





## Why Route 2

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The role of business in society is changing. For Maersk Line this provides a welcome opportunity to challenge the way we think about our business - and the industry we are part of. It forces us to plot a better, more sustainable course. We call this new path 'Route 2'. It is a shorthand for our journey to become a stronger, more profitable and sustainable company.

# Content

## Introduction

This is Maersk Line	7
Introduction	8
About the report	13
From the CEO	16

## Better trade

Better trade	18
Enabling emerging market trade growth	20
MAXimising West Africa's trade potential	24
The WAFMAX effect – Highlights	26
Partnerships for better trade	30
The case of the Indian banana trade	34
Supporting legal trade	38
Fighting corruption	40
Developing and supporting communities	42

## Service excellence

Service excellence	46
Supporting a new business model	48
Increasing supply chain efficiency through on-time reliability	50
More transparency - more choice in shipping	52
Energy efficiency: At the heart of our differentiation strategy	57
Advancing collaborations across industries	59
Improving the footprint of seafood transport	63
Coming up: Innovations to improve the supply chain	64

## Low impact shipping

Low impact shipping	66
Does distance matter?	69
Addressing carbon emissions	72
The Triple-E: The largest and most energy efficient container ship	79
Recycling materials	80
Addressing sulphur emissions	82
Protecting biodiversity	86

## Supply chain innovation

Supply chain innovation	88
Procuring responsibly	90
Partnerships with ports and terminals	92
Supporting 'dry port' developments for better trade flows in Indonesia	95
Engaging with ports on waste handling	96
Ship owners join fuel optimisation drive	97
Reducing the impact of containers	98

## Workplace sustainability

Workplace sustainability	100
Improving employee engagement	102
Mobilising employees	107
A safe workplace at sea	109
Container safety issues	114
Addressing security risks	117

Stakeholder engagement and partnerships	122
What do our stakeholders think?	125
Reporting on progress	127

# This is Maersk Line

**By transporting fresh food and products between world markets, sea freight offers people accessibility and availability of goods from many parts of the world at any time of the year.**

## At a glance

In Maersk Line we are 25,000 people with 325 offices in 125 countries around the world. Our fleet of more than 600 ships sail every major trade lane on the globe, and make about 35,000 port calls every year. Maersk Line is the largest shipping company in the world with a global market share of 15%.

## Absolute reliability

Maersk Line is an integral part of the supply chains of thousands of companies. Our goal is to help our customers optimise their supply chains. Ensuring that our customers' cargo arrives safely and on time is at the core of this.

Working closely with customers, we have introduced the concept of absolute reliability in shipping. Our new service, Daily Maersk, offers daily vessel departure times from four Asian ports to three ports in northern Europe with an on-time guarantee.

Reliability is at the heart of our business model. We are consistently ranked as the most reliable carrier among the world's 20 largest shipping lines by independent third parties.

## Putting customers first

One of our key goals is to transform the customer experience in the container shipping industry. We believe that taking out the complexity in dealing with shipping lines will go a long way in improving the customer experience.

Our progress is based on strategic partnerships and close collaboration with key customers, and an eagerness to constantly improve our service offerings through innovation and optimisation.

## Energy efficient shipping

Shipping accounts for 3-4% of man-made CO<sub>2</sub> emissions worldwide<sup>1</sup>. While container shipping is by far the world's most energy efficient means of transporting goods over long distances, it is overall still a large source of greenhouse gases.

We work to reduce Maersk Line's impact significantly, improving and innovating our way towards lower CO<sub>2</sub> emissions, cleaner water and air, and more responsible lifecycle management of our vessels.

Our goal is to be a low impact shipping line and maintain our leadership in energy efficiency.

## Enabling global trade

Maritime transportation has been, and continues to be, at the core of international trade, accounting for around 90% of globally traded goods.

At any given point, the largest shipping lines transport more than 3% of the globe's gross national product<sup>2</sup>. This makes Maersk Line one of the key enablers of the global economy. A position that brings great opportunities, but also responsibilities.

## 2011 Company facts:

- 325 offices in 125 countries
- Number of container ships: 600+
- Number of containers: 3.4 million TEU
- Port calls every year: 35,000
- Market share: 15%
- Number of employees: 25,000 people

<sup>1</sup> International Maritime Organization (IMO)  
<sup>2</sup> World Shipping Council, 2009; IMO, 2009

# Introduction

## Towards 2050

**As a key player and enabler of global trade, Maersk Line is exposed to some of the biggest global issues and mega-trends. While these trends influence our business in many ways, we would like to also see our role as actively working to shape the future of some of these global issues.**

We are uniquely placed to do so. We are starting to evaluate the kind of scenarios these issues will present over the next 20-30 years. And we are forming our response accordingly.

## Economic development and trade

Global economic output has developed rapidly alongside population growth. Between 1990 and 2010 global GDP has grown from USD 25 trillion to USD 75 trillion<sup>3</sup>.

An important element within this economic growth is that patterns of trade are shifting from the developed world to emerging economies. In the last five years, emerging markets have been responsible for 80% of GDP growth and overall represent half of all GDP, compared to a third 30 years ago<sup>4</sup>.

Trade between emerging economies is also a growing trend, with trade between

BRICs nations growing from USD 21.6 billion in 2001 to USD 154.5 billion in 2009<sup>5</sup>.

In the last 50 years, international trade in manufactured goods has increased over 100 times, from USD 95 billion to USD 12 trillion<sup>6</sup>.

Containerisation has helped accelerate this trade growth. Today around 90% of global trade uses sea transport<sup>7</sup>. Maersk Line is the biggest shipping line in the industry. We play a significant role in the global marketplace connecting customers with new markets.

## Trade shifts demand change

We expect the volume of goods moving from Asia to North America and Europe to continue to increase. Simultaneously, raw materials from Latin America, Oceania and Africa will increase to supply Asian manufacturing industries. As the GDP of countries on these continents rises, the returning trade flow will also grow.

Asia will become an increasingly important customer as well as a producer. Intra-Asian trade will therefore increase significantly. The shipping industry has a major role to play in supporting these trade flows and making sure they are managed effectively. We will need to partner with governments, ports and

customers to ensure that infrastructure and capacity bottlenecks do not hamper prosperity and cause unwanted impacts.

## Economic development and poverty

This recent history of global economic development has created significant benefits, particularly in the alleviation of poverty. It has taken China only 20 years (1991-2010) to double its average per capita income from USD 2,000 to USD 4,260 and India only 10 years to increase its per capita income from USD 329 in 1991 to USD 1,265 in 2010<sup>8</sup>. The global middle class grew to 1.8 billion people between 1980 and 2009, an increase of 700 million, and is anticipated to grow by 3 billion more in the next 20 years<sup>9</sup>.

Exports growth and access to global markets help raise the living standards of many people, but many economies are still held back by poverty and a lack of healthcare and education.

## The environment and natural resource constraints

It is impossible to talk about economic development without recognising the significant consequences this has already had and will continue to have for the environment and the amount of natural resources available on the planet.

<sup>3</sup> Goldman Sachs GS Sustain, "The die has been cast: A new age of accelerating consumption, constrains and competition", April 2011  
<sup>4</sup> www.economist.com/node/18895150  
<sup>5</sup> The China Society Yearbook, Chinese Academy of Social Sciences (CASS), 2011  
<sup>6</sup> Globalisation shakes the world: http://news.bbc.co.uk/1/hi/business/6279679.stm  
<sup>7</sup> International Maritime Organization (IMO)  
<sup>8</sup> International Monetary Fund (IMF)  
<sup>9</sup> www.worldbank.org

Today, there is little doubt about the role of human society in creating climate change. Ecosystems are already under pressure, such as clean fresh water, agricultural soil, forests and fisheries. Unless countries and industries reduce their footprints significantly, climate

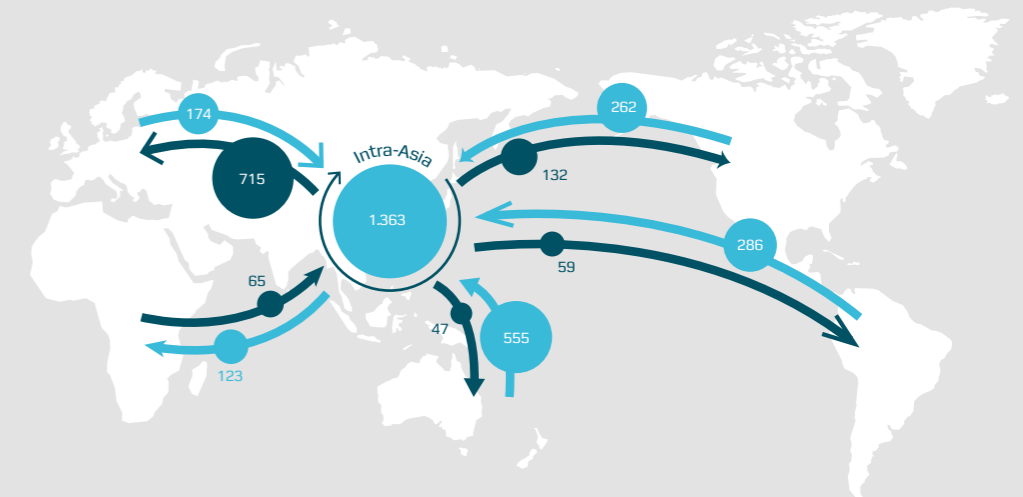
change is likely to impact the ability of the world community to deliver economic growth for the long term. The global transportation business generates significant levels of greenhouse gas emissions. At present, this

is a reality until alternative fuels and new energy sources are commercially available and scalable. Our business has a key role to play in supporting the transition to more environmentally sustainable forms of energy.

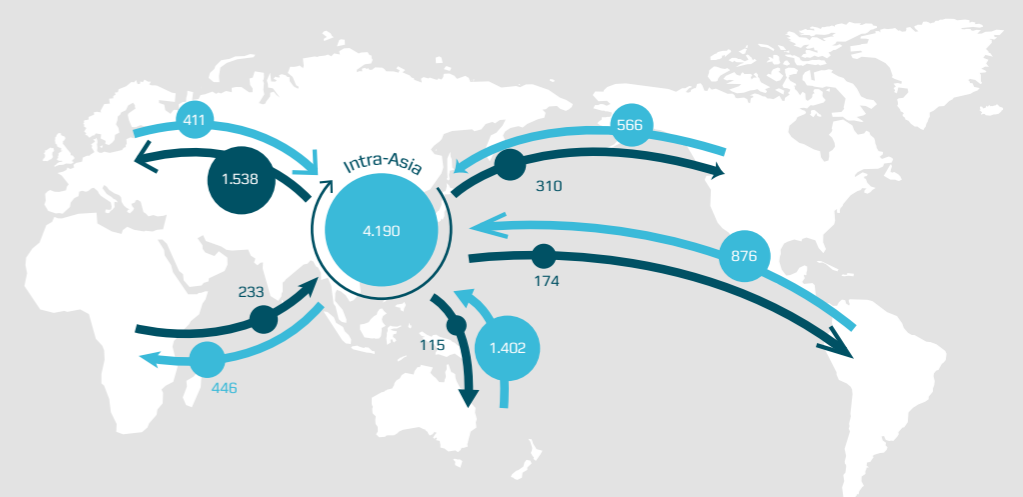
## Food and goods shipped on different routes in 2010 and 2050

**Maps:** Tonnage shipped on different routes in 2010 and 2050, million tonnes.

2010



2050



New trends in trade flows will have important implications for our industry and the means by which we will support global trade most effectively. For example, increasingly unbalanced trade flows will challenge the utilisation of ships if some exports cannot be paired with a returning

load, thus resulting in empty backhauls and logistical waste. Shipping lines are constantly looking to optimise shipments to avoid empty capacity. Capacity optimisation will become increasingly important to maintain high energy efficiency per container in global shipping.

Source: Xynteo analysis in "The Road Ahead", TATA Consultancy Services, 2011.

**Maersk Line's response**

While the challenges are severe, it is also true that leading businesses and other players are starting to re-think the role of business in society and how they can help provide viable solutions.

It is exciting to follow the developments of many global organisations, including some of our biggest customers, who are revising their business models to improve what are seen as systemic rather than industry-specific challenges.

We welcome this development and want to play our part in it. Similar to our customers, we recognise that we are

unable to tackle the issues in isolation. Collaboration and partnerships are forming across sectors, across industries and between public and private sectors. We too are seeking ways to collaborate and examples include our participation with the World Economic Forum, Sustainable Shipping Initiative and innovative programmes with customers where the objective is the optimisation of supply chains and creation of shared value.

It makes sense for us to take the lead in our industry given our size, position and support of the A.P. Moller – Maersk Group. Our operations require large-scale investments, often spanning 25-30

years. Our investments need to generate value for the long-term, and on many different parameters. It is this outlook for long-term economic growth and shared value - along with our commitment to drive industry-wide change that makes us uniquely positioned to be part of a solution.

**2040: A vision for industry-wide change**

Maersk Line is a founding member of the Sustainable Shipping Initiative (SSI) alongside leaders from across the shipping industry and respected NGOs WWF and Forum for the Future. The SSI aims to leverage members' ambition and position to deliver more sustainable value chains and plan how shipping can contribute to - and thrive in - a sustainable future.

**Case for action**

In May 2011, the SSI launched a Case for Action which highlights the global challenges facing the shipping industry over the next 30 years and the risks and opportunities they will bring. Key trends include new patterns of world trade, shifting global economic and political power, rising fuel costs and changing customer demands.

**Step changes towards 2040**

Following this, in November 2011 the SSI launched its Vision for 2040. This outlines key areas of action and specific work streams to help the industry respond to these trends. These include:

- Financing new technology to increase efficiency, diversify the energy sources used in shipping and radically reduce greenhouse gas emissions.
- Reducing the lifecycle impact of container ships by designing vessels that can be recycled more efficiently and that use fewer hazardous materials.
- Producing a "standard of standards" to drive improved sustainability performance in place of the disparate range of sustainability standards currently governing the industry.
- A step change in energy technology innovation and uptake, with key opportunities and barriers identified and improvements made in the level of consultation between shippers.

The first set of work streams will be launched during 2012 and Maersk Line

aims to play a key role in making this vision for the industry a reality.

To find out more about the Sustainable Shipping Initiative, visit:

[www.forumforthefuture.org/project/sustainable-shipping-initiative](http://www.forumforthefuture.org/project/sustainable-shipping-initiative)



# About the report

**This is the second sustainability progress report from Maersk Line. It reports on the progress we have made in 2011 against our strategy and commitments and captures the initiatives that moved us forward on our journey to become a more sustainable company.**

## Introducing Route 2

This year we have structured our report in a way that reflects the broadening scope of our strategy – under the heading 'Route 2'. From the launch of Daily Maersk to the creation of a joint vision for the industry, the testing of algae-based biofuels and various innovative customer partnerships, Route 2 captures the broad path that we are taking in partnership with our stakeholders.

In the report we address the fact that our business is inextricably entwined with the major drivers of the changes the world will see. We have set out to actively respond to these challenges. In the report we discuss how we go about that and what we have achieved.

We don't pretend to have all the answers, but we are committed to report on the progress we make in a transparent and balanced way. At the same time, we see this report as a good opportunity for engaging our stakeholders in issues and challenges that we can't solve on our own.

This report also tries to reflect the sense of change Maersk Line is driving and what it will mean for our customers, our own business and society as such.

## At the heart of the report are five chapters:

- Better trade (18-42) looks beyond our industry's current business models and explores the opportunities and impacts of addressing some of the world's key challenges in global trade including resource scarcities, poverty alleviation and environmental pollution.
- Service excellence (46-64) reports on our work to improve our customers' supply chains by making our offerings more reliable, simple and sustainable.
- Low impact shipping (66-86) captures the progress we have made in reducing the impact of our fleet on the environment, people's health, biodiversity and finite resources.
- Supply chain innovation (88-98) explores some of the new approaches we are developing with logistics partners to improve our own and our customers' supply chains and deliver on shared ambitions.
- Workplace sustainability (100-117) brings it all back home, with a review of how

we are making sure Maersk Line is a great place to work - safe, inspiring and rewarding too.

I hope you enjoy reading about Route 2, and as ever, welcome your feedback on our progress and how we can go further.

**Soren Stig Nielsen**  
Head of Sustainability,  
Maersk Line

# Maersk liner business\*

## Our employees

		2009	2010	2011
<b>Number of full time employees (FTEs)</b>		29,977 <sup>a</sup>	29,347 <sup>a</sup>	30,792
Gender (female representation)	%	35 <sup>a</sup>	37 <sup>a</sup>	37
Employee engagement	%	-	71	77
Performance appraisals	%	51	73 <sup>b</sup>	92
<b>Safety</b>				
Lost time injury frequency (LTIF)**	frequency	1,14	0,83	0,57
Fatalities**	number	0	1	0

## Environmental performance

### Energy consumption

		2009	2010	2011
Fuel oil	1,000 tonnes	10,392	9,792	10,817
Diesel	1,000 tonnes	6 <sup>c</sup>	3 <sup>c</sup>	3
Natural gas	1,000 tonnes	1 <sup>c</sup>	3 <sup>c</sup>	2
Electricity	1,000 MWh	85 <sup>d</sup>	99 <sup>d</sup>	121
Energy consumption <sup>e</sup>	GJ	420,437,539 <sup>e</sup>	396,180,108 <sup>e</sup>	438,121,369

### Greenhouse gas emissions (GHG)

		2009	2010	2011
<b>GHG emissions<sup>h</sup></b>	1,000 tonnes CO <sub>2</sub> eq	32,641 <sup>e</sup>	30,766 <sup>e</sup>	34,168
<b>Direct GHG emissions (Scope 1 GHG Protocol)</b>				
CO <sub>2</sub>	1,000 tonnes	32,391	30,518	33,849
CH <sub>4</sub>	1,000 tonnes CO <sub>2</sub> eq	47	44	47
N <sub>2</sub> O	1,000 tonnes CO <sub>2</sub> eq	156	147	165
HFC	1,000 tonnes CO <sub>2</sub> eq	0	0	43
PFC	1,000 tonnes CO <sub>2</sub> eq	0	0	0
SF <sub>6</sub>	1,000 tonnes CO <sub>2</sub> eq	0	0	0
HCFC	1,000 tonnes CO <sub>2</sub> eq	0	0	0
<b>Indirect GHG emissions (Scope 2 GHG Protocol)</b>				
CO <sub>2</sub> <sup>h</sup>	1,000 tonnes	47	57	64
CH <sub>4</sub> <sup>h</sup>	1,000 tonnes CO <sub>2</sub> eq	0	0	0
N <sub>2</sub> O <sup>h</sup>	1,000 tonnes CO <sub>2</sub> eq	0	0	0

### Other air emissions

		2009	2010	2011
SO <sub>x</sub> <sup>i</sup>	1,000 tonnes	574 <sup>e</sup>	541 <sup>e</sup>	597
NO <sub>x</sub>	1,000 tonnes	820 <sup>e</sup>	773 <sup>e</sup>	854
VOC <sub>s</sub>	1,000 tonnes	13 <sup>e</sup>	12 <sup>e</sup>	14
Particulate matters	1,000 tonnes	78	74	71

### Other resource consumption

		2009	2010	2011
Steel consumption	1,000 tonnes	0	0	0
<b>Waste total<sup>g</sup></b>	1,000 tonnes	201 <sup>c</sup>	249 <sup>c</sup>	158
- recycled (composting, reused, recycled)	1,000 tonnes	80 <sup>c</sup>	147 <sup>c</sup>	58
- solid (landfill, on-site storage, incineration)	1,000 tonnes	121 <sup>c</sup>	101 <sup>c</sup>	100
- hazardous (controlled deposit)	1,000 tonnes	0 <sup>c</sup>	1 <sup>c</sup>	0
<b>Water Consumption</b>	1,000 m <sup>3</sup>	288	329	329
- surface water	1,000 m <sup>3</sup>	16	22	15
- ground water	1,000 m <sup>3</sup>	60	64	42
- rain water	1,000 m <sup>3</sup>	0	0	0
- municipal water supplies/water utilities	1,000 m <sup>3</sup>	212	243	272
Spills (oil)	m <sup>3</sup>	3	2	10

## Economic performance

		2009	2010	2011
Revenue	USD million	18,288	24,022	25,108
Electricity cost	USD million	13 <sup>d</sup>	16 <sup>d</sup>	19

\* Container business includes Maersk Line, Safmarine, MCC Transport and other container related activities.

\*\* Operational scope.

- = Not available

<sup>a</sup> Group principle on FTEs adjusted to include joint ventures accounting to regular financial consolidation rules.

<sup>b</sup> Excludes seafarers.

<sup>c</sup> Diesel, natural gas, and waste has been restated due to incorrect unit measures reported in certain entities. Subsequently, emission calculations have been restated as well.

<sup>d</sup> Subsequently changed due to the above changes.

<sup>e</sup> Reported waste figures for ships have been estimated based on type of waste and discharged.

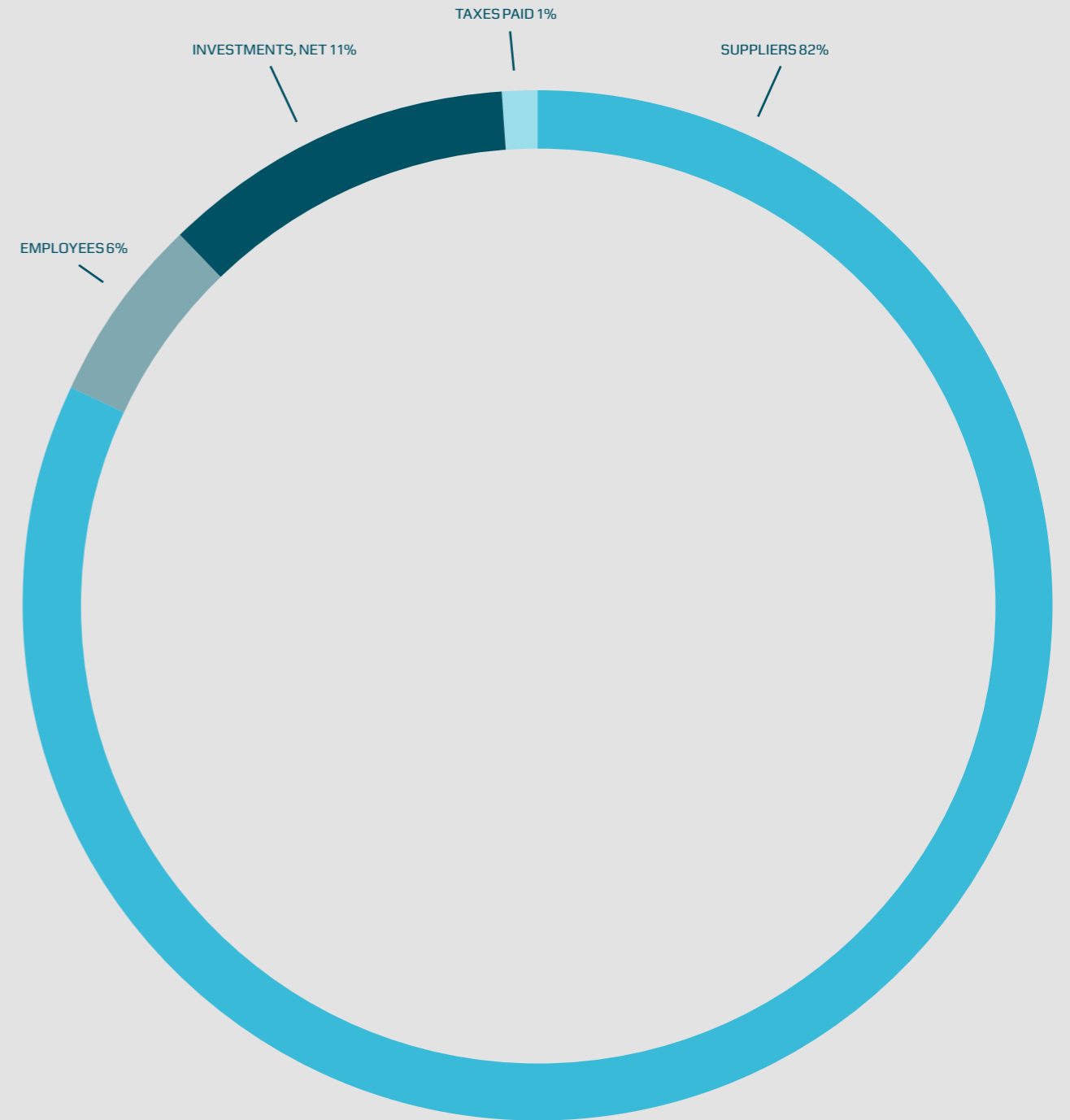
<sup>f</sup> Reefer electricity consumption at terminals incurred for 2009 and 2010 was allocated to the Liner company having reefers at the terminal - some internally and other externally. This principle has been abolished, and all reefer consumption at the terminals is therefore reported by APM Terminals. 2009 and 2010 has been restated accordingly. ERS rail electricity consumption in Germany restated for 2009 and 2010 due to omission of reporting.

<sup>g</sup> The converter for Gas to direct energy consumption restated

<sup>h</sup> District heating included in the scope 2 emission calculations

<sup>i</sup> Converter for SO<sub>x</sub>, on Heavy fuel restated back in time based on measurements of sulphur content

## Maersk liner business cash outflow 2011





# From the CEO

**I am pleased to present you with Maersk Line's second Sustainability Progress Report. It provides a snapshot of our performance in 2011 and the work we have done to improve our services and overall financial, social and environmental performance.**

Even though Maersk Line is more competitive and responsive to customer needs than ever, we faced a significant financial loss in 2011. On top of relentless turbulence in the global economy, overcapacity and the downward trend in freight rates put pressure on our bottom-line result.

Overall, the global liner shipping industry faces some fundamental challenges. It is not profitable. It is extremely volatile. And it is to a large extent still perceived as a commodity business.

That needs to change. At Maersk Line, we have set out to transform liner shipping. The launch of Daily Maersk was an important milestone in 2011. We will continue to innovate our products and services to help our customers optimise their supply chains and save cost.

Today, the environmental impact of running our fleet of 600 container ships is significant in absolute terms. It is a challenge we do not take lightly. In 2011, our absolute air emissions increased with the expansion of our fleet.

Improving our energy efficiency is key to reduce our impact, and we are building on solid performance. Since 2007, we have reduced our CO<sub>2</sub> footprint per container by 15.6%.

## Introducing Route 2

Industry specific challenges and pressing global issues such as climate change, population growth and food security demand important change in the way we and many of our customers operate. Business as usual is not an option. Our view of a more sustainable future and the actions to get there are captured under the heading 'Route 2'. This is our way of suggesting that there is a better alternative; one that is both profitable and sustainable.

I am proud of how much Maersk Line has achieved over the last year. I would particularly like to highlight the following to you:

- Maersk Line improved customers' supply chains by providing the most reliable shipping services in the industry - at a lower environmental footprint per container compared both to the industry average and our own 2010 performance levels.
- Maersk Line's fuel switch programme reduced sulphur emissions by 65-95% in 11 ports in Singapore, New Zealand and Sweden.

- Maersk Line became a safer place to work with relatively fewer accidents.
- We partnered with customers, governments, suppliers and others in improving local infrastructure and increasing trade in emerging markets.
- We supported communities in need through active relief aid involvement in Japan, Horn of Africa, Liberia and the Philippines.
- We are investing for the future by testing biofuels and investing in exhaust gas cleaning technology and ballast water treatment systems. We look to minimise our impacts for the long term by integrating Cradle to Cradle methodology into ship building activities and innovating ship and container designs.
- We concluded 2011 with record high top quartile employee engagement - a fundamental prerequisite for driving the changes that are needed in Maersk Line and the industry we are part of.

I hope you enjoy reading the report and that our 2011 performance will spur demand for even more innovation, greater transparency and positive change in 2012.

### Soren Skou

Partner, member of the A.P. Moller - Maersk Executive Board, and CEO of Maersk Line



# Better trade

## Supporting the sustainable development of industries

Maritime transportation has been, and continues to be, a key vehicle of global trade accounting for around 90% of globally traded goods.

