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DIALOGUE

A JOURNAL FROM THE PETROLEUM SAFETY AUTHORITY NORWAY

CONTENTS

REPUTATION

One definition of *reputation* provided by the Oxford English dictionary calls it "the condition, quality or fact of being highly regarded or esteemed".

The question then is whether this has any significance for us as individuals or for the oil industry as a whole.

Of course it does.

The industry's reputation is a matter of concern for many. Safety and the working environment are also – and must be – part of the discussion on that subject.

Reputation is both relevant and important. And it provides the theme for this issue.

The following pages address the significance of being well-regarded for the industry, what influences that regard, what it means for the sector's future – and how important safety and the working environment are in this context.

We present the attitudes of government, the unions and the employers on the subject, as well as the views of researchers and the expectations of environmental campaigners.

This issue also visits a very different marine industry, and looks at how fish farmers are handling their reputational challenges. Perhaps oil and aquaculture have something to learn – from each other?

ENJOY

Øyvind Midttun
Editor

TEXT Øyvind Midttun
PHOTO Morten Berentsen

FINE WORDS ACHIEVE **NOTHING**

The heart of a good reputation is an honest, responsible and open industry which operates safely, says PSA director general Anne Myhrvold. "It's created by behaviour, not rhetoric."

It is not a goal in itself for the PSA to ensure a good reputation for the oil industry, emphasises director general Anne Myhrvold. "But it'll acquire esteem by working safely."

A criticism sometimes levelled at the PSA is that its concentration on risk and accidents helps to damage the petroleum sector's standing.

"The industry's most important job is to run its business prudently and ensure that it avoids harm to people, the environment and material values," Myhrvold observes.

"What would really hit its reputation, and be the worst which could happen, are major accidents, serious incidents, injuries and ill-health among the workforce."

She emphasises that it is not a goal in itself for the PSA to ensure a good reputation for the petroleum industry.

"But it'll acquire esteem by working safely. Since we work for the safest possible activity and continuous improvement, we're indirectly a driving force for a positive standing."

Climate

The public debate on the industry's reputation over the past couple of years has concentrated particularly on two aspects, Myhrvold notes.

"These are climate and the industry's future in light of that challenge, and the oil price slump with the consequent decline in activity, cost cuts and downsizing.

"The factors which affect the reputation of the sector can also influence its priorities and the way the companies work. That can in turn affect the risk picture – and our own priorities."

She says that the PSA's job is to keep abreast and to investigate whether the challenges and the changes being made have an impact on safety.

"At the same time, I must add that a good reputation for the industry will also make a positive contribution to safety work. All improvements are easier if you're well regarded.

"I believe the sector's good name is closely related to such concepts as honesty, responsibility, openness and safety."

Trust

Myhrvold stresses that the PSA as a government authority is also dependent on a strong reputation, and particularly on being trusted.

"Trust is essential for collaboration between all sides of the industry – government, unions and employers. It's a serious matter if anyone has reason to cast doubt on our impartiality or trustworthiness, or on the quality of the job we do."

In her view, cooperation between the three main sides of the petroleum sector functions well. "We don't always agree, but we always work towards the same goal – avoiding accidents and harm.

"A well-functioning tripartite collaboration, built on trust and openness, is crucial if the industry is to continue delivering good results on safety and the working environment."

Criticism

Myhrvold is used to criticism from the industry. Not all PSA decisions are popular, but nor is it her job or that of the authority as a whole to be as popular as possible.

"This is a matter of fulfilling our assignment

in the best possible way. That occasionally requires us to take unwelcome steps.

"We're a clear-spoken and independent regulator, and need to take many considerations into account. We must live with criticism, no matter where it comes from.

"The most important thing for me is that we discharge our responsibilities in the best possible way. We must come across as credible when developing regulations and exercising supervision."

Publication

Publishing the results of verification and audits openly on the web is another PSA practice which fails to attract equal understanding from everyone in the business.

"Sharing reports is important for spreading knowledge and experience in the industry," says Myhrvold. "Our publication strategy is openness in practice, and I believe this helps to strengthen the sector's reputation."

She points out that an important part of the PSA's job is to supervise that the companies pursue their activities prudently – and to use the instruments available to it when they do not.

"Our role is to contribute to learning and improvement in those areas which are not in compliance with the regulations. So our audit reports focus on findings which are critical of company operations, not on everything they do right.

"In many other contexts, we're concerned to highlight the expertise of and solid work done by the companies. That's an important part of the overall picture."

The factors which affect the reputation of the sector can also influence its priorities and the way the companies work. That can in turn affect the risk picture – and the PSA's own priorities. (Photo: Shutterstock)

TEXT Astri Sivertsen
PHOTO Sverre Christian Jarild

The oil business gets recognition as big and important for the Norwegian economy and has the political establishment on its side, observes Professor Øyvind Ihlen. "But the motorway nevertheless has some potholes."

NEVER GOOD ENOUGH?

The oil industry has a good standing and political power in Norway on its side, observes reputational expert Øyvind Ihlen. "But it's nevertheless dissatisfied."

Reputation is defined in the literature as what people think about an organisation and how they expect it to act. It is an outcome of what the organisation has done and how it behaves.

That definition is also cited by Ihlen, who is a professor in the department of media and communication at the University of Oslo.

Among many other publications, he authored a book 10 years ago on strategic communication and reputation building by the Norwegian oil industry.

Asked why a good standing is so important, he says the belief is that this could contribute to better operational parameters, improved product prices and greater employee pride.

"It could also help to attract good new personnel and investors. So a positive reputation offers many upsides – which is naturally why people are so concerned with it."

Expertise

His 2007 book was an outcome of a major project funded through the Research Council of Norway's Petropol programme on maintaining and developing Norway's petroleum-related research expertise.

What Ihlen and his colleagues first and foremost observed – and found surprising – was the level of dissatisfaction in the petroleum sector over its reputation.

"We couldn't quite understand why this should be," he says. "When we looked at opinion polls and the industry's achievements and compared them with other sectors, the oil business was clearly recognised as big and important for the Norwegian economy.

"Moreover, it had the political establishment on its side. But the motorway nevertheless has some potholes. One of these is a recurrent theme in Norwegian political and social life – the tension between centre and periphery."

According to Ihlen, the division between Oslo and the rest of Norway has always existed and will perhaps persist for ever.

