officials from the Public Security Intelligence Agency, Japan, visit MPA's Port Operations Control Centre (POCC2).

Visit by Port Klang Authority



Port Klang Authority delegation visits MPA - led by Datuk Lee Hwa Beng, Chairman, Port Klang Authority.

GREEN SHIPPING HIGH ON THE AGENDA

SINGAPORE JOINS THE RANKS OF 40 OTHER COUNTRIES TO PREVENT THE USE OF HARMFUL PAINTS ON SHIPS IN THE NAME OF PROTECTING THE MARINE ENVIRONMENT.





► Singapore is one of the busiest ports in the world. In 2009, some 130,000 vessels called here. At any one time there are about 1,000 vessels in port. Singapore is also home to 25 per cent of the world's coral species. Protection of the marine environment is thus important to Singapore. The Maritime and Port Authority of Singapore (MPA) is responsible for ensuring that the usage of our waters by ships and craft and the operations and development of our port are environmentally friendly.

As a flag administration with a large fleet flying under its flag, MPA is committed to promoting highest standards of shipping for the reputation and attractiveness of its ship registry. The Singapore Registry of Ship's commitment to promoting the highest standards of shipping includes implementing effective monitoring and enforcement mechanisms to promote safe and clean shipping.

Although shipping is the most environmentally friendly mode of transport, there are increasing expectations for the shipping sector to

improve its environmental credentials. Singapore's commitment to eco-friendly shipping and port activities is underscored by her being one of the few countries in Asia to be a party to all the Annexes of MARPOL – the International Maritime Organization (IMO) convention for the prevention of ship-source pollution. The Convention applies to Singapore-registered ships and foreign ships calling here, and other ships operating in the Singapore port.

On December 31, 2009, Singapore deposited its Instrument of Accession to the International Convention on the Control of Harmful Anti-Fouling Systems on Ships, 2001 (AFS Convention) with the IMO. Come April 2010, Singapore will join 40 other countries to be party to the AFS Convention on Ships.

The AFS Convention was adopted on October 5, 2001, in an international conference organised by IMO. When the Convention entered into force on September 17, 2008, it ruled that ships cannot use harmful antifouling systems including paints containing tributyltin (TBT).

MPA, being the focal point Government agency for IMO, had the responsibility to lead the preparatory work for Singapore to accede to the AFS Convention.

All hands on board

From the onset, MPA rallied the industry, from shipowners, to paint manufacturers and Government agencies. For example, MPA worked closely with the National Environment Agency of Singapore (NEA), who is the national authority on land-based anti-pollution measures. NEA will ensure that wastes from the application or removal of an anti-fouling system are collected, handled, treated and disposed of in a safe and environmentally sound manner to protect human health and the environment. NEA will also gazette TBT as a controlled toxic substance.

The journey begins

Preparation work started as early as 2006, when MPA issued annual shipping circulars to advise the shipping community to take early action to comply with the Convention when their

ships are dry-docked. In addition, MPA had already been participating actively in IMO Marine Environment Protection Committee (MEPC) meetings since 1990 together with other IMO Members States and NGOs (with observer status at IMO such as BIMCO) on the development of the Convention.

MPA gave regular briefings on the Convention to advise the shipping community on the status of ratification by other IMO Member States and the guidelines and guidance documents prepared by IMO.

With the support of the maritime community and relevant Government agencies, MPA obtained necessary approval for Singapore to accede to the Convention. Close co-operation with other governmental agencies, like the NEA, will ensure the proper implementation of the AFS Convention's guidelines for Singapore. Singapore's accession to the AFS Convention underscores MPA's commitment to environmentally friendly shipping and port activities.

WHAT CHANGES?

The Convention applies to vessels registered with Parties to the Convention, and also to those calling at their ports.

- Parties are required to prohibit and/or restrict the use of harmful anti-fouling systems on ships which operate under their authority. This will apply to Singapore-registered ships, foreign ships calling at Singapore and other ships operating in Singapore waters.
- New ships must use non-toxic paints, while ships with TBT paints must add a barrier coating that prevents the chemical from leaching.
- The Prevention of Pollution of the Sea (Harmful Anti-fouling Systems) Regulations which will give effect to the Convention in Singapore's laws.
- Singapore shipyards will no longer use harmful anti-fouling paints. Singapore ships calling at the ports of 40 countries which have implemented the Convention will have to carry certificates of compliance to show

that they have either removed harmful AFS or put a coating that forms a barrier to harmful AFS.

- Harbour craft and pleasure craft operating in harbour will be required to carry Singapore AFS Declaration.

If the ship is detected to be in violation of this Convention, the Party carrying out the inspection may take steps to warn, detain, dismiss, or exclude the ship from its ports.

There are currently six Annexes of MARPOL:

- Annex I: Prevention of pollution by oil
- Annex II: Control of pollution by noxious liquid substances
- Annex III: Prevention of pollution by harmful substances in packaged form
- Annex IV: Prevention of pollution by sewage from ships
- Annex V: Prevention of pollution by garbage from ships
- Annex VI: Prevention of air pollution from ships



SHIP VS THE SEA

WHAT IS TBT?

Tributyltin, or TBT, is a metallic compound commonly used as an anti-fouling pesticide in marine paints, in wood preservation, for antifungal properties in textiles and in refrigeration water systems.

WHY DO SHIPS USE TBT?

TBT-based paints target a broad spectrum of organisms, from micro-algae to barnacles and everything in between. These paints prevent barnacles and other 'illegal aliens' from hitching a ride. The compounds in TBT-based paints slowly "leach" into the sea water, killing barnacles and other marine life that have attached to the ship. When barnacles, algae or molluscs attach themselves to a ship's hull, they create drag and slow it down, forcing the ship to burn more fuel.

WHY THEY SHOULDN'T

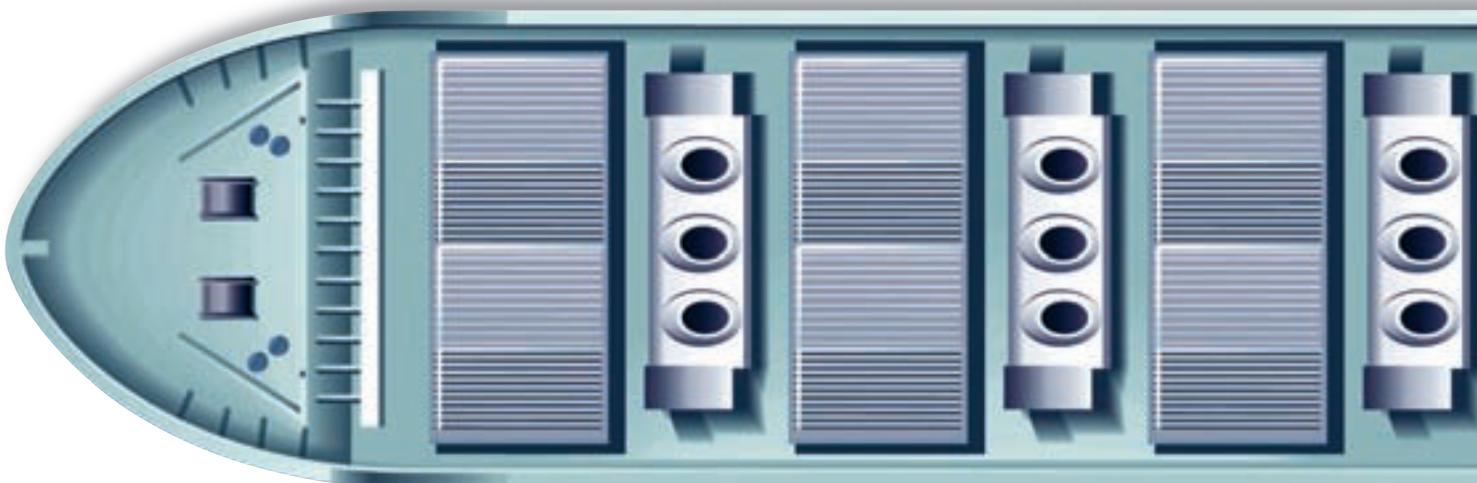
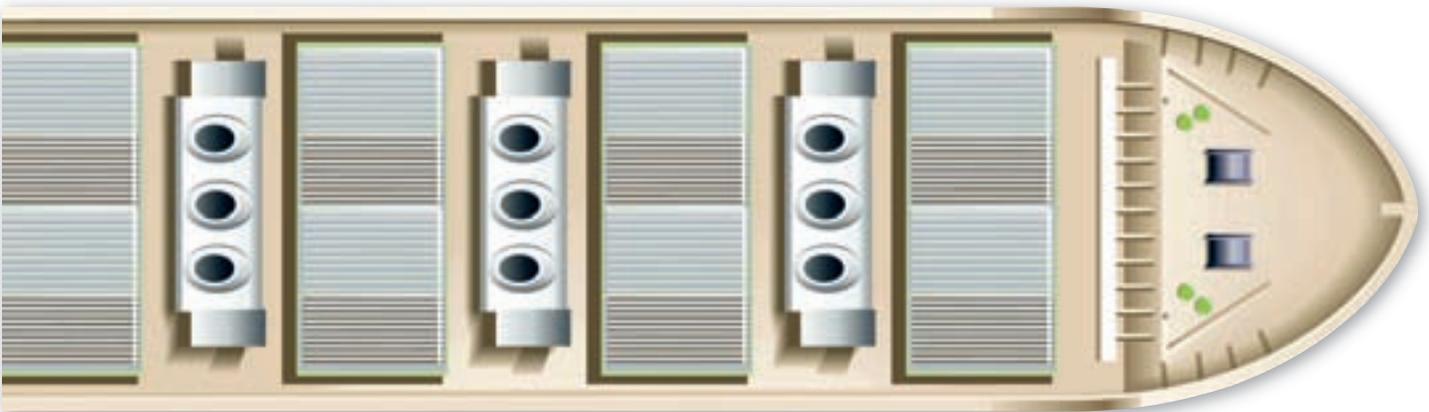
The negative effects of TBT on the ecosystem have been well documented. These include adverse effects on the reproductive systems of marine shellfish, fish, surface feeding sea birds, wild fowl and humans. In particular the immune system is affected and has been linked to mass mortalities in seals and dolphins.

WHAT ARE THE ALTERNATIVES?

Now, most ships are coated in copper-based paints that repel or kill barnacles, or silicone paints that make the surface too slick for barnacles to attach themselves to. But the latter are two to three times more expensive than copper paints.