At any given point, the largest shipping lines transport more than 3% of the globe's gross national product<sup>10</sup>. This makes Maersk Line one of the key enablers of the global economy – bringing great opportunities as well as responsibilities.

There has been much debate over the past decades on the benefits and downsides of global trade. On one hand, global trade has been instrumental in lifting economies into the

modern age and creating wealth for millions of people all over the world. Yet, the enormous wealth generated over the last few centuries still remains out of reach for many and has brought with it significant degradation of our natural environment.

As we move towards a scenario with increased resource scarcities, pollution and higher population, we recognise that “business as usual” will not be sufficient. We are committed to finding new ways of boosting economic activity and promoting social progress without damaging the environment. To that end, we are working together with our customers, civil society and regulators to support the sustainable development of industries and their supply chains.



<sup>10</sup> World Shipping Council, 2009; IMO, 2009

## Goals

## Progress in 2011

### Enable emerging market trade growth

Maersk Line grew its cargo volumes to and from emerging markets by 15%.



### Partnerships for better trade

Maersk Line joined the New Vision for Agriculture to help our customers in the agricultural sector enhance global food security, improve environmental sustainability and advance economic opportunities.



Maersk Line published its first socio-economic study on the implications of unlocking trade in an emerging market.

### Supporting legal trade

Maersk Line's Know Your Shipper program was piloted in two countries.



Maersk Line launched a global company reporting site for misdeclared, illegal and undesired commodities.

### Fighting corruption

Maersk Line trained 19,740 employees in anti-corruption (77% of Maersk Line personnel).



Maersk Line reached out within the shipping industry and formed the Maritime Anti-corruption Network (MACN) together with like minded industry players.

### Developing and supporting communities

Maersk Line's main container businesses collectively spent more than USD 2 million on donation and sponsorship activities in our local communities, not counting the value of in-kind donations such as employee time, freight and container donations.

Maersk joined the Logistics Emergency Team (LET). 14 Maersk employees were trained to be deployed as support to the UN in the event of large scale disasters.

Maersk Line was active in relief aid support in Japan, the Philippines, Horn of Africa and Liberia.



# Enabling emerging market trade growth

**The centre of gravity of the world economy is shifting, with more countries making a significant contribution to global output than ever before.**

This is gradually reducing the importance of the G7 group of economies, transforming global trade flows, and creating new growth opportunities for Maersk Line and our customers.

Since 1990, global trade has increased four-fold, and trade between emerging markets has grown twenty-fold.

Our success now and in the future is very much linked to the further success of these growing markets. At the same time, Maersk Line can play an instrumental role in linking these economies more effectively to key trading partners all over the world.

New transport corridors are emerging, especially between Asia and Africa, Asia and South America, as well as between Asian markets.

At Maersk Line we are adapting our products and services towards the new reality.



“Unilever has a bold ambition to double its business and halve its environmental impact and has underpinned this ambition with the Unilever Sustainable Living Plan; nothing less than the basis of a new business model. Quite simply, the only way we will achieve our ambition is by working in partnerships with all our stakeholders – from suppliers to NGO's. Unilever products are sold in more than 180 countries. We have a strong presence in emerging markets, some of which suffer from poor infrastructure. Supply chain collaboration plays a crucial role to become faster, more cost efficient and more sustainable in our end to end operation. We are looking to others outside our industry to help us improve this. Our partnership with Maersk Line is a great example. The focus of this partnership is on improving and leveraging services in shipping but also on issues such as sustainable sourcing of raw materials, which depends on critical infrastructure. Value chain collaboration offers opportunities to win in common markets and support a sustainable growth model for us and our partners.”

**Simon Smith**  
Vice President, Logistics, Unilever

# Unique services and ships to emerging markets

In 2011, we reshuffled our global networks and introduced a number of unique new services and ships to accommodate trade growth in emerging markets. Overall, we grew our cargo volumes to and from emerging markets by 15%.

## Daily Maersk

The service offers daily vessel departure times from four Asian ports to three ports in northern Europe with an on-time guarantee. It works as a conveyor belt with consistent transportation time on any day of the week.

## Rumba

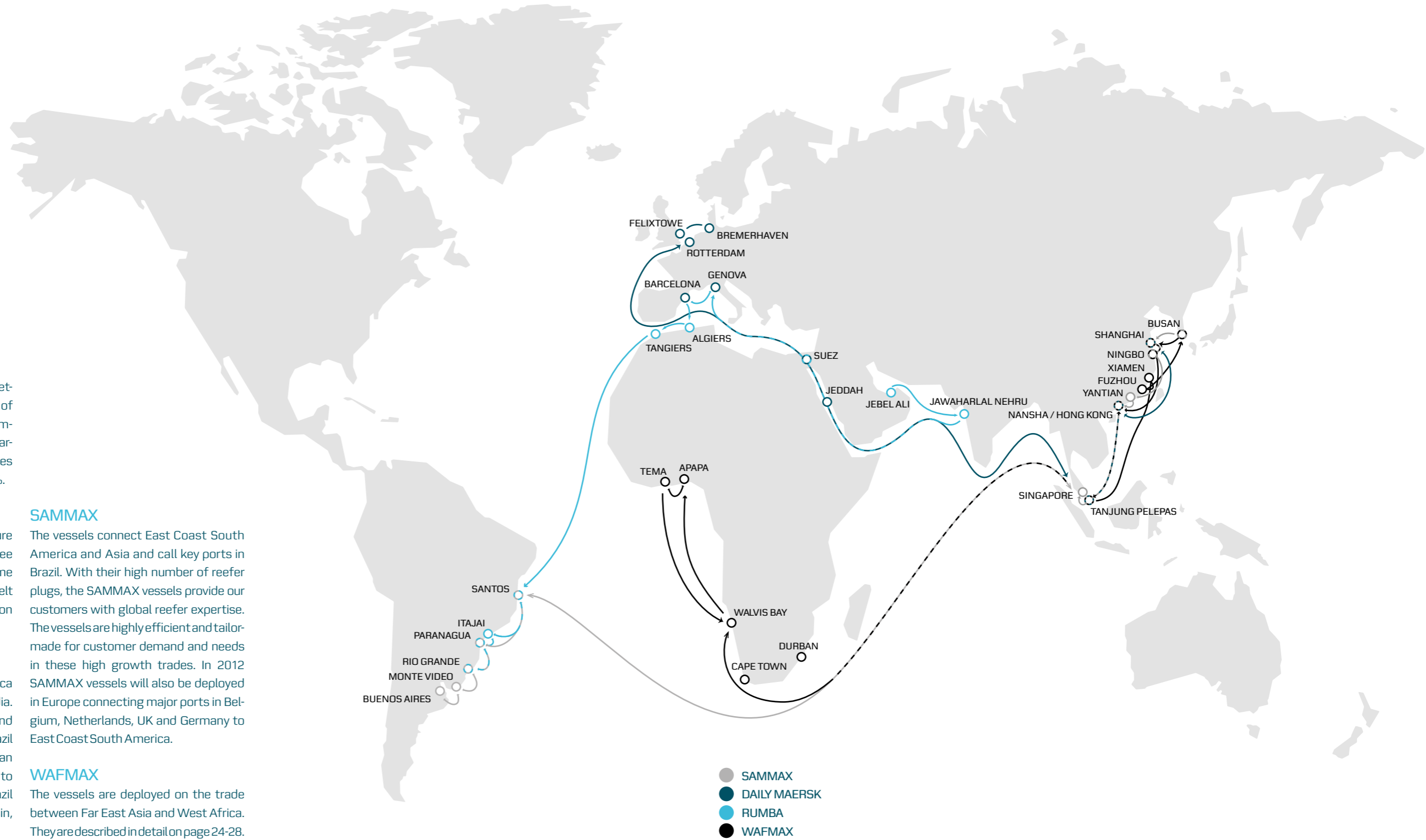
The service connects South America directly to the Middle East and India. It comes with a high reefer capacity and offers loading points at key ports in Brazil and wide coverage in the Mediterranean and Middle East. It is ideally suited to serve the protein market between Brazil and the Middle East as well as resin, plastic, textile and fruit exporters.

## SAMMAX

The vessels connect East Coast South America and Asia and call key ports in Brazil. With their high number of reefer plugs, the SAMMAX vessels provide our customers with global reefer expertise. The vessels are highly efficient and tailor-made for customer demand and needs in these high growth trades. In 2012 SAMMAX vessels will also be deployed in Europe connecting major ports in Belgium, Netherlands, UK and Germany to East Coast South America.

## WAFMAX

The vessels are deployed on the trade between Far East Asia and West Africa. They are described in detail on page 24-28.



- SAMMAX
- DAILY MAERSK
- RUMBA
- WAFMAX

# MAXimising West Africa's trade potential

**Maersk Line is introducing 22 new container ships to West Africa. Designed to enable higher port productivity in West Africa, the 'WAF-MAX' vessels help reduce important barriers for continued trade growth in the region.**

## Africa rising

Africa's economy is growing rapidly. Over the past decade six of the world's ten fastest-growing countries were African and in the period 2011-2015, seven of the top 10 fastest growing economies will be in Africa. West Africa stands out in this respect. In 2011, Ghana's economy was predicted to be the fastest growing in the world and in Nigeria annual growth has been around 9% during the last 10 years.<sup>11</sup>

Significant challenges remain for Africa as large inequalities continue to persist in income and human development. While economic growth is likely to reduce the proportion of the population living on less than USD 1.25 a day, the African Development Bank estimates that poverty will remain a fact of life for around a third of the people living in Africa for the next 40 years. The Bank concludes that Africa needs a long-term average of 7% annual GDP growth across the continent for poverty to decline significantly.

## Barriers to growth

In West Africa, ports and container terminals are among the least efficient and most congested in the world. Dwell times

– the time between a container is discharged from a vessel and till it exits the port facilities – are nearly quadruple those of Asian ports<sup>12</sup>.

Low port productivity contributes to high trade cost and inflated pricing of consumer goods. Transportation and logistics costs in West Africa are in fact among the highest in the world and imported goods are out of reach for many West African consumers. At the same time, the economy continues to be heavily dependent on commodity exports of oil and mineral reserves, resulting in a significant outflow of empty containers. Ultimately, the West African population bears the costs of the current system and its inefficiencies.

## Introducing WAFMAX

In response to the trade growth between Far-East Asia and West Africa, Maersk Line is upgrading its services to West Africa by introducing 22 new container ships from 2011-13. The WAFMAX vessels are the biggest container vessels to ever serve the region. They can carry 4,500 containers (TEU) and have been designed specifically to accommodate the lower drafts in West African ports and enable a more efficient operation.

## The WAFMAX effect on port and terminal operations

The WAFMAX vessels will support important ports and terminal operators in West Africa such as Apapa in Nigeria and

Tema in Ghana in increasing their capacity and turnaround times. By reducing vessels' waiting time in the ports and enabling faster discharging and loading of containers, the WAFMAX vessels will enable speedier trade flows in and out of West Africa, at a lower cost for all stakeholders involved.

As the majority of the container ships currently calling West African ports are relatively small in size (between 1,700–2,500 TEU) and unable to meet the specific conditions of the ports, the waiting time spent getting in and out of West African ports is significant.

Besides delivering almost twice the number of containers in one vessel call, the physical dimensions of the WAFMAX vessels along with an automated container lock feature enables faster discharge of containers and can provide a safer working environment for port stevedores.

## Improvements still needed

Important challenges remain to be addressed in order for West African communities to benefit from the full 'WAFMAX effect'. Among other things, this includes overcoming the current capacity constraints in West African ports to meet future growth; making the customs declaration processes more efficient and transparent; improving and expanding the inland transportation network; and upgrading the logistics

<sup>11</sup> International Monetary Fund

<sup>12</sup> Harding, Pålsson and Raballand, 2007

planning capabilities of the many small to medium sized West African businesses.

## The environmental and human health impacts

While environmental pollution and emissions from trade remains a peripheral priority for many people living in West Africa, environmental impacts of trade are not negligible and a significant share of this derives from maritime transportation.

One major pollutant from shipping is sulphur dioxide, causing acidification and impacting the health of the people who live close to ports. The port of Apapa is located within 2 km of the city-centre of Lagos and the port of Tema is located approximately 5 km from the city-centre of Tema. More than 12 million people live within a radius of 25 km of the two ports. Due to the port productivity benefits and the increased efficiency of the WAFMAX vessels, sulphur emissions will decrease by 20% in Apapa and 13% in Tema from 2013 onwards.

While of a more global nature, CO<sub>2</sub> emissions from shipping on the Far East Asia – West Africa trade are also significant. West African customers using the WAFMAX vessels will however be able to reduce CO<sub>2</sub> emissions of their goods by up to 30% compared to the industry average.



# The WAFMAX effect – Highlights

A study by Copenhagen Economics looked into the current and future impacts of the WAFMAX vessels in Ghana (Tema) and Nigeria (Apapa) and estimated the following effects of the WAFMAX vessels by 2013:



## WAFMAX features

- Capacity: 4,500 containers (TEU)
- Length and stability designed for more cranes to operate at the same time.
- Fully automatic twistlocks enable faster discharge of containers and a safer operation.

## Catalysts for trade and economic growth in West Africa

### Reduced transportation and logistics costs

Transportation and logistics costs in West Africa are among the highest in the world. By 2013, WAFMAX can help bring down shipping, inventory and congestion costs by **USD 131 million** per year in Apapa and **USD 80 million** per year in Tema to the benefit of shipping lines and West African importers and exporters.

### Increased trade potential

Increased trade is a key vehicle of GDP growth and a necessary condition for poverty alleviation in West Africa. Based on the estimated increase in port productivity, the WAFMAX has a potential to increase trade flows by **USD 760 million** per year in Nigeria and **USD 490 million** per year in Ghana by 2013.

### Reduced environmental footprint

Increased trade in and out of West Africa means increased emissions of both local and global pollutants. The introduction of WAFMAX will reduce absolute sulphur dioxide emissions in the ports by **20%** per year in Apapa and **13%** per year in Tema compared to a situation without WAFMAX. Furthermore, the WAFMAX vessels will have a **30%** lower CO<sub>2</sub> footprint per container moved compared to the industry average on that trade.

## Growing trade relations between Far East Asia and West Africa

In 2011, container volumes between Far East Asia and West Africa grew by 25%, mainly due to large GDP growth in Ghana. In comparison, container volumes grew by approximately 6% between Europe and West Africa.

For the coming 1-2 years, growth in container volumes are expected to

continue but at more moderate levels due to lower economic growth in West Africa with an estimated 9% in 2012 and 5% in 2013.

China's need for resources and commodities is a key driver of increased trade flows between Far East Asia and West Africa along with growing demand for

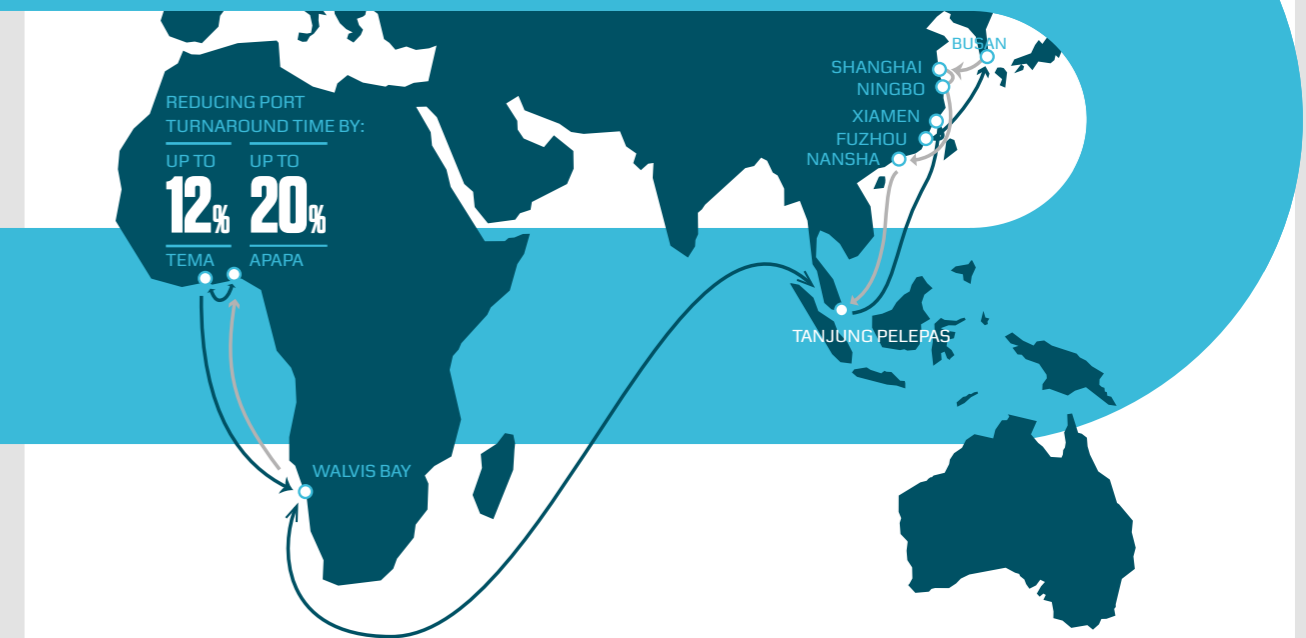
lower-priced Chinese products in growing West African markets such as Ghana and Nigeria.

## Increased port productivity

West African ports and terminal operators face one of the most challenging environments in the world,

negatively impacting their efficiency. By 2013, WAFMAX will reduce port turnaround time by up to 20% per

year in Apapa and up to 12% per year in Tema – or approximately 1 full day saved per vessel call.



Partnering with ports and terminals for MAXimum effect

Getting ready to receive the WAFMAX vessels requires close collaboration between Maersk Line and the receiving ports and terminals in West Africa. Examples of joint efforts include training of pilots and stevedores along with careful stowage planning to ensure that the vessels are navigated safely to shore and containers are discharged safely and efficiently. Fixed berthing windows

are key to bring down waiting time and help terminal operators prepare for the large incoming volumes of the WAFMAX vessels.

In some ports such as Walvis Bay in Namibia dredging has already been conducted to accommodate a fully loaded WAFMAX vessel. In the port of Tema, an important milestone was

reached in October 2011 when the terminal delivered an all time high productivity of 64 container moves per hour on a WAFMAX vessel.

The value of time for Fouani

For Nigerian-based importer of electronics, Fouani, transportation time and reliability are key to the success of the company. Fouani imports its products from Asia and assembles them locally before distributing them to its more than 1,200 customers nationwide. For this purpose, the company is highly dependent on the timely arrival of its goods.

can be as high as 20-30 days. For customers with a turn-over of USD 10 million per month, the financing costs of keeping an extra 30 days inventory can amount to a cost of more than USD 2 million per year based on a 20% interest rate which is the going rate in Nigeria.

In cooperation with our partners in key West African ports, Maersk Line will be able to deliver on-time for 75-85% of the

WAFMAX shipments in 2012 and expect to reach 95% reliability of WAFMAX shipments from 2013 and onwards

Sometimes delays in the port of Apapa



“With Maersk Line’s new WAFMAX service we have already seen variation go down to as low as 1-2 days. This saving is an important piece in making our business more efficient in the long run and helping us to offer a more competitive price to our customers.”

**Mohammed Hassan Fouani**  
Managing Director, Fouani Nigeria Limited



# Partnerships for better trade

**As we grow our business in emerging markets, we have the opportunity and responsibility to create value on social, environmental and economic parameters.**

We have embarked on this journey by exploring opportunities for partnerships with customers and relevant stakeholders where we can leverage the positive impacts of our business to promote sustainable development of key industries.

One industry where we believe we can make a difference is agriculture.

## Better trade through sustainable agriculture

Agriculture is one of the key industry sectors driving emerging market growth.

Commodities related to agriculture and forestry, refrigerated cargo and food and beverages make up approximately 40% of Maersk Line's global cargo.

Agriculture's importance will grow in the coming years. On current projections, by 2050, global food production will need to increase by 70% to feed the planet's 10 billion people. Accounting for 70% of water use and up to 30% of the global greenhouse gas emissions, the sector significantly contributes to and is threatened by environmental degradation. At the same time, no other sector is more instrumental in fulfilling the essential needs of the global population, facilitating economic development and fueling growth, especially in developing and emerging markets.

## Supporting NVA goals

To engage in these vital global debates, during 2011, Maersk Line became a member of the New Vision for Agriculture (NVA). NVA is a private-sector led initiative under the World Economic Forum which aims to increase the contribution of the agriculture sector to global food security, environmental sustainability and economic opportunity.

In NVA we join our customers in their pursuit of concrete goals towards a more sustainable and inclusive growth trajectory.

Our commitment is based on our support for the NVA goals of

### Food security

Increase agricultural produce by

**20%**

### Economic development

Decrease the rural population living on less than USD 1.25 per day by

**20%**

### Environmental sustainability

Decrease greenhouse gas emissions from agriculture by

**20%**







“Trade and infrastructure play a critical role for food security. Food needs to be traded to move from surplus to deficit areas - to the benefit of all parties, often across international boundaries.”

**Roger Janson**  
Business Unit Leader, Cargill Ocean Transportation

**Cargill: Promoting food security and low impact trade**

Cargill is an international producer and marketer of food, agricultural, financial and industrial products and services. The company employs 138,000 people in 63 countries.

Cargill emphasises the need for creating global food and energy supply chains in a responsible manner. For Cargill, food security depends on issues such as sustainable production, efficient use of markets and trade.

“For the global food system to become more productive, sustainable and reliable, agricultural raw materials need to be grown where resources

provide the greatest production efficiency and can be renewed so that production can continue for many years.

Trade and infrastructure play a critical role for food security to the benefit of all parties, often across international boundaries. Trade helps create jobs, supports local economies, raises living standards and contributes to a more food secure global population.

Maersk Line’s business plays an important role by connecting international markets. We work together with Maersk Line in the Sustainable

Shipping Initiative to support Maersk Line and others in doing exactly that job, but with a smaller environmental footprint.”

**Roger Janson**  
Business Unit Leader,  
Cargill Ocean Transportation



# The case of the Indian banana trade

## In 2011, we offered our perspectives on the Indian banana trade through our first socio-economic impact study.

The study was conducted together with the Danish research institute Applied Economics and Health Research and Firstline Communication. It looked at the emerging Indian banana trade in detail, and discussed the opportunities and challenges associated with growing the trade across all aspects of the Indian banana value chain.

### The banana: food for thought

Bananas are the world's most popular fruit. They are a staple commodity for many developing countries and very important to food security. They also make up around 9% of Maersk Line's refrigerated cargo business – a trade we expect to grow over the coming years.

Despite being the world's biggest producer, less than 1% of Indian bananas are exported. 80% of global banana production currently originate from large-scale commercial farms, but most Indian farmers are smallholders. Getting the same quality, economies of scale and security of supply when production is spread across hundreds or thousands of farms is challenging.

### Reducing food waste through an unbroken cold chain

A key finding in our Indian banana case study was the ability of the emerging

banana trade to significantly reduce post-harvest waste levels through the establishment of an unbroken cold chain from pack-house to end-consumers.

Many emerging and developing economies lack sufficient cold chain infrastructure. In India, for example, around 20 – 30% of locally grown fruits and vegetables rot in transit. This amount is equivalent to the total annual consumption of fruits and vegetables in the UK.

Over the course of the years, Maersk Line has invested heavily in innovations in container technology, such as Maersk Line's StarCare™ and Quest II (see page 64).

These innovations mean that fruit crops such as bananas can now travel long distances, up to 50 days, with minimal waste and loss of freshness, giving fruit producers around the world new opportunities to advance into new export markets.

We believe our assets and expertise can contribute to reducing the current waste level and realising some of the export possibilities. We have shared our study with exporters, buyers, authorities and academia who, like ourselves, can have an impact on future developments of the trade.

## Maersk Line study<sup>13</sup>: Unlocking the Indian banana trade

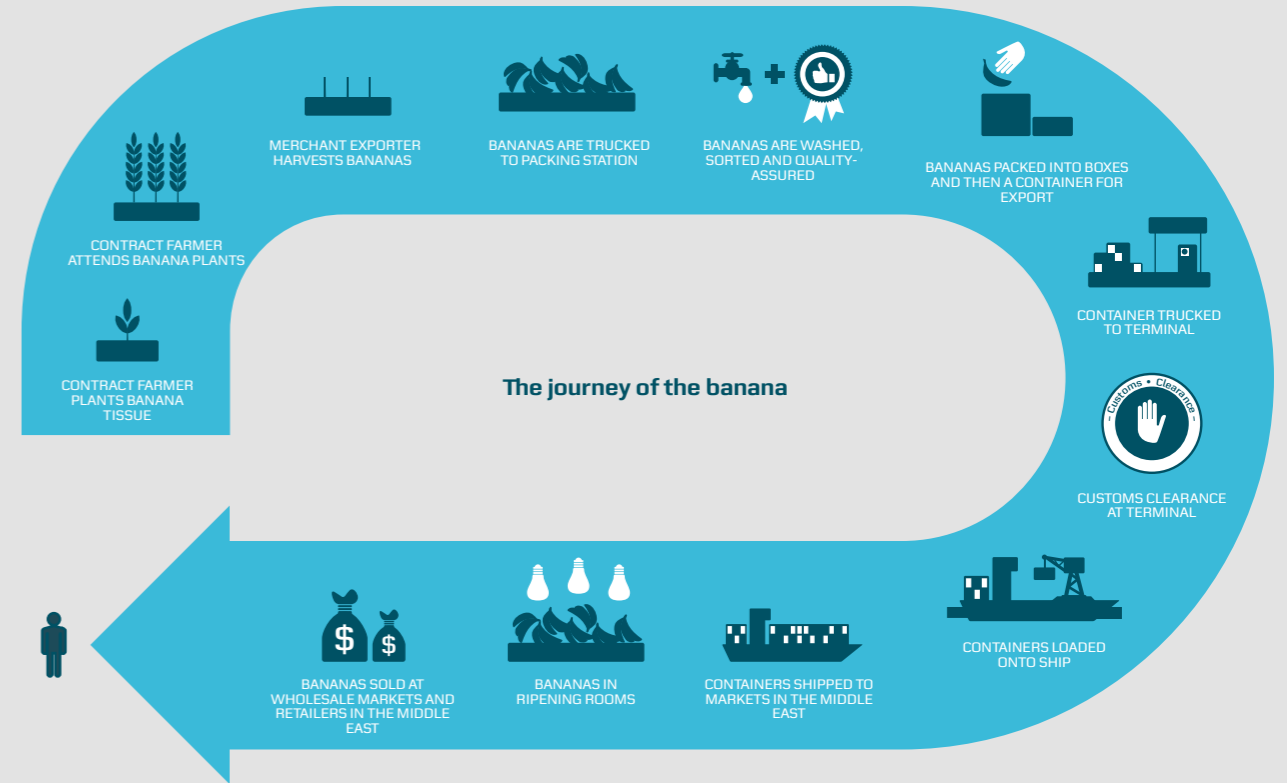
Maersk Line is a key partner to Indian export industries and an important stakeholder in the emerging banana export trade.

In 2011, members of Maersk Line's sustainability team, alongside external consultants visited India to learn first-hand about the Indian banana export model, its growth potential and the contribution it can make to India's social and economic development.

### Our research found that:

- Increasing banana exports has the potential to bring significant economic, social and environmental advantages to India
- To expand the export trade, major investment is needed, along with close collaboration between domestic and international stakeholders in the industry
- Critical upgrades in India's cold chain infrastructure will be important to unlocking future growth potential

<sup>13</sup> The study can be downloaded at maerskline.com



### Current state

< 1%

The proportion of Indian bananas that are currently exported. This represents just 0.3% of all internationally traded bananas.

28%

India's share of world banana production, making it the world's largest banana producer.

20 – 30%

The proportion of Indian fruits and vegetables estimated to go to waste in India due to the absence of an effective cold chain. This amount is equivalent to the total annual consumption of fruit and vegetables in the UK.