In the oil industry, it has fuelled an irritation that people who live in the "petroleum shadow" – in other words, central areas of eastern Norway – know too little about the sector and its national significance.

The professor points to a recent opinion poll from the Norwegian Oil and Gas Association which shows that four out of five Norwegians believe it is important to maintain the industry.

But this survey also showed that people in Oslo and its environs are more sceptical about the business – particularly young women in the capital, known as the "cafè latte" segment.

Climate

Since Ihlen's book first appeared, one objection to the oil industry in particular has become much more prominent – concern over the climate and the environment.

He refers to a survey in Oslo daily *Dagbladet* this year, which showed that 44 per cent of respondents were willing to cut back oil operations to limit emissions and discharges.

"Everyone understands that the industry is extremely important for the Norwegian economy," says Ihlen when summing up the two polls he cites.

"At the same time, they all know that this is a sector with associated environmental problems. Dealing with that dichotomy is the big challenge."

He observes that the industry's response so far has been to highlight its significance for value creation and prosperity – on a par with others who lobby for their business.

"In other words, they claim to argue not

for their self-interest but for what best serves society. Values and principles are deployed which are thought to command wide support, such as prosperity being good."

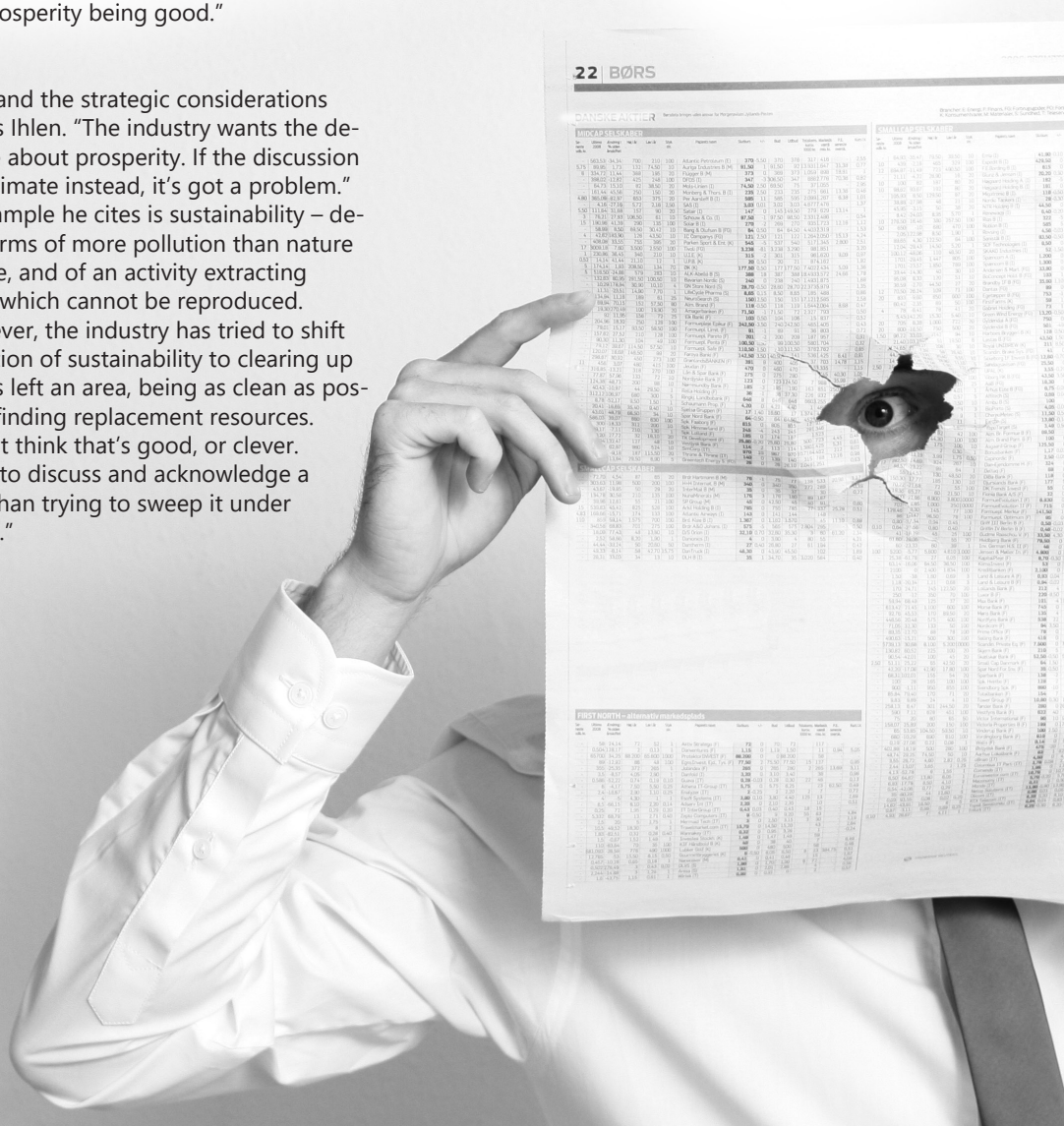
Problem

"I understand the strategic considerations here," says Ihlen. "The industry wants the debate to be about prosperity. If the discussion is about climate instead, it's got a problem."

An example he cites is sustainability – defined in terms of more pollution than nature can handle, and of an activity extracting resources which cannot be reproduced.

"However, the industry has tried to shift the definition of sustainability to clearing up after it has left an area, being as clean as possible and finding replacement resources.

"I don't think that's good, or clever. It's better to discuss and acknowledge a problem than trying to sweep it under the carpet."



Professor Ihlen advises the industry to discuss its problems rather than sweeping them under the carpet. (Photo: Shutterstock)

TEXT	Øyvind Midttun
PHOTO	Maria Amelie

"Our reputation is an important parameter for our continued existence," affirms Kristin Færøvik. "This is closely related to trust. We must *have the confidence of the general public in what we're doing, and its acceptance of our activities."*

GETTING THE MESSAGE ACROSS

The key to the oil industry's reputation is delivering good, concrete results, says Kristin Færøvik at the Norwegian Oil and Gas Association. "That covers both financial performance and HSE."

Active efforts are being made by Norwegian Oil and Gas, which represents oil and supplier companies on the continental shelf, to improve the standing of the sector.

"Our reputation is an important parameter for our continued existence," explains Færøvik, who serves as chair of the organisation.

"This is closely related to trust. We *must* have the confidence of the general public in what we're doing, and its acceptance of our activities."