THE SINGAPORE BALTIC EXCHANGE

THE EMPHASIS ON BULK SHIPPING TRADE HAS BROUGHT COMPANIES LIKE
BALTIC EXCHANGE TO SINGAPORE'S SHORES





One of the reasons why we chose Singapore to locate our Asia Pacific office was because of the government’s user-friendliness in assisting shipping companies to come to Singapore and open up. It’s a very smooth and streamlined process and we’re very happy to be here. It has made our job a lot easier because many companies have now moved here.

Philip Williams, Manager of the Baltic Exchange’s Asia Pacific representative office

► Singapore has been active in promoting the dry bulk trade and stands out for its “user-friendliness” in helping shipping companies and organisations to come to the city state and start up operations.

“The Singapore government through the Maritime and Port Authority of Singapore (MPA) in particular has been extremely active in attracting bulk shipping players to Singapore as an international maritime centre and it has been very successful in doing that,” says the manager of the Baltic Exchange’s Asia Pacific representative office Philip Williams. “MPA understands shipping across the spectrum....and the bureaucracy which exists in some other countries has no place here as far as we’re concerned,” he adds.

MPA has recognised the importance of the bulk shipping trade and has put in more effort to grow the segment as part of the drive to develop Singapore into a more complete international maritime centre. “Singapore and MPA have identified that bulk shipping is a very important sector of the marketplace, and they have taken time to go and learn about it and become more involved with it through us. I think

that speaks quite loudly for MPA in the sense that they understand that to be an international maritime centre, you have to cover all the exits and bulk shipping is one of them,” Williams says.

“One of the reasons we chose Singapore to locate our Asia Pacific office was because of the government’s user-friendliness in assisting shipping companies to come to Singapore and open up. It’s a very smooth and streamlined process and we’re very happy to be here. It has made our job a lot easier because many companies have now moved here,” he says. The exchange has about 50 members who have offices in Singapore and over 100 in Asia Pacific.

Baltic Exchange in Asia

Besides the convenience of setting up in a jurisdiction that not only seeks to understand your business but even helps you to set up operations, being at the crossroads of the main trade routes helps Williams fulfill the Baltic Exchange’s three main objectives for its office here.

The role of the Baltic Exchange’s only overseas representative office outside

London is to provide market education, serve a marketing role, and to expand the coverage of its shipping data. Certainly in the marketing role Williams has been quite successful with about 30 to 40 new members added since the Singapore office was set up three years ago in 2007.

“Singapore is certainly the key to our Asian membership,” notes Williams and Singapore’s excellent travel hub connections help immeasurably in fulfilling his role of reaching out to all the markets East of the Suez Canal.

“What we hope to do and have done by having the office in Singapore is get more feedback from the market and also introduce new assessments for trade which are Asia-centric and we’ve been successful in doing that as well.”

For example, the Baltic Exchange has recently opened up two new dry cargo routes and two new clean product trading routes out of Asia which has been in response to market demand from users in Asia. “It’s very much putting my ear to the ground and listening to what people here want to see and then discussing that with London to see if it can be done,” he says.

Looking ahead

Moving forward, the exchange is looking at one or two possible additions to the dry cargo routes. In terms of the forward freight agreements or FFA market, Williams says that, barring the sharp drops of the 18 months when volumes were halved, the market is expected to grow this year. "From our perspective, we're happy to see that movement and encourage people to seek further opportunities for risk management in the derivatives sector. That again is part of our market education role."

Also on the cards is an expansion of the exchange's profile on the tanker side to bring it on par with the exposure it has in the bulk cargo sector. "The tanker side has lagged a little, but that's something I think I can change by becoming more actively

involved with the tanker people; it's just a question of getting the time to do it," says Williams.

Another big imperative for Williams is the educational side of his job where he would like to do more to encourage young people to join the industry that he's been involved in for over 40 years and still loves passionately. An expansion of the role of the Young Baltic Association to bring more of the so-called backroom staff out to experience things at an operational level is one of his wishes for the year ahead.

However, he is somewhat held back by the fact that he is still very much a "one-man band" at the Singapore office where in between covering the vast Asia Pacific that is under his purview, there is little time for anything else. Williams hopes to

ramp up the office as soon as this year, so that he will be able to broaden the scope of the exchange in Asia.

The shipping freight derivatives market relies on the Baltic Exchange's indices and route assessments for the purpose of settlement of derivative contracts – which are used by the market to manage bulk shipping freight risk. Despite the shipping downturn in the second half of 2008, interest in Baltic Exchange indices, in particular the Baltic Dry Index (BDI), has never been higher and interest in membership is likewise growing. The Baltic Exchange intends to expand its involvement in the Asia Pacific market, and with Chinese and Indian growth scheduled to remain at high levels for the near future, is well placed in Singapore to drive its activity in the region.

singaporenautilus



GET YOUR COPY NOW!

Singapore Nautilus is the quarterly corporate publication of the Maritime and Port Authority of Singapore. Reaching out globally, the magazine covers the latest maritime-related news and initiatives in Singapore, and provides a platform for thought leaders to share ideas on international maritime trends and developments. You can sign up for a free subscription to *Singapore Nautilus* by e-mailing us at SN_subscribe@mpa.gov.sg



SINGAPORE NAUTILUS GIVES YOU ALL-AREA ACCESS TO GETTING THE BEST OUT OF THE MOST EXCITING MARITIME EVENT TO HIT OUR SHORES

► The fifth edition of the Singapore Maritime Week (SMW) from April 25-30 promises an event-filled week to entertain and educate the maritime industry. Going from strength to strength since its inaugural running in 2006, the Maritime and Port Authority of Singapore (MPA)-driven event brings together the international maritime community in Singapore for a week of conferences, dialogues, exhibitions and social events.

The diversity and vibrancy of Singapore as an international maritime

centre will be showcased for the many leading maritime personalities that are expected to be in town during the week.

This year the event builds on its past successes by adding new activities while continuing with the well-received sessions where eminent speakers share their insights and participate in dialogues on topical maritime issues. The dynamism and wide range of topics discussed during the event are a major attraction for maritime decision-makers and the various business networking platforms are an added bonus for many.

SMW 2010 will feature two key outreach events – the Amazing Maritime Race, where participants compete in a race around Singapore to discover the spectrum of maritime-related businesses and ancillary services here, and the SMW 2010 Photo Competition and Exhibition where photography enthusiasts will be given access to maritime facilities to capture the vibrant maritime industry at its busiest.

SMW's strengths in maritime thought leadership will also be developed, with several conferences and

discussion forums anchored by the thought-provoking Singapore Maritime Lecture.

Don't forget the social and business networking element that is such an integral part of the industry – the Seatrade Asia Awards returns while Lloyd's Register hosts its 250th anniversary celebration dinner. See page 20 for a tasting or www.smw.sg for the full listing.

With this, we present you a guide to the SMW, with the hope that you grab every chance to discover all the ideas, meet all the people and grab all the opportunities SMW has to offer!

SINGAPORE MARITIME WEEK



5

PLACES TO SEE AND BE SEEN

► Find some time in between conferences and events to see more of Singapore:

Marina Barrage

This reservoir is brimming with water activities – from boating and windsurfing to kayaking and dragonboating – perfect for taking the edge off this island heat. It promises many picture perfect opportunities along its banks, or at its beautiful Solar Park, Green Roof, and central courtyard.



Esplanade

Singapore's hotspot for the best in arts, music, performances and concerts. Not to be missed in April are Chicago The Musical as well as cellist Yo-Yo Ma and The Silk Road Ensemble playing with the Singapore Symphony Orchestra.

Southern Ridges

Spanning Mount Faber Park to West Coast Park, this nine km trail offers panoramic views from Singapore's highest pedestrian bridge.

casino. The Marina Bay Sands features high-end retail stores, celebrity chef restaurants and a Las Vegas-style casino.

The Singapore Arts Museum

The Singapore Arts Museum has amassed the world's largest public collection of modern and contemporary Southeast Asian artworks.

Integrated Resorts

Resorts World Sentosa boasts the region's first and only Universal Studios theme park and a designer



5 TIPS TO STEAM AHEAD

► Industry heavyweights give us direction for moving towards greater things in the year ahead

The centre of gravity for the maritime sector continues to move east. It is therefore in **Asia** where the **best new opportunities** will be found as the shipping industry moves out of recession.

Chris Hayman, Chairman, Seatrade

The key words for 2010 are "**recovery**" and "**overheads**". In the case of the latter, watching them closely, so that the recovery can be achieved quickly and effectively.

Dato' Jude P. Benny, Managing Partner, Joseph Tan Jude Benny

Shipping is a global and dynamic industry. Shipping operations worldwide can therefore be affected by national and international developments. At all times, we need to **keep track of changes in regulatory requirements** to safeguard our members' interests. It is important for us to **work with our strategic partners** to counter any of these developments which are detrimental to international shipping.

Daniel Tan, Executive Director, SSA

In the year of the Metal Tiger, maritime players should demonstrate **sharpness in action** and **speed of thought** to seize opportunities when they present themselves whilst staying focused and concentrating on their strengths.

Erik Borgen, Regional Director, Head of Asia & General Manager, DnB NOR Bank ASA

5 STEPS FOR AN ENGAGING SPEECH

► No one enjoys a boring speech. Here are some ways to engage your audience:

Be precise and articulate

Figure out exactly what you wish to say and how it should affect your audience. Are you trying to entertain, persuade or inform? Whatever your purpose, articulate your points clearly. Illustrate your point with a story or metaphor to bring it alive with emotions.

Be clear and concise

If your speech is around 10 to 15 minutes, keep it to about three main points. This helps your audience to better remember them.

Practise 'til perfect

Even if you have to read it fifty times to commit your speech to memory, do it. And if you

have to, deliver your speech to a friend and ask if she gets your message.

Maintain eye contact

With your speech memorised, you can maintain eye contact with your audience, sweeping slowly across the room. Look down onto your page only when necessary and resume eye connection with your audience.

Be animated

We've all sat through boring monotonous speeches before, so avoid repeating their mistakes. Speak with rhythm. And when you get to the end of your speech, pause just before your call to action.

Singapore's raison d'être when it started was the port. And Singapore must strive to remain a major hub port. Global developments in sea transport can be seen through the growth and transformation of Singapore as a maritime centre. The development of maritime Singapore is about anticipating the future, adapting to change, creating and seizing opportunities and the pursuit of excellence.

Minister Mentor Lee Kuan Yew at the Singapore Maritime Lecture 2007

Be vigilant and strategise to keep your profitability, **work hard** and **be bold** to enter uncharted waters. Most importantly, have faith in the Singapore maritime community and Asia's future. With the close partnership between maritime partners, the government and SMF, we will do our best to formulate initiatives to benefit the maritime industry in the long run.