3,000

Containers are per year currently exported out of India - equivalent to what is exported out of Ecuador in one week.

### Future potential

25 million tonnes

Up to 25 million tonnes of bananas can be freed up for consumption if the export productivity gains are replicated to the domestic sector.

190,000

Containers exported from India can increase from 3,000 in 2010 up to 190,000 yearly by 2025.

USD 1.612 billion

can be generated to the local economy.

96,000

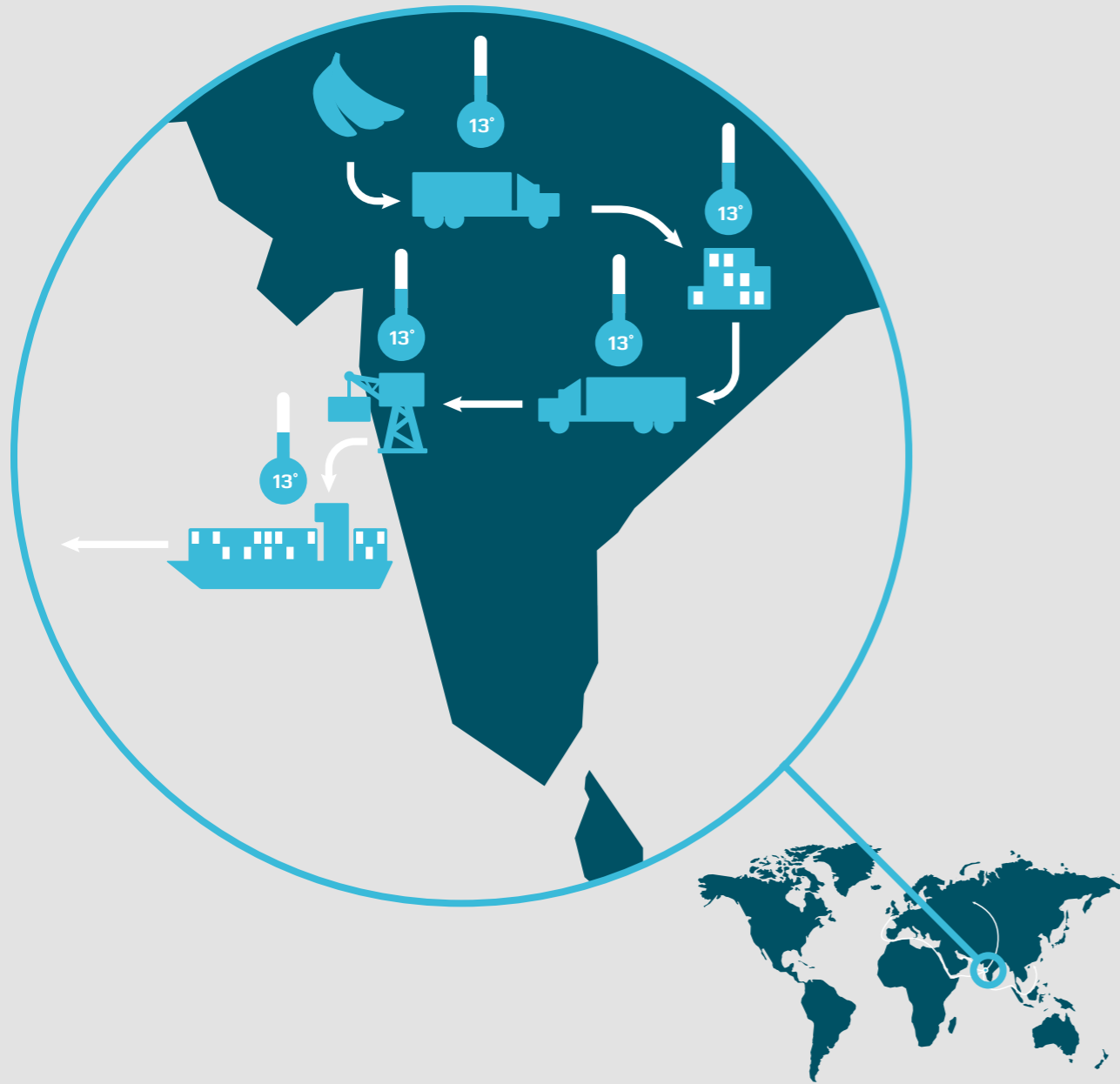
jobs and more than 400,000 dependants.

60%

Increased earnings for farmers of 60%; with a 106% rise for workers.

### Risks if trade is not managed well

- Will growing the banana export be able to pull Indian small-holder banana farmers out of poverty?
- Will increased export mean that local consumers have less access to an important daily food crop and domestic price increases?
- Will external inputs such as chemicals and fertilisers negatively impact the health of banana workers and the local environment?
- Can emissions from export growth be lowered by giving priority to carbon-efficient transportation solutions?



**What is a cold-chain?**

Transporting fresh produce over long distances is an essential element of global food distribution, but most wastage of perishable goods in transportation comes directly or indirectly from poor temperature control.

To minimise these losses and extend the shelf life of fresh produce, a 'cold

chain' - an uninterrupted series of storage and distribution activities, is a critical component.

Maersk Line is a global leader in the development and provision of cold chains. We offer refrigerated containers that can transport fresh produce all the way from the farmer to the consumer in a

cost effective way.

Our cold chain skills and assets can help producers and exporters optimise their supply chains and reduce the amount of food wasted during transportation, as well as boosting the productivity and efficiency of the food sector.



“Growing bananas in a sustainable way for export in India could hold the potential to benefit the livelihood of Indian farmers as well as local wildlife and biodiversity. Improved soil fertility, creation of sustainable jobs and refuge for wildlife would be important focus areas to ensure sustainable development of the Indian banana export.”

**Marcel Clement**  
Senior Manager Europe, Sustainable Value Chains, Rainforest Alliance

# Supporting legal trade

## Globally, illegal trade undermines legitimate business and distorts societal and economic development.

As a reputable company, we recognise that there is a risk to our brand if our services are misused to facilitate illegal trade. While our customers are responsible for the legality of the cargo, our stakeholders are increasingly demanding a more active role from shipping lines in helping to reduce illegal trade. However, shipping lines only have the right to open and investigate a sealed container if it is estimated to pose a severe security or safety risk. To reduce the risk of carrying illegal trade, we therefore need to be smarter in spotting any risks in our systems and collaborating with relevant stakeholders to mitigate those risks.

## Becoming part of the solution

Some of the most challenging issues concerning international trade go well beyond our immediate area of control. However, for each challenge there is also an opportunity to become a part of the solution. For Maersk Line, supporting initiatives and developments to strengthen legal trade is vital. This is best done by engaging in cross-sector collaboration with key customers, authorities and credible third party organisations to advance our shared agendas.

## Illegal waste

The UK is a major exporter of waste and Maersk Line has worked together with

UK's Environmental Agency to reduce the risk of shipping illegal waste out of the country. We take it very seriously when illegal waste is discovered in a Maersk Line container. At the beginning of 2011, Maersk Line received information that we had unintentionally transported about 70 containers of used tyres to South Korea from the UK. The shipment was not legal and we cooperated with the authorities to ensure that the containers were returned to the UK. In addition, we provided information to enable the authorities to investigate further and find the responsible shipper.

## Illegal trade of wildlife species

Illegal trade of wildlife species undermine countries' efforts to protect their natural resources. Some whale and shark species are covered by CITES, the international convention on trade in endangered species, and it is Maersk Line's policy to not accept any cargos declared as involving whale or shark. However, in November 2011, the Danish newspaper Politiken informed that a Maersk Line shipment did contain shark meat. Following this incident, we are improving communication of this policy in areas where the risk of shipping shark is high. This work will continue in 2012.

## Spotting the issues at the booking stage

In 2011, Maersk Line initiated a more systematic approach towards cargo

misdeclarations and risks for potential illegal commodities. Reporting on incidents and risks in countries and capturing the learnings in one central platform enables us to discover patterns, for example with regard to the specific trades and bookings. This type of information and intelligence is an important next step in helping prevent illegal cargo getting on board Maersk Line ships. We believe that reporting these incidents will ensure global focus on relevant issues. The roll-out of this reporting platform will continue in 2012.

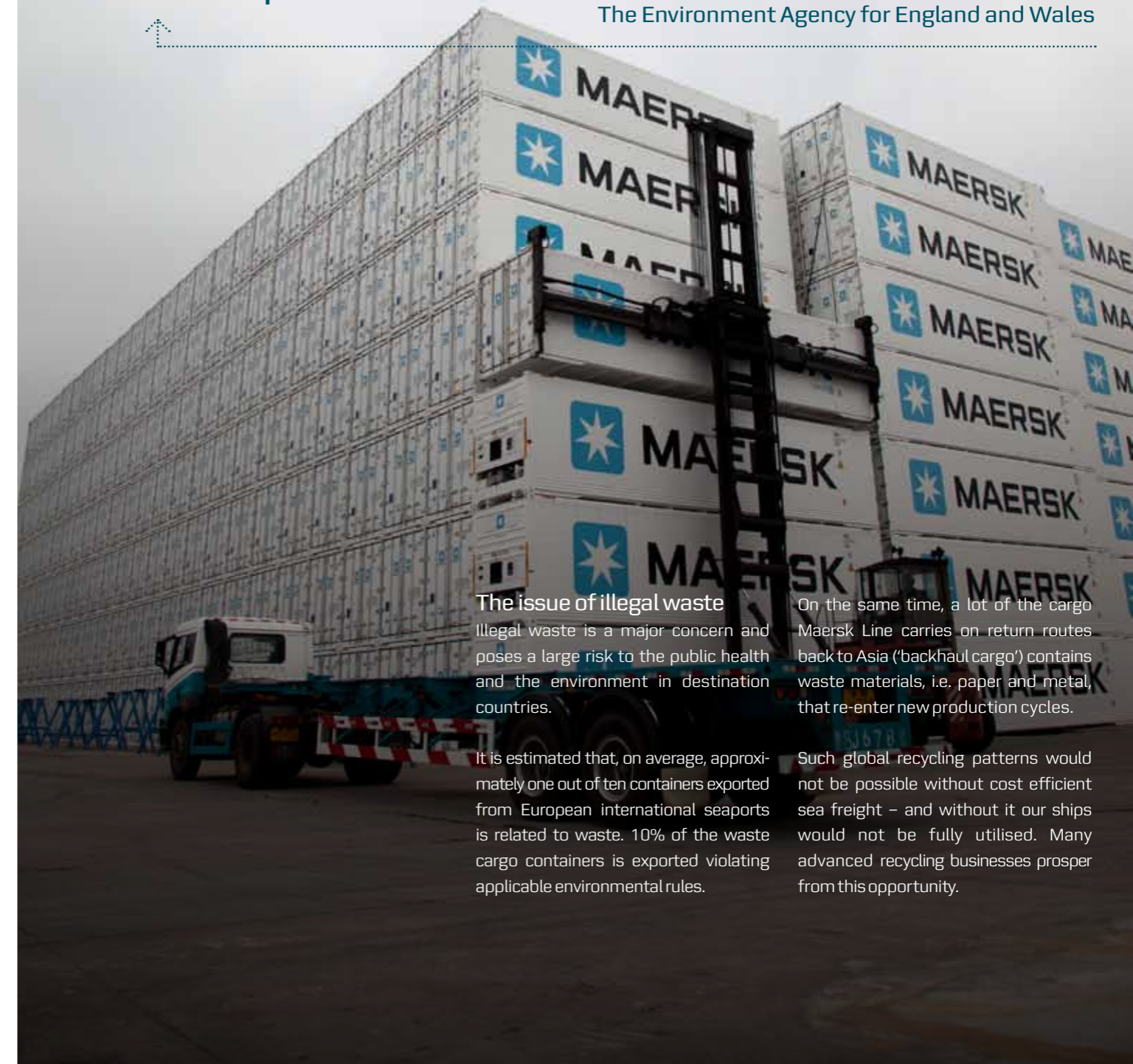
## Know Your Shipper

The "Know Your Shipper" program was piloted in 2011 to enable proactive analysis of commodities and shippers. This involved dedicating internal resources to identifying high-risk shippers and spotting misdeclarations. The program has so far only been piloted in a handful of countries, but has already provided useful knowledge on many trade lanes.

The "Mismatch Analysis" initiative was also launched with the purpose of discovering shipments where reported name and actual commodity show a mismatch, e.g. where the shipper name refers to biscuits and confectionary but the commodity booked is cotton or textiles. This analysis allows us to make the right judgements when suspicious cases arise.

"Maersk Line has joined forces with other shipping lines operating in the UK to reduce the risk of shipping illegal waste. Our cooperation with the industry has been beneficial from both ends. We want to avoid doing unnecessary spot checks, as we know the business is operating on a tight schedule. This cooperation has enabled us to work more efficiently, with controls earlier in the process."

The Environment Agency for England and Wales



## The issue of illegal waste

Illegal waste is a major concern and poses a large risk to the public health and the environment in destination countries.

It is estimated that, on average, approximately one out of ten containers exported from European international seaports is related to waste. 10% of the waste cargo containers is exported violating applicable environmental rules.

On the same time, a lot of the cargo Maersk Line carries on return routes back to Asia ('backhaul cargo') contains waste materials, i.e. paper and metal, that re-enter new production cycles.

Such global recycling patterns would not be possible without cost efficient sea freight – and without it our ships would not be fully utilised. Many advanced recycling businesses prosper from this opportunity.

# Fighting Corruption

**Corruption has emerged as one of the world's greatest challenges. Corruption has a negative impact on countries, communities and businesses impeding economic growth and sustainable development.**

In some countries corruption is pervasive and has infiltrated most aspects of society. Laws are not enforced uniformly and without discrimination, and companies are likely to encounter demands for bribes or extortion attempts in meetings with public officials.

## Facilitation payments in shipping

The shipping sector operates with the whole world as a workplace, and depends on frequent interaction with public officials. A big challenge in the shipping industry is the frequent and persistent demands for low value amounts demanded by public officials to facilitate port operations ('so called facilitation payments'). Typically, the demands are for cash, cigarettes or soft drinks.

It is our policy to oppose facilitation payments and work actively to reduce and eventually eliminate them. We took several steps in 2011 to progress on this journey.

## Employees take on the fight

In 2011, more than 19,000 Maersk Line employees completed Maersk Line's anti-corruption course. The course helped

## Clear policy on anti-corruption

The Maersk Group's policy on anti-corruption has a zero tolerance for bribes. We oppose facilitation payments and work actively towards reducing them with the ultimate goal of elimination.

Our policy obligates us to work against corrupt practices by constantly focusing on anti-corruption measures.

equip employees worldwide in applying anti-corruption measures in their local environment. It also gave employees a better understanding of the challenges seafarers and employees in the most exposed regions face every day. Employees have also been provided with checklists and guidance on how to handle a challenging situation.

Fighting corruption is challenging the norm in some countries. It takes extensive experience by employees to oppose or minimise demands for facilitation payments while ensuring our operation is not being impacted.

Opposing demands in the interaction with public servants can reduce demands in one country and lead to severe consequences in another. The ship can be

detained, or in worst cases the crew can be exposed to severe extortion situations. To that end, our policy on anti-corruption recognises personal safety as the main priority.

## 19,740 employees completed Maersk Line's anti-corruption course

In 2011, we launched a mandatory e-learning course for all Maersk Line employees.

The course was completed by 77% of the global organisation.

In addition, face to face workshops are continuing with the purpose of building capacity locally by implementing a "train the trainer" concept. To date over 470 employees have been trained in high risk countries.

## Open culture and structured reporting

Having a good understanding of local challenges is an important prerequisite for taking on the challenge. So is having a company culture where issues are being discussed openly to find the best course of action. There is a lot to be gained from best practice sharing as our seafarers and office personnel, regardless of location, face similar challenges.

"I am very impressed by the efforts taken by our employees every day. In some locations, it takes a lot of skills and experience to mitigate and circumvent the pressure for facilitation payments while honoring our commitments to customers to deliver on time."

**Peter Rønneft Andersen**  
Chief Financial Officer, Maersk Line

Maersk Line ships and offices are therefore requested to submit incident reports when they face challenging situations. The reports also identify best practices and suggestions for improvements that can be implemented globally. The reports help us leverage countries' knowledge on appropriate anti-corruption measures and form the basis for prioritising efforts and resources geographically.

Local Maersk Line organisations are also asked to map risk areas proactively. By increasing transparency we can verify payments on a detailed level and over time demonstrate reductions in facilitation payments.

## The industry gathers to address corruption

In the fight against corruption, much can be gained when companies in the same sector join their forces and work together.

At the end of 2010, Maersk Line initiated a discussion among like-minded ship owners to investigate whether there was sufficient common interest to address these challenges together. A high level of interest led to the creation of the Maritime Anti-Corruption Network (MACN) in January 2011. Maersk Line served as the facilitator for the network in 2011. The members of today represent different areas of the shipping sector



with head offices in Denmark, Norway, Germany, UK, US and Sweden.

The purpose of MACN is to share best practices among its members and align policies and approaches in the field of anti-corruption. The network also endeavours to collaborate to address

and solve specific challenges. One of the ambitions of the network is to seek support from government bodies and international organisations to target corrupt practices in challenging jurisdictions and ways to address the root causes.

# Developing and supporting communities

**Investing in causes of material significance to the communities we are part of enhances the long-term success of global and local communities as well as our business.**

Maersk Line's community development and support programme encompasses three pillars: disaster relief support, environmental protection projects and projects that help develop new social and economic opportunities for underprivileged communities through global trade. These are areas where Maersk Line's business can have the biggest positive impact on communities, by leveraging our core expertise through collaborative efforts.

## 2011 focus on disaster relief

In 2011, the world experienced a record high number of tornadoes, unprecedented flooding, rampant earthquakes,

disturbing volcanic eruptions and a tsunami in Japan that no one will ever forget.

The frequency and closeness of natural disasters and the dreadful famine in the Horn of Africa made strategic relief support an important priority in 2011 and put optimal planning, on-time delivery and employee preparedness to the test.

## Life-saving logistics

Getting the right products, to the right place, at the right time takes on new meaning when roads, airports, bridges, and other logistics infrastructure are severely damaged or destroyed. To overcome logistics barriers and to maximise the positive effects of our business and expertise, Maersk became members of the Logistics Emergency Team (LET), together with Agility, TNT and UPS.

The four companies come together when a natural disaster with an impact on more than 500,000 people suddenly occurs. The team coordinates transport and storage of aid goods where there is a need. Their efforts and expertise bridge the resource gap during the first 3-6 weeks, while the UN and other aid agencies are ramping up their efforts.

The logistics challenge during the first phases of any disaster is often severe and the response to this challenge can make a big difference in how the disaster impacts local communities in the long term.

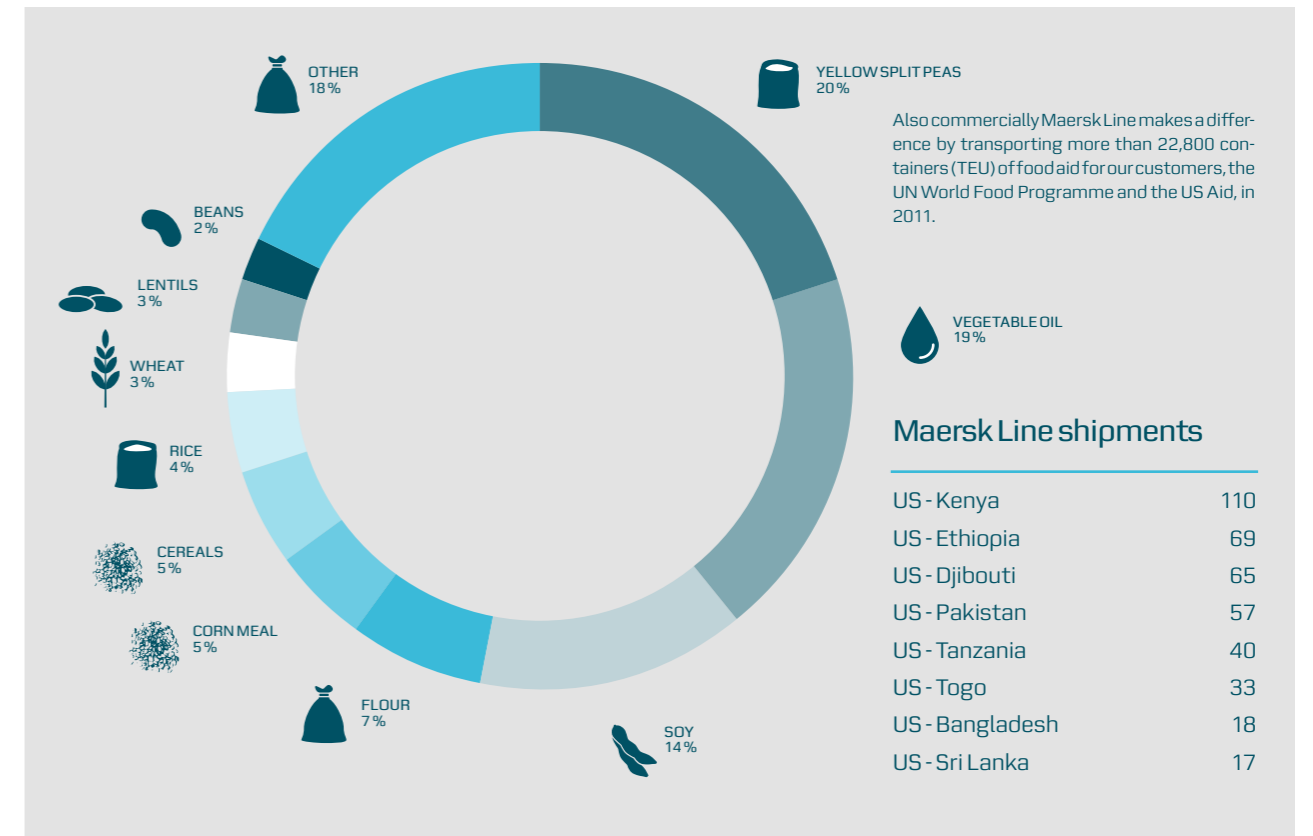
In the long term, strategic relief aid supports social stability which again supports the restoration of local economies and growth – critical societal factors that we depend on as a logistics company.



WFP/Laura Meilo



WFP/Siegfried Modola



“Maersk’s donation has been especially timely as we continue to reach out to millions of people affected by the drought in the Horn of Africa. With these containers, we’ll be better able to store food that is essential for our nutrition activities”

**Monica Marshall**

Global Head of Private Partnerships, the UN World Food Programme

**Employees on stand-by**

An international pool of experts in warehouse management, transport management, customs management, port operations, communications and supply chain management are on stand-by in each of the four companies.

14 Maersk Line employees have been trained to be deployed if a disaster strikes and there is a need for their logistics expertise. They are trained in safety, security and ethics in order to provide effective support to the UN World Food Programme and the UN Logistics Cluster.

**Earthquake and tsunami hit Japan**

When the massive earthquake and tsunami struck Japan, the Logistic Emergency Team stepped in and facilitated the transportation of aid relief items.

The distribution of the relief goods was complicated and challenging as the earthquake and tsunami had caused critical damage to the domestic infrastructure. During the aid relief period, Maersk and some of its service providers took care of the logistics response out of the port of Qingdao in China, including cargo handling and sorting, storage, and inland transportation.

In spite of the Fukushima nuclear disaster and the series of nuclear meltdowns,

Maersk Line continued its services in the region, as one of the few shipping lines. We took the necessary precautions to ensure the safety of our seafarers and monitored the developments closely. The efforts of our captains and crews throughout this difficult time have not gone unnoticed. Overall, the continuation of Maersk Line’s services was essential in keeping the supply chain to and from Japan intact at a critical time.

**Horn of Africa famine**

With famine across Somalia, Ethiopia and Kenya, the UN partners scaled up the urgent humanitarian lifesaving operations. Maersk Line prioritised aid cargo to the area and prepared the necessary capacity by reorganising its service networks.

Existing services were upgraded with additional ships to optimise cargo flows to the affected areas. Maersk Line donated cash and transportation to the World Food Programme from Mombasa to Northern Kenya. The donation consisted of 30 containers and corn soya blend (a fortified nutritional food used to combat malnutrition), as well as the transport. The containers will be used to store nutritionally-enhanced food in 28 of the World Food Programme’s distribution sites in the region.

**Japan**

**Maersk Line offered:**

- 125 containers (TEU) of transport including end-point delivery.
- 27 containers (TEU) were shipped for free.
- USD 88,000 was donated by Maersk employees. The amount was matched by the company.

**Horn of Africa**

**Maersk Line donated in-kind services valued at USD 150,000:**

- Transportation from Mombasa to Northern Kenya
- 30 containers of corn soya blend

The employees in Maersk Kenya took an active role in donating and transporting food supplies. Pictured are Maersk employees in Mombasa loading food for malnourished people.



# Service excellence

## Rethinking our service

In 2011 we set out to rethink our business focusing on the value we can add to our customers' supply chains.

Change is necessary in shipping. We have a whole new generation of customers that expect a different kind of service and quality from us. We are committed to driving change in global shipping so that companies around the globe can optimise their supply chains, reduce waste and grow profitably.

Change is key as we and our customers respond to massive global challenges such as climate change, food scarcity and poverty. We still have a long way to go to change shipping, but in 2011 we nevertheless made important progress, collaborating with customers on new game changing solutions.



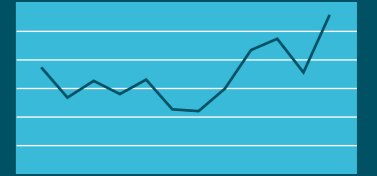
## Goals

## Progress in 2011

### Improve customer satisfaction

Customer satisfaction with Maersk Line rose by 5% from a score of 5.8 to 6.1. The result is an improvement over our 2011 target of 5.75.

Customer satisfaction with Maersk Line's environmental performance increased by 6% from 5.3 to 5.6. The result falls slightly short of our 2011 target of 5.7.

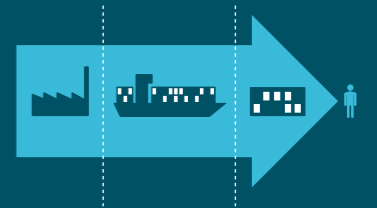


### Increase supply chain efficiency through on-time reliability

Maersk Line's average global on-time delivery score rose to 87.5% in Q4 2011, an increase from 70.2% in Q4 2010, and from 82.9% in Q3 2011<sup>14</sup>.

Maersk Line maintained its status as the most reliable of the top 20 shipping lines across all the trades covered by Drewry.

Daily Maersk helped move Maersk Line to 94.2% in Q4 2011 on the Asia-Europe/Mediterranean trade lane, an increase from 87.5% in the previous quarter.



### Provide our customers with energy efficient shipping

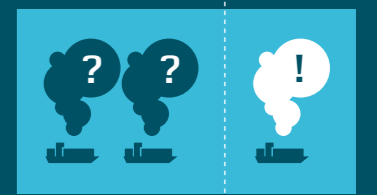
Maersk Line services were 8% more energy efficient than the industry average, a decrease in efficiency from 10% in 2010<sup>15</sup>.



### Transparency and choice in the industry

Maersk Line discloses its CO<sub>2</sub> performance of every vessel and main trade lanes on maerskline.com and in this report.

Clean Cargo Working Group collected the CO<sub>2</sub> performance of all shipping line members including their CO<sub>2</sub> performance on every trade lane. But all shipping lines, except from Maersk Line, remain anonymous.



<sup>14</sup>Drewry 2011 schedule reliability report on top 20 shipping lines.

<sup>15</sup>Clean Cargo Working Group (CCWG) data from mid 2010. The annual CO<sub>2</sub> emissions data for all shipping lines are released in May every year.



# Supporting a new business model

The world is changing for our customers. Major global challenges such as climate change and dwindling resources are creating a new business environment. Concerns are rising and companies are increasingly being held accountable for the impact of their products and their operations on the environment. Many of our customers are responding to this change, developing more sustainable products and ways of doing business.

life cycle of their products – from the way they source raw materials, to making it easier for consumers to recycle materials at the end of a product’s life.