She adds that a strong positive image is also significant for recruitment. "That's a matter of attracting good personnel, which is crucial for us.

"With the industry changing, it needs new expertise. We have a long-term perspective – we know able employees will be required for many years to come."

Færøvik says it must not be forgotten that people in the petroleum sector work in Norway's most important technological laboratory.

"So we also depend on attracting newcomers who can help us operate more efficiently and with less pollution – and who can contribute to continued digitalisation and to keeping us competitive."

Facts

An important part of the job of building the petroleum industry's reputation is about communicating the facts and telling the good stories, Færøvik emphasises.

"We try to convey what our sector means for Norwegian society and the national economy – stressing that we administer perhaps the most important resource in Norway, and in a prudent manner.

"Personally, I believe it's important to get across that there's every reason why Norway should continue competing to deliver the oil and gas the world will still need in the future.

"Norway's been pursing petroleum operations for 50 years, but most people here nevertheless know very little about what the industry actually does."

She acknowledges that this could well be the sector's own fault to a great extent, because it has not been good enough at communicating.

That may have been because it was not challenged earlier in the same way as it is today, always got the workers it required, and had the necessary acceptance from politicians.

"We haven't needed to explain the relationship between our industry and Norwegian prosperity, either to my parent's generation or my own," Færøvik observes.

"Both older people and those my age have experienced a formidable improvement in well-being in our own lifetimes as Norway has become a substantial oil and gas nation.

"It's difficult for my children's generation to imagine a world without the wealth which petroleum has conferred on us."

Silent

But Færøvik believes that the industry's reputation is better than many people believe, and that it has a high level of acceptance among the general public – but that this is a silent majority.

"It's our opponents who dominate the media picture, and it's easy for a lot of people to be swayed by big, bold negative headlines.

"Many of those whose views get heard in

the debate on our sector live a long way from where we operate.

"Appreciating that value must be created before it can be shared is undoubtedly easier when you can physically see what's happening. That's actually a general challenge for all industry."

She feels the oil sector's opponents have failed to present a realistic picture of the consequences of strangling an activity which is so crucial for the Norwegian economy.

"They create an impression that the planet won't need oil and gas, and that continued production isn't reconcilable with the emission targets the world has set itself.

"That in turn makes it seem that this is an industry with a limited future. It's also alleged that jobs and revenues from oil are easy to replace.

"Some politicians and parties claim that this is just a matter of reallocating the capital to something else. But it's not like that, of course."

If the oil companies do not find it attractive to invest on the Norwegian continental shelf, she points out, the capital will disappear to other countries.

Requirements

Færøvik identifies three basic requirements for continued petroleum activity in Norway, starting with political acceptance and sensible operating parameters.

"Second, the industry must remain very profitable for Norway Ltd. And last, but not least, we must maintain a high level of HSE. These three factors are indissolubly linked."

She points out that petroleum operations involve risk. Accidents have occurred before, and can happen again. Safety is also a natural issue when the sector is building its reputation.

"Talking about safety and risk is vital. That's how we achieve the alertness we're looking for. At the same time, we must talk about this in a rational way and not exaggerate.

"As an industry, we want nobody to get hurt at work – first and foremost out of concern for the individual employee. Operating in a safe and prudent manner is also crucial for our licence to operate."

Culture

A good safety culture across the board is often linked with a positive ability to deliver, Færøvik observes. But action on safety must not be taken at the expense of efficient operation.

"We have to keep the cost/benefit perspective in view, both in developing the regulations and in the specific measures which are put in place."

She points to simplification and standardisation as good measures for strengthening safety.

"Ultimately, the industry's reputation is built not with words but with specific actions. The key requirement is to deliver good results – financially and in terms of safety.

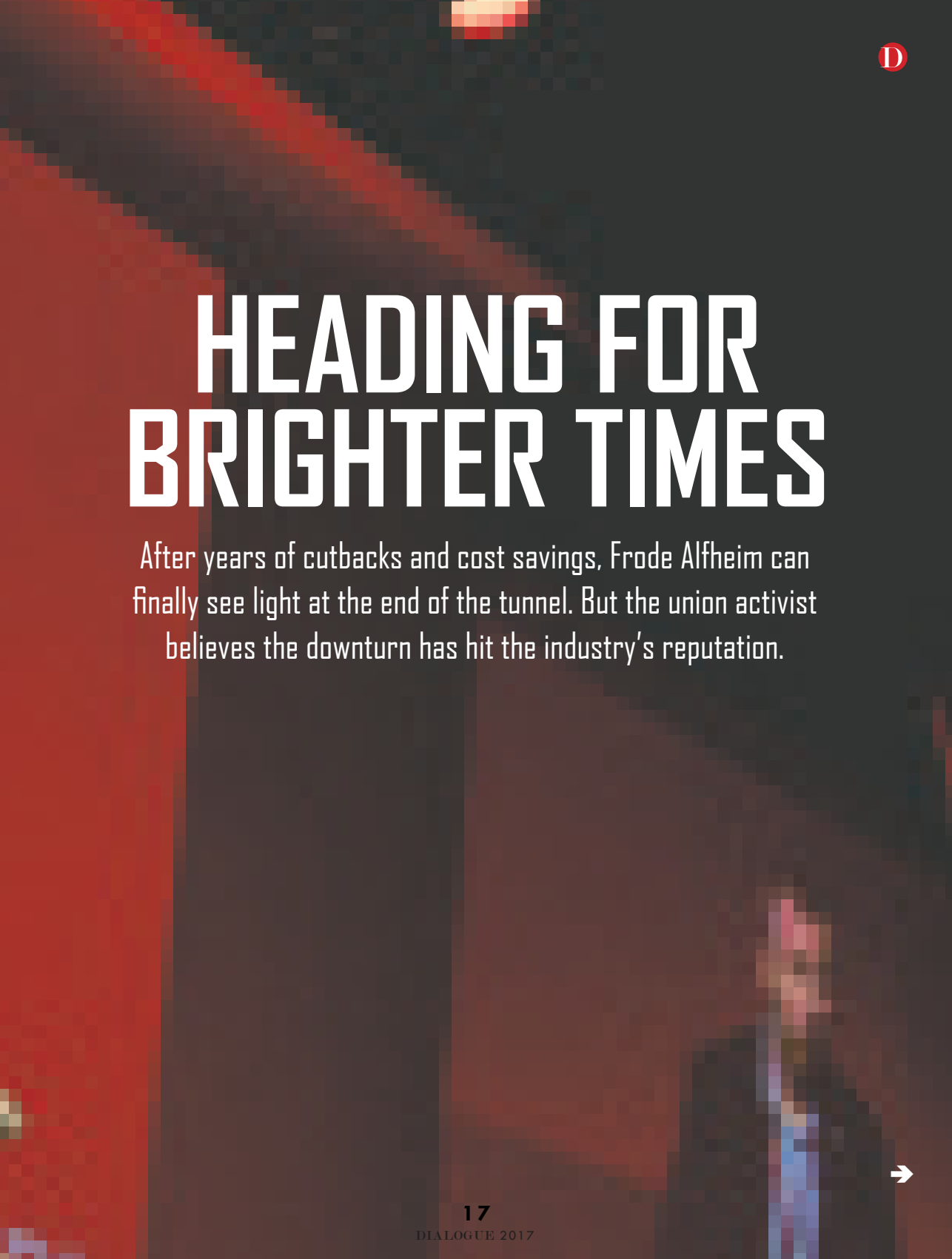
"What really means something is our performance every single day. If we get things wrong, our reputation could be swiftly demolished."

