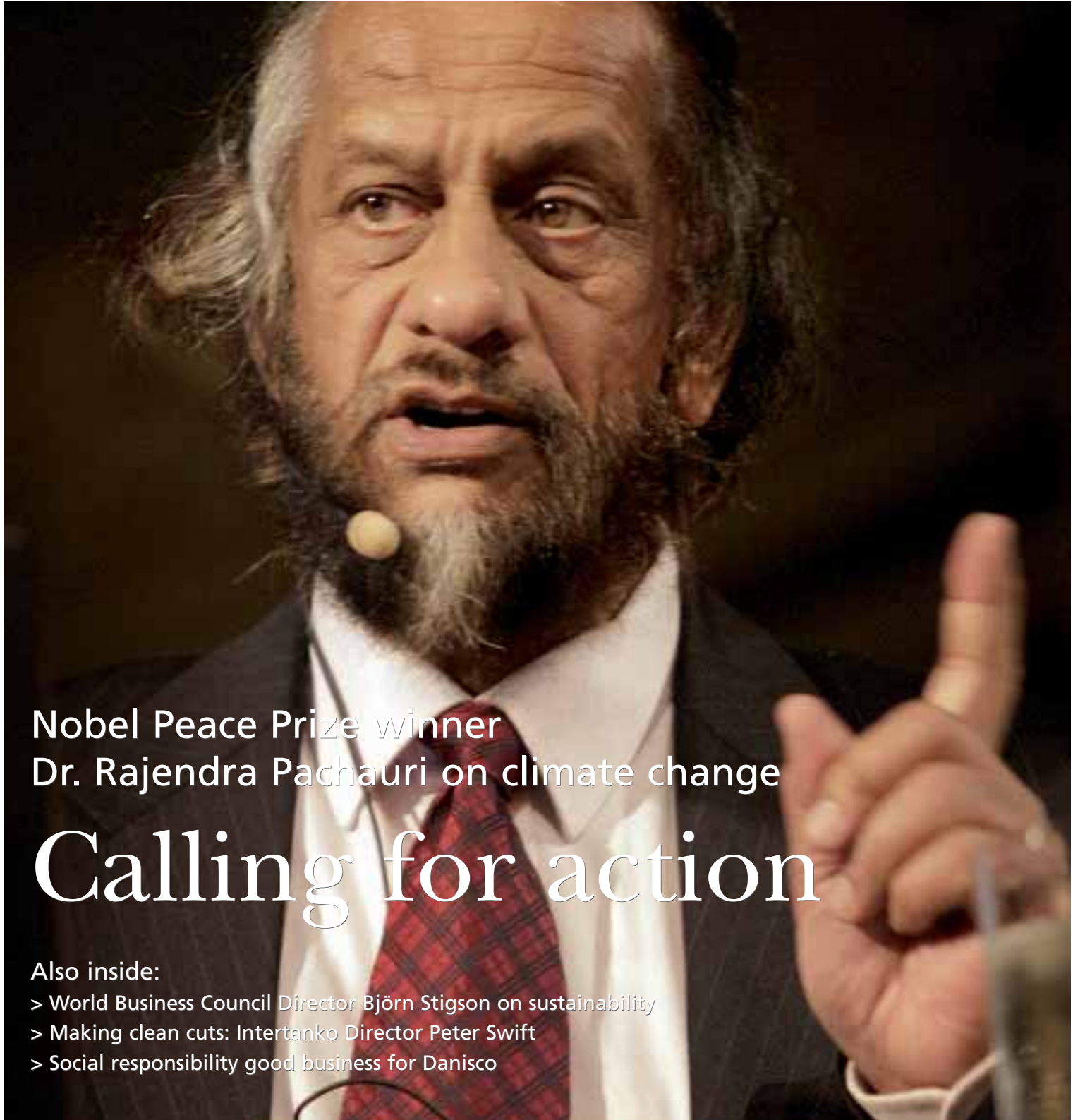


DNV Forum

no 01 2008



Nobel Peace Prize winner
Dr. Rajendra Pachauri on climate change

Calling for action

Also inside:

- > World Business Council Director Björn Stigson on sustainability
- > Making clean cuts: Intertanko Director Peter Swift
- > Social responsibility good business for Danisco

contents



12



24



28



36

- 01 Editorial: Adapting to climate change
- 02 News
- 06 Dr Pachauri: Mitigating and adapting to climate change
- 12 Björn Stigson: Call for deeper dialogue
- 18 Peter Swift: Making clean cuts
- 21 News
- 22 Ithaca on the rise
- 24 University Hospital Brno: Our patients are safer now
- 27 News
- 28 ITC: Putting India first
- 32 Expansion plans at Drydocks World
- 34 Danisco: Social responsibility is good business
- 36 Cosco hoists sustainability sails
- 38 MISC: Leading the way
- 40 Last word: UK Continental Shelf – A challenging change

Adapting to climate change

Our climate is changing. While the world is engaged in making efforts to reduce greenhouse gas emissions, we must all realise that global warming is already occurring. Changes have already taken place, and business and society must adapt to these changes. We also need to prepare for further changes in the years to come.

In some areas, action is already planned; for instance in the cities of London and Rotterdam, where the flood barriers need to be strengthened. Insurance companies are reporting higher pay outs for climate-related damages, and climate-related risk has to be taken into account when finding sites for new industrial plants.

Here in DNV we have also initiated efforts to help our customers adapt to global warming. The expected increase in extreme weather events has, for example, made us focus on possible revision of design and operational criteria for marine structures that will lead to less structural damage and loss. The significance of severe sea state conditions for ship traffic and marine structures is likely to grow in the future.

Present-day technology allows worldwide monitoring of wind, wave, current and sea water levels. Data collected during the past decade by satellites and more traditional instruments indicate that extremely severe sea states occur more often than commonly assumed. New surveys show that extreme waves have become even higher – especially in the North Atlantic. At the same time we also know that, for example, the seabed under the Ekofisk field is sinking due to petroleum activities. This is not a good combination with higher extreme waves than those for which the engineers

designed the structures for more than 30 years ago. Global warming will certainly affect the design and operational criteria for the offshore installations in the future.

So far, climate changes are not explicitly accounted for in classification societies' rules for ships design or in offshore standards. DNV is therefore participating in research work to explore whether there is a need for stricter DNV rules for both ships and rigs.

“With our risk-based approach and technology base, DNV aims to help business and society to focus on the critical needs for change due to global warming.”

However, climate change will not only affect the maritime-related industries. The implications for different business sectors are diverse, and a recent report by the World Business Council for Sustainable Development (WBCSD) has identified both business risks and opportunities. There are opportunities for businesses to introduce new processes, products and services to respond to the changing climate and to protect their existing assets. The effects of climate change will alter existing business models and change current risk structures. With our risk-based approach and technology base, DNV aims to help business and society to focus on the critical needs for change due to global warming.



Henrik O. Madsen
HENRIK O. MADSEN
President and Chief Executive Officer



DNV helps China reduce greenhouse gas emissions

The Chinese State Environmental Administration makes use of DNV's expertise to verify the assessment of greenhouse gas emissions from a chemical plant in the Zhejiang Province.

The objective of the Clean Development Mechanism project is to reduce greenhouse gas emissions through the destruction of HFC23 gases in a thermal oxidation system. Annual estimates of emission reductions of CO₂ for the project are 4,783,753 tonnes. The size of the project is equal to 25-50 wind power or hydro power projects.

The waste from the HFC23 facility is a greenhouse gas with very high global warming potential.

Greek research R&D agreement

DNV has signed a strategic research and development collaboration agreement with the National Technical University of Athens and will establish a research and innovation hub in Athens this year.

The collaboration will focus mainly on the maritime industry and the university's School of Naval Architecture and Marine Engineering. Ship design optimisation and effective bulk transportation are the initial two main topics. Through closer cooperation between DNV and Greece's oldest and most prestigious educational institution in the field of technology, the parties aim to learn from each other and cooperate in the best interests of the industry.

The agreement was signed by Elisabeth Harstad, managing director of DNV Research and Innovation, and Konstantinos Moutzouris, rector of the National Technical University of Athens.



Developing energy efficiency at Baosteel

DNV has together with the largest steel producer in China, Baosteel, launched an energy efficiency project.

Baosteel is the largest energy consumer in Shanghai, and in order to implement the state plan of "One Thousand Enterprises' Energy-Saving Action", the company aims to increase its energy efficiency with 45% during the next five years, assisted by DNV's Energy Auditing Service.

"At present, the energy efficiency in Chinese industries is unsatisfactory. The challenges are many – few signs of systematic energy management, lack of effective and uniform standards and professional talents for energy management are a few," says Sangem Hsu, DNV's business development director for Asia and Australia.

Managing risk in the finance industry

Nordea Capital Markets Products, responsible for all Nordea markets activities, is working with DNV to further improve and up-grade their capability to manage operational risk. This is done by adding new features to the operational risk management framework as human and organisational factors are incorporated in the risk management approach.

The industry finds it difficult to address operational risk. The human and organisational factors involved are difficult, if not impossible, to quantify in the traditional credit risk and market risk analyses used in the finance industry. Many financial institutions, such as Nordea Capital Markets Products, are developing highly complex, innovative financial products and operational risk is considered increasingly important within the industry.

DNV and Nordea Capital Markets Products are developing an operational risk architecture and methodology that borrows from the risk management regime used in European Air Traffic Management.



Oman company reaches safety milestone

Galfar Engineering and Contracting LLC, one of the largest construction companies in the Middle East, has reached a significant milestone by being certified to health, safety and environmental standards by DNV.

Galfar has been certified to the standards OHSAS 18001 (Occupational Health and Safety Management System), ISO 14001 (Environmental Management System), and re-certified to ISO 9001 (Quality Management System). This has placed Galfar among very few construction contracting companies in the Middle East to be certified to all the three standards.



Hotel chain to improve sustainable performance

DNV is to certify 150 Choice hotels according to the environmental management system standard ISO 14001. Through environmental management, competence development and certification, DNV will help Choice demonstrate sustainable performance.

“We’ve decided to be a leading environmentally friendly hotel company. We also intend to motivate other hotel chains and companies so that there is a lot of competition to be best. It was natural for us to choose DNV as one of the world’s largest, most recognised certification companies,” says owner and chairman of the board of Choice Hotels Scandinavia, Petter A. Stordalen.

“Choice Hotels Scandinavia has focused on reducing the use of energy, water and chemicals for many years,” says owner and chairman of the board, Petter A. Stordalen.



DNV signs contract with KIA

The plant in Slovakia is KIA Motor's first manufacturing facility in Europe and has about 2,700 employees. The company's production capacity will be 300,000 cars per year.

With Toyota-Peugeot-Citroën Automobile, Skoda Auto and newly constructed Hyundai Motor plant in the Czech Republic along with Volkswagen, the Peugeot-Citroën Automobile and KIA Motors in the Slovak Republic, a "second Detroit" has now been established in Europe.