### Part of the big picture

This big picture perspective is key to creating a sustainable future. But there are still areas of the supply chain that are difficult for our customers to measure, or control. Up until now, transportation and shipping of goods has been one of those areas.

ble and easier to manage. We are doing that in several ways by increasing supply chain efficiency and reducing waste through reliability, creating more choice for customers through better standards of transparency in our industry, and innovating new solutions to improve the supply chain.

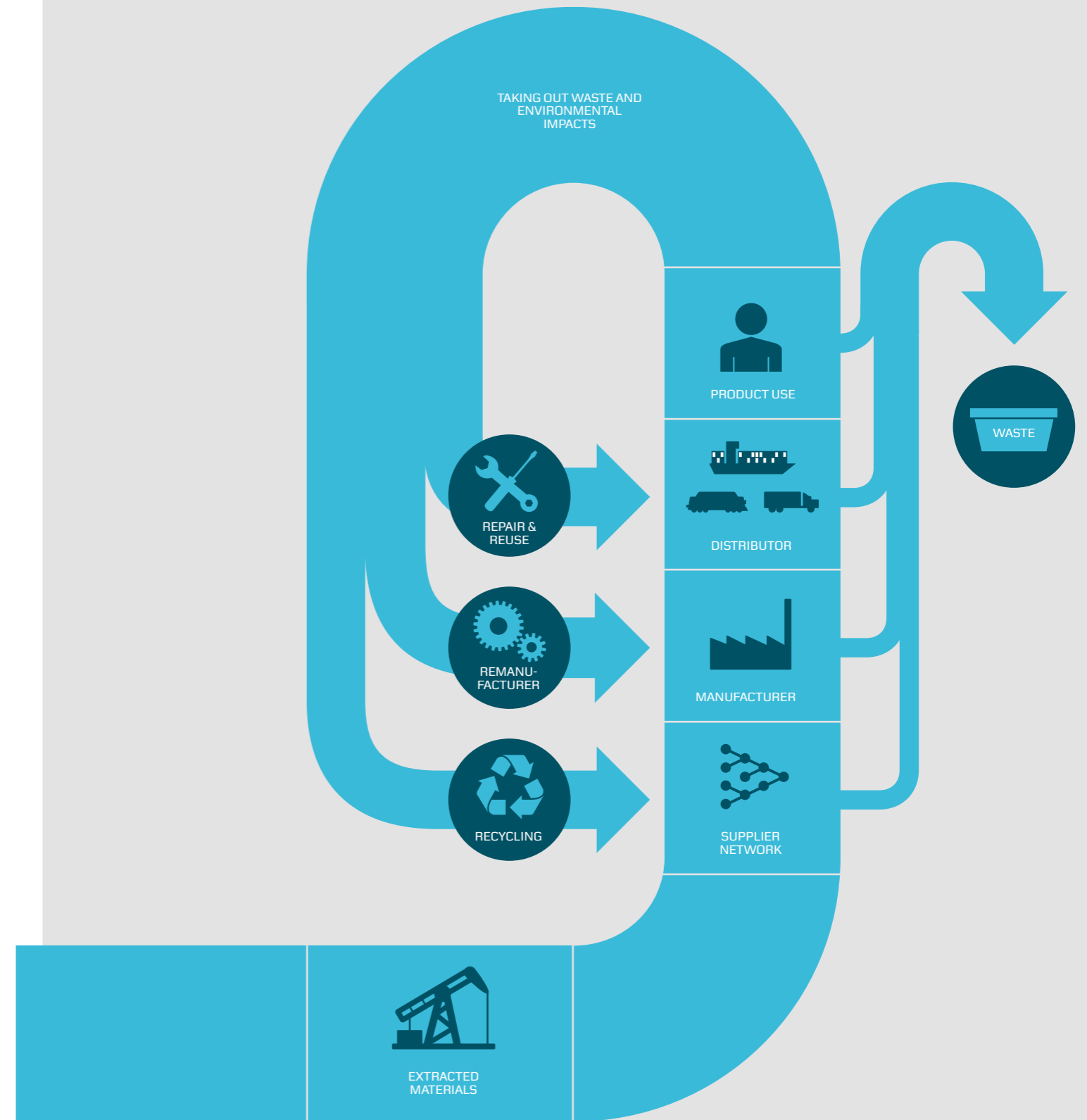
In the drive towards a more sustainable value chain, customers are starting to look at production in terms of the bigger picture. Increasingly, they are taking responsibility for managing the entire

At Maersk Line, we are dedicated to helping our customers develop a sustainable business model by making the supply chain more efficient, more visi-

“We are very interested in learning from our value chain partners, and sharing our insights and lessons learned in the pursuit of business sustainability. Information within the value chain is a fundamental building block for insight, knowledge, innovation to reduce risks, costs, and to develop value added services among value-chain participants.”

**Mr. Neil McKenna**  
Vice President, Transportation, Canadian Tire

Many of our customers, including our own company, are starting to work with closed loop business models. Developing closed-loop supply chains will demand innovative collaboration among supply chain entities, taking into account reverse resource flows. Our business has an important role to play in optimising the flow of products and reducing supply chain waste.



# Increasing supply chain efficiency through on-time reliability

**When products arrive early, customers face capacity problems. If products are late, they face a delivery problem. When customers can count on each and every container arriving on time, supply chain cost and waste can be reduced.**

It is therefore an integral part of our business model to be reliable and ensure on-time delivery of customers' shipments. In 2011 Maersk Line ranked highest in Drewry's report on top 20 shipping lines' schedule reliability. Maersk Line's average global on-time delivery score rose to 87.5% in the fourth quarter of 2011, an increase from 70.2%

compared to the same period in 2010, and from 82.9% in the third quarter of 2011. Our goal is to further decrease customers' supply chain cost and waste through a global average of 95% on-time reliability. To this end, we introduced the concept of absolute reliability by the end of last year.

### Cutting supply chain waste

The new service 'Daily Maersk' offers daily vessel departure times from four Asian ports to three ports in northern Europe with a guarantee of every container arriving on time. With daily departures and a consistent network flow, Daily Maersk can reduce customers'

inventory buffer at both origin and destination significantly. Customers can simply choose to reduce their warehousing capacity. Absolute reliability and optimal planning also takes away the need for last minute air freight which is costly and has a higher footprint.

### Higher profit and less CO<sub>2</sub>

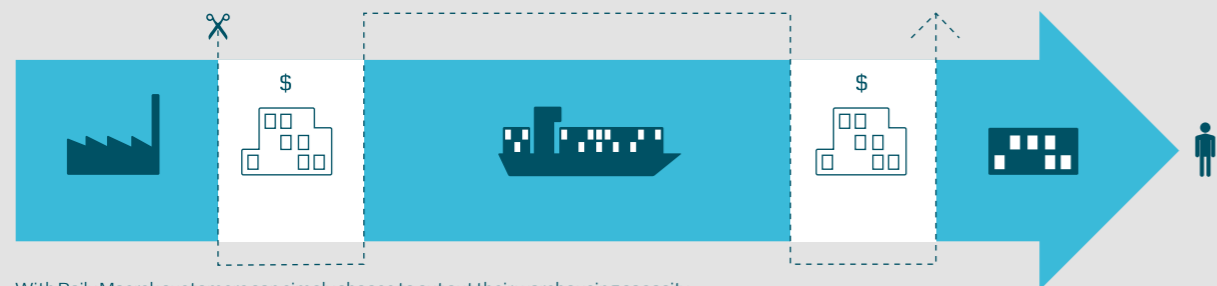
Absolute reliability in shipping reduces cost, time spent on freight management and energy consumption. Moreover, Daily Maersk produces 13% less CO<sub>2</sub> per container compared to the industry average on the Asia-North Europe trade. And containers arriving on time are essential to pricing and profits.

#### Without Daily Maersk

- Weekly departures
- Transit times and buffers
- Unreliability. In the shipping industry only every second container arrives on time
- No compensation for unreliability
- Industry average of 55.4g CO<sub>2</sub> per container (TEU) per km

#### With Daily Maersk

- Daily departures
- A fixed cargo availability date
- Absolute reliability. All containers on 12 corridors from Asia to North Europe arrive on time
- If a container is delayed, Maersk Line will pay back \$100-300
- 48g CO<sub>2</sub> per container (TEU) per km (13% CO<sub>2</sub> less than industry average)



With Daily Maersk customers can simply choose to cut out their warehousing capacity.

Daily Maersk helped move Maersk Line's on-time delivery score to 94.2% in Q4 2011 on the Asia-Europe/Mediterranean trade lane, an increase from 87.5% in the previous quarter.

“Daily Maersk is a highly anticipated product offering that will support us at present to achieve on time delivery of our product to our distribution centre with a fixed transportation time. This arrangement, along with the flexibility of daily cut-offs at origin and cargo available for pick up, assisted us currently to optimise the planning of our supply chain.”

**Mats Samuelsson**  
Global Shipping Manager, H&M

# More transparency – more choice in shipping

## Making the industry's environmental performance 100% transparent lays the groundwork for benchmarking.

Benchmarking is important to create choice for our customers – choice on which services customers want to buy and choice regarding which suppliers they want to engage with.

We experience that customers certainly want to have a choice about their own supply chain impact. Lowering their impact is important to their business growth, risk mitigation and sustainability strategies. Nobody should have to take decisions in the dark on such important items. We believe strongly in 100% transparency in shipping to offer more choice and differentiated services.

## More energy efficient services compared to the averages

Some shipping lines do not disclose their environmental performance, and those that do, disclose it anonymously. We are therefore left to benchmark our performance against estimated industry averages only. Maersk Line's target is to offer our customers services that are at least 10% lower on CO<sub>2</sub> compared to the industry average, a position which Maersk Line gained in 2010.

We estimate that our CO<sub>2</sub> gap to the industry average was approximately 8% in 2011. This estimate is based on mid 2010 industry emissions data collected by Clean Cargo Working Group (CCWG). The industry's CO<sub>2</sub> emissions data are released every year in May<sup>16</sup>.

## Checking the 'carbon blind spots'

Ocean shipping's impact on the product lifecycle varies substantially from product to product. As ocean freight remains one of the most energy-efficient ways of transporting large amounts of cargo, the share of the impact is often relatively small. Nevertheless, in some cases, ocean shipping can make a big difference to a product's overall environmental footprint.

However, shipping remains in many cases a blind spot in the total lifecycle impact of products. The exercise of collecting data from all supply chain entities is complex and time consuming. And as emissions from ocean shipping fall under the category of 'scope 3 emissions', manufacturers have sometimes failed to take them into account.

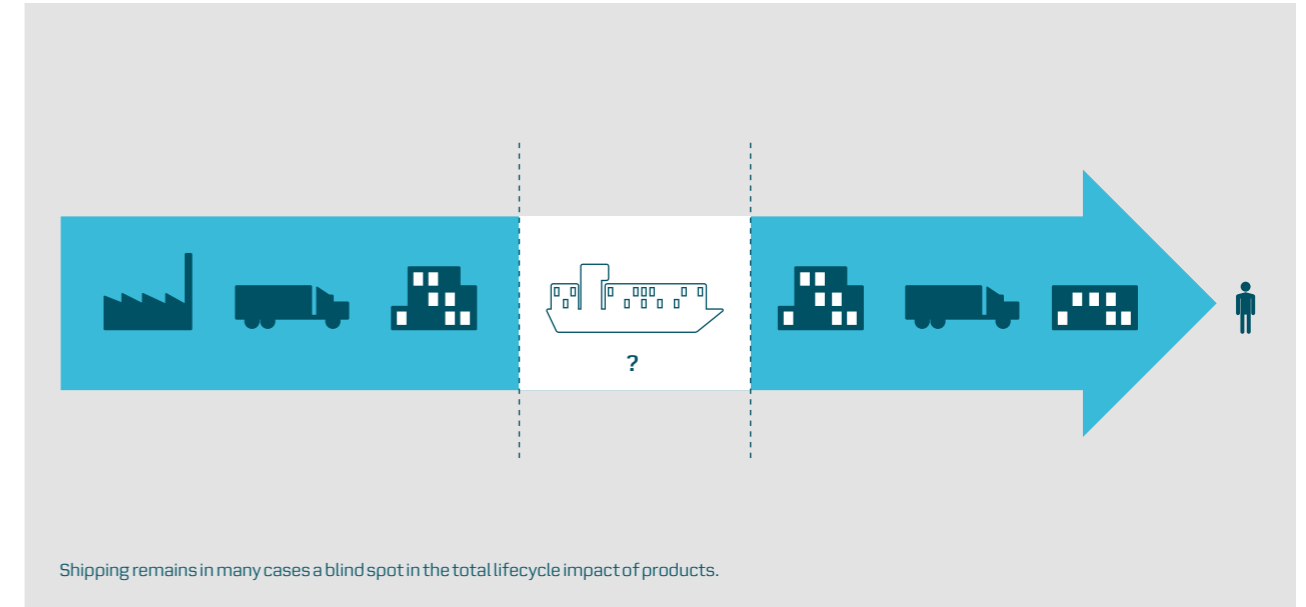
“We compete on hard parameters such as reliability and cost. To include the environment on the same high competition parameters, we need the industry to play by the same rules, so that our customers do not have to make decisions in the dark.”

**Lucas Vos**  
Chief Commercial Officer, Maersk Line

<sup>16</sup>The industry averages are only calculated once a year in May, leaving us to compare our 2011 performance with an estimated 2010 industry average.

The shipping industry faces an important communication task in making its scope 3 emissions more visible. We are making progress with some of our

customers, especially where there is a good case for lowering shipping's share of the product lifecycle impact.



## The case of orange juice

Orange juice highlights the case for raising consumer awareness. At Tesco, for example, oranges for its wide range of orange juice products are sourced from right across the world, including places such as Brazil, South Africa and Egypt. They are transported over seas to processing facilities in the UK.

Tesco reminds consumers that when you buy a carton of freshly squeezed orange juice, the impact on the environment can be twice as big as when you buy one which is made out of concentrate.

Freshly squeezed products incur the greatest transport impacts due to the greater mass of material required to be transported per liter of orange juice

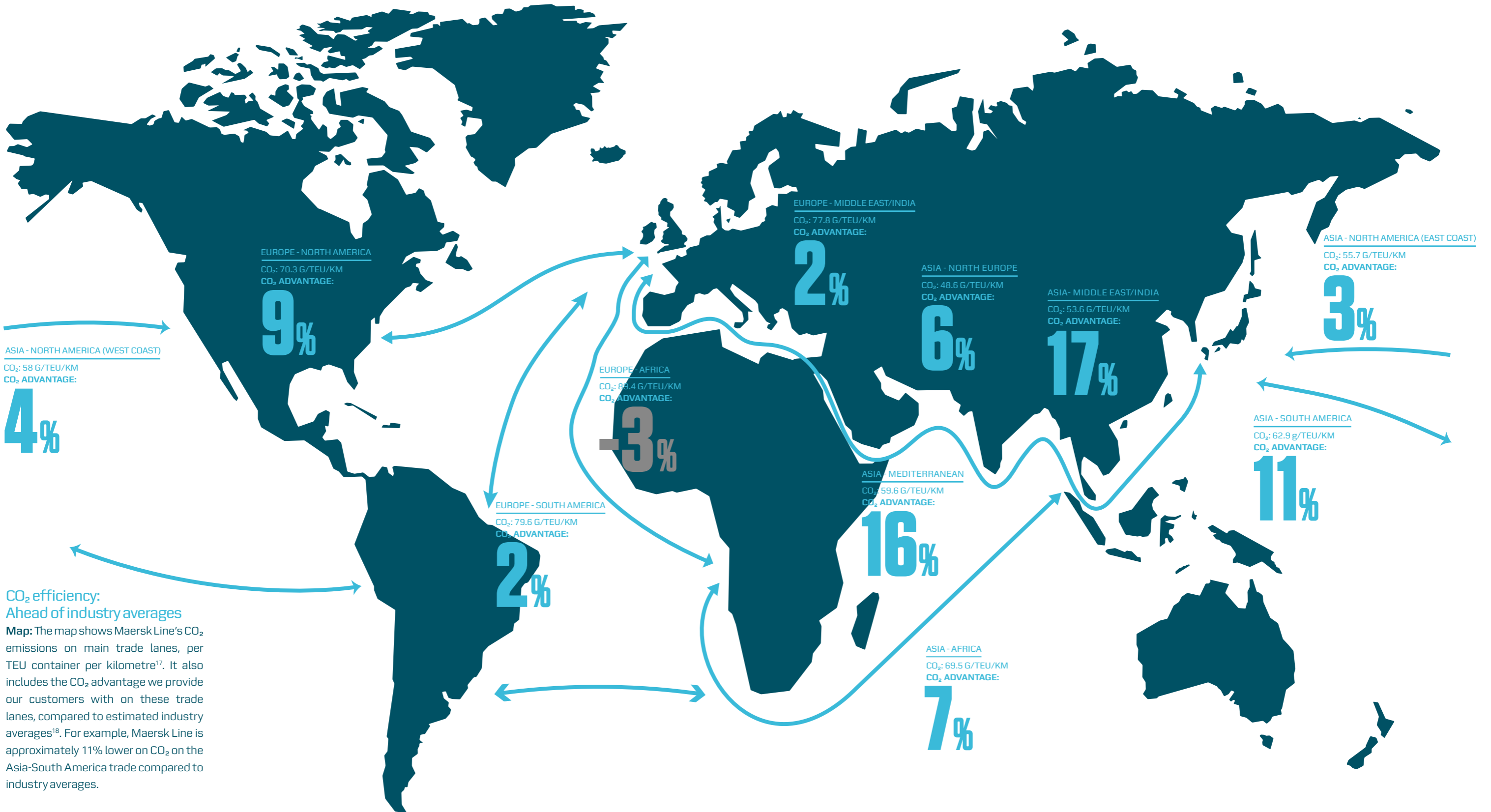
product. Orange juice from concentrate requires significantly smaller quantities of material to be transported to the UK to make up the final product.

Tesco has carbon footprinted over 1,000 of its own brand products. The carbon footprinting of products helps to identify the sources of CO<sub>2</sub> emissions in the life cycle of the products Tesco sells, from the growing of the ingredients, the manufacturing of the product, the packaging, the processing, the transportation, storage in the shop to the trip to the super market, and the way the product is used. By identifying the key points in the lifecycle where carbon emissions are greatest, Tesco is better able to make carbon reductions.

“It's important to inform consumers about the choices they have. And it's important to work together with our suppliers to reduce the impact of products. Our goal is to reduce our supply chain emissions by 30% by 2020.”

**Helen Fleming**  
Head of Climate Change, Tesco





**CO<sub>2</sub> efficiency:  
Ahead of industry averages**

**Map:** The map shows Maersk Line's CO<sub>2</sub> emissions on main trade lanes, per TEU container per kilometre<sup>17</sup>. It also includes the CO<sub>2</sub> advantage we provide our customers with on these trade lanes, compared to estimated industry averages<sup>18</sup>. For example, Maersk Line is approximately 11% lower on CO<sub>2</sub> on the Asia-South America trade compared to industry averages.

On some trade lanes Maersk Line's footprint is higher than industry averages. The Europe - Africa trade is an example (CO<sub>2</sub> advantage: -3%).

<sup>17</sup> 2011 data submitted by Maersk Line to Clean Cargo Working Group in February 2012.  
<sup>18</sup> 2010 data from Clean Cargo Working Group. 2011 data from the industry is available in May 2012.

### The challenges of getting to 100% transparency

While the industry has come a long way, manufacturers and exporters around the world still do not have enough visibility into shipping lines' environmental footprints to compare their performance. This is a major issue, not just for Maersk Line and its customers, but for the entire industry, which risks falling behind if it fails to rise to the challenge of making its environmental performance transparent.

**The challenges are:**

- Customers have no guarantee that the data they receive is correct. In spite of more shipping lines getting emissions verified by an independent third party, still too few shipping lines invest in improving data quality.
- There is no credible industry benchmark for capturing information about environmental performance other than CO<sub>2</sub>.

- Credible rating schemes that communicate performance in a logical, smart way are not yet complete.
- Environmental performance is not yet fully integrated into all strategic levels of decision making, such as the industry's booking and quotation systems.

### Our vision for choice and transparency

We are pushing for a scenario where everyone in our industry fully discloses their carbon performance, ship by ship, trade lane by trade lane. In this ideal future, everyone would measure their performance in the same way, and the data they produce would be independently verified.

If we can achieve this, environmental performance would become hard-wired into industry decision-making processes. A simple A-G rating of energy efficiency would make it easy for customers to

select and deselect services. Consequently, shipping companies could expect customers to reward environmental performance.

### Moving up the ladder on verification

The most important milestone was reached in 2010 when Maersk Line as the first shipping line got its CO<sub>2</sub> emissions verified by an independent third party. In 2011 we made further progress on verification. We increased the number of spot checks and expanded the scope to include more aspects of environmental performance, such as waste handling, ballast water handling and energy efficient technology on board.

The increase of vessel spot checks and the bigger scope led to Maersk Line becoming the first shipping line verified in Clean Shipping Index in 2011.

### Differentiating service providers using advanced Greenhouse gas emissions model

Canadian Tire is one of Canada's most-shopped general retailers, offering everyday products and services to Canadians through more than 1,700 retail and gasoline outlets from coast to coast.

Canadian Tire's businesses are charged with increasing their economic and environmental performance through the lens of business sustainability. Their scope is that of the extended value chain, transportation of products being one out of three key segments.

To this end, Canadian Tire has created an advanced Green House Gas model that allows them to measure the carbon emissions for all transportation

legs of product movements. Canadian Tire can therefore quantify its carbon footprint and measure the impact of tactical and strategic operational decisions made in its network.

"Maersk Line is a global leader in sustainability and this model now allows us to differentiate service providers by their carbon emission intensity and integrate that into our future cargo allocation plans.

Innovation is a social process, and the collaboration of our two companies on reducing the energy, carbon footprint and waste in our collective value chain will also strengthen the competitive position of our companies, increasing

efficiency while reducing costs and exposure to risk."

**Mr. Neil McKenna,**  
Vice President, Transportation,  
Canadian Tire



# Focusing on energy efficiency

### 748,500 ton less CO<sub>2</sub>

Maersk Line provides customers with an environmental advantage. In 2011, Maersk Line's 169 key customers saved close to 748,500 ton CO<sub>2</sub> by shipping with Maersk Line compared to the industry average. The CO<sub>2</sub> saving corre-

sponds to the yearly CO<sub>2</sub> footprint of 80,000 Brits or a USD 15,000,000 saving in CO<sub>2</sub> offsetting cost.

In 2013, when the first new Maersk Line Triple-E ships will be deployed on the Asia-Europe trade lane, the CO<sub>2</sub>

emissions per container will be half of those of the current industry average.

The energy efficient Triple-E ships will give consumers in Europe access to products shipped in a more sustainable and cost efficient way.

8%

Lower on CO<sub>2</sub> than industry average

25%

CO<sub>2</sub> per TEU will be reduced before 2020 - if not more!

15.6%

CO<sub>2</sub> per TEU reduced since 2007

50%

Triple-E ships are expected to emit 50% less CO<sub>2</sub> than the current industry average on the Asia-Europe trade

# Advancing collaboration across industries

**The shipping supply chain is made up of many different players. To make our industry sustainable, we have to break down the silos along the value chain. By collaborating and sharing information effectively, we can align around the same sustainable goals.**

Our work in Clean Cargo Working Group (CCWG) is a good example of collaboration across industries. CCWG is a business-to-business forum hosted by Business for Social Responsibility (BSR). This important advisor helps the shipping industry integrate environmentally and socially responsible busi-

ness principles into transportation management. The CCWG participants make up more than 30 leading multinational manufacturers, retailers, and shipping lines, which collectively move more than 70% of global liner shipping capacity.

The collaborative work in CCWG helps build a more solid foundation for sustainable development across the supply chain. The group is collecting the CO<sub>2</sub> trade lane impact from all shipping lines, a significant milestone towards more transparency and benchmarking.

We have a long way to go to advance collaboration in the supply chain. The progress made in CCWG between the many members is at times a slow process. Fortunately, the aspect of inclusiveness helps ensure that the steps forward are taken by a very large group of stakeholders. We would like to see more customers joining CCWG to encourage advancement and collaboration toward standards and further transparency.

“It is no longer an option not to know where our products come from, how they were produced and to whom they go. Transport companies play a particularly important role in fostering deeper cross-sector collaboration required to meet growing demands for more transparency and sustainability in the supply chain. Companies that offer up viable solutions for transparency and choice will be rewarded by the market.”

**Aron Cramer**  
President and CEO of BSR

**One to one collaboration**

In 2011, Maersk Line also advanced collaboration with key customers on individual CO<sub>2</sub> reduction targets. For example, we achieved an 8% CO<sub>2</sub> reduction for Evian bottled water which we committed to in 2010 as part of the Danone Carbon Pact programme.

Committing to common sustainability goals is a great way of optimising supply chains. While commitments to individu-

al goals are not very widespread yet, we believe that collaboration on concrete targets helps build the foundation for low impact and closed loop businesses. We would like to see this type of collaboration expand across industries and supply chain parties.

**From air and road to water and rail**

Reducing the carbon intensity generated by transport by strengthening the

share of more virtuous transport is strategic to many of our customers; for example by replacing trucks with rail transport wherever possible and air with ocean freight.

In 2011, we assisted several customers in adjusting their transportation networks to more efficient modes, helping them reduce cost and the environmental impact of freight.

**Helping Outokumpu switch to rail**

Outokumpu is a global leader in stainless steel manufacturing and employs 8,000 people in more than 30 countries. Outokumpu believes that stainless steel will play an important role in the sustainable development of global infrastructure.

As part of long-term targets for reducing CO<sub>2</sub> emissions, targets for transportation have been included in the Outokumpu Energy and Low-carbon Programme. The choice of transportation mode is an essential part of this programme.

Looking for more sustainable transportation at their production plant in Avesta, Sweden, Maersk Line was contacted early summer 2011. The Outokumpu production plant in Avesta is well equipped with industrial railway tracks all the way up to their loading platform. The question remained whether we could coordinate rail transportation for the full inland part for their overseas export goods.

Maersk Line made an assessment and found a rail operator that could arrange the container pickup with rail from pro-

duction. In October 2011, containers started to move by rail all the way from Avesta to the ocean terminal in Gothenburg where they load on Maersk Line vessels. This new setup eliminates a truck roundtrip of 240 km per move and saves annually around 60 ton of CO<sub>2</sub>.

The advanced setup is cost efficient, removes trucks from the road and takes out the terminal lifts from truck to rail in Eskilstuna.



“Working together with a logistics supplier that actively works to reduce the climate impact of their own operations will also help Tetra Pak in achieving our target”

**Maria Hellstrom**  
Global Environment Manager, Tetra Pak

**Meeting targets through supplier collaboration**

Tetra Pak makes the processing and packaging solution for many of the well known food and beverage products people consume every day. The environmental profile of those products has been enhanced over the years as Tetra Pak has developed leaner food processing and filling solutions, improved the environmental performance of the cartons and increased the recycling. That helps Tetra Pak's

customers reduce the impacts of products from food processing and packaging.

Tetra Pak's environmental ambition touches various industries in the value chain, including shipping. Their goal of capping climate impact across the value chain despite company growth, highlights the case for more sustainable shipping and transportation.

Tetra Pak tracks greenhouse gas emissions for outbound shipments of packaging material. They minimise them by avoiding air transport, using rail where possible and by consolidating shipments.



“Our expectations for Maersk Line are that we together go as far as we can with the well known factors of environment in logistics, like load factors, modal switches, engine efficiencies etc. At the same time we need to focus on innovation to secure that next generation logistics can start to reduce the major impact that transportation has on emissions globally.”