TEXT Øyvind Midttun
PHOTO Leif Martin Green/IE

"Safety and the working environment are factors of great significance for the petroleum industry's reputation," emphasises IE president Frode Alfheim.

HEADING FOR BRIGHTER TIMES

After years of cutbacks and cost savings, Frode Alfheim can finally see light at the end of the tunnel. But the union activist believes the downturn has hit the industry's reputation.



We've been through a period of reduced activity and a climate debate which has attracted much attention at times," says Alfheim. "That's affected popular perception of the industry."

He was recently elected president of the Norwegian Union of Industry and Energy Workers (IE), the biggest grouping of employees in the country's petroleum sector.

"The industry's been under pressure," Alfheim notes. "Many of its personnel have seen their jobs go – IE has lost 10 000 members in Rogaland country [around Stavanger] alone in recent years.

"That's obviously had some impact on the way this industry is regarded. It's important for a great many people."

While recognising that the downturn is not quite over, Alfheim says things are looking brighter. "Some companies are taking on workers, even if downsizing is still going on elsewhere.

"One of our most important roles as a union is to ensure good operating parameters, so people have jobs to go to. A viable industry is crucial – without it, we can discuss pay levels and the working environment until we're blue in the face."

His ambition is clear: "IE is going to grow and be a prominent organisation on the employee side – in relation to both employers and government."

Significance

"Safety and the working environment are factors of great significance for the petroleum industry's reputation," Alfheim emphasises.

"We've had several major accidents with the loss of many lives in Norway's oil sector, and we see that they affect a lot of people over a long time.

"Accidents and incidents get much attention. The main concern must be for people, but this is also about winning acceptance for continued petroleum operations."

The industry will see this licence to operate weaken or be revoked if it comes across as an unsafe place to work, he maintains.

"We've fought tooth and nail in recent years to keep our heads above water. These have been hard times for the industry both on land and offshore.

"The oil companies have cut costs during this period. It's now important to safeguard the job they've done and keep spending under control so that good, profitable projects can be realised."

Among other prospects, he has great expectations for the forthcoming Johan Castberg development in the Barents Sea and the spin-offs this will give.

Elected

Before Alfheim was elected IE president in April, he spent seven years as vice-president. He succeeded Leif Sande, who had led the union for 17 years.

The new leader has advanced through the ranks in the Norwegian Confederation of Trade Unions (LO) since the early 1990s, but has also been heavily involved in national politics.

That includes serving as a political adviser for Labour Party ministers of defence (1996), trade and industry (1996-97) and labour and government administration (2001).

He is convinced that this aspect of his background will be beneficial in his role as union president. "That's quite clear – it's a big advantage to be politically experienced.

"A lot of our job in the IE is about getting politicians to see the links between industry and value creation and to understand our needs as a union.

"We'll be a partner and a watchdog, a driving force and an ombudsman – including with politicians. We're dependent on good and predictable operating parameters for our industry."

Alfheim adds that the union has a clear expectation that impact assessments will soon be produced for opening the Nordland VI and VII and Troms II areas to petroleum activities.

"Sixteen years have passed without such assessments of the waters off Lofoten, Vesterålen and Senja. It's important that the big parties find compromises. We must now make progress."

Extension

He has several items on his "to do" list. One is extending the Working Environment Act to personnel on multipurpose vessels – now under consideration by the Ministry of Labour and Social Affairs.

Another issue which concerns him is to strengthen the bipartite collaboration between employees and management in the companies.

"I'm worried about this," he admits. "When I meet industry leaders, such cooperation is one of things I ask them to get to grips with. It's important that the companies comply with the regulatory requirements on worker participation."

Collaboration

But Alfheim believes that tripartite collaboration in the petroleum industry, which also involves the government, functions well.

"A strong regulator is crucial here, but all three sides share a responsibility for making the partnership work," he says.

On a number of occasions in recent years, the IE has been critical of the PSA and the way it has handled various issues.

"We still have areas where we disagree with the authority, and where I'd have liked to see it take a more aggressive approach," Alfheim observes.

"We've been dissatisfied with some issues and conveyed that to the PSA, but I feel it's got to grips with many of these in the past 18 months.

"At present, I see no grounds for maintaining that the regulator is failing to do its job. I'm confident the PSA is doing what needs to be done."

"The main concern must be for people, but this is also about winning acceptance for continued petroleum operations," says Alfheim. The industry will see this licence to operate weaken or be revoked if it comes across as an unsafe place to work. (Photo: IE)

TEXT Astri Sivertsen
PHOTO Sverre Christian Jarild

"An accident is clearly the worst that could happen," says oil veteran and environmental campaigner Øystein Dahle. "The reputational consequences are as serious as the financial ones."

CHANGE OF APPROACH NEEDED

The oil industry is streets ahead of the rest of society in safety thinking, says environmentalist Øystein Dahle. "So it's incomprehensible that it doesn't take the risk of helping to destroy the planet more seriously."

Dahle may have become best known over the past two decades as a campaigner for nature and environmental protection. Before that, however, he spent 32 years with oil company Esso, now ExxonMobil.

That gave him first-hand knowledge of pollution from a major accident, when tanker *Exxon Valdez* went aground off Alaska in 1989 and spilt huge amounts of oil.