The plant in Slovakia is KIA Motor's first manufacturing facility in Europe.

Technology Outlook 2015: The Power of 0 and 1

Increased personal income levels and significant investments in infrastructure will result in about 800 million new PC users in the so-called BRIC-countries – Brazil, Russia, India and China within 2015, according to DNV's Technology Outlook 2015.

The main consequences of this are:

- 800 million more participants in the Internet information space, which will affect communication, information flow and democracy
- 800 million new potential customers for Internet and mobile phone providers
- 800 million PCs will become waste sooner or later...

This is just one of several aspects to be found in DNV's new Technology Outlook, where DNV Research and Innovation is gathering the future between two covers. The booklet is distributed to employees and customers. Through this booklet, DNV and its customers will get an indication of how global trends will affect "our" industries in the years leading up to 2015.

Interested? (contact thomas.mestl@dnv.com)



"Our wish and hope is that Technology Outlook will be used actively to transfer expertise and competence in discussions with customers," says Elisabeth Harstad, managing director of DNV Research and Innovation.



New revision of DNV's Pipeline standard

A new revision of the DNV Submarine Pipeline Standard is released. In cooperation with the industry, this worldwide preferred standard is now ISO harmonised, as well as having an increased focus on integrity management and improved document structure.

DNV issued its first 'DNV Submarine Pipeline Rules' specifically for offshore use, back in 1976. A number of updates have been released since then.

The Klima X exhibition was opened by Norway's prime minister Jens Stoltenberg and Rajendra Pauchari, the director of IPCC and Nobel Peace Prize winner.



Sponsoring a spectacular climate exhibition

DNV is sponsoring Klima X, a climate exhibition that opened recently in the Norwegian Museum of Science and Technology in Oslo. Here, children and adults will actually be able to feel the effects of the climate challenges facing the world. The exhibition will last for two years.

Visitors will be challenged, provoked and involved. The exhibition provides climate facts, the research behind these and, not least, how the choice of political solutions, technology and consumer behaviour can counteract climate changes.

Visitors can travel on remote-controlled boats to China, Greenland, the USA and Nepal to visit people who daily feel the effects of climate change.



NOK 40 million for an environmental fund for employees

DNV has established an environmental fund from which employees can apply for a grant for private environmental measures.

Irrespective of where in the world they are employed, DNV's 8,000 employees can apply for a grant for environmental measures, while they themselves have to pay one third of the total amount. Examples that may be supported by the fund are: solar cell panels, diesel filters for older cars, electric cars, new insulation for buildings and public transport subsidies.

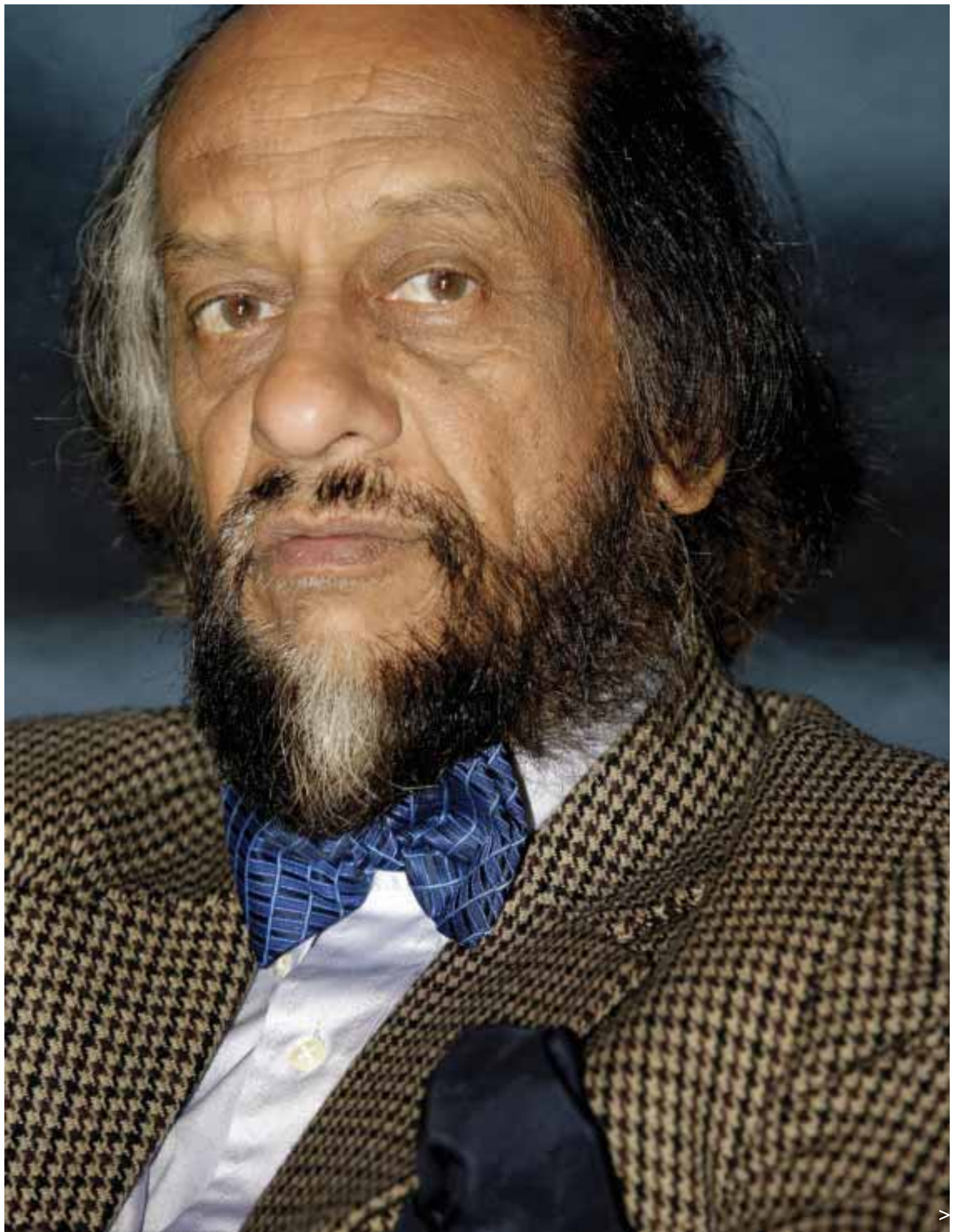
"DNV wants to support its employees' interest in the environment in their private sphere too," says DNV's CEO Henrik O. Madsen.

Chairman of IPCC and Nobel Peace Prize Winner,
Dr Rajendra Pachauri:

Mitigating and adapting to climate change

We now know what threats we face, what is needed to reduce emissions, and what it costs. Dr Pachauri encourages businesses to take on their part of the responsibility to mitigate climate change.

TEXT: **PER BUSK CHRISTIANSEN** PHOTO: **NINA E. RANGØY**



“Climate change impacts will exacerbate existing stresses on already vulnerable populations.”

On December 10th, 2007, Dr. Rajendra Pachauri received the Nobel Peace Prize on behalf of the Intergovernmental Panel on Climate Change (IPCC) together with Al Gore. The IPCC was recognised for providing scientific evidence of man-made climate change, and to lay the foundations for the measures that are needed to counteract such change.

“The IPCC (Intergovernmental Panel of Climate Change) is extremely honoured by the recognition that the Norwegian Nobel Committee has paid to our work”, says Dr Pachauri, who, when congratulated on the award, is quick to pay tribute to the thousands of scientists around the world, who have contributed to the work of the Panel.

We meet Dr Pachauri in Oslo for an exclusive interview. He immediately strikes us as a calm and friendly person, allowing us ample time to tap into his knowledge and views on climate change, despite his busy schedule. He reveals his passionate engagement in the subject, and takes a more serious tone as he starts explaining how climate change is a threat to peace.

CLIMATE CHANGE A PEACE THREAT

“First of all, extreme events will increase in frequency and intensity. Although not implying that Hurricane Katrina was a direct consequence of human-inflicted climate change, it clearly showed that such events can be extremely disruptive to even well-functioning societies, with breakdown

of law and order. In these situations, you will always have elements, who want to exploit the situation creating violence and terror,” says Dr Pachauri.

According to Dr Pachauri, the other direct impact on peace will occur from movements of large populations. Changes in precipitation, leading to floods, droughts, and heat waves, will have dramatic impact on agriculture, forcing people to leave farm lands. Sea level rise, especially in delta areas with high population density, will have direct impact on both human life and property, or forcing people to migrate to other regions. Large movement of populations will inevitably lead to conflicts. One recent example of that is Darfur in Africa.

“Climate change impacts will exacerbate existing stresses on already vulnerable populations. In our reports, we estimate that in Africa alone, 75 to 250 million people will be stressed by water scarcity, leading to potential fights over water. So this is very much an ethical question, because in both developed and developing countries, the poor will suffer the most,” he says.

BALI AND THE KYOTO-PROTOCOL SUCCESSOR

In addition to the Nobel Peace Prize, the IPCC reached another significant achievement recently. The global convention on climate change in Bali in December was driven by and based on the IPCC reports. “And for the first time, no one questioned

the validity of the scientific evidence,” Dr Pachauri continues.

The Bali convention started a process towards the Copenhagen convention in 2009. Here, the world’s nations aim to reach a new agreement and set new targets to replace the Kyoto protocol, which expires in 2012.

Dr Pachauri stresses the importance of the USA being part of a new agreement. When they join, as Australia now also has done, the Clean Development Mechanism (CDM) market and other quota trading markets will expand heavily, and we will see a much bigger carbon market and a higher price on carbon.

PRICE ON CARBON IS KEY

The price on carbon is an important part of the mitigation measures. With a much higher carbon price, new low-carbon energy technologies and renewable energy solutions will become economically viable and a real alternative to fossil fuels.

“Also, the CDM decision making process must become much more efficient. The CDM Executive Board must create simpler rules, without making them too loose. I think they have the experience now to develop and run a more efficient system,” says Dr Pachauri.

Having a large and efficient carbon market requires independent third parties, such as DNV, to validate projects, and measure and verify emission reductions. “This is an extremely important role and



! Facts on Dr Rajendra Pachauri

- Born in Nainatal, India, on 20 August 1940
- Chairman of the Intergovernmental Panel on Climate Change (IPCC) since 2002.
- Received the Nobel Peace Prize in 2007 on behalf of IPCC
- Head of TERI, The Energy and Resources Institute, for 25 years
- Member of the Indian Prime Minister's Advisory Council on Climate Change
- President of the Asian Energy Institute
- Board member, Global Humanitarian Forum
- Adviser to the Administrator of the United Nations Development Programme (UNDP) in the fields of energy and sustainable management of natural resources from 1994 till 1999
- Awarded the Padma Bhushan and the Padma Vibhushan, some of the highest Indian civilian awards and "Officier De La Légion D'Honneur" by the Government of France
- Mr Pachauri has authored 23 books including a book on English poetry.

will become even more critical as the market grows,” comments Dr Pachauri.