**Robert Ingvarsson**  
Group Transport and Travel Manager, Tetra Pak

# Improving the footprint of seafood transport

**To offer our customers the option of transporting live seafood by ocean freight, we have worked together with Aqualife A/S on a patented logistics solution.**

Aqualife's technology makes it possible to transport up to 14 tonnes of live shellfish in a container. They provide land based technology for storage and ensure the cold chain is unbroken between the export and import markets. Together with Aqualife and biotechnology companies we have helped enable a more efficient mode of transport for live seafood.

## Caviar from the desert

Until recently, the Royal Caviar Company in Abu Dhabi transported most of their sturgeon and sturgeon eggs from Germany to Abu Dhabi by air. Maersk Line and Aqualife's patented container

technology and Novozymes' micro-organisms allow the sturgeon to stay in the same water without being harmed by waste build-up.

The sturgeon can now be safely shipped to Abu Dhabi by sea, saving energy and costs. As a result we have been able to carry out the largest-scale transport of live fish ever, and reduced CO<sub>2</sub> emissions by 90% compared to conventional live fish transportation methods.

## Fresh shellfish that won't cost the earth

Together with Aqualife we found better ways to carry live lobsters and crabs from Halifax, Canada to Rotterdam, The Netherlands. Aqualife's technology aerates the water the shellfish are transported in, and reduces the temperature to one or two degrees Celsius. The tem-

perature makes lobsters go dormant for the 10-day journey to Europe, reducing problematic build-up of waste products in the water.

Twelve containers of lobster were successfully shipped from Halifax to Rotterdam during the development phase, and Aqualife has set up 'aquaports' in Halifax and Holland to collect lobsters for distribution. Maersk Line started making stops in Halifax in May 2011, transporting up to four containers of lobsters per week to Rotterdam. We plan to extend the technology to other species such as mussels, oysters, clams, and snow crabs.

Previously all 15,000 tonnes of Canadian lobsters that reach Europe - a market worth around USD 215 million - were transported by air. Ocean freight is now a carbon and cost efficient alternative.

"Today more than 5% of the world annual seafood catch is transported by air to meet increasing consumer demands for fresh or live seafood. With the joint efforts between Maersk Line and Aqualife, we can accommodate those consumer needs by displacing the air shipments with ocean shipments and, as a direct result, minimise the carbon impact on the global environment by more than 90%."

**Erik Winther**  
CEO, Aqualife A/S





# Coming up: Innovations to improve our customers' supply chain

**Maersk Line operates the largest fleet of refrigerated containers in the world. Our 230,000 reefer containers transport temperature sensitive cargo for customers around the globe. The impact on society of reefer containers is vast, allowing consumers all over the world to enjoy fresh produce at any time of year.**

Recent innovations in container technology, such as Maersk Line's StarCare™, mean that fruit crops can now potentially travel up to 50 days with minimal losses and their freshness retained. Technologies such as these are creating new opportunities for our customers to reach more distant markets without eroding the quality of their products.

## Quest II – Safeguarding cargo quality at a lower impact

Some of the most sensitive commodities such as chilled meat, live shellfish or bananas depend on very precise and stable temperatures; even the smallest fluctu-

ations can impact the quality and lead to waste. To keep our customers' goods at a constant temperature at all times, Maersk Line has developed a new container cooling system called Quest II; it stands for 'Quality and Energy Efficiency in Storage and Transport'. The system is innovative because it makes use of its surroundings – the weather.

The Quest II software offers a sophisticated control which lets cooling and heating functions run only when necessary, which in turn prevents energy loss. That sounds simple but the system is in fact extremely smart. It measures how much time it is feasible to turn off cooling, heating and reduce fan speed while maintaining the exact cargo temperature.

The most sensitive cargo groups in the chilled temperature range were selected for laboratory testing and live trials in 2011. It was proven that Quest II maintains the same high quality of our customers' cargo throughout the entire journey.

Quest II builds on Quest I's success in reducing the reefer container's energy consumption by 50%. With Quest II on board, the reduction of energy and CO<sub>2</sub> reduction is estimated to reach an average of 65%.

## Quest II boosts China vegetables exports

In 2011, Maersk Line invited Chinese vegetables exporters in Janin to learn about the features of Quest II and the new export opportunities Quest II could facilitate.

Quest II meant that export opportunities were realised for producers in Janin to new markets in Haiti, Senegal, Argentina, Equatorial Guinea and Uruguay. Typical import countries include Russia, Netherlands, Brazil and Colombia.

In 2011, Quest II helped increase North China vegetables exports with Maersk Line by almost 20%.

Quest II maintains the same high quality of our customers' cargo throughout the entire journey but uses only one third of the energy.



# Low impact shipping

## Taking the impact out of distance

Shipping's significant contribution to the global economy has not been without environmental impact. Some argue that re-localising production and consumption is the answer.

We are not convinced that distance is a bad thing – neither for the producers worldwide looking for new markets, nor for the products' environmental sustainability. But we know that the shipping industry needs to improve its environmental performance substantially if it is to enable trade growth in a low carbon economy.

Our ambition is to be a low impact shipping line, while growing our contribution to the global economy. We need to take our environmental impacts out of 'distance', and not just CO<sub>2</sub>. In essence, that means making the distance travelled by goods and resources irrelevant in environmental terms. It's not as easy as it sounds, it's work in progress – but a change in shipping we're committed to lead.



## Goals

Reduce CO<sub>2</sub> by 25% per container (TEU) from own and chartered ships by 2020 (2007 baseline)

Minimum 10 fuel switch implementations before 2015

Cradle to Cradle passport for Triple-E ships

Protect marine environments

## Progress in 2011

CO<sub>2</sub> was reduced by 1.4% per TEU container in 2011, obtaining a total reduction of 15.6% per TEU since 2007.

The 2011 reduction falls short of our 2011 3% year-on-year CO<sub>2</sub> reduction target.

Our absolute CO<sub>2</sub> emissions increased in 2011 as our fleet expanded with 70 container ships.

Maersk Line's fuel switch programme reduced SO<sub>x</sub> emissions by 1,480 tonnes in 2011. However, absolute SO<sub>x</sub> emissions rose with the expansion of our fleet.

3 fuel switches were implemented; in Singapore (65% SO<sub>x</sub> reduction), in New Zealand (80-95% reduction across 9 ports) and in Gothenburg (90% reduction).

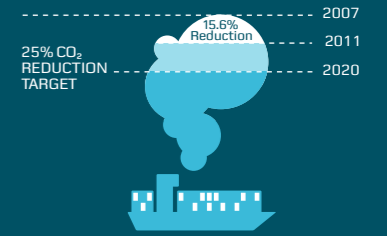
To date, Maersk Line has implemented 6 fuel switch programmes.

We formed a partnership with our supplier Daewoo Shipbuilding & Marine Engineering Co. Ltd. (DSME) in Korea on developing Cradle to Cradle passports for Triple-E ships.

Together, we now have an extensive task ahead of us to build a new material documentation system describing the material composition of ships to ensure better recycling.

We committed to installing a ballast water treatment system on all ships being built in 2012 and onwards.

We became members of the World Ocean Council to enable marine research and transparency on the state of the world's oceans.



# Does distance matter?

**Globalisation and the reduction in transport costs have contributed to an exponential growth of distances covered in supply chains. Our business plays a role in that.**

Oceanshipping is the most cost efficient means of mass-moving goods across large distances - and the most energy efficient mode of transportation if you look at the impact of transportation (km) per product (tonnes). But shipping is nevertheless accountable for 3-4% of the world's CO<sub>2</sub> emissions<sup>19</sup>. Distance does matter.

Given today's environmental challenges, it is understandable that people debate whether or not there is a need for food and other products to travel great distances across the globe, as part of very large and complex supply and demand networks.

To this end, producers worldwide are weighing their decisions by taking various aspects into consideration. Transporting and storing less and distributing locally, for example, make sense in certain situations.

While the impact stemming from transportation can be reduced by minimising the distances covered in supply chains, we believe that the needed impact reduction across industries will not only come from shorter supply chains.

## Focus on hotspots

To radically reduce the environmental impact of today's production, consumption and supply chains, we need to address the material impact within each value chain. In some cases, transportation is a hotspot with a relatively high impact on products' lifecycles. In those cases, the environmental impact can often be reduced significantly by changing transportation mode and increasing logistic efficiency.

In many cases, transportation has a small impact on products' lifecycles - even in spite of great distances between production and consumption.

That being said, distance does matter, but cutting it is not the only answer - taking out the negative impact of 'distance' is. That is the outset of Maersk Line's environmental strategy which focuses on addressing the environmental hotspots in shipping and facilitating smarter transportation of goods.

In turn, smart transportation helps enable smart and efficient production of food and goods. Raw materials should be grown where resources provide the greatest production efficiency. And food and goods need to be traded to move from surplus to deficit areas. Our route to low impact shipping is a commitment to advancing efficiencies in and beyond our own industry.

<sup>19</sup> International Maritime Organization (IMO)



Air freight:  
5.4 kg CO<sub>2</sub>



Ocean freight:  
0.36 kg CO<sub>2</sub>

“In recognition of our responsibility to constantly monitor and reduce our carbon emissions, the adidas Group is incorporating emission relevant information into the selection process of ocean freight providers. Our expectation is that our providers are permanently looking into improved ways of shipping our goods with less carbon emission but by maintaining or improving the service levels. It’s not about meeting but exceeding and setting new industry standards”

**Volker Daut**

Head of Dest. Transport & Logistics, adidas Group

### Superstar II's energy efficient journey

The adidas Group is reducing the environmental impact of transporting its products, particularly by minimising the use of air freight. To get the full picture of ‘ocean versus air’, the adidas Group ran a pilot project in 2011. They followed the adidas Superstar II's journey from the factory near Dongguan, China to an adidas store in Nuremberg, Germany.

The project team collected all the CO<sub>2</sub> data, from the pick-up at the factory right through to the final product delivery and identified which steps in the journey contributed the most carbon emissions.

Shipping the pair of Superstars by air has nearly 14 times the carbon emissions of sending them by ocean freight: 5.4 kg

CO<sub>2</sub> compared to 0.36 kg CO<sub>2</sub>. To put this figure in context, a single person's CO<sub>2</sub> emissions for a flight from London to New York are about 900 kg.

#### The adidas Group compares shipping lines' performances

Environmental performance has been included in the adidas Group's tendering process for shipping lines as a formal criterion. Shipping lines need to submit information on ISO 14001 certification, environmental policy, sustainability strategy and activities.



# Addressing carbon emissions

**Maersk Line accounts for 0.1% of the world's CO<sub>2</sub> emissions. In 2011, our fleet of container ships emitted 33.8 million tonnes of CO<sub>2</sub> to the air.**

Maersk Line operates the biggest fleet of container ships in the world – more than 600 ships and about 3.4 million TEU containers. Today, the environmental impact of running a fleet this size is significant in absolute terms. It is a challenge we do not take lightly. In 2011, our absolute air emissions increased with the expansion of our fleet. While our size comes with a substantial footprint, it is also our scale and size that will help enable our journey towards low carbon shipping.

We are building on solid performance. Since 2007, we have reduced our CO<sub>2</sub> footprint per container by 15.6%.

Improving energy efficiency includes a wide range of measures ranging from making the most of our daily operation and planning, using new types of technologies, to innovating our ships and container technology and designs.

## Reducing fuel consumption is key

Our environmental performance is closely tied to our consumption of fuel. CO<sub>2</sub> is produced as ships use petroleum-based fossil fuels, primarily 'bunker fuel', to power the engines. In comparison with other petroleum products, bunker fuel is extremely crude.

## Slowing down 600 ships

Today, the single biggest impact on fuel consumption is speed. Slowing down helps us increase energy efficiency. It also means we can better ensure arrival at an agreed time because the lower average speeds give us the flexibility to speed up if something unforeseen happens.

The way we manage our 600 container ships and navigate them through the oceans is thus of crucial importance to our environmental performance. A tiny speed increase, as little as 0.5 knot, could increase fuel consumption by 6%, corresponding to a cost increase of USD 340 million<sup>20</sup>.

In 2011, Maersk Line improved its fuel consumption management system for the global fleet. The system tracks fuel use by each ship on every voyage and compares real performance with an optimum modelled performance. The differences between the two, the potential cost and CO<sub>2</sub> savings, and recommendations on improvements are distributed to all internal stakeholders on a monthly basis.

Today, anyone with a significant influence on fuel consumption in Maersk Line has fuel consumption in their performance scorecard and the incentives for fuel efficiency are very clear. Performances are compared, and a monthly report rates each service's energy efficiency based on an A-G rating system.

In 2011, Maersk Line reduced its fuel consumption per container (TEU) by 2.7% this way, corresponding to a total cost reduction of USD 135 million.



<sup>20</sup>Calculations based on a fuel price of 600 \$/metric ton.

“In 2011, we have been successful in creating tools and transparency on fuel consumption; these tools will enable us to deliver significant environmental benefits in 2012.”

**Niels Bruus**  
Director, Energy Efficiency, Maersk Line

## Re-examining its transportation network

By re-examining its transportation network through the lens of sustainability, Levi Strauss & Co. reduced greenhouse gas emissions by 50-60% in 2008. In 2009 the company was able to reduce carbon emissions by more than 700 metric tonnes and save money while continuing to meet service levels.

The contributions came from shifting

from the most carbon-intensive modes of transport (air and trucking) to less intensive modes, such as rail and container ships, adopting efficient processes and partnering with transportation service providers.

Levi Strauss & Co. also made changes to its international shipping routes to reduce the carbon footprint from

transportation. As an example, the company shifted product routing using all-water services to the U.S. East Coast. This reduced dependence on trucking and increased ocean transportation, a more efficient mode of transportation.



“As a company dedicated to building sustainability into everything we do, we’re focused on reducing our environmental impact at every level of our supply chain, including transportation and distribution. Through the changes we’ve made in partnership with companies like Maersk Line, we have reduced total miles traveled, saved fuel, reduced greenhouse emissions and saved money. This reduces cost, and our customers receive our product in a more timely manner.”

**Rob Wiley**  
Senior Vice President of Sourcing and Supplier Management, Levi Strauss & Co.

“In shipping, our main expectation is that our suppliers invest in reducing their carbon footprint and minimizing their negative effects on the environment, namely pollution. Strauss supports Maersk Line’s continuous efforts to become a more sustainable company”

**Moshe Riany**

Vice President, Supply Chain, Strauss Israel

### Can ships run on algae, straw and wood?

In recent years, biofuels for transportation has grown from science fiction to something much more real. For example, EU regulation now requires biodiesel to be blended with diesel for road transportation.

While it is technically possible for container ships to run on biofuels, price, availability and sustainability are currently barriers to wide scale production and uptake of these fuels.

We need lower grade, sustainable biofuels that can be scaled up at the right price. We are therefore very excited that the Danish Advanced Technology Foundation is funding a research platform on developing biofuels for shipping, which includes leading global actors in biofuel development such as the University of Copenhagen, Novozymes and DONG Energy.

As part of this platform, we will seek to develop biofuels tailored to the specific needs of shipping and ship engines. We hope this will prove to be an important first step in making biofuels for shipping a commercial reality!

### The role of captains and voyage planning

In 2011, our captains made more than 35,000 voyages. Experienced captains can save significant quantities of fuel through careful planning of a ship’s voyage from start to finish. We have codified the many tricks of their trade in our innovative fuel and cost saving tool “Eco Voyage”, developed with inputs from many of our captains.

The software recommends the most fuel efficient voyage based on factors such as voyage time, weather and sea conditions, ocean current, the draught of the ship, and the fuel efficiency of the ship at different speeds. In 2011, our Eco-voyage tool helped us reduce fuel consumption by 1%.

### Using waste heat to power our ships

Maersk Line is the first in the industry to install waste heat recovery systems as a standard on all new ships. A waste heat recovery system captures the engine’s hot exhaust gas to produce extra energy for propulsion and reduces fuel consumption and CO<sub>2</sub> emissions by approximately 9%.

39 Maersk Line ships, including 3 chartered ships, now have a waste heat recovery system. 42 Maersk Line ships on order, including the 20 new ‘Triple-E’ class ships, will all have waste heat recovery systems.

### Fuelling large ships on micro-algae

We believe diversifying our fuel supply will help us reduce our impacts further. Using biofuels for shipping is still a relatively new technology, but in September 2011 our container ship Maersk Kalmar steamed off with two tank containers on the deck full of 30 tonnes of algae-based Soladiesel. The biofuel was used in different blends throughout the voyage from Germany to India.

The trial, conducted in partnership with Maersk Line, Limited (MLL) and the US Navy, proved that microscopic algae can in fact fuel large container ships. The cost of high quality algae-based biofuel is currently too great for regular commercial use, but we believe that with further development biofuels such as those derived from algae may be possible to use regularly for container shipping.

### Triple-E class efficiency becomes reality

In 2011, we made a quantum leap in innovating the ship and engine designs of the near future, ordering 20 Triple-E class ships. The first of these 18,000 TEU ships will be deployed in 2013, bringing with it new economies of scale, energy efficiency and unprecedented environmental performance.

New hull, engine and propeller designs optimised for slow steaming mean that CO<sub>2</sub> emissions per container moved by Triple-E will be approximately half those of the current industry average on the Asia-Europe trade. Triple-E will give Maersk Line’s customers access to one of the most energy and cost efficient modes of transportation in the world.



**1%**

Our Eco-voyage tool helps us reduce fuel consumption by

Our innovative waste heat recovery system reduces fuel consumption and CO<sub>2</sub> emissions by approximately

**9%**

20 Triple-E class ships will cut the emissions by approximately

**50%**

per container compared to the current industry average on the Asia-Europe trade

# The Triple-E: The largest and most energy efficient container ship

In 2013, the first Triple-E ships will be deployed on the Asia-Europe trade lane. The capacity of the ship will be 18,000 TEU (more than 16% greater than the largest ship built so far, Emma Maersk).

The vessel order reflects Maersk Line's ambition to continuously develop competitive and attractive shipping services for our customers

## **Energy efficiency**

The Triple-E is designed and optimised for lower speeds. The unique hull design, energy-efficient engine and system that uses exhaust gas to produce extra energy to help propel the ship, make the Triple-E unmatched in energy efficiency.

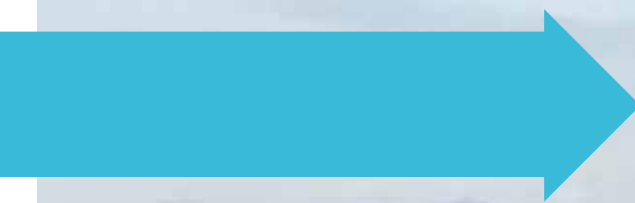
## **Economy of scale**

The Triple-E breaks the world record in container ship capacity scale by more than 16%, without requiring more engine power. This design takes economy of scale to a new level.

## **Environmentally improved**

These vessels reduce CO2 emissions by more than 50% per container moved, compared to industry average on the Asia-Europe trade.

**Follow the Triple-E's on  
[worldslargestship.com](http://worldslargestship.com)**





# Recycling materials

**In 2011, Maersk Line took delivery of 18 ships. In the construction our suppliers used approximately 400,000 metric tonnes of steel, 2,000 tonnes of copper, 4,000 tonnes of coatings, 1,200 tonnes of mineral wool, 400 tonnes of plastic and rubber and 80 tonnes of glass, amongst many other materials. The sheer scale of what we do makes material choices very important.**

## Finite resource with infinite recycling potential

Steel tops the list of resources we use to maintain and grow our fleet of ships and containers. There is around 4.7 million tonnes of steel in our fleet – equivalent to 1,300 Eiffel Towers floating at sea.

Iron for steel is a finite resource - when it's gone, it's gone. Some projections estimate that steel will run out in about 60 years' time, some say there is enough steel for longer than that. In any case it is a finite resource, and extracting it is energy intensive. Fortunately, steel can be recycled indefinitely without significant loss of property or performance.

## Reusing materials with a new 'passport'

In 2011, we sold 9 ships, some of which had not yet reached the end of their service life. It will be the final owner, not Maersk Line that oversees the recycling of these ships. But we still see it as our responsibility to ensure that all our

ships can be properly recycled. To that end, Maersk Line's next generation ships, the Triple-E class, will come with a 'Cradle to Cradle passport'.

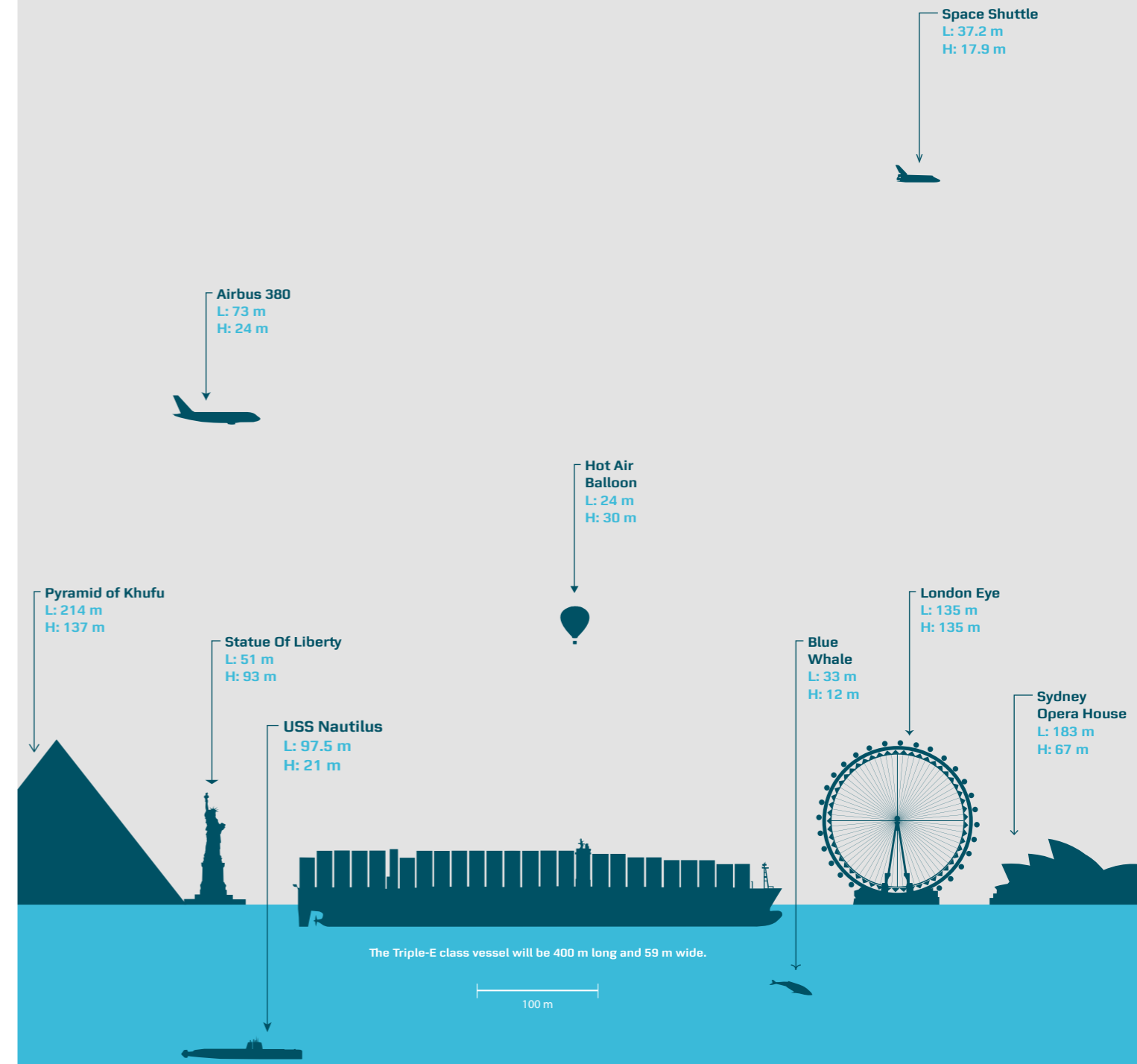
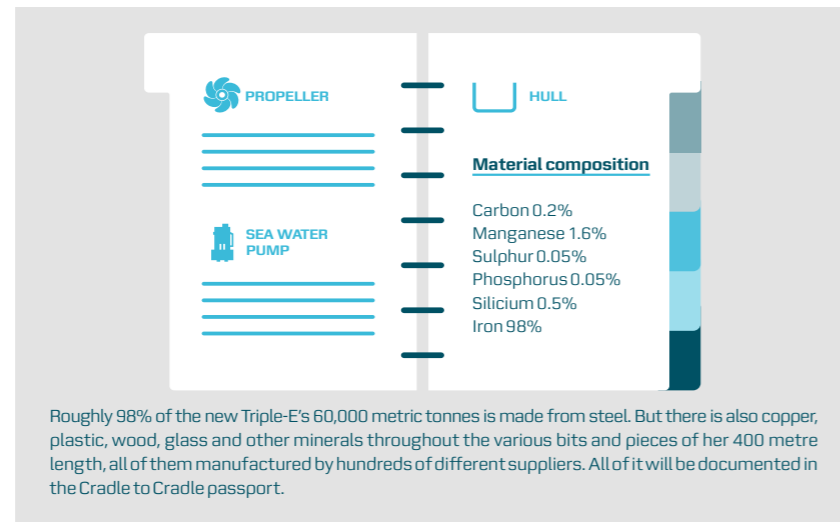
The passport will be a comprehensive, living document, describing the material composition of the ship – the most comprehensive material documentation system the shipping industry has ever seen. With the Cradle to Cradle passport Maersk Line is expanding the scope from safe and effective recycling to recycling that reuse materials to a much greater extent.

With the development of the Cradle to Cradle passport, the Triple-E ships will become the first ships that function as material-banks for the containerships of the future.

## A challenging task ahead

It will not be easy to map all the individual parts of the world's largest ships and it will take much of the next two years to develop the passport. We need to engage with many suppliers and partners to develop and feed data into the Cradle to Cradle passport.

Some of this important work takes place as part of the Sustainable Shipping Initiative (SSI) which facilitates the necessary collaboration and sharing of expertise. The work stream partners include Daewoo Shipbuilding & Marine Engineering Co. Ltd. (DSME), Carnival Corporation, Forum for the Future and Maersk Line.



## Cradle to Cradle passports for the world's largest ship

The Triple-E's will come with a Cradle to Cradle passport - a comprehensive documentation system describing the material composition of the ship.

# Addressing sulphur emissions

**A full two-thirds of the world's population - 4 billion people - live within 400 kilometers (240 miles) of a seacoast<sup>21</sup>.**

In 2011, Maersk Line emitted 600,000 tonnes of sulphur, of which a significant part was emitted at or in the proximity of coasts. This makes the sulphur emissions (SO<sub>x</sub>) of our ships – and their impact on air quality and health – an increasingly important dimension of our efforts to reduce impact.

After 2015, the fuel sulphur content for any ship in an Emission Control Area<sup>22</sup> must not exceed 0.10%. We welcome the stricter regulation on sulphur as an important way to reduce SO<sub>x</sub> emissions in shipping.

There are several ways a shipping line can reduce SO<sub>x</sub> emissions; through fuel switching to low sulphur fuel, cleaning the exhaust gas and using alternative fuels. We are committed to reduce our SO<sub>x</sub> impact beyond regulatory requirements, and our long-term aspiration is to drive global SO<sub>x</sub> emissions towards zero.

The primary focus within our Zero SO<sub>x</sub> programme is to reduce SO<sub>x</sub> emissions in the proximity of port city areas.

### Switching to cleaner fuels

In 2011, our Zero SO<sub>x</sub> programme included 3 more fuel switch programmes from regular to low sulphur fuel. These were

implemented in Singapore, all 9 ports of New Zealand and in Gothenburg. The immediate effect was a 65% reduction of SO<sub>x</sub> emissions in Singapore, a 80-95% reduction in New Zealand and an expected 90% reduction in Gothenburg.

In 2011, we concluded our fuel switch programme in Houston, a successful collaboration between the Port of Houston Authorities, the US Environmental Protection Agency (EPA) and Maersk Line. The programme saved the port's inhabitants the exposure to 303.6 metric tonnes of SO<sub>x</sub>.