"It was a terrible tragedy," he says. "Every detail of the investigation into the accident was on the front page of every American newspaper, and you obviously couldn't talk it away."

He draws parallels with later disasters, such as the Macondo blowout in the Gulf of Mexico. The companies responsible for that came close to going out of business.

Worst

"An accident is clearly the worst that could happen for your relationship with the world at large," Dahle says. "The reputational consequences are as serious as the financial ones."

Preventing accidents is much more important for a company in the oil industry than in other sectors, he says, because their consequences are so much worse.

He recalls the two years he spent as operations manager for Esso's oil refinery on the Caribbean island of Aruba, where two million barrels were loaded or discharged every day. That is 400 000 more than Norway's total offshore output in 2016.

"When you put your head on the pillow at night with a big tanker expected the following day and bad weather forecast – you didn't sleep well," Dahle says.

Fortunately, things went well in his time. He experienced no major accidents, either at Aruba or the Esso refinery at Slagentangen near Oslo where he was in charge for several years.

"That was thanks to the company's safety culture," he says. "A reputation as an organisation which takes safety seriously is very important. And it's worth a great deal.

"But the most important value in safety work lies in reducing the risk of something going wrong. The oil industry is streets ahead of the rest of Norwegian society on safety thinking and performance.

"That should actually go without saying, when you've been lucky enough to be allowed to hunt for oil. This is by no means a matter of course when you know the risk involved."

Risk is precisely something a modern society should discuss in its full breadth, Dahle believes, and is keen to get onto an issue which concerns him far more than the oil industry's good name.

"How is it possible to live in this world, which is in the process of being destroyed, and not take seriously the risk of doing nothing?" he asks.

Symptom

Dahle is astonished that the environmental debate has become so climate-focused. He says the temperature rise is the most visible and easily measurable symptom, but only one of a wide range of issues.

"We've taken a path which is fundamentally wrong, and the consequences of what we're doing have now become very visible. Every day we *don't* discuss this, valuable time is lost."

In his view, the problem is that economic growth represents the main political goal and that the western world is using up all the resources.

"Carbon emissions occur primarily when we burn oil and gas," he points out. "But petroleum is an incredibly important building block in most modern products.

"If all the oil-based materials were suddenly to disappear, we'd be in a pretty pickle. Rather than burning oil and gas, we should use them for petrochemicals. They'd also last much longer."

Sorry

Dahle feels sorry for the oil industry. "It's full of very clever people who don't appear to understand the seriousness of the problem.

"The world can't cope with more burning of oil, gas or coal, and the petroleum industry should therefore apply its expertise to making the energy sector renewable.

"We must transform our whole way of thinking. There are more than enough challenges for young people who want to make a commitment to the energy business."

But he emphasises that it is not up to the industry to set the goals for society's development. This must be the job of elected politicians.

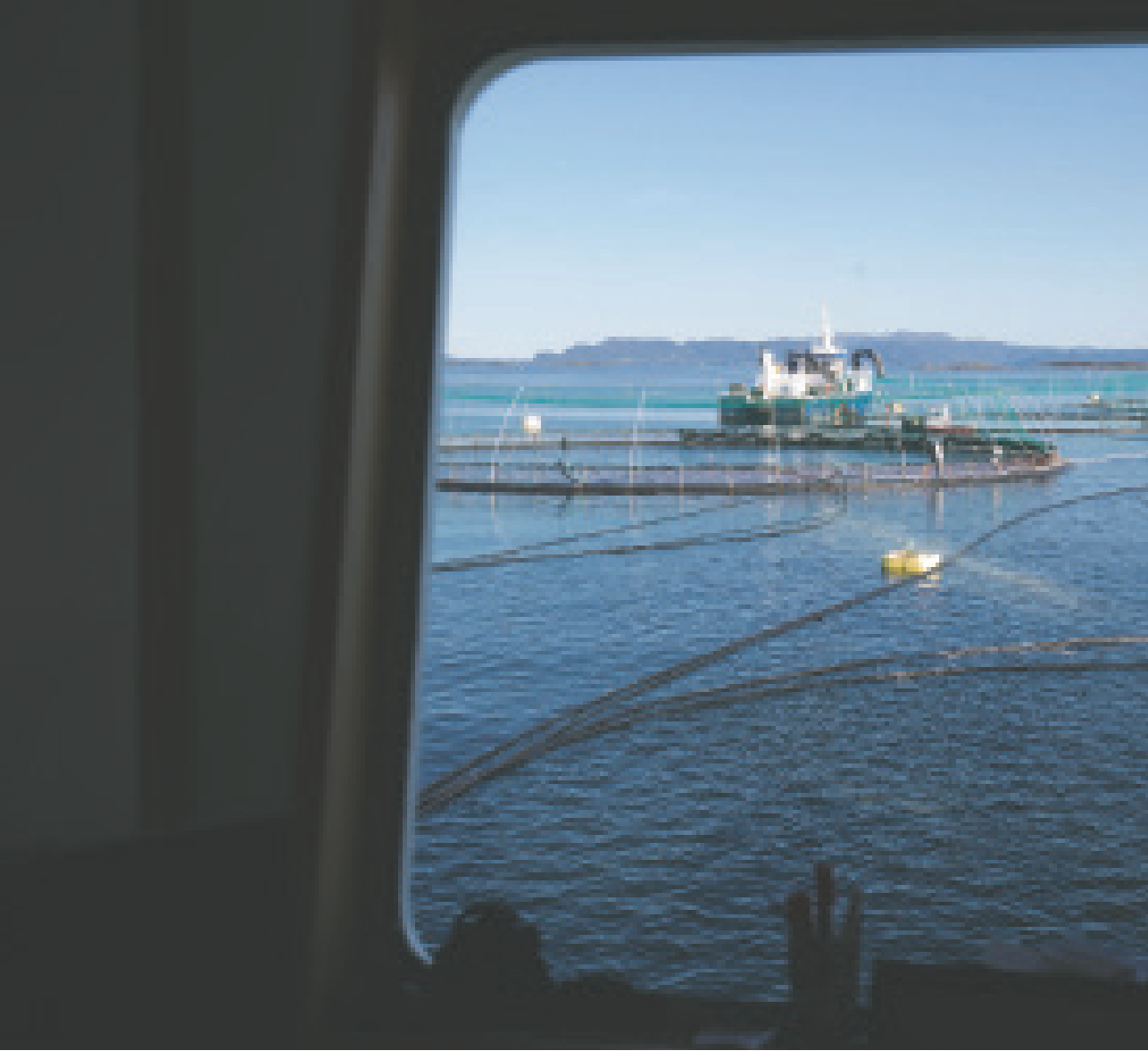
"We must become significantly more frugal in the future," he concludes. "Our planet is like a spaceship, and we must manage with the resources it's got on board."