Michael Chia, Chairman,
Singapore Maritime Foundation



The most significant threat to our environment today concerns the earth's atmosphere. Although the shipping industry, which is credited with the carriage of more than 90 per cent of the world trade, is a relatively small contributor to the total volume of harmful emissions, according to recent figures, which is less than three per cent. When a study was carried out in 2000, the outcome was that shipping was responsible for 1.8 per cent.

IMO Secretary-General, E E Mitropoulos
at the Singapore Maritime Lecture 2008

5 TIPS TO WORK THE ROOM

▸ More than just shaking hands, networking is all about cultivating social relationships with business professionals. Here are some ways that will help you succeed as a master networker in the long run:

Impress to success

The first five seconds determines the impact you wish to create. And according to a Harvard study, it is your appearance rather than voice or what you say that leaves this impression. So check out what your event is about, groom yourself appropriately for it, and dress to impress!

Keep it professional

Know who your host is and find out if there are any important guests present. Stock up on business cards beforehand, focus on meeting potential business contacts and offer a firm handshake when you meet.

Approach with 3Q3R

Begin a conversation with some small talk using the 3Q3R (3 questions, 3 responses) formula. Ask three questions, says Ricky Lien, Creative Training Director of Mindset Media. For example:

- "Hello, my name is Ricky and you are?"
- "Hi, Robert, are you a member of this business association?" Include a remark to this, like how you came to know about the event or whether you know the host.
- "Have you met or do you know many of the people here tonight?"

A round or two of 3Q3R should do the trick for starting some great conversations.

Remember names

Once your new contact has mentioned his/her name, repeat it by saying, "Nice to meet you, Thomas." Zoom in on a physical trait to help you remember, with something like "Thin, tall Thomas". While talking to him/her, use the name again when asking them questions. For instance, "What projects are you currently working on, Thomas?"

Meet more people

"Keep conversations to less than 10 minutes each to network with more business professionals, especially those who might add value to your business," says Lien. But at the same time, don't be rude or in a rush to move on to the next person. You won't be able to meet every single person in the room so be relaxed and don't hurry the process.



5

THINGS YOU MIGHT NOT KNOW ABOUT MARITIME SINGAPORE

Early riser

Recent research unveiled that pre-modern Singapore functioned as a significant "port of trade" during the 14th and 15th centuries, serving a commercial trading zone stretching from the Persian Gulf to south China.

Busy bees

In 1989, Singapore's container traffic hit over four million Twenty-Foot Equivalent Units (TEUs). In 2009, that number swelled to 25.9 million TEUs.

Beacon of light

The Fullerton Building, now the five-star Fullerton Hotel Singapore, had a lighthouse which was commissioned in December 1958 and provided a flashing white signal light group that was visible up to 18 nautical miles. The Fullerton Lighthouse was de-commissioned in November 1979.

Shipshape

In 1866, 178 vessels, which included junks, schooners, barques and brigs, were registered under parliament as

belonging to Singapore. Today, the Singapore Registry of Ships ranks among the top 10 largest registries in the world, with more than 3,000 registered vessels totalling 45.6 million gross tons.

Cutting-edge

A refurbished ship, the *TS Singapore*, was used to train seamen in the '60s and '70s. Maritime training has come a long way, with the Integrated Simulation Centre offering realistic search and rescue scenarios for the training of officers and crew.



HOW TO WIN THE RACE

One half of the *The Amazing Race Asia* Season 2 winners Collin Low dishes out tips to get ahead of the pack and stay there

**Be nice**

You'll be surprised at the doors that can be opened by a simple pat on the shoulder and a genuine smile. And don't be afraid to ask directions - it won't make you seem like less of a man (or woman). Use your charm and flash your megawatt smile.

Never wear shorts

While Speedos seem to be the most

practical wear in this weather, I suggest you go long. Lightweight pants are best as they work wonders as a barrier against hungry mosquitoes, especially if you're staking out a sunset or passing boat, or both.

Stick to a knapsack

Avoid messenger bags. An hour into the race, your back will start to ache because of the uneven weight distribution.

Follow the directions

Take some time to read the instructions given. Read and re-read them. Then go ahead and read them again. If you jump the gun and race off, you're bound to miss out essential information or hidden messages that could cost you the race.

Stay hydrated

It's a tropical island. It's bound to get scorching hot. Drink water.

Sunday April 25, 2010

Amazing Maritime Singapore

VENUE VivoCity
8.30AM - 3.00PM

SMW 2010 Photography Exhibition

VENUE VivoCity
8.30AM - 10.00PM

Monday April 26, 2010

2nd Annual Offshore Support Vessels Asia-Pacific

VENUE Grand Copthorne Waterfront Hotel
9.00AM - 5.00PM

Maritime Learning Journeys

VENUE Various Maritime Installations
8.30AM - 3.00PM

4th Singapore Maritime Lecture

VENUE Fullerton Hotel
2.30PM - 5.00PM

Seatrade Asia Awards 2010

VENUE Shangri-La Hotel
6.30PM - 10.00PM

Tuesday April 27, 2010

2nd Annual Offshore Support Vessels Asia-Pacific

VENUE Grand Copthorne Waterfront Hotel
9.00AM - 5.00PM

Maritime Learning Journeys

VENUE Various Maritime Installations
8.30AM - 3.00PM

Information Fusion Centre (IFC) Maritime Workshop 1/2010

VENUE Information Fusion Centre, Changi C2 Centre
9.00AM - 5.00PM

ICS / ISF International Shipping Seminar

VENUE STI Auditorium, Capital Tower
2.00PM - 5.00PM

Consultation on New Ship Sale Form

VENUE M Hotel
9:00AM - 12.00PM

Sea Asia 2011 Launch Party

VENUE Reflections at Keppel Bay Show Gallery
6.30PM - 9.00PM

3rd Singapore Maritime Forum

VENUE Singapore Maritime Academy Auditorium, Singapore Polytechnic
6.30PM - 7.00PM

Wednesday April 28, 2010

MARTECH 2010

VENUE Singapore Polytechnic
FULL DAY

Seatrade Tanker Industry Conference 2010

VENUE The Tanglin Club
8.30AM - 6.30PM

Offshore Vessels Workshop

VENUE Grand Copthorne Waterfront Hotel
9.00AM - 5.00PM

Maritime Learning Journeys

VENUE Various Maritime Installations
8.30AM - 3.00PM

5th Annual International Maritime Law Conference

VENUE Royal Plaza on Scotts Hotel
9.00AM - 6.00PM

Lloyd's Register 250th Anniversary Celebration Dinner

VENUE Shangri-La Hotel
7.00PM - 11.00PM

Thursday April 29, 2010

MARTECH 2010

VENUE Singapore Polytechnic
FULL DAY

Vision and Roadmap for R&D Priorities in Maritime Environment, Technology, Business, Policy and Security

VENUE Hilton Singapore Hotel
8.00AM - 10.00PM

Piracy and Sea Robbery Conference 2010

VENUE Swissôtel Merchant Court
8.30AM - 12.45PM

Petrospot Seminar: Managing Credit Risk

VENUE Swissôtel Merchant Court
9.00AM - 5.30PM

Inaugural FPSO Singapore 2010

VENUE Grand Copthorne Waterfront Hotel
9.00AM - 6.00PM

5th Annual International Maritime Law Conference

VENUE Royal Plaza on Scotts Hotel
9.00AM - 6.00PM

The Petrospot Maritime Security Debate: Taking Arms Against A Troubled Sea

VENUE Swissôtel Merchant Court
2.00PM - 5.30PM

DNV Best Practices Forum

VENUE Shangri-La Hotel
4.00PM - 6.30PM

BIMCO39 Reception

VENUE Swissôtel Merchant Court
6.00PM - 8.00PM

MARTECH 2010 Conference Dinner

VENUE Singapore Marriott Hotel
8.00PM - 12.00AM

Shipping Conference 2010

VENUE Ritz-Carlton, Millenia Singapore
9.00AM - 6.00PM
6.00PM - 8.00PM
(COCKTAIL RECEPTION)

Friday April 30, 2010

Vision and Roadmap for R&D Priorities in Maritime Environment, Technology, Business, Policy and Security

VENUE Hilton Singapore Hotel
8.00AM - 10.00PM

Petrospot Seminar: Bunker Operations - Quality & Quantity

VENUE Swissôtel Merchant Court
9.00AM - 5.30PM

Petrospot Seminar: Maritime & Port Security Seminar

VENUE Swissôtel Merchant Court
9.00AM - 5.30PM

Inaugural FPSO Singapore 2010

VENUE Grand Copthorne Waterfront Hotel
9.00AM - 6.00PM

ICS / ISF Dinner

VENUE Resorts World Sentosa, Integrated Resort
EVENING

OUR MARITIME MOMENTS THROUGH YOUR LENS

Singapore Maritime Week Photography Exhibition 21 – 25 April 2010 | VivoCity

Come view unique and striking images of Maritime Singapore at the first-ever Singapore Maritime Week (SMW) Photography Exhibition.

From land, sea, people to architecture, appreciate award-winning photographs specially captured for the SMW Photography Competition.