CARBON CAPTURE AND STORAGE

The IPCC has not only put forward all the evidence needed to take climate change very seriously – sooner rather than later. The reports clearly spell out what needs to be done to curb emissions, and the costs are modest if we act now. Over a 30 year period it will take us just one more year to reach the level of global GDP we would have reached without the mitigation costs. Finally, the IPCC concludes that the technologies needed to mitigate climate change are already here, or just around the corner of being commercialised.

One such technology is carbon capture and storage (CCS). Says Dr Pachari, “I think it can be a significant means of reducing CO₂ emissions to the atmosphere, but our perception is that we are not there yet.” He points out, that it will take time before it becomes commercially available, but that Norway is in a position to play a leading role by investing in the technology and making it a viable solution. He continues: “There is no doubt that CCS potentially has a very significant role to play, but as one of many solutions”.

THE RELEVANCE FOR BUSINESSES

The IPCC findings are first and foremost directed towards policy makers. However,

many aspects of the reports are also highly relevant for businesses. “The fourth Assessment Report provides assessments of which technologies are promising and which have problems associated with them, helping businesses in their technology investment plans. I am aware that they carry out these assessments themselves, but the IPCC report puts all the findings into a framework and provides businesses with much wider information to base their decisions upon,” Dr Pachauri points out.

An increasing number of businesses are investing in environmental initiatives because it is becoming good business. There is mounting pressure from customers for businesses to communicate their green credentials. Dr Pachauri encourages businesses to take on their part of the responsibility to mitigate climate change. However, they must have their environmental initiatives verified by a third party to provide credibility to their green initiatives, he advises.

MITIGATION AND ADAPTATION

IPCC is very clear about the need for policy makers to focus on mitigation and adaptation measures at the same time. Adaptation is essential to address the impacts resulting from the warming which is already unavoidable due to past emissions. But if we only focus on adaptation, the impacts of climate change will be so

severe that adaptation costs will accelerate rapidly and we will see enormous social, environmental and economic disruption.

The same applies for businesses. They must find ways to operate in a greener way and reduce emissions as well as adapting to the direct impact of climate change. Businesses will have to consider how rising sea levels, extreme events, precipitations and heat waves impact their business. Companies relying on agriculture will have to consider climate change effects on farm lands, hence on prices of primary products. Industries relying heavily on water in their manufacturing process will have to deal with water scarcity. Most businesses will have to adapt in one way or the other.

LOOKING AHEAD

Although Dr Pachauri’s expression is mostly serious as he elaborates on the upsetting findings, he does nothing to hide a well-developed sense of humour. Reflecting on the road ahead for him personally and for the IPCC he comments: “Working as Chairman of IPCC, which I am not being paid for by the way, has taken up all my time, so I actually feel a little guilty towards my colleagues at The Energy and Resources Institute. However, if the Indian government decides to renew their trust and support my candidacy as Chairman of IPCC, I will consider running for a new period.”

! Lighting a billion lives

Starting with his home country India, Dr. Pachauri has initiated the campaign “Lighting a billion lives” through The Energy and Resources Institute (TERI) that he heads.

More than 2 billion people in the developing world have no access to electricity. In India alone, almost 400 million have inadequate lighting. This has direct impact on their health,

environment, and safety as they are forced to light their homes with kerosene lamps, dung cakes, firewood, and crop residue after sunset.

By replacing these with solar lighting devices, Dr. Pachauri targets to bring light into the lives of one billion villagers throughout the developing world, not the least children, who will have their education facilitated by having prop-

er reading lights when studying after sunset.





“ Extreme events will increase in frequency and intensity. ”

! DNV and climate change

- The first accredited body by UNFCCC (United Nations Framework Convention on Climate Change) to validate and verify Clean Development Mechanism (CDM) projects
- Involved in 43% of all CDM projects globally
- Estimated reductions pr. year from projects validated by DNV: 220 mill. tonnes CO₂
- Certifies all large wind turbines according to international standards
- Involved in more than 80% of all offshore wind farms
- Develops standards and perform technology qualification of Carbon Capture and Storage (CCS) projects globally
- Works with governments in six countries to qualify CCS technology
- Provides consultancy services for energy efficiency for the maritime and energy industry.

Call for deeper dialogue

Can businesses influence global development and help alleviate world poverty? Björn Stigson, President of the World Business Council for Sustainable Development (WBCSD) is intentionally blunt in his assessment of the situation: "Businesses can make a difference, but it requires support from governments who play a critical part in creating the framework conditions in which business serves society." **TEXT: STUART BREWER PHOTO: NINA E. RANGØY**

The media coverage of sustainable development issues in general and energy and climate issues in particular has been unprecedented through much of 2007. Not only have there been record amounts of it, but the stories suggest huge changes in the ways in which governments, companies and individuals approach energy issues.

"Climate issues are of real concern in all parts of the world, and there is still much to be done," says Björn Stigson. As president of the WBCSD for the past 12 years, he is well-qualified to comment on the role of businesses in global development. "Business is now seen as a necessary part of the sustainable development equation. However, business cannot succeed without a basic framework of law and trade regulation, infrastructure, services and education and healthcare. Governments play a critical part in creating such framework conditions but there is often a lack of political will."

MAKES GOOD BUSINESS SENSE

The WBCSD, a unique, CEO-led, global association of some 200 companies dealing exclusively with business and sustainable development, argues that they must address major social and environmental

issues as part of their business strategies because ultimately it makes good business sense. "A business's long term competitiveness – its license to operate, innovate, and grow – will increasingly depend on how it embraces societal challenges," says mr Stigson.

CALL FOR LONG-TERM FRAMEWORK CONDITIONS

"The year 2007 has been something of a watershed for issues of sustainability, especially climate and ecosystems and the wider impacts for human activity," says mr Stigson.

"Today, no one should be in any doubt that climate change is upon us. Climate change has made its way on the agendas of global conferences; the media publish climate-related stories daily, and the progressive business is becoming a leading advocate for action," he adds.

"The big question now," says mr Stigson "is how are we going to respond. If globalisation has taught us anything over the past decades, it should be that we are all inextricably linked and that our actions all impact upon one another. Nowhere is this truer than with climate change. Rising to the challenge therefore will require coor-

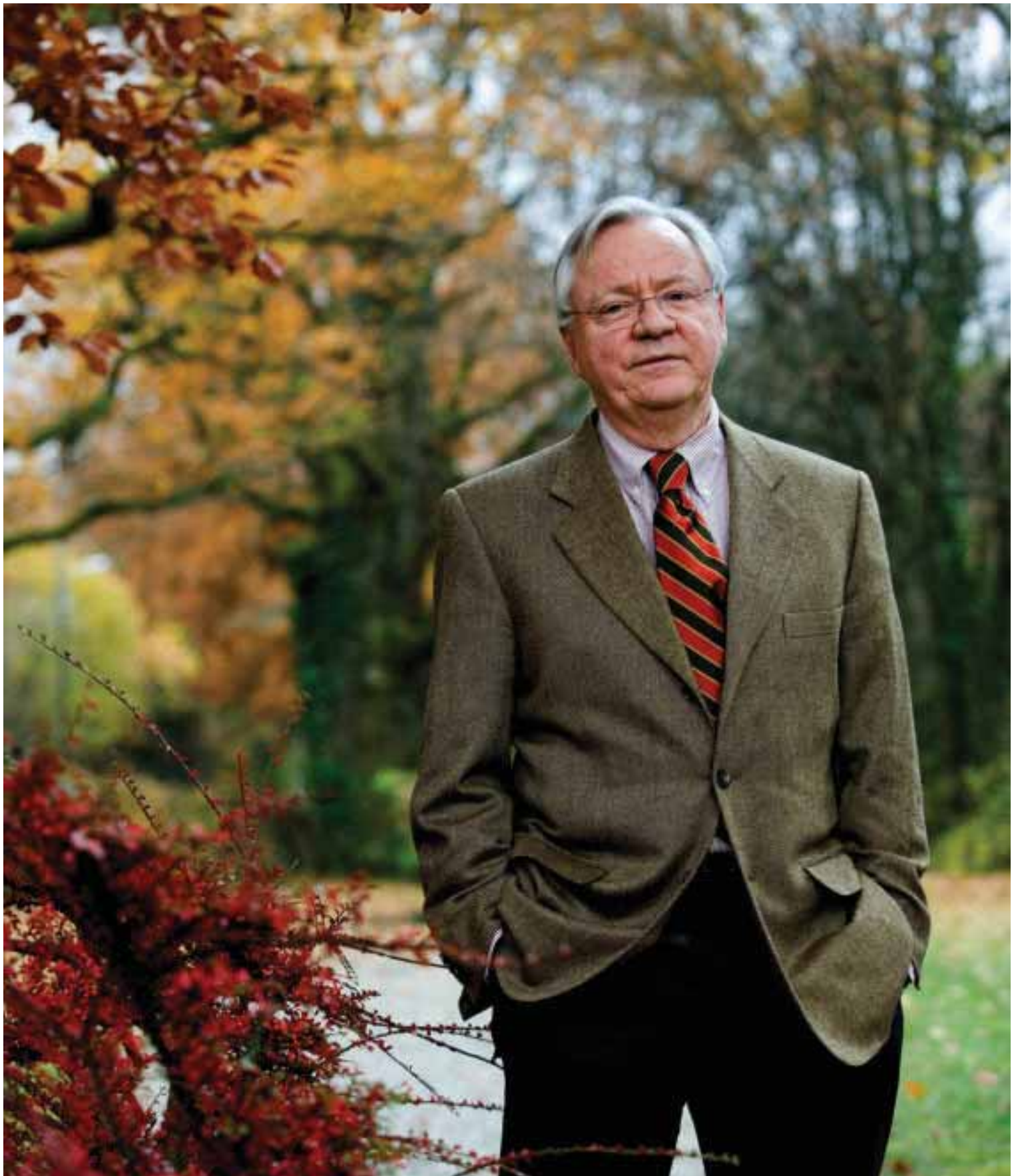
dated policies by global society as a whole. This will be a huge task. Long-term framework conditions are needed now."

A SENSE OF URGENCY AND OPPORTUNITY

"Without thoughtful policy shifts we may be heading towards both energy insecurity and climate change," says mr Stigson. "The macroeconomic picture is becoming increasingly focused: investment in prevention now will, in all likelihood cost less than trying to adapt later." Mr Stigson also points out: "Some companies see opportunities in developing products and services to both mitigate and adapt to climate change."

At the WBC's recent meeting in Brussels, mr Stigson warned delegates that "the stakes are going up on sustainable development issues. In fact, sustainable development is becoming a competitive issue and creating growing tensions inside of the business community".

Sustainable development has reached a "tipping point" noted mr Stigson. "There has been an emergence of new economies. Media interest in sustainable development has never been so high. The financial markets are beginning to act and reflect this. All in all, there is a growing sense of



GREEN EXECUTIVE: Björn Stigson is president of the World Business Council for Sustainable Development, the world's leading business organisation focused on business and sustainable development. He also serves on the board or advisory council of, for example, the Global Reporting Initiative, Harvard's Kennedy School of Government and the government of China.