"Reducing speed isn't enough if we're heading in the wrong direction," says Dahle. (Photo: Shutterstock)

TEXT Øyvind Midttun
PHOTOS Morten Gjerstad

SEEKING ACCEPTANCE FOR SUCCESS

Norwegian farmed salmon gets exported worldwide. But the country's aquaculture industry is having to work hard at home to strengthen its reputation.



Fish farming is one of Norway's biggest and most important export industries. A long coast and suitable seawater temperatures year-round provide particularly good conditions for raising salmon.

The Norwegian aquaculture sector has grown over four decades from nothing to occupying a significant place in the national economy.

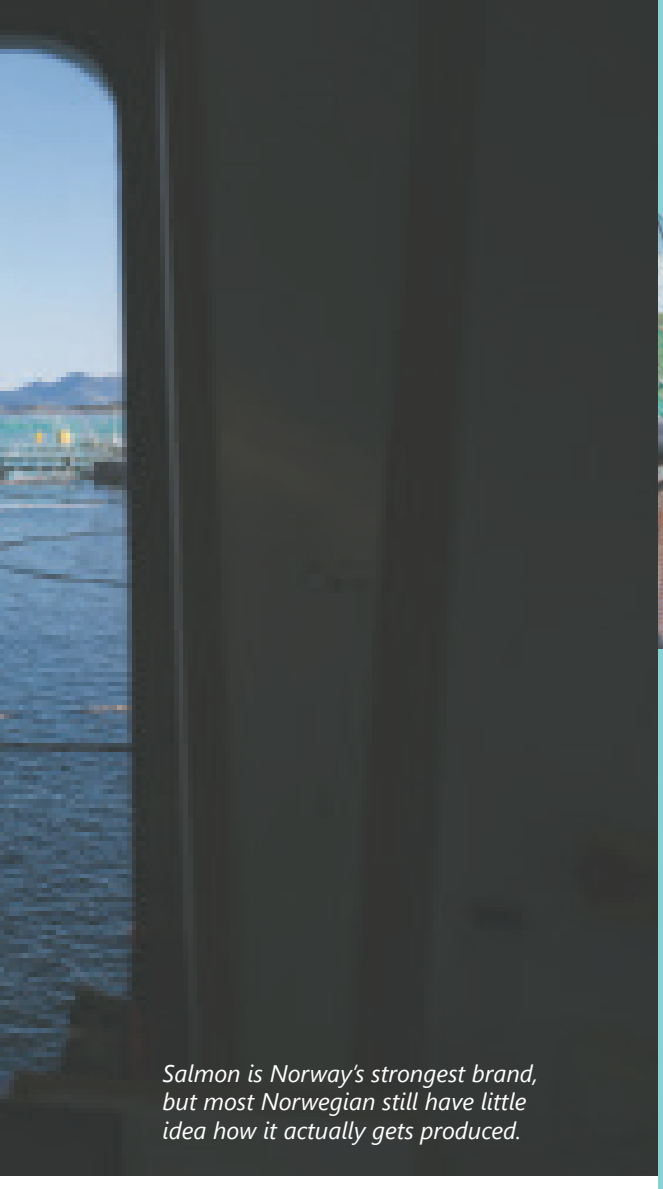
Its annual output has risen from 4 000 tonnes in 1980 to 1.2 million in 2016. Fourteen million salmon meals are produced every day to grace dinner tables in more than 100 countries.

Opposition

But the industry also faces opposition – and reputational challenges. Its critics highlight problems with fish health, lice, environmental impact, escapes and genetic impact on wild fish.

"We've been accused of behaving recklessly, polluting the fjords and showing no concern for nature," says Are Kvistad, communications head at the Norwegian Seafood Federation (NSF).

"That's patently untrue, because the fish need to be in a good environment if they're going to grow."



Salmon is Norway's strongest brand, but most Norwegian still have little idea how it actually gets produced.

Part of the Confederation of Norwegian Enterprise (NHO), the NSF organises 500 companies in the fishing, aquaculture, feed, biomarine, and associated technology and service sectors.

Kvistad maintains that much of the criticism is unjustified, but accepts that allegations, media headlines, discussion and debate affect the industry's standing.

"We can't blame the media," he says. "They only reflect what people believe.

"Maintaining and further developing its reputation is important for every industry. In the case

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SWIMMING IN CASH

"We're look after living creatures," says Roy Even Strømskag. "It would certainly have been easier to produce nails, but think how boring that would have been."

The operations manager for the Rennaren fish farm gets 137 600 young salmon to leap and thrash when he tosses an extra portion of pellets into the cage.

A September day with calm sea and idyllic conditions is not representative of working conditions on the northern shore of Rennesøy near Stavanger.

Personnel usually have to roll with the waves and withstand the wind, says Strømskag. "The weather can be brutal here, wide open to storms from the north-west.

"When things are at their worst, we simply have to stay on land. But this is a fine place for aquaculture – a good depth of water and fine flow. That lets the salmon thrive.

"This facility lies in the middle of a main current. Plenty of churn in the sea provides good environmental conditions."

of fish farming, we need to secure acceptance to make continued progress.

"The way people perceive us will be crucial for our ability to develop our operations and sell our products."

Openness

The NSF devotes much time to telling aquaculture companies about the importance of openness and information, particularly out in the local communities where their business lies.

"Lack of dialogue with the world around them and inadequate knowledge of the industry are factors which can weaken its standing," says Kvistad.

"We must seek to understand why people are worried. We often have a tendency to counter feelings with facts, and that doesn't always yield good results.

"When a newspaper article about fish farming is headlined 'We're laying waste to the fjords', it's slant is based on feelings.

"We can respond with facts which show that our discharges aren't a problem. But the question is why people are concerned – why we're felt to be a threat."

Myths

He says that old myths persist, including claims that fish farmers use a lot of antibiotics – when the truth is that such medication has been almost eliminated from the industry.

"Although this problem was confined to the 1980s, people think it persists. But we must undoubtedly accept that our sector hasn't been good enough at communicating what we do and how we do it.