In 2012, the North American ECA<sup>20</sup> will become effective and consequently reduce SO<sub>x</sub> emissions significantly.

Since 2006, Maersk Line has conducted 6 voluntary fuel switch programmes worldwide. We call them voluntary because they go beyond regulatory requirements.

We have committed to at least 10 fuel switch programmes before 2015. Fuel switches are prioritised for locations where SO<sub>x</sub> concentrations are high and where we can partner with ports and other stakeholders to share the cost of switching to cleaner and more expensive fuels.

While our fuel switch programmes have an immediate positive effect for the inhabitants of those ports, they are hardly

sufficient in the bigger scheme of things. To address what we believe to be one of the biggest issues in shipping, all shipping lines need to cut their SO<sub>x</sub> emissions. After all, it is SO<sub>x</sub> reductions across the entire industry which will make a real difference to people's health and the environment.

### Cleaning the exhaust gas

Another way of reducing SO<sub>x</sub> is to clean the exhaust gas from ships. After several years investigating SO<sub>x</sub> scrubber technologies, we found a feasible solution together with BELCO®. Their advanced exhaust gas cleaning system will be implemented on our container ship Maersk Taurus in 2012, as a first in the container industry.

The USD 600,000 investment in the installation and operation of the scrubber promises to cut SO<sub>x</sub> emissions by 97%.

<sup>21</sup> www.peopleandplanet.net  
<sup>22</sup> ECA covers North Europe and as of mid 2012 North America and Canada.

“Electrolux welcomes initiatives to reduce the impacts of shipping on people's health and the environment. Maersk Line's focus on reducing SO<sub>x</sub> emissions fits well with Electrolux own commitment to sustainability across our whole supply chain.”

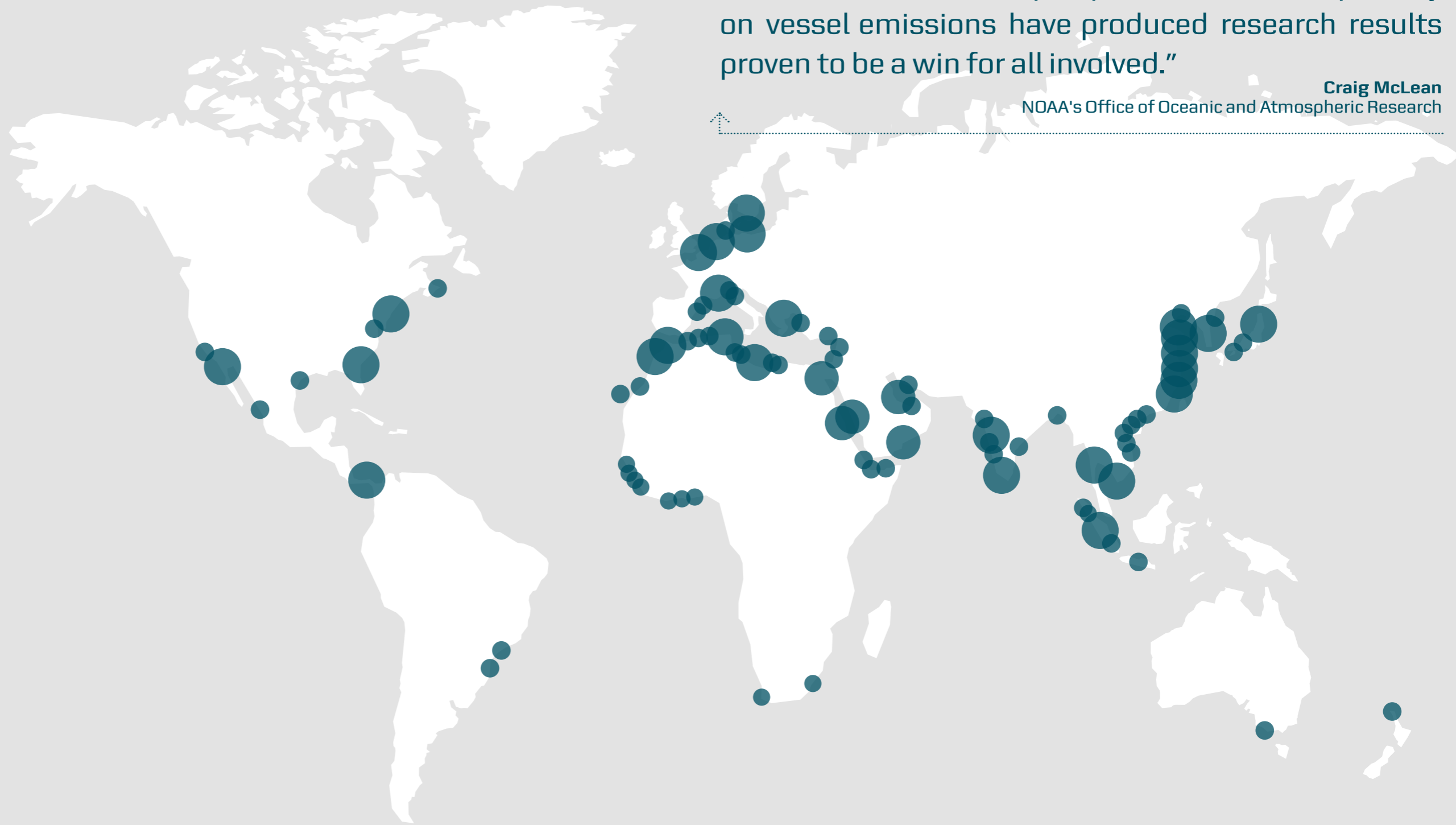
**Henrik Sundstrom**  
 Vice President of Group Sustainability Affairs, AB Electrolux

After years of investigating SO<sub>x</sub> scrubber technologies, we have found a feasible solution together with BELCO®. The scrubber system is being installed and tested on Maersk Taurus. The technology promises to cut SO<sub>x</sub> emissions by



Map

SO<sub>x</sub> emissions emitted by Maersk Line in proximity of coastal areas. The circles reflect the concentrations of our SO<sub>x</sub> emissions.



Fuel switch strategy

In 2011, Professor James Corbett, University of Delaware, a leading academic on pollution from shipping, helped us develop specific recommendations for Maersk Line's future fuel switch programmes. Our fuel switch strategy takes into consideration current and future SO<sub>x</sub> concentrations worldwide as showed in blue on this map.

Public-Private Partnerships for transparency on SO<sub>x</sub>

The research of leading environmental research institutions such as the US National Oceanic and Atmospheric Administration (NOAA) and the US Environmental Protection Agency (EPA) helps put SO<sub>x</sub> emissions on the agenda.

Creating transparency on SO<sub>x</sub> emissions and their impact on public health and the environment is important to mobilise shipping lines and authorities to reduce the emissions across the entire industry.

In 2011, a partnership between Maersk Line and NOAA enabled the necessary data and analysis for a study measuring the impact of California Air Resources Board's fuel-switching requirement.

“The NOAA-Maersk Line collaboration is a model for government-industry cooperation in environmental research. NOAA's unique scientific expertise and Maersk Line's leadership in performance transparency on vessel emissions have produced research results proven to be a win for all involved.”

Craig McLean

NOAA's Office of Oceanic and Atmospheric Research

# Protecting biodiversity

**When invasive species hitch a ride from one part of the world to another on big ships it is a major threat to local ocean flora and fauna.**

Ships carry ballast water to provide stability, aid steering and control trim and draft. But ballast water often originates from ports and other coastal regions rich in plankton and other marine organisms. Discharging ballast water originating from one marine environment into another can introduce alien species into a marine ecosystem, threatening its ecological balance.

To reduce the impact on biodiversity Maersk Line discharges ballast water midway on the journey. But as we ex-

change up to 10 million cubic metres of water every year, this measure is not sufficient, also not in light of anticipated regulatory developments.

So in 2011 we committed to installing a ballast water treatment system on all new ships built in 2012 and onwards. This system cleans the water thoroughly before releasing it back into the sea. We expect that the IMO Ballast Water Convention will enter into force in 2012 making ballast water treatment the norm going forward.

**Using our assets to measure ocean health**

As our ships are present in every ocean they are attractive platforms for

researchers who want to measure the ocean health using samples from all over the globe.

In 2011, Maersk became members of the World Ocean Council (WOC). The purpose of the membership is to partner with like-minded companies and engage with the scientific community to enable systematic and regular reporting of standardised oceanographic and atmospheric data.

Our objective is to facilitate strategic scientific programmes on our ships, preferably sharing open source data globally. The data also benefits Maersk Line by improving our understanding of ocean currents for route planning, and for reducing our impact on biodiversity.

“Maersk is making significant progress in its commitment to protect marine biodiversity, reduce the impacts of its operations and better understand the oceans. By joining the World Ocean Council - international ocean industry alliance for Corporate Ocean Responsibility - the company is leveraging its leadership to achieve even greater results in advancing ocean sustainability.”

**Paul Holthus**  
Executive Director, World Ocean Council (WOC)

It is estimated that at least  
**7,000**  
different species are carried in ballast tanks around the world.



# Supply chain innovation

## Why sustainability matters in our supply chain

Maersk Line has more than 10,000 suppliers. Our procurement spend in 2011 was more than USD 17 billion. What we buy, how we buy it and who we buy it from matters — from a corporate and societal perspective. Especially as we operate assets with a thirty-year lifespan. We need to think long term together with our suppliers and partners.

Forging new links with others in the logistics chain in planning, collaboration and R&D efforts helps us improve our performance and service offerings. Risks are reduced as standards are improved throughout the chain. And knowledge and expertise is leveraged for all parties involved.



## Goals

50% of operational spend registered in Maersk Responsible Procurement Programme

Supplier partnerships for supply chain improvements

Fuel efficiency of charter vessels on par with Maersk Line owned vessels (Goal: 25% CO<sub>2</sub> reduction per container from 2007 to 2020)

Introduce sustainable floorboards in Maersk Line containers

## Progress in 2011

Suppliers accounting for 22% of our operational spend were registered in the programme and acknowledged our Third Party Code of Conduct.

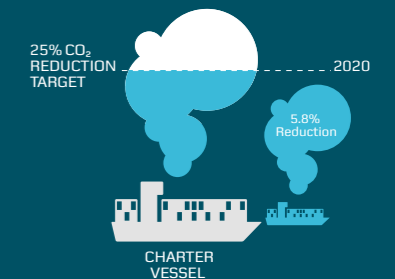
Maersk Line worked together with ports, terminals and authorities globally to improve port productivity, ballast water management and support the development of hinterland infrastructure.

Maersk Line formed a partnership with ship owners on optimising charter vessels' fuel efficiency by integrating Maersk Line's performance management approach.

In 2011, the CO<sub>2</sub> footprint of the chartered fleet was reduced by 5.8% per container (TEU/Km).

Maersk Line issued a new procurement policy on container floorboards to avoid illegally logged timber in our containers.

In 2011 we purchased 504,000 TEU containers with floorboards adhering to our policy's requirements and became members of Forest Stewardship Council® (FSC).



# Procuring responsibly

**Through responsible procurement, Maersk Line can help improve how business is conducted with suppliers, in line with international standards and conventions, and reduce risks to our operation and brand.**

To facilitate this, Maersk has developed a Third Party Code of Conduct which outlines our expectations to suppliers and key business partners in the area of environment, health and safety, human and labour rights and anti-corruption. The Code of Conduct was launched in the second half of 2011 and is being implemented through Maersk Line's Responsible Procurement program.

4,700 of our suppliers are in scope for the programme. They include ports and

container terminals, ship yards, container manufacturers, energy companies a.o. and represent a wide range of industries and geographies.

Our target for 2011 was to introduce the programme to key suppliers representing approximately 50% of Maersk Line's operational spend.

### Suppliers sign up to Maersk Line's Responsible Procurement Programme

In 2011, we introduced the Maersk Responsible Procurement Programme to approximately 300 suppliers who have subsequently acknowledged our Third Party Code of Conduct. They account for 22% of our operational spend. Another 13% has been invited to

join but has not yet registered their companies in our system.

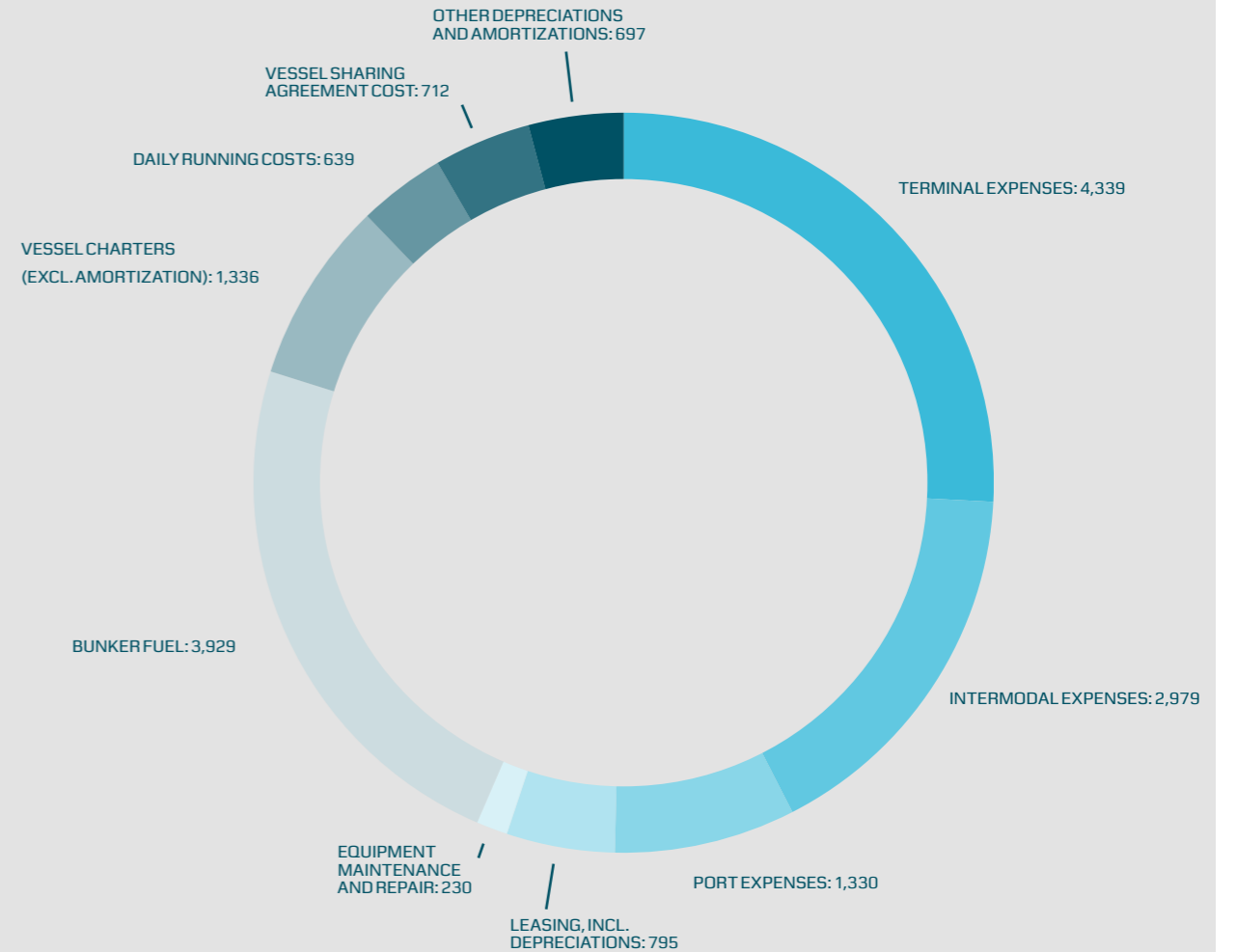
Going forward, we will be assigning clear priorities for the registered suppliers and engage actively with the suppliers identified as high-risk vendors.

### First year of implementation

The Responsible Procurement programme is still in its early days. Our commitment to Responsible Procurement is for the long-term and the programme will continue to expand over time. We are convinced about the benefits it will bring about and the opportunity to engage with suppliers in long-term strategic development.



**Maersk Line's operational costs in 2011**  
Container terminal activities and bunker fuel represent the two biggest operational cost items for Maersk Line.  
Figures: million USD



### Our progress in 2011:

- Suppliers accounting for 35% of Maersk Line's operational spend were invited to join the Responsible Procurement program. (target 50%).
- 22% accepted the invitation, acknowledged our Third Party Code of Conduct and registered in the Responsible Procurement system. (target 50%).
- 90% of Maersk Line's procurement staff relevant for the programme has completed the Responsible Procurement e-learning programme. (target 80%).

# Partnerships with ports and terminals

## Supplier partnerships for supply chain improvements

**Ports and container terminals are a key node of global supply chains and essential gateways in channelling goods to consumer markets worldwide. Providing crucial infrastructure for world trade, they bring about job opportunities for thousands of citizens, local societal development and global wealth creation.**

Ports are a part of our customers' supply chains and an essential component to our business, our customers and nations worldwide. They will increasingly be involved in bringing value to the final consumers as part of an integrated supply chain.

If ports and their hinterland infrastructure can function in a way that minimises environmental impacts and maximise the many societal benefits ports bring about, the end results will benefit both business and consumers and the local communities through which those goods pass.

## Ships' energy efficiency depends on port performance

The reliability, cost efficiency and sustainability of shipping lines are all closely linked to the productivity of ports.

High port productivity, with quick loading and off-loading of ships, means less time spent in port, timely departures and more efficient fuel consumption at sea through slow steaming. The result is a better service for our customers at a lower cost and with lower carbon emissions.

Together with our partners in the terminals, Maersk Line has launched an initiative to boost productivity. In all simplicity we work on site with the terminal operator for several weeks to determine which actions we both can take in order to eliminate waste and variation from the process.

## Boosting port productivity

It is a mutual responsibility to increase port performance, and the benefits will be visible to both, as well as to our customers and the environment. Close follow-up is key to success and this will be an ongoing partnership.

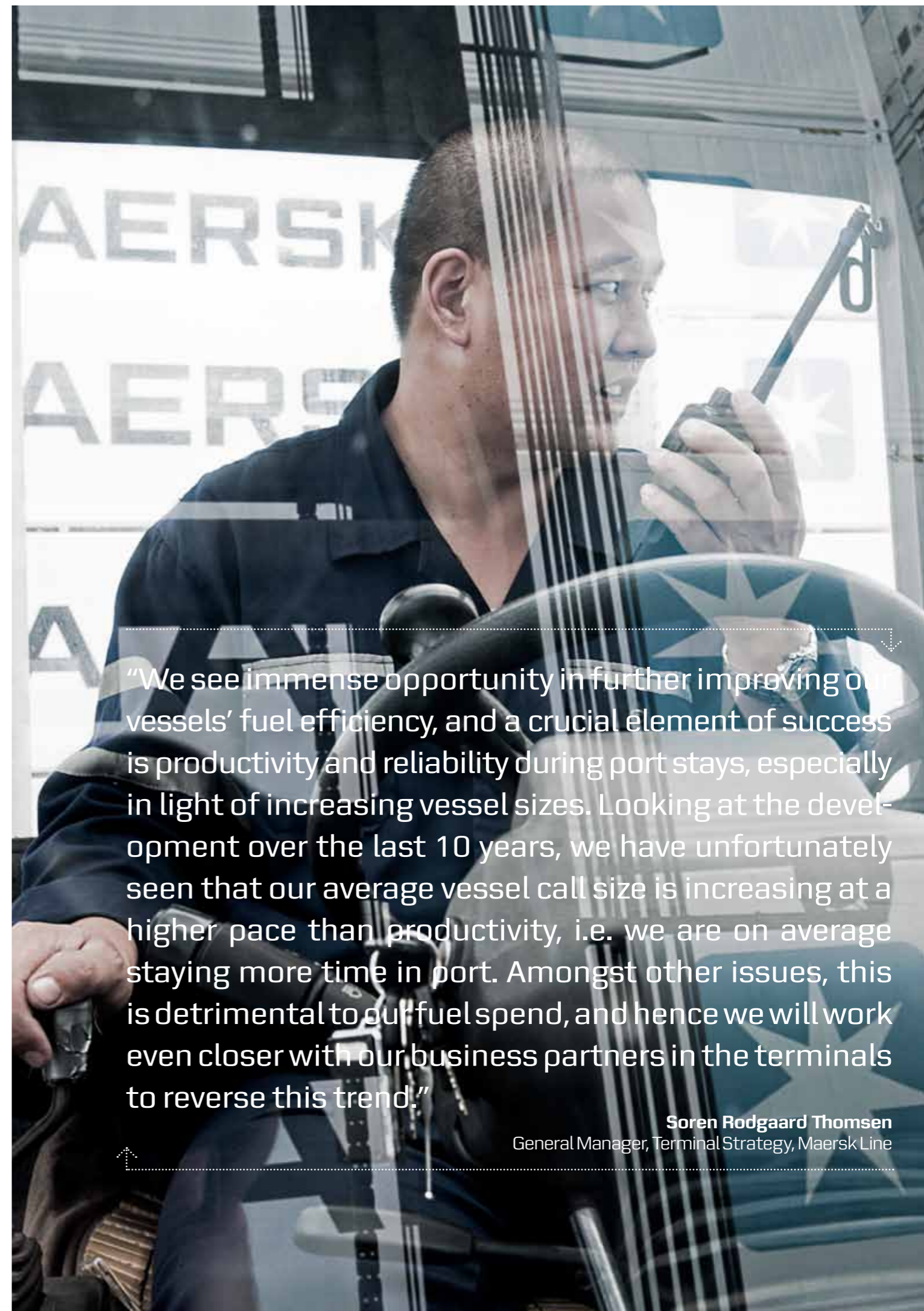
Worldwide, logistics-based buildings such as warehouses, ports and distribution centres contribute 371 million tonnes of CO<sub>2</sub> each year<sup>23</sup>. Similar to shipping lines, they depend on fossil fuels and are almost completely powered by non-renewable energy sources. As ports expand, their impact on the surrounding environment is becoming more and more important.

## Improving supply chain transparency

It is increasingly important to our customers that they are able to measure their environmental and social impacts throughout their supply chains. By measuring their own impacts, ports can play an important role. More integrated, transparent supply chains allow customers to identify opportunities for performance improvements across the entire value chain.

Port performance on CO<sub>2</sub>, SO<sub>x</sub>, NO<sub>x</sub>, water and waste will increasingly supplement the typical 'hard' selection criteria that shipping lines apply, such as cost, productivity, capacity, draft and safety. Because many of the issues are similar in our industries, there is a strong case for collecting and sharing data along the value chain.

To this end, Maersk Line advocates a standardised approach to measuring the environmental footprint of the terminal operations. Programmes like the Sustainable Shipping Initiative and Clean Cargo Working Group can help to establish performance benchmarks, enabling ports to commit to goals for improvement.



“We see immense opportunity in further improving our vessels' fuel efficiency, and a crucial element of success is productivity and reliability during port stays, especially in light of increasing vessel sizes. Looking at the development over the last 10 years, we have unfortunately seen that our average vessel call size is increasing at a higher pace than productivity, i.e. we are on average staying more time in port. Amongst other issues, this is detrimental to our fuel spend, and hence we will work even closer with our business partners in the terminals to reverse this trend.”

**Soren Rodgaard Thomsen**  
General Manager, Terminal Strategy, Maersk Line

<sup>23</sup> Low-carbon, high growth, 2011, by TATA Consultancy Services

# The case of the Indonesian 'dry port'

**Indonesia is an important exporter of oil and gas, electrical appliances, plywood, textiles and rubber. As an archipelago country of more than 17,000 islands, Indonesia relies on seaports for exports and imports.**

The port productivity of the Indonesian main ports is considered slower compared to most ASEAN countries, with many of the commercial ports and hinterland infrastructures suffering from limited capacity and congestion.

Tanjung Priok Port, the biggest sea port in Indonesia, is the gateway for more than 60% of the country's containerised cargo throughput. The region consists of more than 2,500 manufacturing companies, including the likes of Mattel, Ikea, Nike, Adidas, LG and Samsung. It is becoming the biggest industrial area in the country.

## Indonesia initiative to reduce logistics cost

In 2011, Indonesia proposed an initiative to reduce the uncertainty of lead time and logistics cost stemming from infrastructure challenges for the business players and the shipping industry.

The national initiative concerns a new 'dry port' in Cikarang – the first such port in Indonesia. A dry port is an inland intermodal terminal directly connected by road or rail to a seaport. It operates as a centre for the transshipment of sea cargo to inland destinations.

Dry ports can play a key role in promoting economic development in inland areas by integrating regional transport and logistics into international networks.

The aim of the dry port is to improve the nation's trade flows by bringing the port to the manufacturing neighborhood. Maersk Line was consulted for the development of the project. We shared best practices and collaborated with the assigned project partner from the government, Jababeka Group, to maximise the value of the dry port for the shipping industry and our customers.

## Better access to global markets

Besides facilitating a modal shift from road transport to lower carbon rail, our cooperation and participation in the project has meant that we can today offer our customers better access to global markets and help Indonesia become more internationally competitive.

Maersk Line was the first shipping line to connect Cikarang Dry Port with other ports of call around the world. Unilever was the first customer we served using the dry port.

“When infrastructure challenges impede international trade flows and our service, we have an opportunity to contribute with logistics expertise and push for positive national developments. We are thrilled to be part of this success story which has leveraged our business and created social and economic value for Indonesia and customers worldwide.”

**Jakob Friis Sorensen**  
President Director of Maersk Line, Indonesia



# Engaging with ports on waste handling

**Maersk Line does not discharge any waste in the ocean except for organic waste. This means that adequate reception facilities must be available in the ports to ensure safe and responsible handling of waste.**

In 2010, we developed a standard operating procedure describing how the vendors in ports should handle the sludge and garbage disposed of by our ships. We rate the vendors based on this procedure. In 2011, 37 of 159 vendors were rated 'red' by our organisation as they did not live up to the standards described in our operating procedures.

The exercise on following up on 'red' flagged vendors is in its early stage. In 2011, we made some progress by

conducting four workshops with port authorities in Rotterdam, Antwerp, Singapore and Hong Kong to understand the barriers and possibilities for safe waste disposal.

## Rotterdam and Antwerp lead the way

Rotterdam and Antwerp are rated 'green' in our rating system because they handle sludge and waste in an environmentally safe way. Our ratings testify to the two ports' consistent leadership on safe waste handling activities. They continue to raise the bar and now work to improve the performance of port reception facilities even further.

We recommend our ships not to dispose of sludge and waste in 'red' rated ports.

To improve the standards in these ports we are sharing best practices from Rotterdam and Antwerp.

## Getting more ports on board

In 2011, we defined a pilot project to map the performance of 12 deep sea ports in north Europe. Rotterdam and Antwerp will be used as role models to ensure that sludge and waste is handled safely in all of the north European ports.

The pilot project will also be used to guide ports in the rest of the world on how to improve port reception facilities ensuring sludge and waste is handled in the best possible way.



# Ship owners join fuel optimisation drive

**About two thirds of the container fleet sailing under the Maersk flag is owned by other companies, and chartered by Maersk Line. So the performance of these container ships is important to meeting our target of reducing CO<sub>2</sub> by 25% per container from 2007 to 2020.**

On average, Maersk Line owned vessels are estimated to be around 5-10% more fuel efficient than the chartered fleet.

Our goal requires collaboration and coordination as the chartered fleet is covering a diverse group of around 80 different companies including major and minor players.

Our long-term goal is to boost the chartered fleet's energy efficiency to the level

of Maersk Line owned ships. Our experience shows that major efficiency gains can be made from factors such as the tuning of engines, choice of hull paint, and timing and quality of hull and propeller cleaning.

## Extending our performance management approach

In 2011, we took an important step by extending Maersk Line's performance management approach to the chartered fleet.

The ship owners welcomed our initiative and request to supply performance and other data about their vessels. The data was used to develop theoretical models of performance for every type of ship – and baselines against which real performance can be compared.

In 2011, Maersk Line's reporting system was installed on the first 140 charter ships. The first batch of Energy Efficiency Scorecards was published in the beginning of 2012.