Remember to vote for your favourite photographs when you visit the exhibition!

www.smw.sg

Organisers:



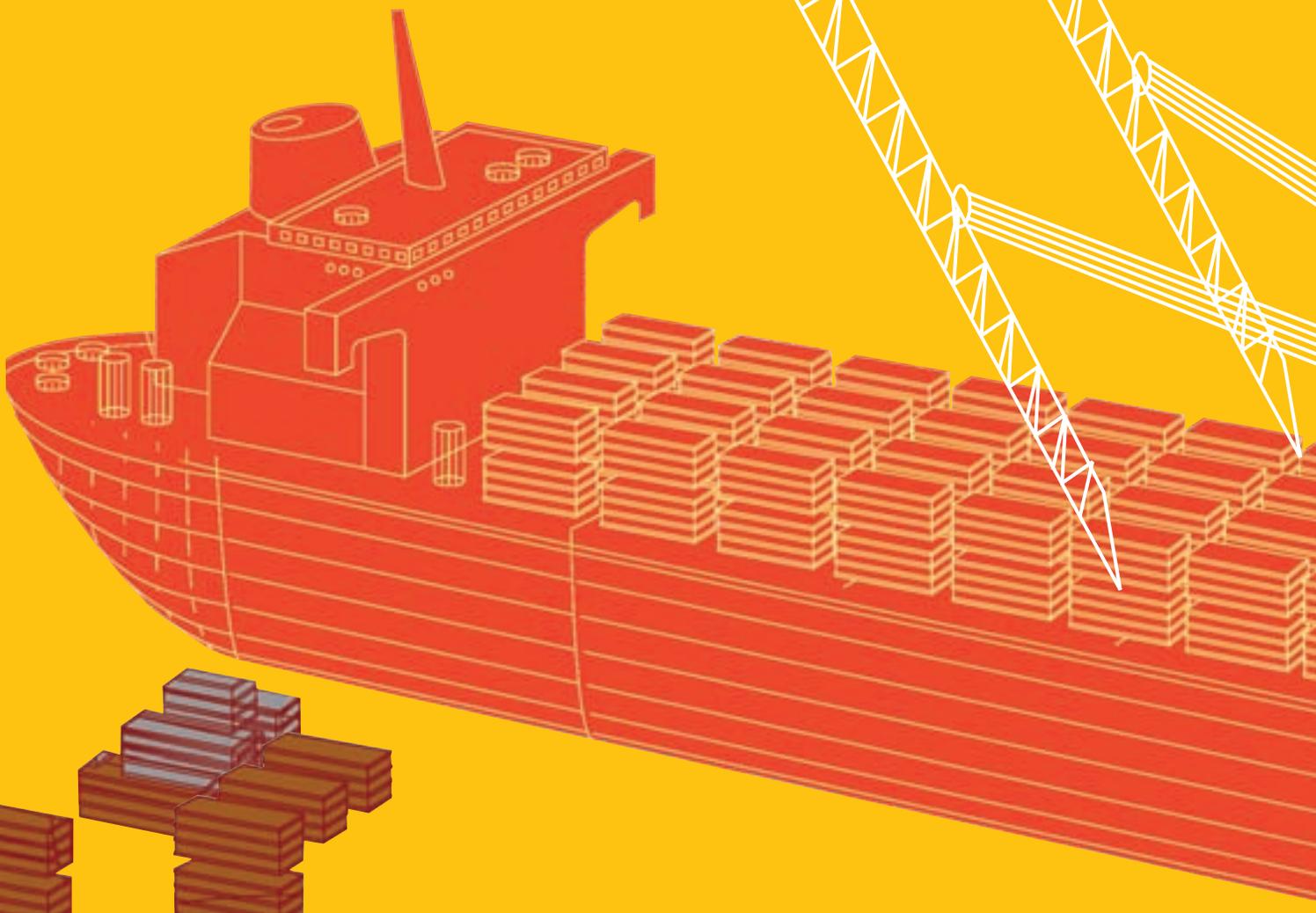
Co-Organiser:



ELEVEN MEN

WHAT STARTED AS CASUAL BANTER AMONG 11 MEN 250 YEARS AGO, BECAME THE WORLD'S FIRST CLASSIFICATION SOCIETY. TODAY, IT IS A GLOBAL POWERHOUSE KNOWN AS **LLOYD'S REGISTER**. BY RAHITA ELIAS

AND A LIST



It was a rather quiet start. Eleven men at Edward Lloyd's London coffee house were just having a natter when they came up with a brainwave. Their idea was to publish a list of ships, which would be a register to define the vessels' quality and safeguard life and property carried on them. The result was the formation of the Society for the Registry of Shipping, the forerunner to Lloyd's Register (LR), in 1760.

Since then, the world's first classification society has grown in geographical reach and business range. Despite these changes, Lloyd's Register's raison d'être remains the same.

Nigel Worsley, Lloyd's Register's Senior Vice-President, South East Asia Marine, explains: "It is the same as it has been since 1760 when we first began. We have continued to provide the products and services that help our clients to operate safely and environmentally friendly assets that are commercially viable and sustainable. We have also continued to increase our service-delivery capabilities and technical expertise to our clients."

Bearing testimony to the quality of its service and technical expertise are the accolades it has won. Among them is the Lloyd's List Asia Awards, where LR won the Classification Society of the Year award three years running. "When our peers vote for us in three consecutive Classification Society of the Year in Asia awards, we know we are on the right track," says Worsley.

Defining Lloyd's Register

He adds that LR defines itself in terms of four concepts: Technical expertise, integrity, global reach and breadth of knowledge.

Worsley explains: "We have written and published rules and regulations for ships and continually update them. We supplement with a global investment in training and educating our employees, and by listening to our stakeholders."

Financial independence also protects LR from being affected by commercial or national influences, allowing their clients sound, unbiased technical advice.

In terms of geographical



reach, it has some 7,700 people at 238 offices in 227 countries and territories. "With over 90 nationalities, you can imagine the diversity of our workforce. This global diversity gives us the ability to service our clients. We can combine an intimate knowledge of local culture and regulations and a global network," says Worsley.

On breadth of knowledge, he explains: "Many people think of Lloyd's Register as a ship classification society, and we are very proud of that. It is our origin. However, we have other business units such as Energy, Management Systems and Transportation. Given this multitude of knowledge, there are many synergies to be realised among these businesses."

LR has a long and established history here (in Singapore). Less than 60 years after Sir Stamford Raffles first set foot on Singapore, the LR "flag" was also planted here.

Not just ship classification

A prime example of these synergies is right here in Singapore. In July 2008, LR set up its Singapore-based Floating Offshore Installation (FOI) business, a joint venture between its Energy and Marine divisions.

The FOI team had initially existed as part of the oil and gas business, dealing exclusively with its upstream clients. FOI, which acts as a bridge between LR's vast Marine and Energy teams, has a core of 12 experts. Ten are based here, with one in Busan, South Korea, and the other in Aberdeen, Scotland. A China satellite team is imminent.

"The business is being managed here because Singapore is one of the biggest centres for the development of offshore structures in Asia and the world."

The office here also serves as the South East Asia area office for LR. Its management's remit includes Indonesia, Malaysia, the Philippines, Thailand, and Vietnam.

Singapore and LR

Worsley, who is also the country manager for Singapore, points out that LR has a long

and established history here. Less than 60 years after Sir Stamford Raffles first set foot on Singapore, the LR "flag" was also planted here.

"It was a major milestone for Lloyd's Register in Asia. We first established a presence in Singapore in 1878 with a non-exclusive surveyor, then an exclusive surveyor in 1895. We have a 130-year presence here, and we are very proud of that."

Given LR's deep Singapore roots, it is playing a major role in developing the pool of shipping talent here.

Lloyd's Register Educational Trust (LRET), set up by LR – but independent of it – has funded nine scholarships under the MaritimeONE initiative from 2008 to 2010.

"These scholarships are recognition of the importance of Singapore as a maritime hub and the quality of the MaritimeONE scholarship programme. LRET has strict criteria for sponsorship, and this programme has met them."

LR also sponsors a Professorship at the National University of Singapore (NUS), Professor Choo Yoo Sang, Director for Research at the NUS Centre for Offshore

Research and Engineering.

Worsley says: "It is the first time that the LRET had set up a professorship outside the UK, demonstrating our confidence in Singapore's commitment to develop its offshore and maritime industry."

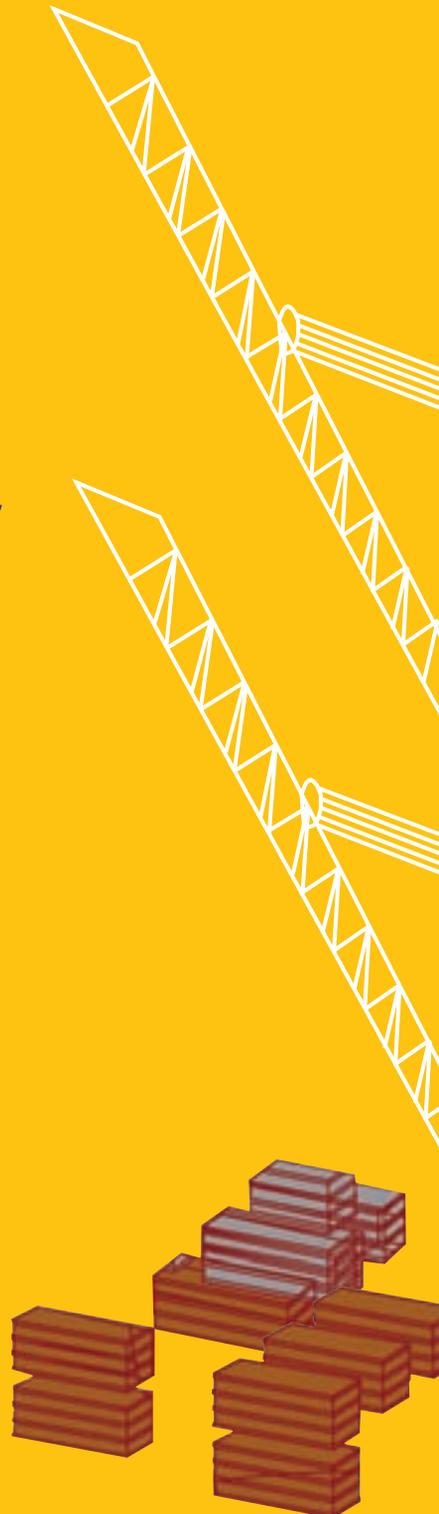
In addition, the Singapore LR team provides external training, workshops and seminars, while managing the South East Asia Technical Committee and the Asia Ship Owners' Committee.

"These communication channels keep the industry up to date with technology and regulatory developments as our clients need them, and often before. They also allow us to listen to and address our clients' interests and concerns," says Worsley.

He adds that the "great" communication has made Singapore the maritime hub it is today. "Singapore has adapted to the requirements of the marine environment, and it has created a culture of bringing all the stakeholders together to create a very user-friendly environment for shipowners."

Among the major attractions of Singapore, he notes, is its Approved International Shipping Enterprise scheme, which offers tax breaks to shipping companies. Worsley adds that with Singapore evolving in tandem with the maritime industry, shipping companies will continue to flock here.

"Even as we speak, several significant ship operations are moving office here because of the great environment created," says Worsley.



WHEN MINDS MEET

MTEC 2011 WILL BRING TOGETHER BRIGHT MINDS AND IDEAS FROM
ACROSS THE MARITIME INDUSTRY



► The International Maritime-Port Technology and Development Conference 2011 (MTEC 2011) will take place April 13-15 next year. It will be the 3rd of the MTEC conferences held alternately in Singapore and Rotterdam. The conference brings together researchers, practitioners and agencies from the maritime-port industries and is a vibrant platform for sharing new developments, trends, innovations and best practices.

Jointly organised by the Maritime and Port Authority of Singapore, Nanyang Technological University and National University of Singapore, and co-organised by the Port of Rotterdam and the Delft University of Technology, the conference boasts a panel of prominent speakers who will offer valuable insights into the latest maritime developments and technologies. There will also be an exhibition featuring the latest R&D products and services in the port, shipping and offshore industries.