"The industry must become more accessible. You can easily visit a Norwegian farm on land today and see how it operates, but not an aquaculture facility."

Although 11-12 show farms exist along the coast, where people can be taken out to view what happens, the main rule is that outsiders are banned.

"This could mean that we're regarded as inaccessible and closed," admits Kvistad. "That's a pity, because the business has nothing to hide."

Surveys

The NSF has conducted annual reputational surveys since 2009. Results show that the standing of both the industry and its products is fairly stable.

"Farmed salmon is very well-regarded as a product," Kvistad notes. "While the status of aquaculture is good, however, it could have been better.

"Reputation is particularly important for industries based on natural resources. The oil and seafood sectors both operate in areas – sea and shore – which belong to all."

He feels that this means people perhaps pay greater attention to how these activities are pursued, and points to several parallels between the two industries in Norway.

"They're both about the same age here, starting in the 1960-70s, and have expanded sharply since then. Both are a bit out of sight for ordinary people, a little inaccessible.

"That makes it all the more demanding to communicate how we operate. A third similarity is that these sectors are pretty profitable, which helps to make people even more critical."

Significant

Aquaculture's reputation has a significant effect on its role both in Norway and internationally, agrees Bjørn-Erik Stabell, manager for salmon and trout at the Norwegian Seafood Council.

"Salmon is the country's strongest brand, but most people still have little idea how it gets produced. Our ambition has been to boost the industry's visibility and increase knowledge of it."

The council is a state-owned company which works to boost the value of Norwegian seafood, in part through reputation-building in selected markets worldwide.

It has traditionally concentrated its resources on promoting and enhancing the standing of salmon as a product, rather than the way this fish is produced.

This emphasis has now been shifted with a

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Monitors in the control room on the feed barge allow operations manager Roy Even Strømskag to keep the fish under observation and distribute their rations either manually or automatically.

MOST IMPORTANT OF ALL

When a smolt was delivered to the Rennaren fish farm by well boat in early August, it weighed 80 grams. Four weeks later, it had become a young salmon of roughly 140 grams and will reach its slaughter weight of five to 5.5 kilograms in 12-18 months.

"Everything's about the welfare of the fish," says manager Roy Even Strømskag. "That's crucial. When the salmon thrive, they eat well, gain weight quickly and give us a good return."

This facility has eight large cages, each 160 metres in diameter with net bags descending 20 metres. When full, it accommodates up to 1.2 million salmon.

Although Norwegians are a fish-eating folk, most of the output from this farm is exported to end up on dinner tables in countries such as Belgium, the Netherlands, Luxembourg and France.

Big monitors in the control room on the feed barge keep the fish under observation, with their rations distributed either manually or automatically.

Regular sampling, weighing and measuring ensures that the health of the fish is kept under close observation.

The cages are left empty for two months after slaughtering to prevent the spread of disease and parasites and to protect the seabed underneath. Equipment is checked and nets replaced.

"Escaping fish are what we want least of all," emphasises Strømskag. "That's the worst kind of environmental criminality. It would hit the whole industry and torpedo our reputation.

"We leave a footprint. All industry does that. But it's not lasting. I despair over the accusations in the media and the way we're presented. We don't recognise ourselves."

campaign called "Salmon is important", which aims to focus attention on aquaculture as such.

"A good reputation is significant for positioning both salmon as a product and fish faming as an industry," Stabell says. "We must become more visible and play a bigger part in the debate.

"Our efforts need to be directed at eliminating myths and showing the spin-offs this sector provides in the form of value creation and employment.

"In this area, we're drawing inspiration from the petroleum industry. Good reputational work has unquestionably been done in that sector."

Feed

Aquaculture's fantastic expansion has been paralleled by the growth of fish feed specialist Skretting to become the world's leading supplier in its field, with factories in 16 countries.

At its head office in Stavanger, CEO Erlend Sødal reports that growth in the domestic market has ceased because no new fish-farm licences are being awarded.

"Norway's aquaculture sector has been at a standstill since 2012," he says. "It's clearly possible to see this in terms of reputation.

"Public opinion doesn't regard further growth as legitimate at the moment. Many opponents want the industry to expand no further.

"You could then argue that this hasn't anything to do with reputation, but reflects a scientific assessment that the environmental burden is too great. That's a matter of debate."

Sødal points out that all food production has some impact on nature, including salmon farming. If the criterion is a zero environmental footprint, the industry has yet to reach that point – despite working very hard to get there.

"Norwegian aquaculture is sustainable, and the world's population needs more food. Nevertheless, people are very sceptical about us. Our opponents aren't big and powerful, but they work systematically and manage to win public support."

Discussion

Skretting takes its own initiatives to encourage discussion on the industry's reputation, in part through the big AquaVision conference held every other year in Stavanger.

This event brings together top management in the fish farming sector to debate its future.

"As a feed producer, we depend on the industry being held in the highest possible regard both directly and indirectly," says Sødal.

"We could have left more of the responsibility to fish farmers themselves, but have opted for a high profile. We're a big and heavyweight player, and have a responsibility."

Global

"This is also a matter of raising the debate to a global level," he adds. "While the producers are challenged on local sustainability, our company also plays an international role.

"The raw materials we use for salmon feed come from all over the world. Other countries also have a lot to learn from us for both aquaculture and feed production."

Noting that salmon is a luxury and perhaps not the product to save the world from food shortages, Sødal argues that lessons from farming it will benefit global aquaculture in the long term.

"A lot of what we've learnt from salmon is now being applied to farming such species as prawns and cheaper fish like tilapia," he notes.

"Internationally, we now see that the use of antibiotics in farming prawns is declining sharply – not least because the feed confers greater resistance to disease."

Systematic

"The seafood council has pursued systematic reputation-building for salmon worldwide," Sødal says. "This fish is held in high regard as a result of long-term promotion.

"Strengthening the aquaculture sector's standing has not been the council's mandate,

but its strategy has now changed because the industry is where the biggest challenges are seen to lie."

While acknowledging that Norway has been the centre of gravity for fish farming, he notes that curbing growth will eventually mean less money for innovation.

"So asserting that no further expansion should be allowed until the problems have been overcome is too simplistic. The job is to make the footprint as small as possible.

"Now the industry has reached its present size, opposition from some quarters is quite natural. The same is true for the petroleum sector. That's part of the social dynamic, and a challenge we must quite simply deal with."