Maersk Line's reporting system and scorecard setup enables benchmarking between vessels, meaning owners can compare how sister ships within their fleet are performing. Though Maersk Line carries the cost of the bunker fuel, owners will be incentivised to perform well so that they have good results to report when charters are renewed.

In 2011, the CO<sub>2</sub> footprint of the chartered fleet was reduced by 5.8% per container (TEU/Km).

“We are pleased to join Maersk Line's fuel efficiency optimisation drive. It came at a good time for us, soon after the launch of our new environmental department charged with improving our environmental performance. Our joint project challenges us to focus on performance in new and radical ways.”

**Mark Rawson**  
Environmental Manager, Zodiac Maritime Agencies Ltd

# Reducing the impact of containers

**There are 17 million containers in circulation in the world today, about 10% of them owned by Maersk Line. Hardwoods sourced from tropical forests still form an important component of containers. They provide a durable flooring system, but bring unwanted social and environmental impacts where the source of the timber is unclear.**

In 2011, following three years of research into alternatives together with Maersk Container Industry (MCI), we made the decision to end the purchase of containers using uncertified tropical hardwood floors - a component currently consuming

between 1.2-1.5 million cubic metres of hardwood annually.

## Certified wood, recycled plastic or bamboo

We created a new procurement policy, requiring that containers floors must come from responsibly-managed hardwood forests certified by the Forest Stewardship Council, or from alternative materials, particularly bamboo and recycled plastic.

MCI produced its first FSC-labelled container for Maersk Line in Dongguan, China in April 2011. The container is fitted with hardwood floor from certified

responsible forestry. MCI has now commissioned several thousand containers with these replacement materials.

We expect to buy a further three million such containers in the next five years.

A large proportion of our container fleet will thus have sustainable floorboards within a relatively short time span. Certified floors will be in all Maersk Line containers within 18 years, the typical lifetime of a container.

In 2011, Maersk Line became members of FSC.

### Maersk Line Policy

It is the policy of Maersk Line that all orders for production of dry and special containers must comply with the standards for container floor materials, as described below and in order of the following priorities:

1. Non-wood recyclable or sustainable waste product container flooring such as recycled plastic.
2. FSC certified hardwood floor, which entails both the wood and the supply chain must be FSC certified.
3. Bamboo floor.
4. Non-tropical wood species from controlled, responsible forestry, such as birch and larch.

As a direct result of the new policy, non-certified tropical hardwood will no longer be accepted.



# Workplace sustainability

## Becoming a better and safer workplace

Our employees provide the skills and innovative thinking that drive our business. To ensure our long-term success we want everyone to be healthy, safe and engaged.

Our latest employee survey shows that 91% agrees that Maersk Line is making a genuine effort to be socially and environmentally responsible. The commitment from employees to drive this agenda forward is key to deliver on our promises.



## Goals

Top quartile employee engagement (employee engagement score of 76%)

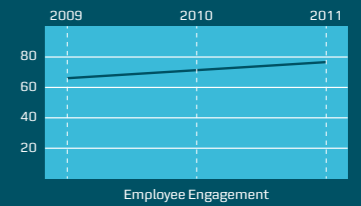
Drive towards zero accidents

Minimise risk of security incidents

## Progress in 2011

Maersk Line's employee engagement score improved from 71% in 2010 to 77% in 2011.

Maersk Line's employee engagement score on sustainability improved from 83% to 91%, and is the highest score in the annual survey.

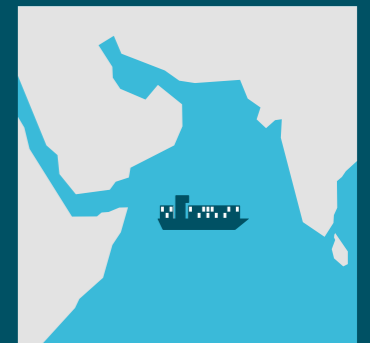


Maersk Line reduced its Total Recordable Case Frequency (TRCF) by 13% to 2.08 – the number of recordable incidents per million man-hours worked.



All attacks on Maersk Line operated vessels were averted through different precautionary measures.

Maersk Line's Customs-Trade Partnership Against Terrorism (C-TPAT) membership was renewed by US customs.



# Improving employee engagement

**At Maersk Line, employee engagement is crucial for our company's performance in the broadest sense.**

Highly engaged employees deliver a whole different level of customer service, with a different energy and motivation. They are more willing to exceed expectations and better equipped to make the right decisions. Engaged employees mean happier customers and better results.

Every year we measure employee engagement. Our employee engagement survey assesses employee attitudes and perspectives towards the company, leaders and the overall work environment across the organisation. Last year, 97% of our 25,000 employees globally provided their feedback.

**Employee engagement increases again**

Efforts to maintain high engagement

paid off with an employee engagement score of 77% (percentage of employees responding in favour of four selected engagement statements), a major improvement on the previous year's 71%. Top quartile engagement in comparable industries is at 76%.

The number of employees being 'extremely satisfied with Maersk Line as a place to work increased to 84% - an all time high and higher than the top quartile of comparable industries. The employee feedback improved positively across all 55 survey statements by 4% in average.

**Sustainability affects employee engagement**

Maersk Line employees continue to respond very favourably toward the company's efforts to develop sustainably.

This year the statement 'my company is making a genuine effort to be socially

and environmentally responsible' beat all other statements at a favourability rate of 91%.

**Managers are more effective**

The annual survey reveals that 88% of all employees have a good relationship with their manager. The figure is closely linked to the manager effectiveness scores which increased by 2 percentage points to 83%.

Manager effectiveness include leadership skills such as living the values, giving timely and relevant feedback, supporting open two way communication and employee development.

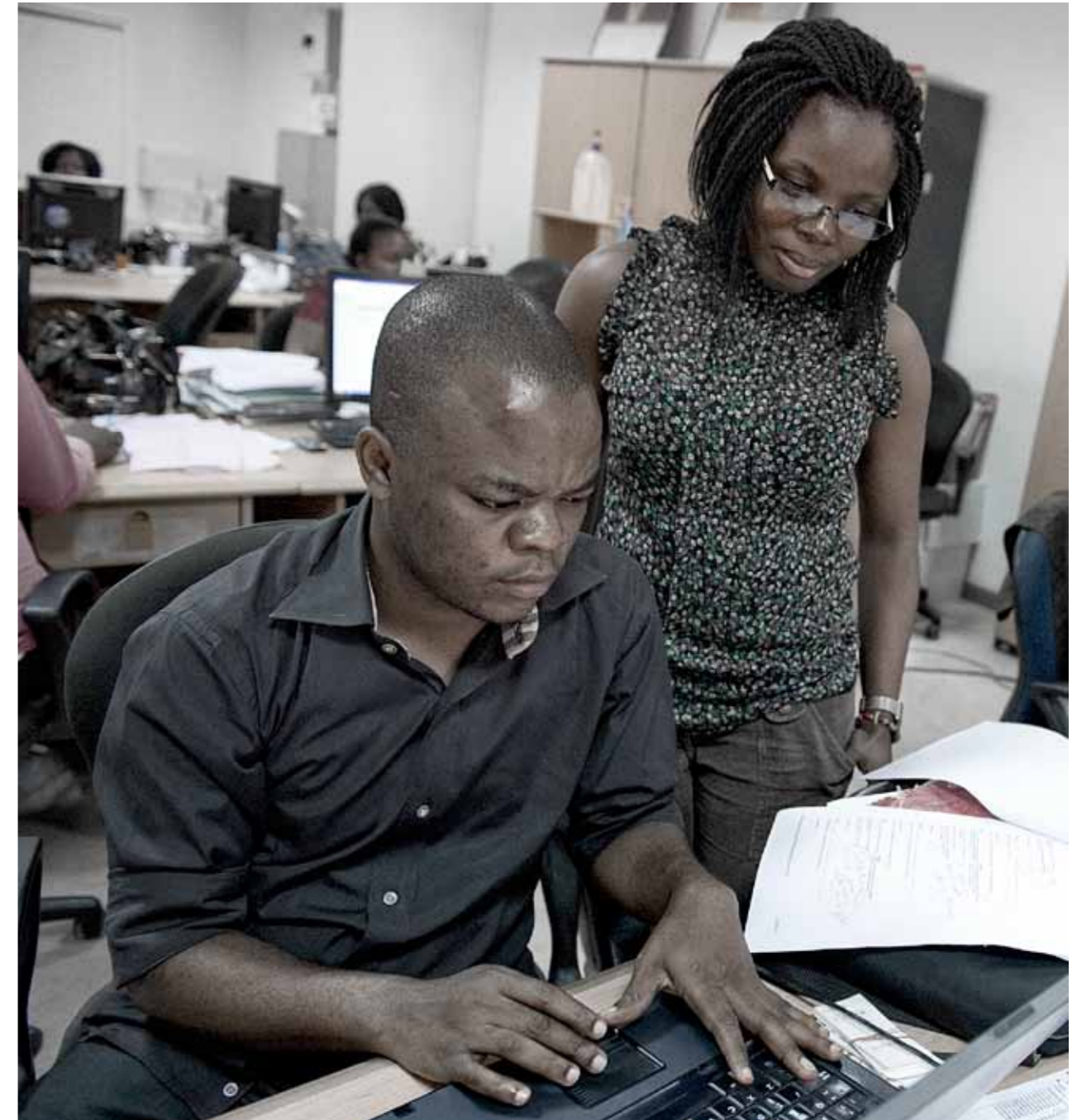
**The voice of seafarers**

The employee engagement survey for seafarers includes questions related to the daily vessel operation. In 2011, 53% of 5,847 seafarers responded, filling out the

“Our commitment to sustainability is a good compass and source of motivation. It is an important part of being an innovative and inspiring place to work and vital to our attractiveness as an employer.”

**Bill Allen**

Head of Group HR, A.P. Moller-Maersk and acting Head of HR for Maersk Line



survey on paper. Their engagement score is lower compared to that of office staff but improved from 59% to 65% over 2011.

The highest scoring category is Safety & Security, and environmental considerations were rated highly positively as well. On the lower end of the scale are items such as satisfaction with the support from the Crewing Manager (56%), the management of relief times (58%), feel-

ing positive about career opportunities (62%) and the quality of the food served on board (63%).

**Taking action on employee feedback**

Based on the survey results we have identified Career & Development as one of the most important improvement areas across the organisation. Moreover, every manager is asked to hold a feed-

back session in order to discuss the survey input with his or her team, and subsequently follow up with appropriate and timely action.

Employee engagement is viewed as a fundamental factor for all aspects of company success in Maersk Line. Employee engagement is therefore an integral part of our leaders' performance scorecards.

### Voice of employees

90%

My company is innovative and seeks out new ideas. (2010: 86%)

89%

I know my company's vision for the future. (2010: 82%)

86%

My company treats people equally with respect to gender, race, nationality, religion etc. (2010: 82%)

84%

I am extremely satisfied with my company as a place to work. (2010: 78%)

91%

My company is making a genuine effort to be socially and environmentally responsible. (2010: 83%)

### Voice of seafarers

93%

On board I am encouraged to consider environmental impacts of my actions.

Maersk Line employees by region



# Mobilising employees

**Mobilising employees around our company strategy remains an important focus area to further integrate sustainability into our business.**

In Maersk Line the integration is being driven from many different functions in the company. There is no doubt that our leadership's commitment to sustainability has been a key driver of the progress made so far.

**CO<sub>2</sub> reduction in personal scorecards**

In Maersk Line, CO<sub>2</sub> reduction is on the scorecard of senior management as well as our CEO. During 2011, Maersk Line's former CEO, Eivind Kolding was tasked with reducing CO<sub>2</sub> emissions per container moved by at least 3%.

To that end, Maersk Line's fleet management function has been successful in incentivising fuel and CO<sub>2</sub> reduction throughout the organisation. Managers' performances are compared, and a monthly report rates each service's energy efficiency based on an A-G rating system. In 2011, Maersk Line reduced its fuel consumption per container (TEU) by 2.7% this way.

**Articulating our value proposition**

'Delivering best environmental performance' is an integral part of our value proposition to customers. Employees' ability to articulate how Maersk Line

can add value is essential to increase demand for more responsible and environmentally efficient shipping services.

In 2011, the commercial organisation launched a campaign to help the sales force engage with customers on the long-term strategic value Maersk Line can bring to customers' supply chains. The goal is to focus customer meetings on factors that help bring our customer success, for example waste reduction through on-time reliability and a lower supply chain footprint.

**Training for employees**

In 2011, we worked to increase the general awareness and understanding of the sustainability issues inherent to our business. Four global training programmes were launched and more than 20,000 employees completed one or more of the courses.

**4 sustainability e-learning programmes launched in 2011**

**Eco-Advantage**

An introduction to environmental issues in shipping, our sustainability strategy and environmental initiatives. Completed by 133 sales managers.

**Responsible procurement**

Explains procurement employees how to work with the Maersk Responsible Procurement program, system and tools. Completed by 37 procurement managers.

**Anti-corruption**

Educates employees on how to tackle demands for bribes and facilitation payments in different challenging situations. Completed by 19,740 employees, 77% of all Maersk Line staff.

**Safe Transportation**

Demonstrates how actions or non-actions on land affect the safety of those at sea. Completed by 548 employees.

# A safe workplace at sea



**Our seafarers' safety is a priority for Maersk Line, and it is a focus we will never lose sight of. Our goal is to drive our operation towards zero accidents by continuously reducing risks and improving the safety behaviour of our people.**

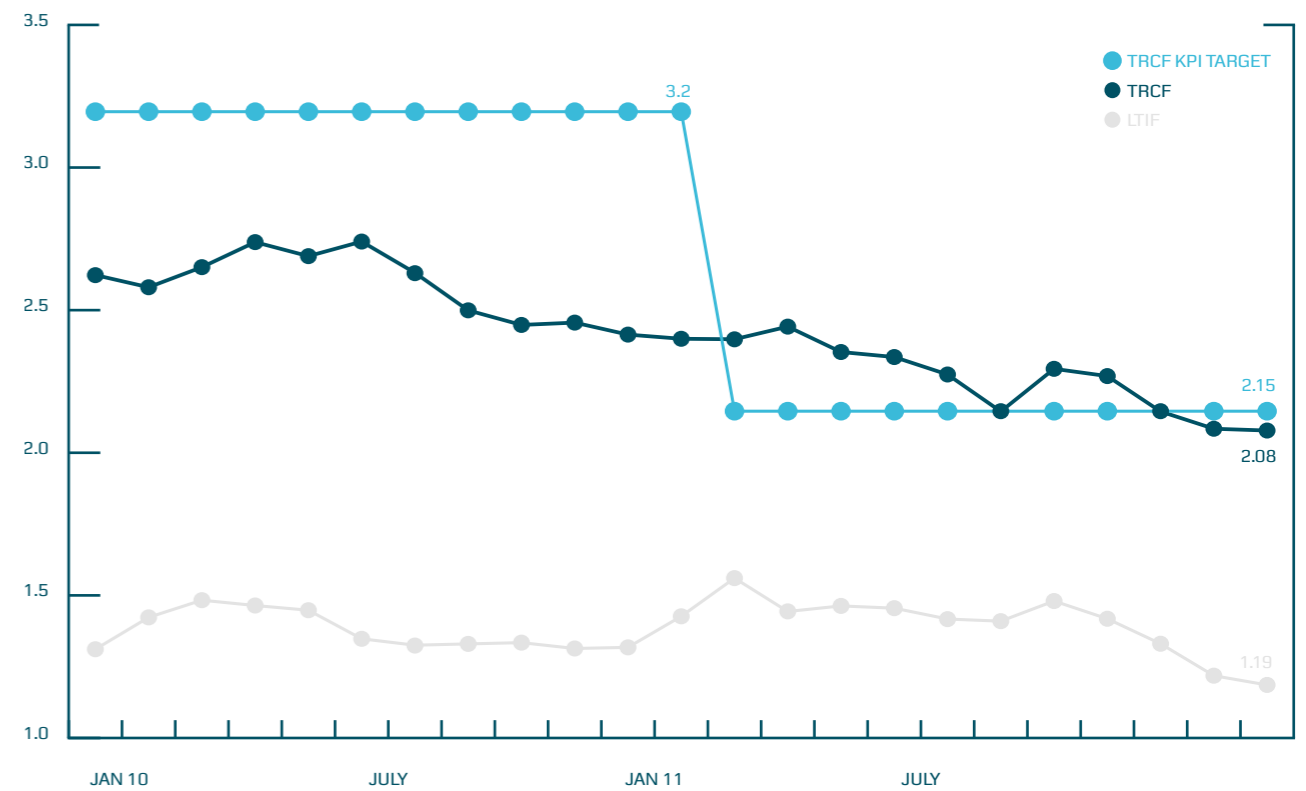
In 2011, the new function 'Marine Standards' was formed in Maersk Line. Marine Standards is tasked with monitoring and improving Maersk Line's Health, Safety, Security and Environmental performance

and maintains the company's Safety Management System for our vessel operation.

### 391 injuries on board

391 work related accidents<sup>24</sup> were reported on board our container ships in 2011. 140 of them are 'recordable', meaning they were medical treatment injuries, restricted work injuries and lost time injuries, also called Total Recordable Cases (TRC). Fortunately, we did not experience any workplace fatalities in 2011.

The 140 recordable cases are on par with our performance in 2010 (143). Factoring in the growth of our fleet and resulting increase in 'exposure hours', our Total Recordable Case Frequency (TRCF<sup>25</sup>) improved by 13% in 2011. Maersk Line's TRCF in 2011 was 2.08 against a target of 2.15.



<sup>24</sup>Total number of accidents includes LTI, RWI, MTC and FAC.

<sup>25</sup>The frequency of all recordable safety related cases (measured: lost work cases + restricted work cases + medical treatment cases, per million man-hours worked). For KPI measurement the TRC have been weighted (LTI: 1.0, RWI: 0.6, MTC: 0.2)

**Risk areas: Manual handling and Maintenance**

We are continuously monitoring and investigating any work place injury that occurs. Our monthly safety report shows the reported injuries for each field of activity. It helps our organisation examine trends and prioritise efforts. In 2011, some of the highest injury and risk areas were Manual handling and Maintenance.

Manual handling includes a wide range of manual handling activities, such as lifting, lowering, pushing, pulling or carrying. In 2011, manual handling injuries increased from 21 to 29 cases. That is concerning as manual handling often results in back injuries affecting longer-term personal health and wellbeing.

In 2011, we registered a 40% increase in injuries occurring during Maintenance

activities. In the Maintenance category the highest risk area is maintenance work on pressurised equipment. Equipment containing a liquid or gas under pressure (such as boilers and steam heating systems) must be handled with extreme care. Minimising risks when working with pressurised equipment will therefore continue to be a focus area.

Activity	Total	LTA	RWA	FAC	MTC
Anchor handling	1	0	0	1	0
Bunker transfer operation	2	1	0	1	0
Cargo operations	17	5	3	7	2
Crane operations	2	0	0	1	1
Domestic (cooking and cleaning)	24	1	0	22	1
Enclosed space activities	1	0	0	1	0
Equipment overhaul - Major	12	2	1	5	4
Equipment overhaul - Minor	35	3	5	25	2
Falling object	6	0	2	4	0
Gangway/pilot operations	5	0	1	3	1
General movement	34	5	5	21	3
Maintenance - Major	16	3	1	9	3
Maintenance - Minor	87	8	10	56	13
Manual handling	29	5	3	16	5
Mooring/Unmooring	12	2	0	8	2
Off-duty activities	7	1	0	5	1
Other (i.e. slips or burns)	61	6	5	44	6
Painting/Blasting	8	0	1	5	2
Safety drill, training	4	1	0	2	1
Shore leave	1	0	0	0	1
Tank cleaning	1	0	0	0	1
Trapped by something collapsing	2	1	0	1	0
Unknown	2	0	1	1	0
Use of power tools	8	1	1	3	3
Welding/burning	10	0	1	8	1
Working aloft (at heights)	4	1	0	3	0
<b>Total</b>	<b>391</b>	<b>46</b>	<b>40</b>	<b>252</b>	<b>53</b>





**Focus on mooring paid off**

In 2010, we identified the mooring operation as one of the highest injury and risk areas. Mooring is the operation of securing a container ship to a fixed quay or berth by means of mooring lines or cables. To improve our safety performance in 2011 we launched a 'Safer Mooring' campaign on our ships.

In 2011, injuries occurring during mooring operations decreased by 30%. We are not satisfied with the fact that injuries still occur during this critical task and will continue our focus on safe mooring operations in 2012.

**Taking near-miss reporting to the next level**

In 2011, we launched a campaign to improve the reporting of near misses on ships. A near miss is an unplanned event that did not result in injury, illness, or damage – but had the potential to do so. Only a fortunate break in the chain of events prevented the injury.

Recognising and reporting near miss incidents can make a major difference to the safety of our employees. History has shown repeatedly that most accidents were preceded by warnings, near accidents or narrow escapes.

In 2011, a Near Miss Safety Campaign helped us get reporting of near misses on the radar. Subsequently, near miss reports increased from 5,518 reports in 2010 to 13,148 reports in 2011, an increase of 240%.

**Following up on near misses**

When a near miss report is submitted by a ship, it is reviewed by the Marine Standards department who provides assistance to the crews in preventing the near miss from happening again. Captains can view their near miss statistics and compare it to their peers. The statistics help the crews spot trends and risk areas. The commitment of the crews to report on near misses is essential to our safety culture. It helps us create an open culture

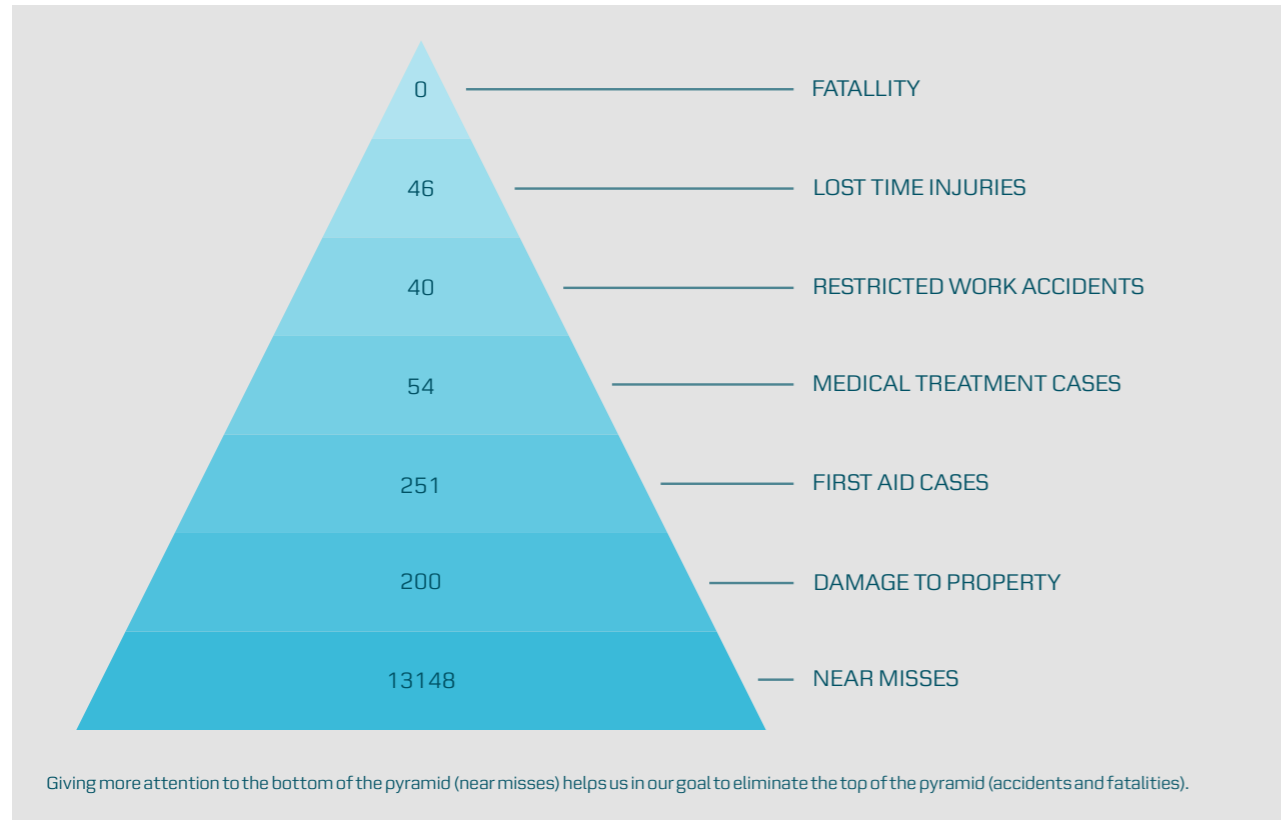
in which we share risk assessments, best practices and action plans in a responsible manner.

**When an injury happens on board**

Safety meetings are held every month on all Maersk Line ships to discuss safety performance and decide on proactive measures. When an injury does happen it is crucial that it is being thoroughly investigated and measurements are taken to prevent it from happening again. When an injury report is submitted by a ship, the injury is discussed in detail with Marine Standards and subsequently an action plan is made. In 2011, Maersk Line added extra human resources to ensure sufficient following up on injury reports.

**Port authorities inspect Maersk Line ships**

During the last two years we have seen an increase in Port State Controls (PSC). The trend is more frequent and detailed



inspections. The inspection is performed by PSC officers who go on board to verify that the condition of the ship and its equipment comply with international conventions, and that the vessel is manned and operated in compliance with applicable international law.

In 2010, PSC officers inspected 194 ships through 265 inspections. In 2011, the number increased to 202 vessels and 494 inspections. In 65% of the inspections, no deficiencies were recorded.

As a consequence of more rigid PSC inspections, we launched several initiatives to guarantee improvement. We have developed guidelines on preventing deficiencies, and findings in PSC audits are shared across the fleet. We initiated a benchmark study together with Boston Consulting Group who looked at our PSC performance. The report shows that we are on par with the container industry aver-

age for PSC deficiencies, which is approximately one deficiency per inspection.

In spite of having increased our focus on PSC inspections we unfortunately had five ship detentions this year.

**Avoiding fatigue through rest hour reporting**

Crew members on Maersk Line ships must get the rest time required by law. Compliance with rest hour rules remains a priority. We are following the principles issued by the ILO 180 Convention to monitor the hours of work and rest.

In 2011, we took several initiatives to ensure the limits are not being violated. A Rest Hour Awareness Campaign was launched to improve the rest hour planning on vessels. Captains and crews have been trained in rest hour planning, and rest hour reports are issued on a monthly basis.

**Voice of our seafarers**

**89%** say they receive relevant safety training

**90%** agree that Maersk Line is committed to employee safety

**93%** feel that Safety rules are consistently enforced on board

# Container safety issues

## Exploding reefer containers

**In 2011, Maersk Line grounded 844 refrigerated containers following three tragic fatalities and a number of accidents onshore. The refrigerated containers exploded on three separate occasions in Itajai, Brazil and Cat Lai, Vietnam.**

After a thorough investigation, we found out that the explosions were caused by contaminated refrigerants allowing an otherwise inert system to react violently. Together with the main producer of the refrigerants we located the main source to be a counterfeit product.

We reached out to other shipping lines through the industry association, the World Shipping Council (WSC) and subsequently also the Container Owners' Association (COA), and later on to reefer machinery manufacturers, leading forensic and test institutes amongst others with the objective of sharing knowledge and best practices in combating this threat.