CONFERENCE COVERAGE

The following thematic areas will be addressed during the conference:

- **Green Port and Shipping**
The maritime industry faces increasing concerns over environmental issues and with this, the impetus for research, development and adoption of clean energy and environmental technologies.
- **Port Planning and Development**
Port connectivity and pre-recession shipping volume growth led to the design of larger vessels, new port constructions, and application of new technologies such as intelligent systems and advanced port equipments.
- **Port Operations and Technology**
With signs of recovery from the recession in 2010, operators should constantly improve by using new technologies, methods and processes.
- **Offshore & Marine Technology**
Advances in offshore and marine technologies could hold the key to producing more from oil and gas wells and access resources in deeper waters to meet global energy needs.

CALL FOR PAPERS

Papers covering or relevant to the four thematic areas can be submitted. For online submission and pre-registration, visit the official conference website: www.mtec2011.org Paper selection will be based on a one-page abstract of about 300 words on the following topics:-

- Green Port and Shipping
- Port Planning and Development
- Port Operations and Technology
- Offshore and Marine Technology

Abstracts should be submitted together with the completed pre-registration form by June 30, 2010 to the Conference Secretariat. Abstracts submitted must include title of paper, authors' names and organisation(s).

DATES TO NOTE

- | | |
|---------------------------------------|-----------------|
| • Abstract submission system opens | Apr 1, 2010 |
| • Submission deadline for abstracts | June 30, 2010 |
| • Notification of abstract acceptance | by Sept 1, 2010 |
| • Submission deadline for full papers | Dec 31, 2010 |
| • Early Bird Registration | by Jan 31, 2011 |
| • Conference | Apr 13-15, 2011 |

* For further information or enquiries, please contact the Conference Secretariat at mtec2011@nus.edu.sg.





UPPING

NEW INITIATIVE TO DRIVE MARITIME CLEAN ENERGY TO GREATER HEIGHTS
BY RAHITA ELIAS

GREENA

◉ The Maritime and Port Authority of Singapore (MPA) and Nanyang Technological University (NTU) have joined hands to launch the \$15 million Maritime Clean Energy Research Programme (MCERP).

Under a memorandum of understanding (MOU) inked by MPA's Chief Executive, Lam Yi Young, and NTU Provost Professor Bertil Andersson in February this year, the five-year green initiative will focus on research platforms promoting carbon-neutral energy management solutions. Research will be conducted through the newly formed Centre for Maritime Energy Research (CMER), which comes under the Energy Research Institute at NTU (ERI@N). The MCERP will also leverage on other ERI@N centres to develop green solutions for shipping and port operations.

Research grants of up to \$8 million and \$2 million will be contributed by MPA's Maritime Innovation and Technology

(MINT) Fund and NTU respectively. The partners will work towards securing industry co-funding of up to \$5 million.

At the signing, Lam said: "Through the MINT Fund, MPA has been actively supporting R&D and test-bedding of maritime technologies by universities, research institutes and companies in Singapore. Two core areas under the MINT Fund are clean energy and environment technology. The MCERP comes under these areas and will help in the development of technologies toward greener shipping and port management."

Prof Andersson noted that environmental issues in the shipping and maritime industry were fast gaining prominence, with increased awareness of shipping's environmental footprints. "In line with one of NTU's Five Peaks of Excellence, Sustainable Earth, the programme we are launching today is timely and I applaud this opportunity to partner with

(The MCERP) heightens awareness and provides a focused and dedicated platform for the maritime community to undertake innovative pre-competitive research for green marine solutions.

Dr Kurichi Kumar, Head of Advanced Technology Centre, Rolls-Royce Singapore

MPA, ship builders and owners, ship operators, technology solutions providers, and classification societies to address the rapidly growing global energy concerns," he added.

Joining hands

Even at this early stage, the maritime community has gotten on board the green initiative. At the MCERP launch, American Bureau of Shipping (ABS), APL Co. Pte Ltd, DNV Pte Ltd, Keppel Offshore and Marine Technology Centre Pte Ltd and Sembcorp Marine Ltd signed an MOU with NTU, while Rolls-Royce Singapore Pte Ltd inked a letter of intent.

A K Seah, Vice President, Technology and Business Development, Southern Pacific Region, for ABS, says: "The MCERP initiative brings together the experience and knowledge of a variety of parties who share a common interest and place high importance on ecological and environmental goals."

Dr Kurichi Kumar, Head of Advanced Technology Centre, Rolls-Royce Singapore, agrees, saying: "(The MCERP) heightens awareness and provides a focused and dedicated platform for the maritime community to undertake innovative pre-

competitive research for green marine solutions."

Climate change challenge

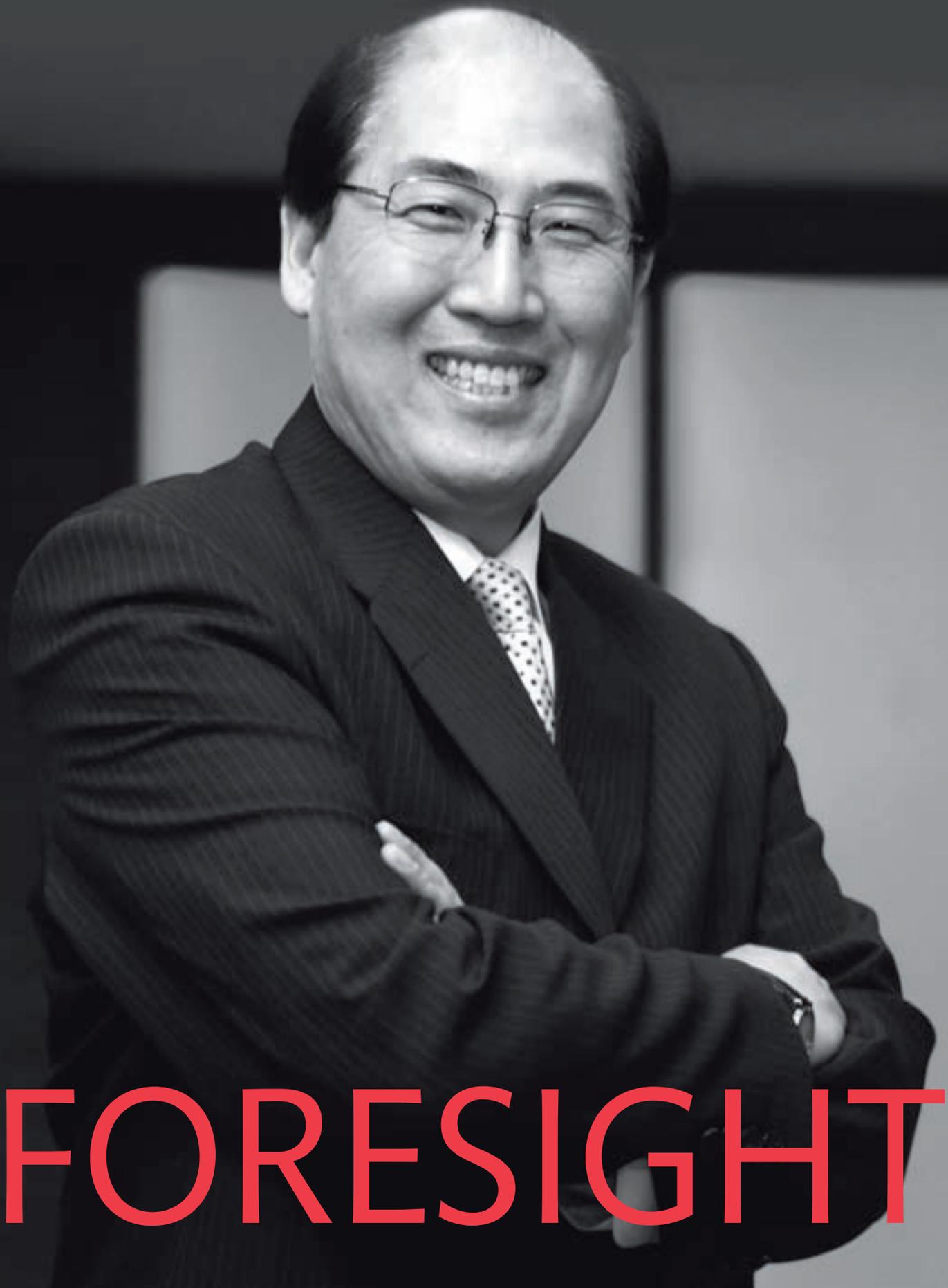
In Copenhagen late last year, governments met to discuss this hot topic. Charles Foo, Keppel Offshore & Marine's Managing Director (Special Projects), says that the summit succeeded in creating awareness of the need to mitigate climate change. "This, in essence, means limiting carbon emissions. With the Annexes of MARPOL, the burden on the marine community to use clean energy is inevitable. Keppel believes in sustainability and any programme we can participate which promotes it is worth the effort."

DNV, which recently established its new Clean Technology Centre (CTC), signed up because it believes collaboration is the way ahead. "We are delighted to work with such well-established research institutions and the MPA. We believe that our collaborative model will contribute to Singapore's fast-evolving clean tech industry," says DNV CEO Dr Henrik O. Madsen.

With such strong support from the industry, the future looks bright for Singapore's green shipping movement.

THE

NTE



FORESIGHT

► For a high-ranking official who heads South Korea's Maritime Safety Bureau, director-general Lim Ki-Tack is a remarkably humble man. As Lim relates how he had his first somewhat tentative beginnings at the agency, which is the equivalent of Singapore's Maritime and Port Authority, he relates candidly that it took him some time to be convinced that his role there was a sufficiently important one that he should consider staying on, instead of going back to the private sector where he began his career.

In the beginning

Going further back to how Lim got his start in the maritime industry, it boils down to much more pragmatic reasons. When he finished high school in the early 1970s, South Korea was not the economic powerhouse it is today, and it was a tricky question to find a sector to specialise in that would have the best prospects for the future. But the young Lim, showing the foresight and vision he has today, decided to go to the Korea Maritime University because he felt the industry would grow in importance as global trade grew.

After finishing his studies, he went to sea for slightly over a year with a

Korean shipping company, before returning and joining the government service in 1985. His first big experience was attending a Marine Environment Protection Committee (MEPC) meeting at the International Maritime Organization (IMO) and he continued to attend various meetings at the IMO after that.

"I was not sure how important and meaningful my job was then," he discloses. "I didn't fully recognise the value of maritime safety and marine environment protection to the Korean government at that time." However, the epochal moment came when he chanced upon the UNCLOS convention in 1987. He was so captivated by the value of the convention that he decided to enroll in the World Maritime University in Sweden - which is run under the auspices of the IMO - to further his studies.