“Who’s in charge of creating a sustainable world? I believe that we are all in this together; no one part of society can create a sustainable future on their own,” says WBCSD President Björn Stigson. He firmly believes the WBCSD will continue, in the years ahead, to play an influential role in pushing the boundaries of business activity as it seeks greater synergy between its goals and society.



urgency. However, general consensus seems to indicate that we are not moving fast enough. So the question is: where is the power of change going to come from and who is in charge of creating a sustainable world?”

Noting the difference between the “hard power” (such as military force) and “soft power” (such as the influence of business), Mr Stigson called upon the corporate leaders to work together to “use the WBCSD as a soft power tool to contribute to a sustainable world that is a good place for doing business.” Mr Stigson elaborated, “you cannot solve climate change with hard military power”.

He firmly believes that “we are all in this together; no one part of society can create a sustainable future on its own. For its part, the WBCSD has to become sharper at advocacy. There is a real need to educate different sectors of society about the role of business. We need to define and explain the role of business in sustainable development. We need to educate both society and governments about how business works,” he adds.

A TRILOGY OF REPORTS ON ENERGY AND CLIMATE

As part of its efforts to reach this goal, the WBCSD recently published three reports which highlight the scale and complexity of the challenges ahead. This work is based largely on the experience that WBCSD member companies have had in addressing global challenges.

He comments, “We are publishing the Trilogy at a time of intense debate. Directions set in the next few years will have profound consequences for future generations – we believe business should be clear about its purpose and candid about its dilemmas”.

THE NEXT INDUSTRIAL REVOLUTION

So is this a good time for companies to think about greening their businesses?

“It’s definitely a good time to look at all the issues around sustainability, it is about the future,” believes Mr Stigson. “The expression people are using is that it’s the new, or the next, industrial revolution. People used to see sustainability only as a constraint, an additional cost, but they’re able to increasingly see that there are real

opportunities associated with sustainability”.

At the same time Mr Stigson acknowledges that evidence is mounting that the climate is already warming, and even if greenhouse gas emissions were halted, global temperatures would still rise as UN and other reports indicate. So what can businesses do?

“Our members accept that they must work with governments and NGOs to limit climate change. Further, we believe climate change effects will alter existing business models and change current risk structures. In the business arena, we accept there will be both winners and losers,” says Mr Stigson.

He thinks the current discussions on adaptation should focus on raising awareness and highlight the challenges. “Adaptation describes a set of responses (to the actual or potential impacts of climate change) to reduce the harm that climate change may bring,” he explains and adds “business also must show leadership on the issue by examining the short-term and medium-term risk factors worldwide.”

Turning to the subject of how businesses are currently combating greenhouse gas

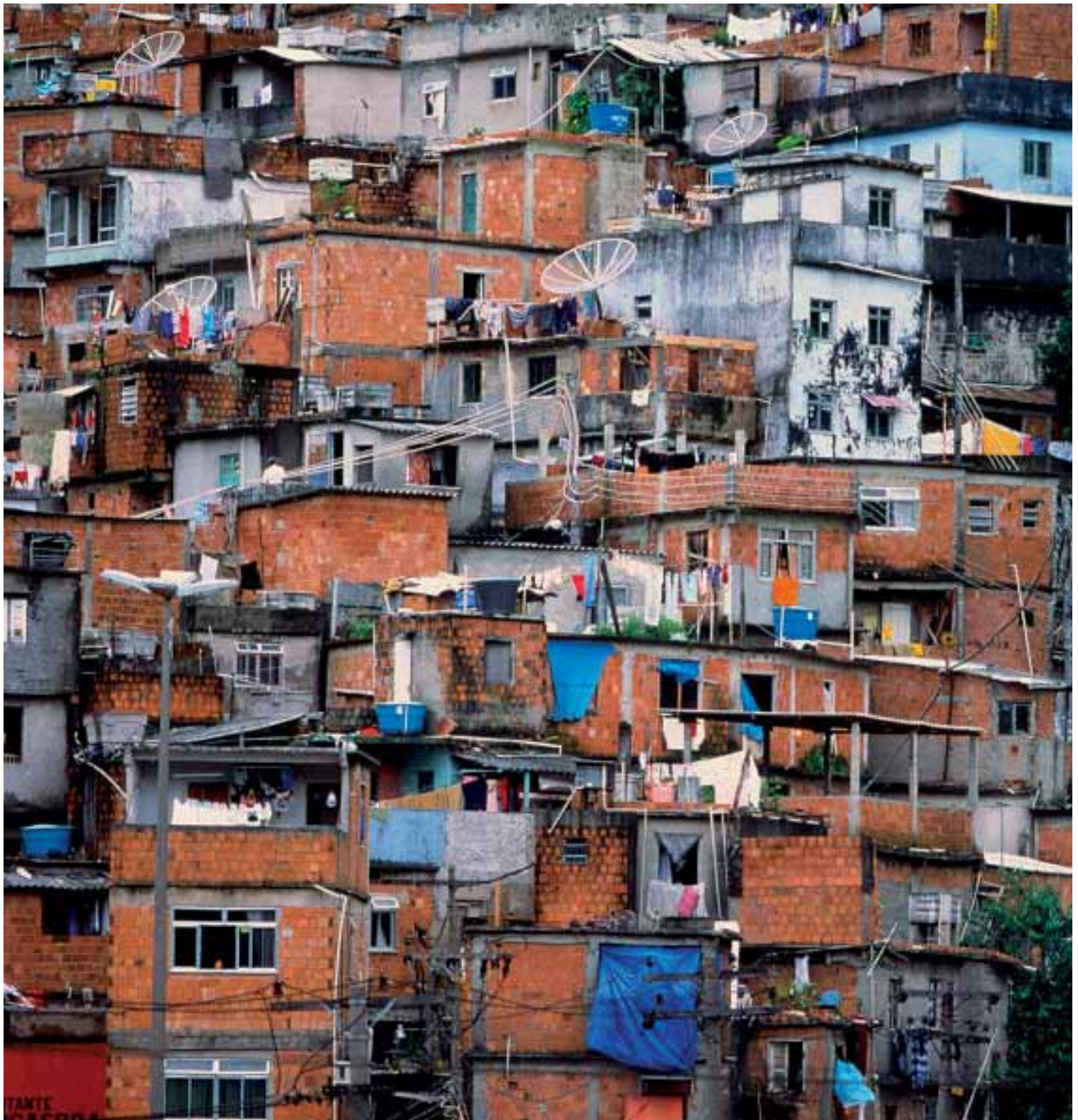


OUTCOME OF THE UNITED NATIONS CLIMATE CHANGE CONFERENCE (COP 13)

After some tense negotiations that spilled over into an unplanned extra day, participants finally agreed on a "Bali Roadmap". This document charts the course for a new negotiating process to be concluded by 2009 which will lead to a post-2012 international agreement on climate change.

While this was a very significant achievement according to Mr Stigson, COP13 also resulted in other important breakthroughs. First, it shifted the focus from a discussion about "if we need global action on climate change" to "what do we have to do as a global community?".

It also made clear that climate change and development are inextricably linked; put adaptation to climate change strongly on the agenda; identified deforestation and forest degradation in developing countries as a key source of carbon emissions; and raised the interest for industry sectoral approaches as a policy tool. But perhaps very significantly, it put business at the center of the development of the content for the "Bali Roadmap".



“BUSINESS CANNOT SUCCEED IN SOCIETIES THAT FAIL.”

POVERTY: Poverty continues to afflict a large proportion of the world's population. More than a billion people survive on less than US\$ 1 a day and nearly three billion on less than US\$ 2 a day. Some 30,000 children die daily as a result of extreme poverty.



POPULATION: Today the world has around 6.5 billion people. By 2050 it is expected to have more than 9 billion, of whom nearly 8 billion are forecast to live in developing countries. The challenge of the growing population is complicated by the pressure of urbanization.

emissions, Mr Stigson says that “an increasing number of companies are responding to this challenge by completing greenhouse gas inventories, quantifying their emissions, reporting emissions and setting emissions reductions goals.”

He continues, “We also believe a changing climate is likely to have significant ramifications on operations, strategic decisions, market development, investor relations and also on communications and policy. Indeed, experience from multinational companies indicates that management commitment is important to steering businesses through the new environmental landscape.”

NEED FOR INDEPENDENT VERIFICATION SERVICES

Commenting on DNV's role in climate change issues, Mr Stigson believes companies stand to benefit from working with independent organisations when verifying and reporting their emissions. “I believe such services will become even more important in the future because there is a growing understanding among companies that they have to be recognised as being environmentally friendly if they want to operate. There is indeed evidence that some businesses and, in particular government departments, are demanding that suppliers and partners adhere to responsible environmental practices.”

Mr Stigson attended the recent United Nations Climate Change Conference in Bali, Indonesia. After some tense negotiations that spilled over into an unplanned extra day, participants finally agreed on a “Bali Roadmap”.

“This presents a unique opportunity for us in business and one that we now need to build on,” says Mr Stigson and concludes, “but it will require increased involvement from business leaders and WBCSD member companies. We will continue to position WBCSD as a key resource for business input into the intergovernmental arena so that we continue to be seen as a credible and constructive force.”

! WBCSD in brief

The WBCSD is a unique, CEO-led, global association of some 200 companies dealing exclusively with business and sustainable development. The council provides a platform for

companies to explore sustainable development, share knowledge, experiences and best practices, and to advocate business positions on these issues in a variety of forums, working

with governments and non-governmental and intergovernmental organisations.

“Tanker owners are not complacent and are committed to ‘continuous improvement’ throughout the industry. New technologies are being tested for application in both existing and new ships, including ways of achieving further efficiency gains and reducing harmful emissions to the atmosphere,” says Intertanko’s managing director Peter Swift.

Making clean cuts

“Society at large is sharpening its sustainability focus and the shipping industry will also have to do its share,” says Intertanko managing director Peter Swift.

TEXT: EVA HALVORSEN PHOTO: NINA EIRIN RANGØY

Transportation by ship is far more efficient and causes less emissions than any other alternative. One litre of fuel on a modern VLCC (Very Large Crude Carrier) moves one tonne of cargo more than 2,800 kilometres; more than twice as far as twenty years ago. The average carbon footprint (in terms of CO₂ per tonne-kilometre) of each of the world’s oil tankers is less than one tenth of that of a heavy truck and less than one hundredth of that of an aircraft, according to Intertanko – the International Association of Independent Tanker Owners.

But even so, the shipping industry will have to pay much more attention to sustainability in the future than it does today. Society at large is sharpening its sustainability focus.

Intertanko’s members and its managing director Peter Swift realised this long ago, and have taken a pro-active approach on the subject, causing heavy debate within the industry and headlines in the maritime press worldwide.