CHALLENGES The biggest environmental challenges facing Norway's fish farmers at present are the sea louse and the genetic impact of escaped salmon on wild stocks.

Other important influences on the environment include discharges of nutrient salts and organic materials, illnesses and sustainable feed production.

WORLD LEADER Norway ranks today as the world's largest producer of farmed Atlantic salmon, and the aquaculture sector's significance for the economy could strengthen further as oil production declines.

100 COMPANIES Salmon and trout farming is pursued in Norway through about 100 companies, owned in turn by roughly 80 players. The ownership structure of the sector comprises a mix of large listed enterprises and small family-owned firms.

PRIDE AND REGULATION

Grieg Seafood has been farming fish at Rennaren for a decade. The permanent workforce comprises an operations manager and three other staff as well as two apprentices.

"We're proud of our industry," says manager Roy Even Strømskag. "We know what we're doing. We produce food of the finest quality.

"Most fish farmers are people who're interested in nature and thrive with it. They want to take care of the natural environment and have no interest in harming it."

He has been in the aquaculture business his whole life, and has seen regulation become more and more detailed. "There was undoubtedly a bit of a cowboy mentality before, but it's quite different now. You can't carry on like that today."

"Everything's about the welfare of the fish. That's crucial," says operations manager Roy Even Strømskag at Grieg Seafood's fish farm near Stavanger.

The International Regulators' Forum (IRF) is a collaboration arena for government authorities supervising the safety of the offshore oil and gas industry in various countries and provinces worldwide. Norway has belonged to this body since it was formed in 1994. The other current members are Australia, Brazil, Canada, Denmark, Mexico, the Netherlands, New Zealand, the UK and the USA.

> "Winning the hearts and minds of those concerned by the petroleum industry is a tall order, and even the confidence of supporters can be lost through poor safety and environmental performance"
>
> (Scott Tessier, C-NLOPB)

STUART SMITH, CEO of the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA), Australia

How do you assess the reputation of the petroleum industry in your country?
The industry operates within a performance-based regulatory regime, so our assessment of its reputation is tied to strong HSE performance outcomes as well as the confidence levels of the offshore workforce, government, interest groups and community.

Without the confidence of their stakeholders and a solid reputation for responsibility, the industry would still have a future but it would be an unnecessarily challenging and unpopular one.

How do safety and working environment issues affect the industry's reputation?
Overall, the industry is performing relatively well, with maintenance performance holding up and no fatalities or serious injuries being recorded in the 2016 calendar year.

Looking ahead, various global scale projects are approaching commissioning, other projects are entering the later stages of the asset life cycle and some assets are being transferred to operators new to the jurisdiction.

These changes are introducing new challenges and risk profiles. The industry needs to meet these challenges and demonstrate how it is reducing risks across any offshore petroleum activity.

What are the most important steps the industry can take to maintain or strengthen its reputation?
The drive to meet project and investor milestones must not compromise ensuring that effective and functioning risk controls are in place.

Project performance indicators should be comprehensive and chosen with an appropriate focus on long-term risk management and reliable operation, not just short-term time or cost targets.

Furthermore, the industry should ensure it learns from its incidents so that it can put barriers in place to prevent re-occurrence, address re-occurring or systematic incidents, and adopt innovative thinking and practices to improve risk management.

SCOTT TESSIER, chair and CEO of the Canada-Newfoundland and Labrador Offshore Petroleum Board

How do you assess the reputation of the petroleum industry in your country?
The industry's standing in the eyes of Canadians has been polarised over the past few years, with opinion polls depicting varying levels of support depending on timing and survey composition.

While Canadians have a deep appreciation of natural resources, the country's economic susceptibility to oil price fluctuations has been underscored. There is more focus than ever on climate change, partnership with indigenous peoples, the health of the ocean, economic diversification, renewable energy and science-based decision making.

How do safety and working environment issues affect the industry's reputation?
Winning the hearts and minds of those concerned by the petroleum industry is a tall order, and even the confidence of supporters can be lost through poor safety and environmental performance.

Over the past 35 years, the Canada-Newfoundland and Labrador offshore area has seen terrible tragedies, specifically the loss of the *Ocean Ranger* and two helicopter crashes.

Being a relatively small, tightly-knit province, offshore safety is at the forefront of public confidence. People are more focused than ever on safety and environmental performance across Canada and beyond.

What are the most important steps the industry can take to maintain or strengthen its reputation?
Canadians are familiar with the inherent risks in offshore petroleum activities, and the industry has very little margin for error when it comes to safety and environmental protection.

The industry is recognising that public confidence is becoming as important for it to address, as is regulatory compliance, and the economic and technical challenges it faces when it comes to exploration for as well as production and transport of petroleum products.

Engagement, transparency and accountability are more important for the industry than ever; even more so when the above-noted risks manifest themselves in incidents and accidents.

CHRIS FLINT, director of Health and Safety Executive's (HSE) Energy Division, UK

How do you assess the reputation of the petroleum industry in your country?
Stakeholders recognise that petroleum products play a vital role in the day-to-day life of the country, and the industry recognises that confidence in the safety of its operations is paramount to its reputation.

The industry operates within a risk-based, goal-setting regulatory framework where stakeholders expect compliance with a higher set of standards than in many other sectors and the industry seeks to eliminate accidents and harm to people, and to reduce the environmental impact of its operations.

How do safety and working environment issues affect the industry's reputation?
Companies in the petroleum industry have well-developed health and safety policies and procedures, and these are constantly under review in the light of new technology, operational experience and the sharing of best practice as well as legislation.

However, incidents do still occur and are a stark reminder of the challenges faced to improve performance. A single serious incident could have catastrophic consequences and undermine the whole industry by eroding public trust and society's acceptance of complex, high-hazard activities.

Currently, there is much public concern about hydraulic fracturing to recover gas and oil from shale. This activity needs to be properly managed to prevent harm to the workforce, the environment and the public and so maintain the onshore oil and gas industry's reputation.

What are the most important steps the industry can take to strengthen or maintain its reputation?
Effective and visible leadership and a competent workforce along with correctly focused workforce engagement will lead to control of the petroleum industry's major accident hazards.

Effective management of the risks associated with ageing infrastructure and offshore decommissioning is also important to maintaining the industry's reputation.

Getting this right all helps to provide public confidence in the safe running of the high-hazard petroleum industry.

DIALOGUE

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