During this time, he learnt more about the key articles encompassing safety, environment protection, roles of flag states and port states and the role of the government in these areas. "Through the articles and my understanding of them, I was assured of the importance of my job and that I should continue working for the government rather than go back to the private sector," he says somewhat

laconically. Lim assumed his current appointment last August. Prior to this, he held various posts, including Minister-Counsellor for the Korean Embassy in the UK, Director-General for Maritime Safety Policy, Director for Shipping Policy Division and as Korea's Maritime Attache to the IMO.

Key targets

Lim's self-effacing nature in the early years of his career belie his reputation built up over many years of service in the maritime sector. Among his priorities to achieve in his work at the IMO and national level are to further develop the currently voluntary efficiency audit scheme for shipping companies and to further enhance port state controls.

The other key area he hopes to make headway on is addressing the problem of piracy. Speaking on the sidelines of the recent 4th Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia (ReCAAP) Information Sharing Centre (ISC) Governing Council meeting, Lim says that while ReCAAP has been very successful so far in combating the problem of piracy in the region, more efforts need to be made to resolve the

ALTHOUGH IT TOOK SOME CONVINCING, LIM KI-TACK'S
VISIONS AND MISSIONS ARE COMPLETELY ASSIMILATED WITH
THE MARITIME INDUSTRY BY VINCENT WEE

AND VISION

Singapore is a successful example of highly efficient and well organised port operations. There are areas here we can co-operate and benchmark against, and I would like to see more co-operative activities in future.

issue in the Gulf of Aden and other areas to the east of the African coast.

"I really appreciate the importance of ReCAAP and the progress made which has been very successful," says Lim. "The dedicated efforts of Singapore within the limits of its human and financial resources has really helped to improve the situation till the formalisation of ReCAAP quite recently," he adds. Lim says that more capacity building exercises particularly for the less developed and most badly affected countries need to be put in place to help improve the situation in future.

Singapore and Korea

Underscoring the good working relationship between Singapore and Korea, Lim recently visited Singapore as part of the MPA's Distinguished Visitor Programme (DVP) where he called on Permanent Secretary for Transport, Choi Shing Kwok. In his meeting with Choi, they had a good exchange of views on areas for further co-operation such as piracy, climate change and the Co-operative Mechanism. Lim also met with MPA Chief Executive Lam Yi Young and other MPA senior management.

Both parties agreed to work towards a Memorandum of Understanding (MOU) on Maritime Co-operation to further strengthen maritime relations between Singapore and Korea. The DVP

programme was established in 1997 and has been a key vehicle for engaging and developing relations between MPA and leaders in the international maritime community.

"I believe there are many areas for co-operation between Singapore and Korea," says Lim. This is especially so since both countries are in geographically separate regions where they are not competing with each other. "In fact, they can even complement each other," he adds.

Lim sees three main areas for co-operation: At the inter-government level, between shipping companies through the respective shipowners' associations and in terms of port operations.

"Singapore is a successful example of highly efficient and well organised port operations. There are areas here we can co-operate and benchmark against, and I would like to see more co-operative activities in future," he says.

This should be done through more frequent contacts between the two countries and the MOU between them that should hopefully be finalised by the end of the year will help to enhance that. Possible areas of co-operation include joint activities such as organising international events. Singapore's systems to deal with maritime statutory areas, commercial port operations and the Vessel Traffic Information System are also areas where Korea can get support in its

efforts to improve, Lim says. "Due to the nature of shipping, which is inherently international, there are always areas to improve co-operation among regional countries whether at a multilateral or bilateral level," he notes.

Goals for the future

Turning his focus to the future, Lim sees the need to help less developed countries bring their maritime safety and environmental protection standards up to international levels as this is important for sustainable development. This needs to be done through increased capacity building measures, he says, as there are variations among countries due to differences in the levels of development. "We have to focus on capacity building particularly for the developing countries," he says. Lim adds that this is the reason why the Korean government has increased the level of its contributions to help less developed countries.

Lim points out that Korea also reached its current level of development from a very low base previously and along the way had been helped by other countries. "So now it is time for Korea to pay back because throughout our economic development there were many countries who helped us in many ways."

Although the business of shipping has developed over the years, there are still issues that need to be dealt with to ensure its future success.

One such issue is the shortage of seafarers, which needs to be addressed on various fronts. These include improving the status of people who go out to sea and thinking of incentives to attract young people to the profession. Sharing the experience of Korea, where new job seekers are reluctant to enter the profession, Lim praises Singapore's efforts in this regard. "Singapore has been doing a great job in this regard and in particular the work by public sector organisations such as MPA," he says.



The 16th Singapore International Bunkering Conference and Exhibition

27 - 29 October 2010
Resorts World Sentosa Singapore

Forging Ahead – A New Era for Marine Fuels

Maritime and Port Authority of Singapore is delighted to announce that the world's largest Marine Fuels Conference is back after a stupendous success in 2008. With 1000 attendees from 45 countries at the last conference, SIBCON has set unrivalled benchmarks for the industry. The conference will be followed by the highly popular Oil Spill Exercise, scheduled on 29 October, to enable participants get a better feel of practical issues associated with managing an oil spill.

SIBCON 2010 WILL BRING TO YOU

Thought Leadership – Renowned industry commentators at the top of their game will present the latest trends in Global oil markets, International trade developments and the Outlook for shipping markets, and key drivers shaping the marine fuels industry.

Marine Fuels Market Watch – Challenges facing fuel specifications, security of supply, demand and supply of LSFO, and risk management amongst others, will dominate the discussions that will be led by Supplier CEOs. Shape the future of your business by staying on top of demand trends and market opportunities.

Ship owner reactions – Get inside the minds of top ship owners and understand what influences the bunker procurement strategy. Is it as simple as cost and quality? Which contracting practices are desirable, what hedging strategy is best, and where do disputes arise? Hear from the technical and procurement decision makers on their expectations from suppliers.

Brand New Location! The doors have been thrown open at Resorts World, Sentosa. Offering a stunning range of activities that allow you to mix business with pleasure, this slick new facility boasts of theme parks, gaming, kids club, shopping – the list is endless! Make the most of your time here.

And much more!

REPLY FORM	<input type="checkbox"/> Yes, please send me a brochure on The 16th Singapore International Bunkering Conference and Exhibition, 27-29 October, Resorts World, Sentosa <input type="checkbox"/> I am unable to attend this time but please put me on your mailing list		
	Name:	Job Title:	
	Company:	Business Activities:	
	Address:		
	Tel:	Fax:	Email:
	For more information, please contact Ruoh Yi Tham at IBC Asia (S) Pte Ltd. Tel : (65) 6835 5109 Fax: (65) 6733 5087 or Email: ruohyi.tham@ibcasia.com.sg or mail to IBC Asia (S) Pte Ltd, No. 1 Grange Road, #08-02, Orchard Building, Singapore 239693. <small>51288 MPA Nautilus April 2010</small>		

Key contacts	Programme and Speaking Opportunities Sukumar Verma, Project Director sukumar.verma@ibcasia.com.sg	Marketing and Media Arrangements Ruohyi Tham, Senior Marketing Manager ruohyi.tham@ibcasia.com.sg	Sponsorship and Exhibition Opportunities Jonathan Kiang, Sponsorship and Exhibition Manager jonathan.kiang@ibcasia.com.sg
---------------------	--	--	--

For programme updates and registration options visit the SIBCON 2010 web portal www.sibconsingapore.com

Organised by: 	Managed by: 	Sponsors to date:          
--	---	---

HANS SMITS HAS HIS HEART AND MIND TRAINED ON REDUCING SHIPPING'S ADVERSE EFFECTS ON THE ENVIRONMENT BY VINCENT WEE

HEART AT SEA

▸ Running one of Europe's biggest hub ports is something that has come from the culmination of a long and varied career in the transportation business for Port of Rotterdam president and CEO Hans Smits. But he began his working life in a rather different role.

After graduating from the Netherlands' Delft Technical University as a civil engineer, Smits started working on the Delta project to protect the south-western part of the Netherlands from flooding, his first contact with the sea. In 1975, he joined the Dutch Ministry of Transport, Public Works and Water Management, where after holding several key positions, took him to the highest civil service post there. "I learned to appreciate the various aspects of the sea. But later my professional scope widened to water works, maritime affairs and policy, roads, rivers, ports and airports," Smits recounts.

After completing his civil service in 1992, he took up the appointment of president and CEO of Amsterdam's Schiphol Airport. In 1998, he joined Rabobank Nederland as chairman of the executive board, and later served as a director of Arthur D Little Benelux.

Exciting Developments Ahead

In 2005, the call came to be a part of the Port of Rotterdam. The appointment of such a highly qualified person as Smits coincided with expansion plans for the port. The Maasvlakte 2 port extension project is a major infrastructure development that is set to see the port through the next 20 years.

Smits cites specifically the Maasvlakte 2 project, where the first phase is due for completion in the second quarter of 2013,

as the way forward for the port, not only because of its flexibility but also because it will set the benchmark in making ports more environmentally friendly. "We put much effort in raising the sustainability levels in the port and of port-related activities," adds Smits.

The Port of Rotterdam intends to cut carbon dioxide (CO₂) emissions of the port area by 50 per cent from 1990 levels by 2025 through various means including carbon capture at source, transport by pipeline and inland vessel and underground storage in the North Sea.

A precondition is turning carbon into a commodity through the emission rights trade system. If so, the prospects for Rotterdam as a CO₂ hub for north-west Europe can grow. "I would describe the smooth progress for the project a highlight of my career, and I hope the carbon project will be another one," he says.

The enormous growth in importance and scope of sustainability is the most significant change in the shipping and ports industry and will be for many years, predicts Smits. Complying with the standards or anticipating them is not just a matter of change in procedures. In a lot of cases, a "fundamental rethinking" is necessary, he says.

Working Together

This is part of the reason for Smits' recent visit to Singapore where he met with Maritime and Port Authority of Singapore's (MPA's) chief executive Lam Yi Young and other top management and key customers of the port. "We co-operate on a long-term basis and meet each other regularly to exchange ideas and develop them together. We discussed sustainability strategy and touched on the regulatory

framework in our respective areas and how we can learn from each other," says Smits.

Another issue was the environmental shipping index, which is a system that rewards cleaner ships coming in and out of the port. "On a global scale, the Port of Rotterdam, a shipping line, and the EU can take the lead to stimulate others, but effective implementation is only possible with international co-operation and via international standards," he says.