“Shipping has a worldwide responsibility,” he says.

A naval architect with 24 years’ experience from Shell, where he was responsible

for marine operations, mr Swift joined Intertanko in 2001.

NEED FOR ACTION

“Society expects less pollution from ships, and the shipping industry needs to act,” he states, underlining that there has been some progress in recent years.

According to him, tanker owners have invested an average of nearly USD 32bn a year in new ships since 2000 and today over 75% of the internationally traded fleet is double hulled. With this increased protection for both the oil cargo and the ship’s fuel tanks, accidental oil spills this decade have been at record low levels – one third of those in the previous decade and one tenth of those in the 1970s – at a time when the volume of oil transported has more than doubled since the mid 1980s.

However, much attention is now being paid to reducing the shipping industry’s emissions to air, both the “classical” pollutants (such as SO_x, NO_x and particulates) as well as greenhouse gases (CO₂). The industry is not covered by the Kyoto Protocol, but few expect that the industry

will continue to escape new requirements. The Kyoto Protocol and EU, for example, have stated onshore carbon emission-reduction targets of 20–30%.

“The shipping industry will be expected to reduce offshore emissions by at least the same amount,” says mr Swift.

In respect of the “classical” pollutants, and in particular SO_x, one way of reducing emissions is by extending the Sulphur Emission Control Areas (SECAs). Today such areas have been introduced in the Baltic Sea, the North Sea and the English Channel, and new areas are in the pipeline, such as the North American coasts, the Mediterranean and parts of Asia.

Another way is to stay with residual fuel and invest in the development of new abatement technology, such as scrubbers, but still leaving the ship to deal with the waste streams. A third way is the mandatory use of cleaner fuels to strike at the root of the problem.

“One way or another, shipowners are going to have to pay, but in some cases this is not just the initial bill but also ongoing maintenance, monitoring and safety related costs.



INTEBANKO





“As society starts to put a price on the ‘value’ of carbon, this will drive change and the challenge for the shipping industry is to be ahead of the game,” says Peter Swift.

All these three alternative ways of reducing emissions bring technological as well as a range of other challenges. But the best solution to reduce harmful pollutants will be applicable to both existing and new ships and also globally. Inevitably, we will also need a transition period to implement the best solution, which I believe is to be the cleaner fuel, distillate, approach, and the best way forward is to be clear in the goal to be achieved,” says mr Swift.

Air emissions from ships are currently regulated by the United Nations’ International Maritime Organization (IMO). In 1997, an International Convention on the Regulation of Air Pollution from Ships was adopted, and this convention is currently being revised with a target completion date of 2008.

“Intertanko has submitted a specific proposal to the IMO which would require the use of cleaner fuel on a global basis,” explains mr Swift. Other proposals under review include the application of abatement technologies as well as the expansion of emission control areas.

But mr Swift underlines that an optimal fuel policy is only one part of the solution. Other measures are also important to obtain a sustainable shipping industry.

“Today engines are more efficient than ever before and other measures, such as segregated ballast water and ballast water management, the application of new tin-free paints, optimal weather routing and the recovery of otherwise wasted heat from the engine and auxiliaries, are just a few of the developments that have resulted in significant gains in energy efficiency and

reductions in environmental impact,” he says. But these accomplishments are just the beginning. Considerable efficiency potentials still remain.

THE VALUE OF CARBON

The shipping industry is on its way to adopting means to reduce pollutants, but huge efforts are necessary before it can claim to be a truly sustainable business, and without doubt there is now an urgent need to address greenhouse gas emissions.

“This will be important for today’s ships as well as tomorrow’s, and will require co-operation among the maritime industries, shippers, charterers and many others. As society starts to put a price on the “value” of carbon, this will drive change and the challenge for the shipping industry is to be ahead of the game,” concludes mr Swift.

! INTERTANKO - the International Association of Independent Tanker Owners

- Intertanko has been the voice of independent tanker owners since 1970.
- Independent owners operate some 80% of the world's tanker fleet and the vast majority of them are Intertanko members.
- Intertanko has 280 members. Their combined fleet comprises more than 2,800 tankers totalling 233 million dwt, which is nearly 80% of the world's independent tanker fleet.



Royal Caribbean's first new vessels of the Genesis class.

New milestones in cruise

Before Christmas the keel laying ceremony for the world's largest cruise ship took place in Turku, Finland. Royal Caribbean's first new vessels of the Genesis class will leave for Miami, Florida in the USA in autumn 2009.

For the time being, two huge luxury cruise vessels have been ordered. Both will be 47 metres wide, 360 metres long and reach 65 metres above the water line. Some 5,400 passengers will be hosted comfortably on each cruise.

"Large vessels, such as the Genesis class, are more environmentally friendly per transported unit than smaller vessels. This is therefore another step in a positive direction," says Karl Morten Wiklund, DNV's director of passenger ships.

DNV and COSCO Shipyard Group sign strategic agreement

DNV and COSCO Shipyard Group signed a Strategic Cooperation Agreement at the World Shipping Summit 2007 in China, marking that cooperation between COSCO and DNV have entered into a new phase.

Under the new agreement the two parties are committed to work further to enhance the competence on commercial ship repair, conversion, newbuilding and offshore classification. Technical support services and training through DNV Academy are also covered by the new agreement, which is valid to 2012.



DNV wins best in class double

Shipping daily Lloyd's List has chosen DNV as the best classification society in the Middle East and Indian subcontinent just weeks after DNV won a similar award from Seatrade magazine.

"The Lloyd's List award reflects the standing DNV has in the region," says Eivind Grøstad, DNV's regional manager for the Middle East and India. Criteria for the Lloyd's List award included number and breadth of ships classed, value added services and customer satisfaction. The award is considered by many as an opportunity to recognise the leaders of the maritime industry, whose innovation and dedication to quality is helping to transform the industry.

DNV's Kamal Kumar (right) accepts the Lloyd's List Classification Society Award from the sponsor, Ali Al-Daboos, chief operating officer of Dubai Maritime City.

“The actual quality still sits in the North Sea. It’s just not owned by the majors,” says John S. Woods, VP development and operations at Ithaca Energy.

Ithaca on the rise

“Choosing your partners is crucial in the modern North Sea,” says John S. Woods, VP development and operations at Ithaca Energy, one of the up and coming independent oil and gas companies on the UK Continental Shelf. TEXT AND PHOTO: **KAIA MEANS**

BP, Shell and Total are still the biggest names. But as UK production slows (it dipped by 9% in 2006) the majors are seeing a future in more promising regions, and are reducing their North Sea presence. Smaller companies, content with lower margins, are moving in to fill the gap – taking over aging installations and acquiring licenses for much smaller fields than any major would be willing to develop. Today 150 different companies hold licenses on the UK Continental Shelf.

It’s only been three and a half years since Ithaca Energy was founded in Calgary, Alberta with the purpose of establishing itself in the North Sea. Now the independent oil and gas operator is looking like it is one of the ones that could be voted “most likely to succeed.”

John Woods, VP development and operations, has lofty goals for Ithaca, focusing on keeping high ownership in new devel-

opments. “Our driving force is to stay high and to operate. We believe we can bring forward developments more quickly and more effectively than larger companies in the UK,” he says.

After initially acquiring a number of UK Continental Shelf licenses and building its exploration and development asset portfolio, the company floated its stock in June 2006, and has seen a rise of more than 50% in share price since then. On November 30, Ithaca announced that it had acquired Talisman Energy’s 100% interest in the Beatrice oilfield for £10 million.

FIRST PRODUCTION

In addition to Beatrice, which will bring immediate production of approximately 1,800 bopd when complete transfer is planned in June 2008, the company has three developments, and establishing production from them will be a major mile-

stone. The Jacky field, where Ithaca has a 90% stake, is expected to see first oil at the end of 2008, and will tie in to the Beatrice platform. Ithaca has brought DNV onboard to support the Jacky field development.

Success in the North Sea, says mr Woods, is based on several factors.

“Effective funding allows you to do everything else,” he says, noting that Ithaca is very well funded in comparison with many competitors. “Our ethos is that we believe we need to control the assets that we’re a part of,” he says. “We believe in the control of our own destiny.”

Control is one thing, guts is another. “You have to have the courage to drill,” mr Woods says. “We have a board of directors who back our technical guys with the drill bit.”

Mr Woods joined Ithaca Energy in 2006 with 25 years of experience in petroleum engineering and development manage-



ment, including 13 years at Amerada Hess. He has several 'firsts' in his career in North Sea production, including leading the Amerada Hess project to conduct the first well workover using a wireline intervention vessel in 1992.

Mr Woods says the biggest risk mitigation is done in choosing who works for you, and who your partners are. Having partners, says Mr Woods, is not merely valuable in order to share risk. "It actually gives you a discipline, which is very valuable. We've established partners who want to make things happen."

OVERLOOKED PROSPECTS

High-quality technical work gives the company an edge. "We believe we can find prospects that others have overlooked," says Mr Woods.

That is what happened with the Athena discovery. It was previously owned by

Talisman Energy, but lay undeveloped, as Talisman deemed it marginal, and below their metrics.

Ithaca saw the opportunity, acquired the licence and did the geological surveys. However, Talisman stands to gain from the project, as the subsea tie-back will go to their platform.

"They weren't going to drill it – we did," says Mr Woods. "That's one of the joys for me about working at Ithaca. There is no cumbersome gate process. If I want to develop Athena, it's up to me to make the right development plan, get it funded from the board, and then deliver it."

TALISMAN'S FOOTSTEPS?

Talisman Energy is the prime example of an independent upstream oil and gas operator to enter the changing UK market, growing in its 10 years there to become a new UK major. Mr Woods says Ithaca is

planning on staying lean, and with 14 current employees, there are no plans for more than 24 in the next couple of years.

The next step for the company is to become a production operator, which will happen with Beatrice next year. He says in the new North Sea market, the skills are no longer the domain of the big producers. "Best practice is now with the contractors," says Mr Woods.

"There has been a worry that the small companies will lead to a degradation of standards. What we've seen is exactly the opposite. We're willing to go to the people who actually have most competence. The actual quality still sits in the North Sea," he says. "It's just not owned by the majors."

“Our patients are safer now”

When newborn babies leave the premature clinic at the University Hospital Brno in the Czech Republic, the parents receive documentation that the hospital's quality management system complies with the requirements of the ISO 9001 standard.

TEXT AND PHOTO: HÅVARD SOLERØD

Since 1999, the University Hospital Brno (UHB) has been in partnership with DNV. Step by step, the hospital's 60 clinics, with 4,500 employees, have been certified according to the Quality Management System standard ISO 9001.

Dr Zdenek Dolezel is head of the newborn intensive care unit. Today he is visiting Eve; a cute as can be baby girl with a proud mother by her side. Because she was born one month early, Eve has spent her first few days in the premature clinic. When taking her home, Eve's parents will receive a document describing her medication and treatment.