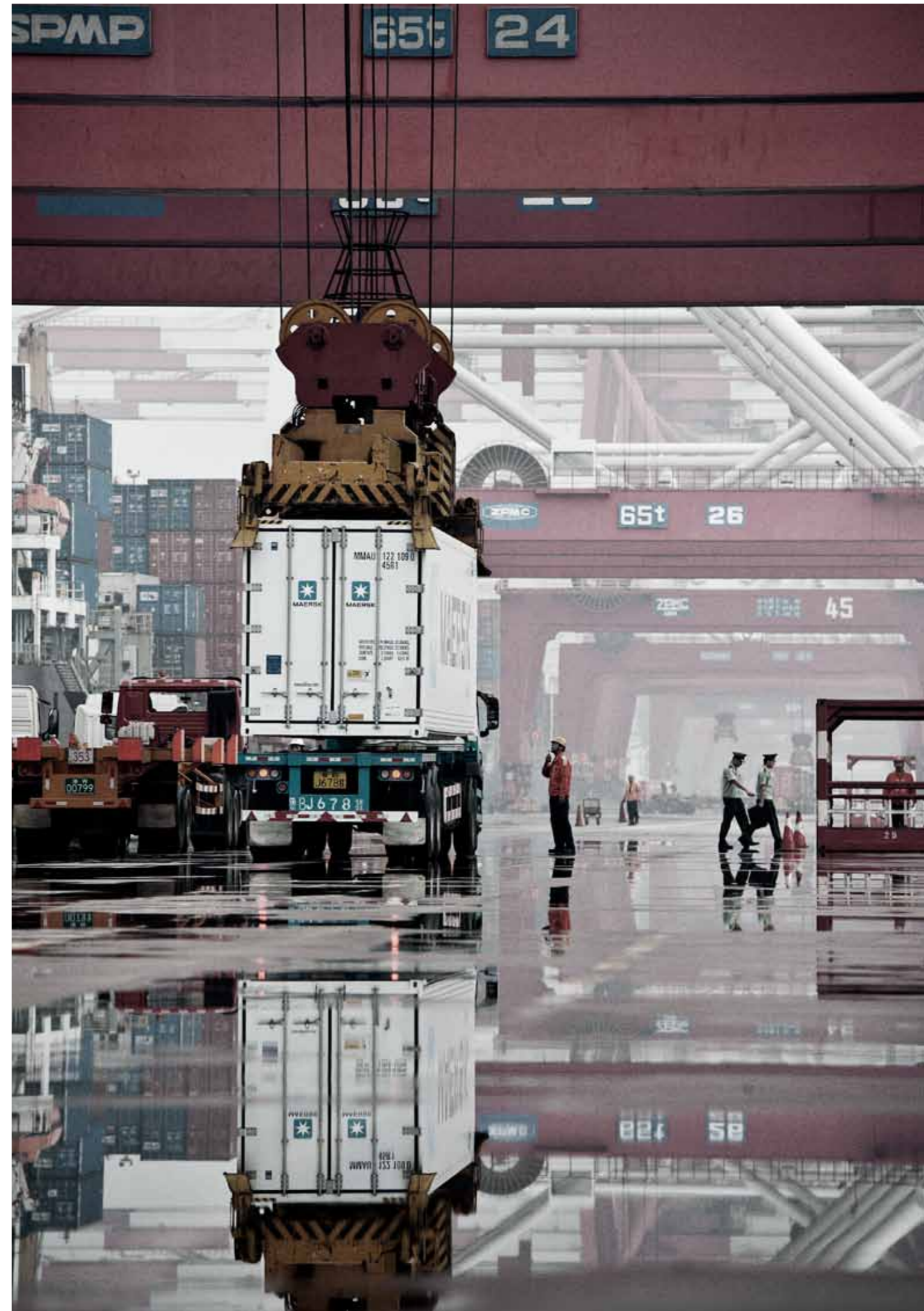
Steps to prevent the issue from recurring have been taken with further initiatives in the pipeline, for example the development of new testing methods and procedures. We hope that the industry continues to collaborate on preven-

tative measures to restore safety and confidence in the reefer container transportation industry.

## The issue of overweight containers

Overweight containers pose safety risks to people and assets throughout the entire transportation chain. They remain a serious issue in almost all regions and trades.

In the shipping industry wrongly declared containers cause issues in vessel planning and stowage. If there are too many overweight containers stowed on deck, a ship may lose stability and even capsize.



Maersk Line is in favour of the introduction of mandatory weighing of containers prior to loading. That would ensure correct weight declarations and help shipping lines reduce accidents and loss of containers. We support and encourage the International Maritime Organisation (IMO) to establish such legal requirements.

**Containers overboard**

There is a public perception, including within the International Maritime Organisation (IMO) and the EU Commission, that around 10,000 containers are lost overboard container ships every year.

If true, the safety and environmental risk would be substantial. The container carrier industry association therefore assembled data for the past three years. They arrived at an average annual loss of approximately 675 containers, including those resulting from single catastrophic elements (defined as 50 and more containers lost in a single event).

Over the past five years, Maersk Line, in comparison, lost on average 42 containers annually. While severe weather conditions can have an impact, some can also be attributed to human error.

Overall, we have been able to maintain a relatively low figure because of careful and systematic checks and procedures from the time of accepting the booking until the container is physically loaded on board. Our personnel and service providers at land and sea will continue to spot and isolate containers that may have potential safety risks.

We are making progress in forming an industry wide initiative that will help shipping lines know the exact gross weight of containers before loaded on board our ships. Knowing the exact weight on board will help us further reduce the number of containers lost overboard. Our overall objective remains zero containers overboard.

**Safe Transportation**

In 2011, Maersk Line launched a safety training programme for employees to highlight how actions or non-actions on land affect the safety of those at sea.

The course was completed by 548 employees.



# Addressing security risks

**Dealing with the threats of piracy**

**Piracy continues to pose a considerable impact on our seafarers and business in general. The constant threat impacts the safety and well-being of our employees, our service and cost. Countering piracy remains a high priority.**

According to the International Chamber of Commerce there have been 421 pirate attacks and 42 hijackings worldwide in 2011. Though many of these incidents originate from armed robbery stealing cargo or personal belongings from crews, the majority is aimed at hijacking crew, ships and cargo for ransom. Most of these attacks occur in the waters surrounding the failed state of Somalia.

By the end of 2011, 10 ships and some 170 seafarers were held hostage by Somali pirates.

**The impact of piracy is devastating in many ways**

Piracy from Somalia has a negative impact on stability in East Africa as a whole and causes a number of problems locally, regionally and globally.

First and foremost piracy is a threat to the merchant seafarers who risk being attacked, wounded, taken hostage or killed whilst transiting the waters to maintain global trade. Piracy has a con-

siderable economic impact to global, regional and local economies, which suffer from increased cost on import and export. Piracy is also a threat to the environment as it forces speed increases and thereby creates higher air emissions.

According to private risk assessment provider MaRisk, piracy around Somalia resulted in 213 attacks and 30 hijackings in 2011. Though the number of successful hijackings have been halved compared to 2010, the number of attacks have not decreased. The main reasons for this are believed to be the increased efforts initiated by the shipping industry and the continued international political will to fight piracy. The better cooperation and information sharing among the naval entities and the industry also contributes to the reduction of piracy attacks.

However, the present international activities have not deterred the pirates from attacking merchant vessels and incentives for piracy remain high in Somalia.

**Anti-Piracy Coordinator**

As a result of the development in piracy activities in 2010, Maersk Line decided to top already in-place initiatives by employing a dedicated person to head our Anti-Piracy coordination and to be Maersk Line's point of contact regarding piracy related issues.

The position as Anti-Piracy Coordinator, which is believed to be the first of its kind

within the shipping industry, is also responsible for Maersk Line's strategic approach to fight piracy and for coordination with international partners.

**Ship Protection Measures**

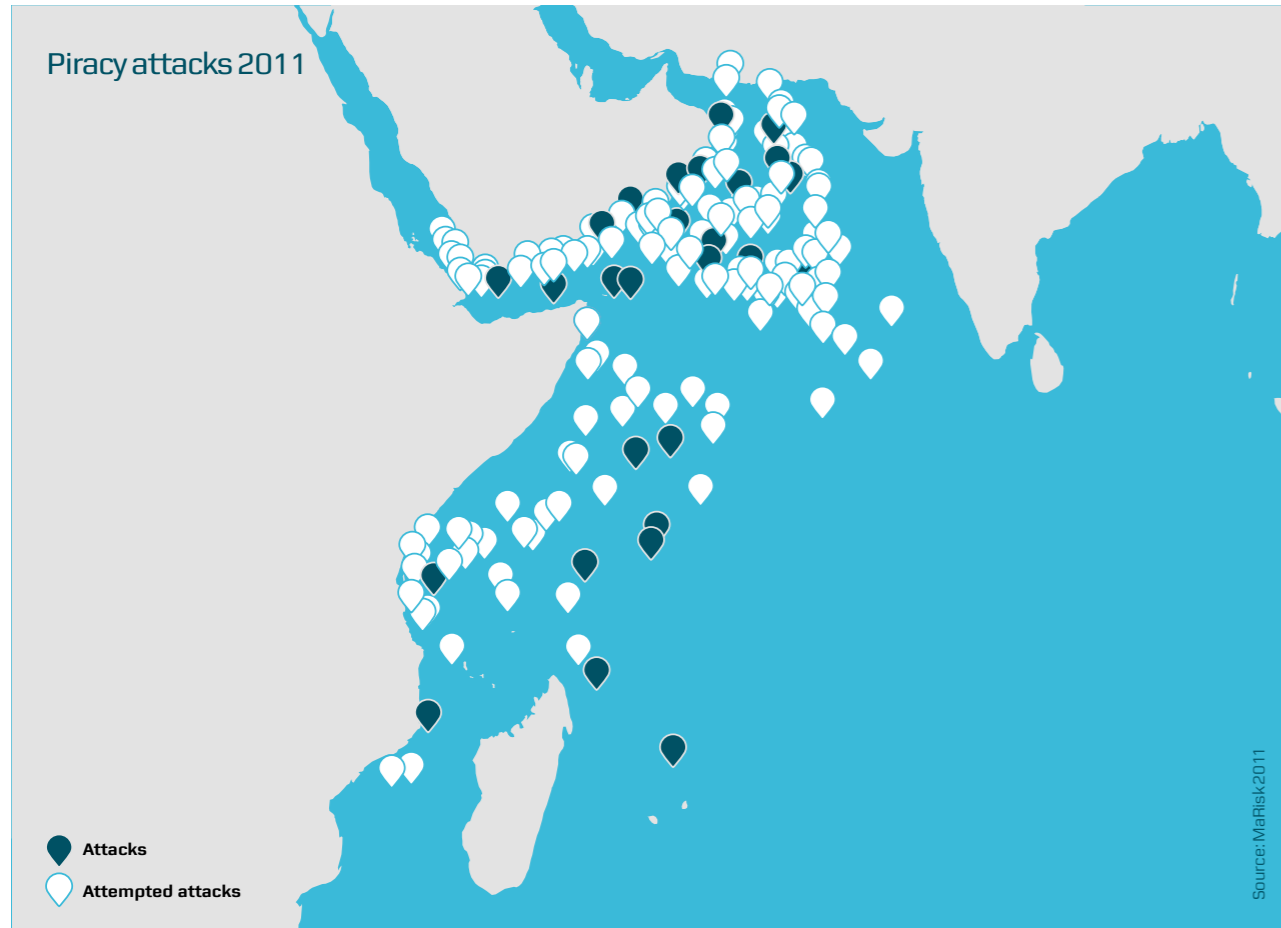
Prior to applying defensive measures on ships, a thorough voyage risk assessment is conducted in order to define the specific protective measures to be applied on the individual vessel e.g. razor wire, extra lookout, safety gear and safety drills.

The shipping industry is increasingly finding it necessary to use armed guards on vessels to ensure the safety of the crew. However, arming merchant vessels deals only with the symptoms of piracy and is not a long term solution to the root causes.

**Voice of seafarers**

**85%**

say Maersk Line is committed to security (e.g. against piracy, theft and armed robbery)



“No single actor can successfully fight piracy alone – the root causes creating piracy can only be solved through a comprehensive and international led engagement.”

**Henrik Ehlers Kragh**  
Head of Anti-Piracy Coordination, Maersk Line

**Promoting comprehensive and internationally led engagement**

In 2011, we continued our efforts in keeping piracy on the international agenda through engagement in senior-level counter piracy conferences in Dubai and London. We actively engage with organisations such as Combined Maritime Forces, NATO Shipping Centre

and Maritime Security Centre, Horn of Africa as well as other high-level international stakeholders.

We continue to exchange information, experiences and policies regarding piracy with the two major shipping companies, MSC and CMA CGM. Our three companies represent approximately 36% of container shipping worldwide; united we

have a strong voice keeping momentum towards fighting piracy.

Finally, we maintain our good relations with authorities, facilitate training of special forces and continue to discuss potential solutions to piracy with politicians, ship owner associations and international partners.

“A.P. Moller has become an industry leader demonstrating their commitment to the principles of supply chain security and trade facilitation. A.P. Moller’s long term, active participation in the Customs-Trade Partnership Program along with their cooperation and contributions over the years stands out as a model corporate citizen who is truly dedicated to building the strongest government to business partnership in the world.”

**Sean E. Doherty**  
Acting Director C-TPAT, U.S. Customs and Border Protection

**The threat of terrorism**

On September 11, 2001, combating the threat of terrorism became the U.S. Customs and Border Protection’s (CBP) number one priority.

On that day, the movement of goods and people into the US came to halt. Shortly after 9/11, CBP developed the ‘Customs-Trade Partnership against Terrorism’ (C-TPAT) as the first coordinated response between industry and government to secure US borders.

The C-TPAT program is a joint initiative between CBP and trusted partners including US importers, terminal operators, shipping lines, and other supply chain entities focusing on securing the international supply chain. The C-TPAT program is also considered the “restart” mechanism of international trade, should any future attack occur.

**C-TPAT re-validation of Maersk Line and Safmarine**

While a voluntary agreement, the C-TPAT program has gradually evolved into an industry standard, which many of our customers include in their service contract requirements. Maintaining our membership in good standing is important in order to retain and attract business.

In 2011, Maersk Line and Safmarine successfully renewed its C-TPAT membership following a re-validation effort by U.S. Customs trade security specialists.



# Stakeholder engagement and partnerships

**External stakeholder engagement is pivotal to our ambition of becoming a more sustainable company. We cannot, should not and do not operate in a vacuum.**

We are sensitive to the expectations and pressures from our ever growing stakeholder universe and therefore engaging in open exchange is no longer something we consider optional, but increasingly a license to operate.

For this reason, Maersk Line sought out and further developed strong bonds with our primary stakeholders through strategic partnership and network engagement. We also actively engaged more broadly in dialogues with academia, government, think-tanks and NGOs. To maximise the benefits of partnerships, we implemented a stakeholder strategy that will continue to form the backbone of our engagement in the years to come.

Our stakeholders have encouraged us to further challenge ourselves, raising the bar on our performance and highlighting areas for improvement. Innovation networks and scientific partnerships have increased the span and depth of our

knowledge pool allowing for better strategic planning. Exchanges with regulators and key government actors have brought us closer to creating a level industry playing field. Strategic customer partnerships have helped us to better understand customer needs, enabling targeted product and service innovation. Finally, thought leadership dialogues in cross-industry forums have generated new visions for what our industry could aspire to in the future.

## Clean Cargo Working Group (CCWG)

The CCWG is a business to business collaboration between 30+ global influential shipping lines and their customers. CCWG is hosted by the business oriented NGO Business for Social Responsibility (BSR) and has the objective to promote more sustainable container transportation.

CCWG is a recognised source of high-quality environmental performance data. The group has developed a standardised CO<sub>2</sub> calculation methodology for container shipping as well as easy-to-use tools that enable customers to calculate the environmental footprint in their supply chain.

[bsr.org](http://bsr.org)

## Customs-Trade Partnership Against Terrorism (C-TPAT)

Shortly after 9/11 the U.S. Customs and Border Protection's (CBP) developed the C-TPAT as the first coordinated response between industry and government to secure US borders.

The C-TPAT program is a joint initiative between CBP and trusted partners including US importers, terminal operators, shipping lines, and other supply chain entities focusing on securing the international supply chain. Maersk Line was invited into C-TPAT at the end of 2002.

[c-tpat.com](http://c-tpat.com)

## EU Authorised Economic Operator (AEO)

Similarly to the U.S. Customs-Trade Partnership Against Terrorism, the EU developed its own Authorised Economic Operator (AEO) programme to improve safety and security in the international supply chain.

Maersk Line became a certified member in October 2008. Over time this voluntary framework is expected to evolve into an industry standard.

[ec.europa.eu](http://ec.europa.eu)



## Forrest Stewardship Council (FSC)

FSC is an independent, non-governmental, not-for-profit organisation established to promote the responsible management of the world's forests. Established as a response to concerns over global deforestation, FSC is a pioneer forum where the global consensus on responsible forest management convenes. Maersk Line became members of FSC in 2011 when we issued a new floorboard policy to prevent illegally logged timber in our container floors.

[fsc.org](http://fsc.org)

## Maritime Anti-Corruption Network (MACN)

The members represent different areas of the shipping sector with head offices in Denmark, Norway, Germany, UK, US and Sweden. The purpose of the network is to share best practices, align approaches to combat corrupt practices, and collaborate in addressing specific challenges. The network also aims to seek support from government bodies and international organisations to target corrupt practices in challenging jurisdictions and encourage solutions to the root causes.

## UN Global Compact – LEAD

Global Compact LEAD responds to the critical need for leading companies to step up and reach new levels of social and environmental performance. Launched in January 2011, the A.P. Moller-Maersk Group was invited to be a part of a new platform for corporate sustainability leadership. The mission is to challenge the approximately 50 participating companies to implement the Blueprint for Corporate Sustainability Leadership.

[unglobalcompact.org](http://unglobalcompact.org)

## World Economic Forum: New Vision for Agriculture

The World Economic Forum is an independent international organisation committed to improving the state of the world by engaging business, political, academic and other leaders of society to shape global, regional and industry agendas.

The New Vision for Agriculture (NVA) is led by 27 global partner companies of the World Economic Forum that span the full food value chain and beyond. The initiative aims to address the major challenges of global food and agricultural sustainability through multi-stakeholder and market-based approaches, exploring models for collaboration that can spark the necessary step-change needed in agriculture. Maersk Line became members of NVA in 2011.

[weforum.org](http://weforum.org)

## World Food Programme: Logistics Emergency Team (LET)

Agility, Maersk, TNT and UPS are experts in transport and logistics. The four companies have formed a partnership called the Logistics Emergency Teams (LET) lending its support and expertise to the World Food Programme during large-scale natural disasters.

[wfp.org](http://wfp.org)

## World Ocean Council (WOC)

The World Ocean Council brings together the ocean business community to drive global leadership and collaboration in ocean sustainability and responsibility. In 2011, Maersk became members of WOC and is co-chairing the research program "Smart Ocean/Smart Industries" with the WOC and rig operator, Transocean. The aim of the program is to expand the collection of ocean and atmospheric observations from ships and platforms in order to improve the modelling and predictability of weather, ocean conditions and climate change.

[oceancouncil.org](http://oceancouncil.org)

## World Shipping Council (WSC)

The World Shipping Council is an active participant in policy debates that will affect the liner shipping industry, its customers, and the economic vitality of all trading nations. In addition to trade, security and customs initiatives, environmental issues have been a very active area of new policy development. The WSC is working with legislators, appropriate government agencies, the International Maritime Organization as a respected advisor to support the establishment of internationally uniform environmental standards.

[worldshipping.org](http://worldshipping.org)



**Sustainable Shipping Initiative (Forum for the Future)**

The Sustainable Shipping Initiative (SSI) brings together some of the biggest names in the maritime sector to plan how it can contribute to - and thrive in - a sustainable future. Its members are leading companies from around the world and NGOs Forum for the Future and WWF. The cross-industry group represents ship owners and charterers, shipbuilders, engineers and service providers, banking, insurance, and classification.

In May 2011, the SSI launched a 'Case for Action' analysing the social, environmental and economic challenges shipping faces and how best to react to them. In response, the SSI has now published its shared vision of an industry in 2040 which is resilient, socially and environmentally responsible and profitable, linked to a first set of practical work streams, through which the SSI will begin to make Vision 2040 a reality.

[forumforthefuture.org](http://forumforthefuture.org)



“Delivering on Sustainable Shipping Initiative’s joint vision for our industry will help drive needed change in operating models - thereby allowing economies to grow, trade to develop and social wealth to spread.”

**Morten Engelstoff**  
Chief Operating Officer, Maersk Line

# What do our stakeholders think?

**In 2011, the Maersk Group commissioned independent survey organisation Globescan to carry out a brand reputation survey of all Maersk businesses including Maersk Line.**

Globescan asked a group of 400 stakeholders drawn from customers, employees, NGOs, investors, government and media their impressions of Maersk Line and its competitors. It's been good to learn that Maersk Line is generally well perceived and 80% of our stakeholders would be happy to recommend us.

Globescan also asked respondents what issues they felt were most important to Maersk's brand and reputation, and how Maersk Line is performing. We were encouraged to find we are doing

well on many of their priority issues - not least our innovation capability, quality service, financial strength and high safety standards – factors which have long been key priorities within Maersk. Their belief in our ability to open new markets gives us confidence in our plans to advance emerging markets trade.

But our stakeholders were less convinced in other areas – for example our commitment to integrate sustainability into investment decisions, and the level of transparency we offer.

On different human resource issues, we still have some way to go, with some employees being concerned about the reward structure and whether their voices are being sufficiently heard.

This is important feedback. As our sustainability strategy enters its third year, we are aware that we need to continue to improve our employee and customer value proposition, and engage more openly with stakeholders so that we understand their concerns and they can see the changes we are making. As a result we are building our efforts in these areas and focusing harder on communication, stakeholder engagement and relationship building.

Globescan's conclusion was that our solid business fundamentals support a strong reputation, and that our sustainability strategy could strengthen it further.

“Maersk Line has a license to act boldly on the global stage. With that comes high expectations that extend beyond the balance sheet. Maersk Line is seen as an organization that not only can, but indeed should, play a lead role in connecting people and markets to advance global development. We think that will only benefit the company in the long term.”

**Eric Whan**  
Director, GlobeScan

# Reporting on progress

**Maersk Line's 2010-2015 sustainability strategy defines our company's priorities and targets. We review the progress on our targets regularly and update targets according to rising expectation and ambition levels. The five scorecards in this report reflect any adjustments made vis-à-vis our priorities in 2011.**

We will report regularly on how Route 2 is contributing to our objectives, 2012 and beyond.

Furthermore, we will continue to disclose the CO<sub>2</sub> performance of every Maersk Line owned container ship. In 2012, this data will be made available on our website [maerskline.com](http://maerskline.com).

Maersk Line's emissions data is independently verified. The performance and progress data captured in this report is summarised in the A.P. Moller - Maersk Group Sustainability Report 2011-2012 which is externally assured.

Besides reporting on 2011 progress and challenges, we have tried to give a sense of some of the practices we put in place during 2011 that we think will play a part in the long-term future of logistics and trade. These thoughts aim to spur dialogue and debate in and outside our industry.

Our main goal with reporting continues to be to increase transparency in ship-

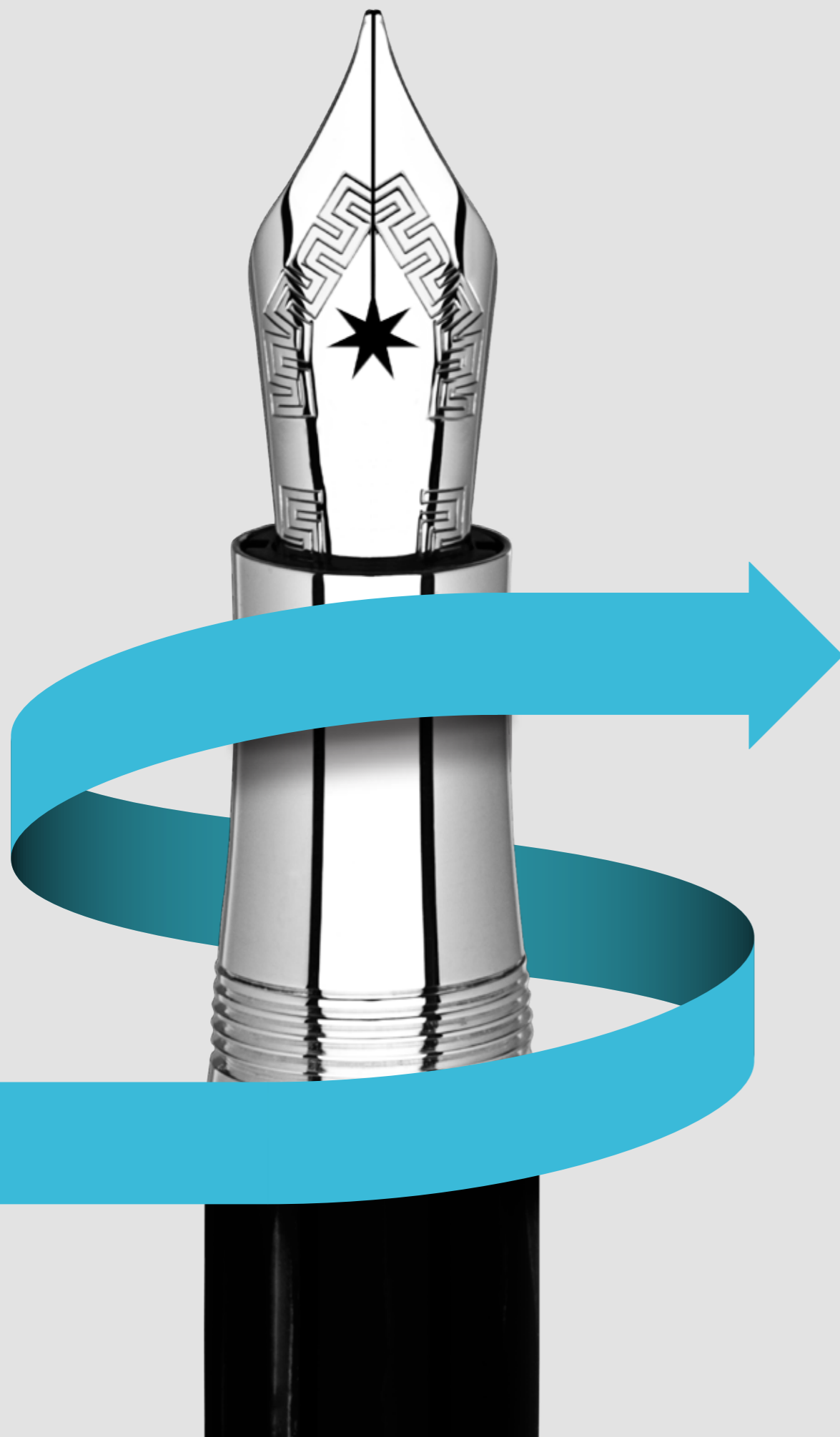
ping. We believe transparency is one of the most important enablers for progress and commercial demand for more sustainable shipping operations.

In this way, the report is also a means for us to push for change within a number

of industry-specific areas, and to rally support for goals we share with many stakeholders.







## We value your feedback

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If you have any questions, comments or suggestions about this report or our performance, we welcome your feedback. You can send your comments to:

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### For more information please see:

**The A.P. Moller - Maersk Group Sustainability Report 2011:**  
[maersk.com](http://maersk.com)

**'Unlocking the Indian banana trade' by Maersk Line:**  
[maerskline.com](http://maerskline.com)

**Sustainable Shipping Initiative Vision 2040:**  
[forumforthefuture.org](http://forumforthefuture.org)

**Clean Cargo Working Group:**  
[bsr.org/en/our-work/working-groups/clean-cargo](http://bsr.org/en/our-work/working-groups/clean-cargo)

**Maersk Line Manifesto:**  
[changingthewaywethinkaboutshipping.com/](http://changingthewaywethinkaboutshipping.com/)

**Triple-E ships:**  
[worldslargestship.com](http://worldslargestship.com)

**Route 2:**  
[maerskline.com](http://maerskline.com)

### Forward looking statements

The report contains forward looking statements on expectations regarding the achievements and performance of Maersk Line. Such statements are subject to risks and uncertainties, as various factors, many of which are beyond Maersk Line's control, may cause actual results and development to differ materially from expectations contained herein.