Spreading the Word

Prime among discussions with Smits' counterparts at MPA was the issue of climate change. He shared how the Port of Rotterdam is leading the city's Rotterdam Climate Initiative by committing to its carbon reduction targets. "All big ports with people living nearby should have sustainability programmes so that air quality will be better despite the increasing throughput," says Smits. "In this respect, we would love to share our experience with Singapore."

Other discussions were also held with major industry players based in Singapore such as Wilmar, Chemoil, Keppel and Neptune Orient Lines.

Apart from increasing environmental demands, Smits sees containerisation as the second big change of the last few decades. "Not just the technical aspects and consequences in shipping, terminal handling and hinterland transport but probably even more, its contribution to the economic globalisation and the rise of new economic powers," he says.

Smits also visited MPA's Pasir Panjang Terminal extension site and noted that even as the Port of Rotterdam ramps up its capabilities, ports in Asia are also keeping pace.



SHARE &

EXPERIENTIAL WORKSHOP HELPS IMO MEMBER STATES PREPARE FOR AUDIT

LEARN

► The Maritime and Port Authority of Singapore (MPA), with support from the Ministry of Foreign Affairs and the International Maritime Organization (IMO), organised a workshop for IMO member States from the Asian and African regions for the implementation of the Voluntary IMO Member State Audit Scheme (VIMSAS).

A change from current workshops which focused on the training of auditors, this session sought to share with member States Singapore's experience on the implementation of mandatory IMO instruments and the audit process in a bid to help them prepare

successfully for the VIMSAS. Twenty-four maritime officials from 13 countries attended the workshop held from March 1-5.

Organised under the Singapore-IMO MOU on Third Country Training Programme, the workshop served as a unique learning and sharing platform to equip IMO member States from the Asian and African regions with knowledge on VIMSAS audit preparation, process and follow-up action required. In addition to class discussions with MPA officers who were closely involved in Singapore's VIMSAS audit, the officials also visited MPA's Port Operations

Control Centre, MPA's Hydrographic Department, and an oil spill response facility to observe the implementation of IMO rules and regulations that ensure safe, secure and clean shipping.

MPA Chief Executive, Lam Yi Young said: "Singapore has been an active supporter of VIMSAS, and Singapore was a member of the pilot audit project which facilitated the implementation of the IMO audit scheme.

"We hope that by organising this workshop to share our experience on VIMSAS, more countries will indicate their preparedness to be audited."



Singapore Nautilus spoke with participants of the workshop on what they felt about the session:

Mauritius has already volunteered to be audited under the VIMSAS programme. The workshop gave us an insight into what has to be done in order to implement the IMO Conventions and also gave us the opportunity to realise the large amount of work that is being done in Singapore in implementing the IMO Conventions and in turn realise our shortcomings.

Kiran Shamloll, Senior Maritime Officer assisting the Mauritian Secretary for Shipping Development, Republic of Mauritius

The workshop provided us an opportunity to learn from Singapore's experience on how Indonesia can prepare for the audit. It has also provided us with ideas on best practices that could be applied to our maritime administration.

Bambang Sutrisna, Head, Sub-Division of Public Relation and International Co-operation, Legal Division, Ministry of Transportation, Republic of Indonesia

Now I understand the shortcomings of the implementation process of the IMO regulations in Sri Lanka. This programme helped me immensely in getting ready for the upcoming IMO-VIMSAS audit.

Mahanama Jayawickrama, Additional Secretary for Ports and Shipping at the Ministry of Ports and Aviation, Democratic Socialist Republic of Sri Lanka

The guidance, knowledge and experience of all lecturers; Singapore practices that had been shared selflessly; and the exchange of knowledge and information among participants were key to the success of the workshop.

Tatjana Krilic, Member State Audit Officer, Member State Audit and Internal Oversight Section, Office of the IMO Secretary-General

WHAT IS VIMSAS?

The Voluntary IMO Member State Audit Scheme (VIMSAS) was launched in 2005 to raise the quality of shipping through objective and comprehensive assessments of member States' compliance with implementation of mandatory IMO instruments. It allows member States to review and address gaps in their enforcement of IMO regulations for international shipping. Singapore underwent the audit in 2008 and has participated in the audit of four other maritime administrations.



SAFE AND

FROM PIRACY TO ILLEGAL FISHING, THREE SECURITY EXPERTS TELL US
WHAT KEEPS THEM UP AT NIGHT

SECURE SEAS

Yoshiaki Ito



Joshua Ho



Giles Noakes



● Yoshiaki Ito, Executive Director, ReCAAP Information Sharing Centre (ISC)

● Joshua Ho, Senior Fellow, S. Rajaratnam School of International Studies

● Giles Noakes, Chief Maritime Security Officer, BIMCO

► In a World Maritime Day message on maritime security, Secretary-General of the International Maritime Organization (IMO) Efthimios Mitropoulos stated: "...even though the new international maritime security measures are now in force, we must not make the mistake of resting on our laurels and assuming the work has been completed. The risks are too high to allow for any hint of complacency and we must make sure that high levels of vigilance and awareness are maintained and built upon until they become second nature throughout the shipping and port industries."

Six years on from that timely message, maritime security remains a key focus area for governments, maritime companies, and relevant agencies. *Singapore Nautilus* digs deep into expert minds to see what is being done to ensure safety at sea.

SINGAPORE NAUTILUS: What are the challenges for maritime security in the region and internationally?

ITO: Challenges for maritime security include organised crime such as smuggling of drugs, trafficking of humans and weapons, illegal migration, illegal fishing, terrorist attacks, disasters at sea (e.g. ferry sinking), disputes over resources, including piracy and armed robbery.

The magnitude and extent of these challenges vary in different locations but there is no room for complacency.

HO: Good order at sea ensures the safety and security of shipping and permits countries to pursue their maritime interests and develop their marine resources in an ecologically sustainable manner in accordance with international law.

A lack of good order at sea is evident if there is illegal activity at sea or inadequate arrangements for safety and security of shipping. At present we lack good order at sea in the region. Problems in regional waters include piracy and armed robbery against ships, the threat of maritime terrorism, illicit trafficking in drugs and arms, people smuggling, pollution, illegal fishing and marine natural hazards, such as tsunamis and cyclones.

SINGAPORE NAUTILUS: What are some of the ways we can address these challenges?

ITO: It has already been acknowledged that no country or agency can manage the challenges alone. Countering transnational threats and challenges requires consistent co-operation between States and the various maritime stakeholders. Thus, regional co-operation is the key to address these issues.

Enhanced sharing of information among stakeholders at functional levels is a major contributor to this effort. The ReCAAP initiative is an example of such co-operation. The ReCAAP ISC provides the platform for information sharing among governmental agencies and the maritime community. Having such a network increases capacity and resources to enhance the assorted forms of enforcement and containment.

HO: The lack of good order at sea is due to several factors. Difficulties arise in combating illegal activity at sea due to inadequate resources, ineffective national legislation, poor co-ordination between national agencies, and a shortage of trained personnel. The lack of maritime boundaries in parts of the region further complicates the situation.

Hence, managing these problems requires regional co-operation, as well as co-operation between agencies at a national level. While much progress has been made, particularly in

Enhanced sharing of information among stakeholders at functional levels is a major contributor to this effort. The ReCAAP initiative is an example of such co-operation. The ReCAAP ISC provides the platform for information sharing among governmental agencies and the maritime community.

Yoshiaki Ito, Executive Director, ReCAAP Information Sharing Centre (ISC)

the Malacca and Singapore Straits, present levels of co-operation elsewhere fall short of what is desirable.

NOAKES: It is important to meet the challenges with the tools available for a ship and a port. These include the implementation of the ISPS code and best practice advice. The continued review of risk assessments will ensure that the risk is kept at the minimum level.

The current threat release therefore should encourage all vessels transiting the region to review their SSA and implement measures of increased security according to their Ship Security Plan.

SINGAPORE NAUTILUS: Movies such as the Pirates of the Caribbean have

popularised the image of pirates as swashbuckling adventurers, how different is that from reality?

ITO: The heroic adventures of Captain Jack Sparrow are nothing more than myths poised to hit the box office. The reality is that piracy is an organised crime. Without enforcement, many economically challenged youths are being misled to perceive piracy as a means of making a quick buck. It has to be understood that piracy is a threat against global economy and political well-being; hence the perpetrators must be persecuted.

Though it may be one of the oldest "professions", it has evolved over time and countering it will take a more innovative form.

HO: While the movies have romanticised pirates as some sort of folk hero, the reality in the region is very much different. Many of the pirates in the region come from villages that are relatively poor and it is this poverty that drives these people to become pirates as a livelihood. Many acts of piracy in the region are low-level criminal acts such as theft of ship's equipment or money stowed onboard.

Perhaps closer to the notion of pirates in the movies would be pirates in Somalia. The Somali pirates are hard core criminals who are well-equipped with weapons like rifles and rocket-propelled grenades and fast boats. They are also well organised. The high level of sophistication has enabled them to hijack whole ships for ransom and operate far away from the main Somali coast.

NOAKES: The principal threat in the Malacca Straits is posed by piracy. This threat has been considerably reduced, particularly on the Malaysian side of the Straits, from the period between 2005 and 2006 when the pirate threat was such that the Straits were on the Lloyds of London Joint War Risks Committee's list of excluded areas. This improvement is primarily a result of the concentrated

efforts of littoral states, particularly Malaysia, assisted by the multinational ReCAAP co-ordination and intelligence centre in Singapore.

Nevertheless, piracy is endemic and significantly under-reported. It is now primarily targeted at fishing vessels and small coastal traffic. The threat on the Indonesian side of the Straits is considerably higher than that on the Malaysian side, largely because of the limited resources available to the Indonesian government; ports on this side of the Straits remain on Lloyds' list of excluded areas.

The piracy that does target larger commercial vessels in transit tends to seek either hostages for ransom, valuables and cash, or (only very occasionally) specific vessels to be hijacked for their cargo. The pirates are well-organised, heavily armed, comparatively efficient, ruthless, and have a propensity for sometimes extreme violence in the pursuit of their criminal activities. They tend to attack using either a single, high-powered small boat to close rapidly with the target or with flotillas of speedboats directed by a mother ship to box the target vessel in.

The pirates have also been known to use innocuous-looking fishing boats, usually

hijacked, to approach their targets and tranship hostages or booty.

SINGAPORE NAUTILUS:
As pirates evolve with the times, how have some of our methods evolved to combat piracy?