“If complications occur, we have easy access to accurate information. Mistakes can be located. The quality management system includes processes to locate and eliminate risk. Continuous improvement is systemised. We benchmark with other hos-

FEWER MISTAKES:
“The process towards certification involved a lot of work, but now we make fewer mistakes,” says Dr Michal Klimovic, the head of the children's operation clinic.



pitals. Our patients are safer now,” says Dr Dolezel.

He describes an incident at another hospital that recently mixed up babies. Two babies were sent home with the wrong parents. A document had been rewritten by mistake.

“We investigated if the same could happen at UHB. The conclusion was that it could not happen at our hospital due to

the document handling system we designed to meet the requirements of the ISO 9001 standard.”

STRATEGY AND QUALITY MANAGEMENT

UHB is one of the biggest university hospitals in the Czech Republic. Its ambitions and challenges are mirrored in its Strategy Quality Plan. The focus is on patient safety, environmental issues, economy and transparency, health and safety for employees, and IT security. The management is discussing the implementation of additional ISO standards to fulfil the Strategy Quality Plan.

A pilot project on biological and normal waste will start up in 2008 within the framework of ISO 14001 (environmental management system standard). Other certification standards are being discussed as well.

GOING HOME SAFELY:

Eve has spent her first days in the premature clinic at the University Hospital Brno. Dr Zdenek Dolezel will give her parents documentation that the hospital's quality management system complies with the requirements of the ISO 9001 standard.



UNIVERSITY HOSPITAL BRNO:
The University Hospital Brno in the Czech Republic has 60 clinics that all have been certified according to the Quality Management System standard ISO 9001.



ECONOMY IMPROVEMENTS:
“The ISO 9001 certificate gives us a better bargaining position with the insurance companies,” says CEO Roman Kraus of University Hospital Brno.



QUALITY MANAGEMENT AND STRATEGY:
“We are considering the Environmental Management System standard ISO 14001 as well as other standards,” says Assistant Director Jaroslav Peřla.

“We use the ISO management system standard as a tool to strengthen our strategy. The government is introducing a new health reform in 2008. We believe the ISO 9001 certification processes have prepared us to meet future demands,” says Jaroslav Peřla, the Assistant Director who has been instrumental in the ISO certification process at UHB since the start.

STRONGER ECONOMY

The forthcoming health reform will provide upgraded guidelines for dealings between insurance companies and hospitals. In the Czech Republic, patient costs are governed by insurance companies.

“According to new Czech guidelines, certified hospitals are in a better position to negotiate terms with the insurance companies. This will benefit our economy and patients,” says CEO Roman Kraus.

Dr Kraus is a medical doctor with an MBA. He started practising in a neighbouring hospital and then proceeded to hospital administration. He took over as the CEO of UHB a year ago. He is a driving force behind the change of mindset inside Czech hospitals.

“Before, patients were looked upon as medical problems. Today, our patients are first of all human beings and customers of our services.”

A NEW WORK SHIFT

On average, 40 operations per day are performed on children at UHB. At the end of every work shift vital information on patients is logged in computers. Before, most of this information was passed on verbally.

“The process towards certification involved a lot of work, but now we make fewer mistakes,” says Dr Michal Klimovic, the head of the children’s operation clinic. “Documentation is complete. A strict job description provides continuity. An emergency plan is in place. Statistics show that the safety management is working.”



DNV's Øyvind Andresen awarded a doctorate

Øyvind Andresen defended his doctoral thesis entitled "Quantifying fuel consumption and air emissions from shipping" in January.

His doctoral work has focused on calculating the historical, current and future emissions from ships and making arrangements for models showing the effects on the environment.

Øyvind Andresen, PhD.

DNV to qualify Aker Kvaerner's carbon capture technology

Aker Kvaerner has awarded DNV a contract to qualify the carbon capture technology which will be used in the Just Catch™ Bio Demo plant.

The company intends to build a CO₂ capture demonstration plant in Norway linked to a gas-fired power plant. It will be based on Aker Kvaerner's Just Catch™ technology, which is being developed together with twelve industrial partners in addition to Gassnova, a subsidiary of the Norwegian Ministry of Petroleum and Energy.

The demonstration plant will be developed in two phases. Firstly, the Just Catch™ plant will be run using exhaust from the gas-fired power plant. Secondly, a bio plant providing steam will be fully integrated with the demo plant. The technology will therefore be designed to clean flue gas from natural gas fired and bio power plants, in addition to flue gases with CO₂ concentrations similar to those from coal-fired plants.

"By following the principles laid down in DNV's recognised technology qualification process, we are identifying and monitoring all risk elements in a systematic manner. We believe that the qualification will build confidence in our technology," says Oscar Fr. Graff, Vice President of Gas Technology and Onshore Solutions in Aker Kvaerner.



The demonstration plant will have the capacity to clean 10% of the flue gas from a 420 MW power plant.

New head of strategy and business development at DNV



In order to strengthen its position in the global energy industry, DNV has appointed David Walker as director of strategy and business development.

He is a recognised senior management executive, with 25 years of international experience from the oil and gas industry, and comes from BHP Billiton, where he served as president of production for Europe, North Africa, the Middle East and Australia.

DNV's oil, gas and energy activities are expanding rapidly. There is an increasing demand for its cross-disciplinary services relating to classification, qualification and risk consulting as well as services relating to cleaner energy and renewables.

"Having worked with DNV as a client in the past, I am now excited to be joining DNV as an employee. DNV's values and aspirations match my own," says David Walker, DNV's new director of strategy and business development.

ITC's Incense Business Unit is helping to support over 5,000 rural women who make incense sticks by hand. The income they receive goes towards their children's education and health, thus bringing positive societal change while delivering value to the consumer.





Putting India first

ITC is recognised as one of the most successful private sector companies in India. It is also a caring company which is instrumental in creating and sustaining the livelihoods of nearly five million people in India.

TEXT: **STUART BREWER** PHOTO: **ITC**



A commitment beyond the market: The creative use of information technology through the eChoupal system is helping to empower the Indian farmers, whilst placing ITC in a unique position to reap benefits through its closeness to the potential consumer.

In a concerted effort to develop innovative value-chains across its diverse business segments, ranging from consumer goods to hospitality and commodity trading, ITC is instrumental in creating and sustaining the livelihoods of nearly five million people, many of whom represent the weakest sections in rural India.

“We believe that an effective growth strategy for India must address the needs of rural India, home to over 300 million people who live in poverty,” says R. Srinivasan, Chief Executive Officer of ITC’s Paper and Packaging Division. “It is imperative to ensure that India’s economic growth is inclusive, embracing its villages, so as to free millions of its disadvantaged citizens from the indignity of poverty.”

Echoing the words of India’s Finance Minister P. Chidambaram, Mr Srinivasan is confident about his nation’s surging economy, which is currently growing at more

than 9% annually, but warns, “the growth will not last if the gains are not shared by hundreds of millions of Indians still mired in isolated, poverty-stricken villages.”

EMPOWERING RURAL FAMILIES

As part of its business strategy of creating multiple drivers of growth and sustainability, ITC pioneered and established the world’s largest rural digital infrastructure, eChoupal, empowering over five million rural families.

The system leverages information technology to farmers in 31,000 villages in India. Mr Srinivasan explains, “Basically, ITC has supplied a computer kiosk to each village so that they can access up-to-date information such as sowing seed times, herbicides and accurate weather reports which, in turn, help them to improve their crops as well as the process of bringing it to the market. Previously, farmers did not

have access to such quality inputs and as a result lost 60-70% of the potential value of their crops. Similarly, on the output side, middlemen clogged the supply chain, reducing profit margins for both farmers and buyers such as ITC.”

The system has led to considerable recognition both nationally and internationally, with ITC becoming the first Indian company to win the prestigious Development Gateway Award. More recently, Mr Y C Deveshwar, the chairman of ITC, was given the Sustainability Leadership Award in Zurich for “his extraordinary leadership in developing, implementing and promoting sustainability in ITC through innovative corporate strategies that led to significant societal development.”

LEADING SUSTAINABILITY PRACTICES

In addition to its eChoupal system, ITC has spearheaded one of the largest industry-

facilitated afforestation programmes globally, greening 75,000 hectares of land. Also, the company's integrated watershed development project has irrigated over 28,000 hectares of land, making it the most significant corporate intervention in watershed development in rural India. ITC's forestry and watershed initiatives make it the only company in the country to be both 'carbon' and 'water' positive – a testimony to its benchmark sustainability practices.

"We try to manage our work in a sustainable and effective way," says mr Srinivasan, adding: "Another good example of our sustainability approach is the marketing of our incense sticks (agarbattis) which are sourced from small-scale cottage units.

"With its participation in this business, ITC aims to enhance the competitiveness of the small- and medium-scale sectors through its complementary R&D-based product development and strengths in trade marketing and distribution. At the same time, our Incense Business Unit is helping to support over 5,000 rural women who make the agarbattis by hand. The income they receive goes towards their children's education and health, thus bringing positive societal change while delivering value to the consumer," explains mr Srinivasan.

INTERNATIONAL STANDARDS

Mr Srinivasan says that the implementation of international standards is an important mechanism to achieve sustainable growth. He points out that ITC's Incense Business Unit is encouraging the use of standards in the small-scale "cottage industries" from which it sources the incense sticks. "In the past two years, six vendors out of nine have been certified to the Quality Management system standard ISO 9001. This initiative has helped in standardising the systems and procedures across the vendors and helped them to follow best practices," he says.

He continues, "As for ITC, we have adopted DNV's IQRST™ (International Quality Rating System) as a tool to benchmark our process and business excellence practices and our division at Chennai has recently achieved a Level 8 in the rating process."

ITC's Incense Business Unit has encouraged the production of incense sticks as an attractive micro enterprise because of its

marketability says mr Srinivasan. "We have developed an innovative model with a win-win situation for both the producers and consumers. This is called 'ASHA' which is an abbreviation for Assistance in Social Habilitation through Agarbatti.

COUNTRY BEFORE CORPORATION

"The success already achieved shows it has a clear potential to grow into a thriving business. For example, in the Munger district of Bihar, ITC provides training and marketing support at six centres with more than 350 members who are gainfully employed. Production has already reached 10 tons of incense sticks per month. For

unemployed female members this provides a critical supplementary income," says mr Srinivasan.

In spite of ITC's commendable efforts, mr Srinivasan acknowledges that he has his concerns, particularly about events that are well outside his control. "I am confident about India's future but at the same time what we're doing at ITC is only a drop in the ocean. There is so much more that could be done for many more people. The nation's 9% annual growth rate is completely meaningless to people living in the poverty-stricken villages. An effective growth strategy for India must also address the needs of rural India."



Homemaker and income generator: Over 5,000 rural women are contributing to their children's education and health working from home making products which are marketed by ITC. This is just one of the many ways in which ITC expresses its belief that country must come before corporation.

! ITC in brief

With a market capitalisation of over USD 13 billion and a turnover of USD 3.5 billion, ITC Limited is a major player in the consumer goods, hospitality and commodity trading sectors. Based in Kolkata, it currently employs 20,000 employees at more than 60 locations across India.



Expansion plans at Drydocks World

Drydocks World Dubai is the new name for Dubai Drydocks, the largest single repair complex in the Middle East. It is one of the thriving business units of Drydocks World, which is currently expanding its facilities both regionally and internationally.

TEXT: **STUART BREWER** PHOTO: **DRYDOCKS WORLD DUBAI**

DRYDOCKS WORLD DUBAI: the 200-hectare site and 350m-wide channel attract up to 2,000 dockings a year.

The Drydocks World Group is expanding. In June last year it acquired Pan United shipyard in Singapore and shortly after that it signed an agreement to develop a large plot of land, using the Dubai Maritime City model, in Batam Indonesia. Most recently, the group made an offer of USD 1.64 billion for the acquisition of Labroy Marine, a Singapore-based company with a shipyard facility in Batam.

Its expansion strategy is set to continue and it intends to establish shipyards in strategic locations around the globe, including China, India and Vietnam.

ONE-STOP-SHOP

Commenting on developments at Drydocks World in Dubai, Managing Director Nawal Saigal says, "The new name is now established and we have plans to expand our facilities to include two new VLCC (Very Large Crude Carriers) berths, an additional floating dock, and a new office building to accommodate our newbuilding division personnel. We will also complete a 4,000 bed accommodation to house our junior staff. Our goal is to provide our clients with a one-stop-shop for quality ship-repairs, newbuilding and conversion services in the United Arab Emirates."

The company has had a good slice of ship repair business over the past few years and 2007, in particular, was very good according to Mr Saigal. "Last year proved to be extremely busy for us, with very high occupancy rates across all the docks. There was a high demand for our specialist services, not only from the shipping industries but also from the oil and gas sectors, with

major contracts completed for offshore drill rigs and support vessels," he says.

TANKER CONVERSIONS

The yard is currently involved in four conversions – three of which are tanker to FPSOs (Floating Production Storage Offloading) units. The first is the 274,300 dwt tanker *Gimboa* from Italy's Saipem, the second being the 273,600 dwt tanker *Frade FPSO*, managed by SBM Offshore Contractors and the third being the 145,200 dwt tanker *Knock Allan* for Fred Olsen Production. The yard is also completing the conversion to an FSO (Floating Storage Offshore) of the 68,139 dwt tanker *Deep Producer* from FPS Ocean.

The 16,500-ton hull for the first of the H-6 semi-submersible offshore rigs classed by DNV, *Rig-Aker-Alpha*, was delivered to Aker Kvaerner in August last year. Deck installation is currently being carried out at the Aker Kvaerner Stord yard.

At the moment, Drydocks World Dubai is "probably the biggest ship-repair yard in the world," believes Mr Saigal. "We have a nice blend of work which includes our core strength relating to shiprepairs. For example, we are a major player in VLCC and ULCC repairs with over 50% of the world's tonnage docking in our facilities each year. In addition, we are strong in ship conversion and are a force to be reckoned with when it concerns newbuilds."

WAVE OF CONFIDENCE

Mr Saigal is enjoying riding the wave of confidence and believes the "good times" will continue for a few years. "This business

is typically cyclical. We had some lean times in the early 2000s, but demand for dock space is now very high. With our expanded facilities and focus on cost-effective, quality services, we believe we are well placed to service existing and potential clients in the future."

He continues, "It is my belief that shipyards can be built around the world, but one needs to build a team which has the commitment and attitude to 'make it happen'. I am proud to say that we here at Drydocks World Dubai have such a team. Our commitment to employing people with the best skills and providing a safe and secure environment for them to work, will ensure continued success."



NAWAL SAIGAL

Managing Director of Drydocks World, Dubai.

"Our primary goal is to provide our clients with a one-stop shop for quality ship repair and shipbuilding services in the U.A.E., but don't be surprised if you see the Drydocks World logo popping up somewhere new soon."

! Drydock World Dubai yard facts:

- Yard area: 200 hectares
- Entrance channel: 350 m wide, repair berths: 2,400 m
- Workforce: around 10,500
- Dockings: around 2,000 a year
- 3,000-tonne lift operational with 6,000-tonne lift to come in first quarter 2008
- Two VLCC berths on the way, providing 650 m more berth space
- Three graving docks and two floating docks
- 120 metre load in/out hydra lift
- 700 ton yacht lift.



Danisco is a company that embraces an extensive range of ingredients for industrially produced food, not to mention sustainable energy, detergents, textiles, plastics and many other consumer products across the world.

Social responsibility is good business

Danisco is setting an example to other companies. For the sixth consecutive year, it has reported on its performance in the sustainability area. Benefits for the environment, consumer health and company image have been achieved. **TEXT: STUART BREWER PHOTO: DANISCO**

Danisco is a world-leading biotechnology company with activities at 142 locations in 47 countries. Its products are used in ice cream, jam, bread and many other food products. With more than 100 million people regularly eating or using products containing its ingredients, the responsibilities are huge.

“Our ability to perform responsibly towards society is decisive for the company’s position in the marketplace,” says Liselotte Carlsen, project coordinator in Danisco’s Corporate Sustainable Development Division. She leaves no doubt that sustainability is more than just a sector interest. “Sustainable development is a fully inte-

grated part of our business model and considered by management as a basic driver for creating an effective and socially responsible organisation. Our image and credibility rely on top-class sustainable performance,” emphasises ms Carlsen.

“For us at Danisco, it is essential that we work in harmony with our surroundings. As sustainability attracts growing attention around the word, this attitude is greatly to our advantage. Today, when developing new foods or consumer products, we regularly find that our approach is one both customers and consumers prefer.”

Liselotte Carlsen,
project coordinator in Danisco's Corporate
Sustainable Development Division.



COMMITTED TO SUSTAINABLE DEVELOPMENT

“Danisco’s decision to integrate sustainable development into its business platform is not only due to legal or customer requirements but also to an equal extent because it will benefit the company financially,” ms Carlsen explains. “We also consider it an insurance for Danisco as well as our customers against potential problems in relation to sustainability. As a demonstration of our commitment to this area, we signed the Business Charter for Sustainable Development in 1992 and the UN Global Compact in 2003.”

Danisco’s sustainability-related initiatives have led to its inclusion in both the Dow Jones Sustainability and FTSE4 Good Indexes, which impose strict requirements on businesses.

According to ms Carlsen, Danisco’s foundation in sustainable development is a continuous and dynamic process to support the company’s production and sales function.

“It should not only be seen in a traditional sense – eg, health and safety or fighting pollution – Danisco is also striving to develop new products with less negative impact on the environment in the customer’s application process, or food ingredients with health-promoting effects, for instance in relation to overweight or dia-

betes. In addition, Danisco focuses on reducing the overall energy consumption in the entire value chain for its products,” ms Carlsen points out.

OPTIMISED EFFICIENCY

One example of this can be found within Danisco’s sugar division which, over the years, has optimised efficiency and processing at its factories, turning them all into state-of-the-art facilities. As a result, Danisco is one of Europe’s most efficient sugar producers, in terms not only of yield but also of energy consumption. Relations with the surrounding communities are also strong.

Ms Carlsen believes that successful sustainability performance depends first and foremost on leadership and commitment. “This can only be achieved through a structured approach. We must establish goals and plans, set standards for how to operate our facilities, take account of any negative impact related to our products, develop people’s skills and knowledge, and establish a follow-up system for monitoring our progress and taking corrective action,” says ms Carlsen.

ADVANCED LEVEL OF REPORTING

DNV has been commissioned by Danisco to verify Danisco’s 2006 sustainability reporting in both its printed format, the

report entitled “Energy and balance at all levels”, and online format. The scope of assurance included social, environmental, health and safety indicators and sustainability data and activities.

Ms Carlsen comments, “This year we have, for the first time, employed the new Global Reporting Initiative G3 as our reporting guidelines. Both we at Danisco and DNV confirm that the GRI “C+ application level” has been met.

The report demonstrates Danisco’s efforts to embed its sustainability approach into business and manage its reporting activities at an advanced level.

“We like to think that being responsible is not always an expense. It can result in exciting new products and reinforce the company’s stance as an attractive collaboration partner,” says ms Carlsen.

“Consumers also expect companies to be good citizens. They want to feel good about grabbing a product from the supermarket shelf, not weighed down by a guilty conscience about the environment, obesity problems or the people involved in production,” says ms Carlsen, and concludes, “Through our efforts, we are working to make all this possible. That helps to make us an attractive partner.”



Cosco hoists sustainability sails

Chinese shipping giant Cosco is putting corporate social responsibility into practice. Last year, it released its first Annual Sustainability Development Report, the first in China to comply with the UN Global Compact Initiative. **TEXT: STUART BREWER**

Cosco (China Ocean Shipping Group Company) is one of China's flagship enterprises. Its shipping capacity is the largest in China and the fifth biggest in the world. But Cosco is not only big – it is also a recognised leader in sustainable development.

This shipping and logistics giant has released its first Annual Sustainability Development Report under the United Nations' Global Compact Initiative. The report, verified by DNV, covers the three critical aspects of sustainability – economic performance, environmental protection performance and social impact.

"After two years of efforts, Cosco established its Global Compact Social Responsibilities Management System and issued the sustainability development report," says Ma Xin Ying, manager of Cosco's strategic planning division.

FIRST IN CHINA

"As the first Chinese enterprise to implement the Global Compact, Cosco is also the first state-owned company to compile such a report according to the requirements of the Global Reporting Initiative," she says proudly.

According to ms Ma, the main driver behind the work is Cosco's president and CEO, Captain Wei Jiafu, who has set his company's vision for establishing a socially responsible culture across the company. The programme covers the 10 core principles of the United Nations Global Compact Initiative, which was established by the former UN Secretary-General Kofi Annan in 1999.

The agreement to provide services to support Cosco's sustainable business development was signed in May last year, after

DNV awarded three certificates recognising Cosco's modern enterprise management system. The three certificates are for:

- ISO 9000 quality management system
- ISO 14000 environmental management system
- OHSAS 18000 occupational health and safety management system

The company is the first state-owned enterprise in China to receive all three certificates at the same time.

"President and CEO Captain Wei and his senior management team are dedicated to building an innovative management system and are keen to implement new concepts to take an international lead in shipping," says ms Ma. She firmly believes the external audits are one of the most important factors contributing to Cosco's success.

FULLY INTEGRATED

"Cosco's senior management's commitment is key to the company's success," adds Sangem Hsu, DNV's business development director for Asia and Australia. "DNV's role is to ensure that our certification services help Cosco to build a management framework which integrates expertise risk management and sustainable development into the ISO-based management system."

Highlighting the importance of being a Global Compact member, ms Ma says that whatever goals a company pledges to reach or standards it promises to comply with, there must be a specific, practical application. Without this, codes will set only the overall ground rules for corporate conduct.