ITO: The maritime community has learnt from past incidents and worked hard to compile Best Management Practices

to share with seafarers. In addition, the collective effort of the law enforcement agencies of the various countries in the region has witnessed the effectiveness of operational cohesion and co-ordination with one another and like-minded agencies in combating piracy and armed robbery. This is a continually evolving procedure and the resolve of the industry and governments is evident in



refinement of the anti-piracy/ anti-robbery procedures from time to time.

HO: Combating piracy has evolved in the region mainly around the twin pillars of technology and organisation. In terms of technology, new non-lethal weapons like the long-range acoustic device (LRAD) can be used to deter pirates from boarding from a long distance away.

But more importantly, I think that organisational developments have contributed to the relatively low rates of piracy in the region. The setting up of the ReCAAP-ISC is an excellent example. The ISC is able to quickly share acts and trends of piracy to its partners who in turn disseminate it to their shipping community. The dissemination of best practices through capacity-building exercises has also contributed to the increased capability of the shipping community to deal with pirates in the region.

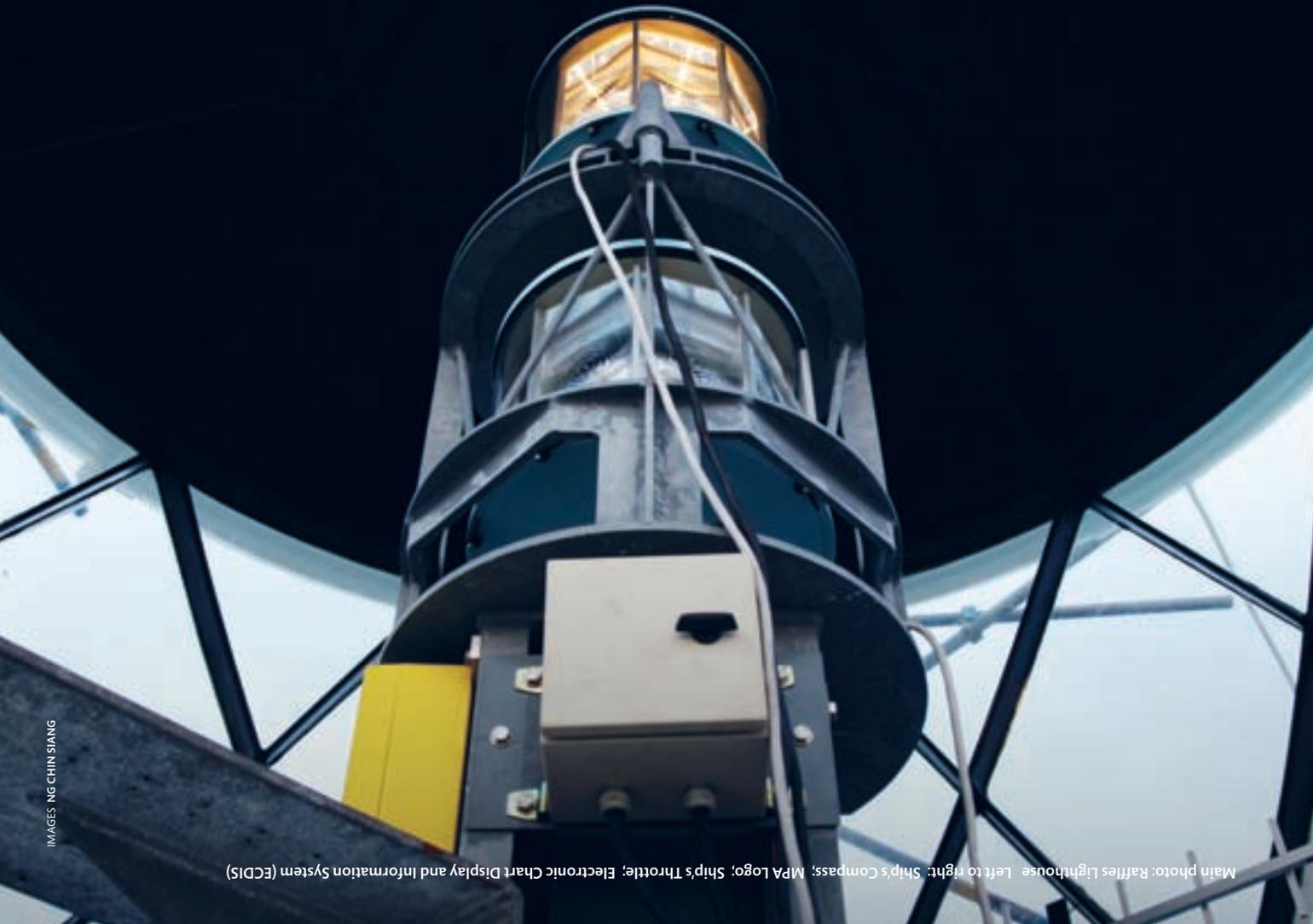
The principal threat in the Malacca Straits is posed by piracy. This threat has been considerably reduced, particularly on the Malaysian side of the Straits, from the period between 2005 and 2006 when the pirate threat was such that the Straits were on the Lloyds of London Joint War Risks Committee's list of excluded areas.

Giles Noakes, Chief Maritime Security Officer, BIMCO



SEA SNAPS

IF MARITIME HAS NEVER BEEN YOUR FOCUS, THE SMW PHOTOGRAPHY EXHIBITION MIGHT PRESENT YOU WITH NEW PERSPECTIVES. HERE'S AN IDEA OF WHAT YOU CAN EXPECT. (SEE BELOW FOR ANSWERS!)



DnB NOR - staying the course

Debt Capital Markets - Bonds & Loans

 <p>Stolt-Nielsen USD 250,000,000 Senior Secured Credit Facility Sole Bookrunner & MLA 2009</p>	 <p>Seadrill USD 1,500,000,000 Senior Secured Credit Facility Bookrunner & MLA NOK 800,000,000 Senior Unsecured Bond Joint Lead Manager 2009</p>	 <p>NCL USD 750,000,000 Senior Secured Credit Facility Bookrunner & MLA USD 450,000,000 Senior Secured Notes Co-Manager 2009</p>	 <p>Farstad Shipping NOK 680,000,000 Senior Secured Credit Facility Bookrunner & MLA 2009</p>	 <p>Precious Shipping USD 100,000,000 Senior Secured Credit Facility Bookrunner & MLA 2009</p>	 <p>Hurtigruten ASA NOK 3,300,000,000 Senior Secured Credit Facility Bookrunner & MLA 2009</p>
 <p>Gas-two Ltd./GasLog Ltd. USD 147,500,000 Senior Secured Credit Facility MLA 2009</p>	 <p>Havila Shipping NOK 960,000,000 Credit Facilities Bookrunner & MLA 2009</p>	 <p>Prosafe Production USD 130,000,000 Senior Secured Credit Facility Bookrunner & MLA 2009</p>	 <p>TPO Investments USD 375,000,000 Senior Secured Credit Facility MLA 2009</p>	 <p>Knutsen Group USD 210,000,000 Credit Facilities Bookrunner & MLA 2009</p>	 <p>Høegh Autoliners USD 220,000,000 Senior Secured Credit Facility Bookrunner & MLA 2009</p>
 <p>NCL USD 2,500,000,000 Debt Restructuring Sole Advisor 2009</p>	 <p>DOF Subsea NOK 500,000,000 Senior Unsecured Bond Joint Lead Manager 2009</p>	 <p>Color Group NOK 200,000,000 Senior Unsecured Bond Joint Bookrunner 2009</p>	 <p>Navios USD 400,000,000 First Priority Ship Mortgage Notes Co-Manager 2009</p>	 <p>General Maritime USD 300,000,000 Senior Notes Co-Manager 2009</p>	 <p>RCCL USD 300,000,000 Senior Unsecured Notes Co-Manager 2009</p>

Corporate Finance

 <p>Ocean Tankers USD 70,000,000 Sale Leaseback Sole Arranger 2009</p>	 <p>Teekay Offshore Partners USD 93,080,000 Equity Offering Co-Manager 2009</p>	 <p>Siem Offshore NOK 900,000,000 Private Placement Co-Lead Manager 2009</p>	 <p>PGS NOK 790,000,000 Private Placement Lead Manager 2009</p>	 <p>Golden Ocean NOK 738,000,000 Private Placement USD 100,000,000 Equity Offering Joint Lead Manager 2009</p>	 <p>Nordic American Tankers USD 135,000,000 USD 98,000,000 Equity Offerings Co-Manager/Advisor 2009</p>
 <p>Golar LNG Energy USD 110,000,000 Private Placement Joint Lead Manager 2009</p>	 <p>CGG Veritas USD 310,000,000 Acquisition of Wavefield Inseis Manager & Financial Manager to CGG 2009</p>	 <p>TTS Marine NOK 242,000,000 Rights Issue Sole Lead Arranger 2009</p>	 <p>K-Sea Transportation USD 55,000,000 Equity Offering Co-Manager 2009</p>	 <p>Teekay Offshore Partners USD 320,000,000 Financial Advisory Advisor 2009</p>	 <p>Reservoir Exploration Technology NOK 130,000,000 Equity Offering Sole Lead Arranger 2009</p>

Singapore • Shanghai • London • Athens • New York • Bergen • Oslo

DnB NOR Shipping, Offshore & Logistics

DnB NOR

EXECUTIVE MBA in Shipping, Offshore & Finance

The Business School with Singapore's #1 MBA* programme

(*Ranked #27 in the 2010 Financial Times Top MBA Rankings)

The Executive MBA in Shipping, Offshore and Finance is developed jointly by BI Norwegian School of Management, Norway, and the NTU Nanyang Business School, Singapore, in close collaboration with the industry.

Combining the latest research and theory with a practical "hands-on" approach, this programme is designed to give participants an understanding of the key drivers, challenges and opportunities in the shipping and offshore industry, with an exposure to the fastest growing Asian markets.

The objectives of the programme are to:

- Develop strategic leadership skills in the shipping and offshore sectors
- Identify business opportunities within a company's value chain
- Gain a thorough understanding of the global shipping and offshore business

Nanyang Executive Education also offers the following programmes:

- Nanyang Executive MBA Programme
- Nanyang Executive MBA Programme with specialised tracks in Entrepreneurship/Energy
- Nanyang Fellows Programme (full-time)
- Berkeley-Nanyang Advanced Management Programme

For qualifying candidates, funding support of the tuition fee is available from SPRING Singapore and MPA.

- Get two internationally recognised MBA degrees – one from BI Norwegian School of Management and one from Nanyang Technological University
- Modular format, 6 segments of 2 weeks every quarter
 - 3 segments in Oslo, Norway
 - 3 segments in Singapore
- Upcoming Intake in Feb/Mar 2011
- Application deadline: end November 2010