COMMERCIAL BENEFITS

"Good corporate practices bring commercial benefits. They help companies achieve a variety of goals: protect their corporate reputation, improve employee morale, enhance client loyalty, just to name a few. On the other hand, companies that do not practice what they pledge risk adverse publicity and customer loss," says ms Ma.

As it turns 46 years old, Cosco has made the transition from a small shipowner to one of the world's leaders. However, its core values remain the same: a commitment to leadership, innovation and financial strength.

"Maintaining these values will ensure that the Group continues to lead, to grow and to contribute to the sustainable development of global economic trade" concludes ms Ma.



MA XIN YING

Manager of Cosco's strategic planning division

"By taking social responsibility seriously, there is no doubt that a company can improve its competitive position," says Ma Xin Ying.

Leading the way



Shipping and logistics specialist MISC Berhad is determined to set standards and aims to establish itself as a leading integrated service provider focused on energy transportation, marine and heavy engineering and offshore floating facilities.

TEXT: **STUART BREWER** PHOTO: **MISC BERHAD**

“We want to be a global champion, and in order to do this we need to achieve operational excellence and invest in infrastructure and people,” says Nordin Mat Yusoff, Vice President Fleet Management Services, MISC Berhad, formerly known as Malaysia International Shipping Corporation Berhad.

In just over three decades, the group has established itself in the fields of liquefied natural gas (LNG), petroleum & chemical shipping, liner and integrated logistics, ship repair and heavy engineering, and maritime education. Its vision is to become ‘the preferred provider of world-class maritime transportation and logistics services.’

“As a publicly listed company, MISC has a strong desire to position itself and build up its capacity and capabilities in several sectors” says Mr Nordin. “To achieve this in today’s challenging environment, we need to maximise our growth through various means. These include enhancing our reliability, building strong relationships and optimising resources. As we utilise what we have, we can continue to drive MISC into expanding business areas.”

Business is going well for MISC. A good foundation for the business was created by the company’s success in the early 1980s. Over the years, the company has built up a diversified fleet and currently operates over 100 vessels and two offshore floating facilities.

EXPANSION PLANS

According to Mr Nordin, MISC will continue to grow its energy shipping business through the expansion plans in place for LNG carriers, petroleum and chemical tankers. “In view of the expected down-cycle in the shipping industry, MISC will proactively look for mergers and acquisition opportunities to build critical mass and expand its global coverage,” says Mr Nordin.

MISC has also made substantial investments in qualified personnel and procedural areas. Explains Mr Nordin: “We’re proud of our achievements but are continually striving to improve. With our ongoing investment in maintaining a large,

modern, high-quality fleet, the assets side is well in hand. The operational procedures area is also important to us and, over the past few years, we have strengthened our best practices through several initiatives, including comprehensive training schemes and ship safety performance.”

More recently, MISC began its corporate-driven ‘triple plus’ initiative, which focuses on three areas: leadership development, behavioural changes and capability building. The latter involves the development and implementation of a capability building programme for Fleet Management Services, work that is being supported by DNV.

Explaining the background, Mr Nordin points to the escalation of costs driven by costly raw materials and scarcity of resources. “To cope with MISC’s aggressive fleet expansion plans and the increasing cost of fleet management and operations, it became critical for us to develop a pool of capable personnel with the right skills, knowledge, experience and mindset to meet the industry’s challenges.”

CAPABILITY BUILDING

“As a consequence, we embarked on a capability building exercise and hired DNV as our consultant to build capabilities in the areas of ship superintending, crew management and ship building management. Phase 1, which we concluded earlier this year, involved a review of the systems, processes, tools and procedures, leadership skills, mindsets and behaviours. We also benchmarked ourselves against industry leaders to assess capability gaps and identify improvement opportunities” says Mr Nordin.

In the next phases, MISC plans to “develop, implement and institutionalise the requisite capabilities within the group,” says Mr Nordin and adds, “With the capability building initiatives in place, Fleet Management Services is better positioned to support MISC’s business needs.”

DNV’s work focuses on operational excellence and the development of new practices to support MISC in meeting its strategic ambition of becoming a leading industrial shipping company.

In the initial phase, MISC chose to focus on areas that are at the core of its fleet operations, namely maintenance, docking, fuel efficiency, procurement and business performance management. Work is ongoing and DNV has provided solutions that have contributed to the bottom line, particularly in the area of fuel efficiency.

With increasing competitive pressure and rising fuel prices, Mr Nordin believes that operational excellence has become a key factor in ensuring cost-efficient operations and asset reliability.

ENHANCED COMPETITIVENESS

“Sound management and investment in operational procedures, infrastructure and people will reduce costs and boost our competitiveness and efficiency. There is no alternative because there will be no future if we don’t achieve these goals. We will simply be too expensive,” says Mr Nordin.

Commenting on the cooperation with DNV, Mr Nordin says: “For us, it’s important to have good relationships with all of our suppliers, subcontractors and consultants, like DNV, as they are key to achieving optimal services and delivery in a competitive marketplace.”

“Given our strategic ambitions, we must seek innovative, international partners to develop relationships that put quality, price and delivery hand-in-hand with efficient services,” Mr Nordin says and concludes “This in turn, will help enable MISC to achieve its vision of becoming the preferred provider of world-class maritime transportation and logistics services.”



NORDIN MAT
YUSOFF

Vice President Fleet Management Services, MISC Berhad, formerly known as Malaysia International Shipping Corporation Berhad.



UK Continental Shelf:

A challenging change

The oil and gas market on the UK Continental Shelf is undergoing a transformation. The UK hopes to keep its production rates up, but hitting the target of sustaining production at 3 million barrels per day in 2010 will be a challenge. It's not going to happen by itself – a new drive is needed, and the names to look out for aren't necessarily Shell, BP or Total.

There are fundamental and very important changes occurring in the UK oil and gas market. Declining production, ageing installations, and the fields being developed are much smaller than they used to be.

The UK government and the Industry together are talking action to keep production rates up. However, insiders agree that

decades are lesser-known names, such as Venture, Ithaca, Oil-Expro, Fairfield, Lundin and Nexen.

SHAKE-UP

Already they've made their presence known in the market. They actually shook it up. These new companies are smaller, have lower baseline costs, and aim to create

DNV's role in this development is to safeguard life, property, and the environment, and at the same time assist new entrant to improve their business performance. These companies are the future of oil and gas in the UK.

“THE NEW NAMES TO LOOK FOR ARE VENTURE, ITHACA, OIL-EXPRO, FAIRFIELD, LUNDIN AND NEXEN.”

hitting the target of sustaining UK production at 3 million barrels per day in 2010 and dipping no lower than 2 million barrels per day by 2020 will be a significant challenge.

The traditional, large global oil and gas companies are gradually reducing their presence and investments in the region. For some time now, companies such as Shell, BP and Total have seen their future in the larger fields in places like Russia, the Middle East and West Africa creating a space to be filled by others that specialises in tail-end opportunities.

The companies which are likely to be at the forefront of keeping production at respectable levels in the UK in the next

substantial value through a focused and pragmatic approach. They are acquiring licences, developing fields, and in some cases growing into medium-sized producers.

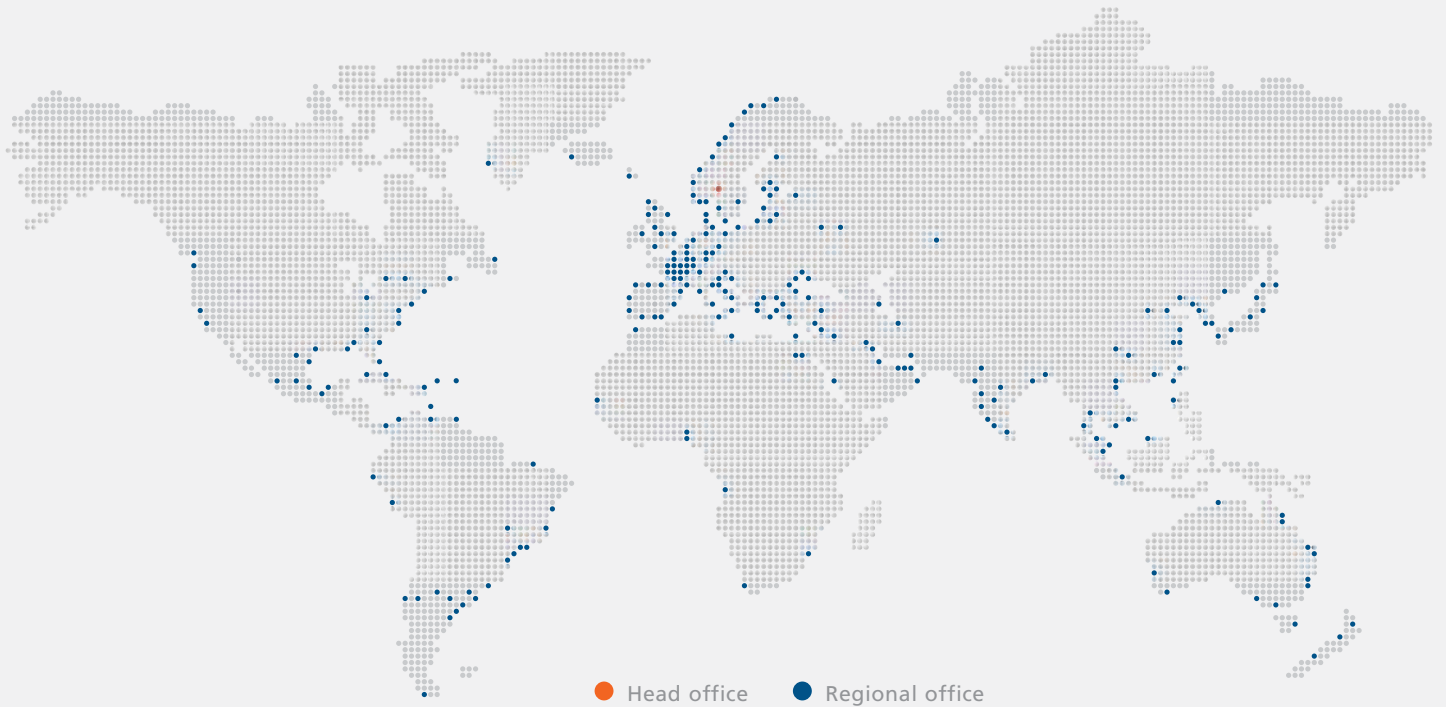
It used to be a good field if it was 100 million barrels. 25 million barrels is now considered a significant field, and even smaller fields are being developed.

In more recent years, the number of new entrants has skyrocketed, and as many as 150 different oil and gas companies now hold UK Continental Shelf licences. The proportion of capital invested in the North Sea by new entrants was just 10% as recently as 2003 – now it has grown to a sizable 38%. The new entrants today account for 16% of total production.

IAN WRIGHT, associate director at DNV, is supporting an industry that is in the process of a giant shake-up.



DNV worldwide



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