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DIALOGUE

A JOURNAL FROM THE PETROLEUM SAFETY AUTHORITY NORWAY

BREAKING THE TABOO

Inclusive: Roald Sandal's challenges were the starting point for the world's first dyslexia-friendly workplace. The petroleum industry is now following up. Page 26.



THE WORKING ENVIRONMENT

A tradition of pursuing working environment improvements seriously and purposefully prevails among the companies in Norway's petroleum sector. Generally speaking, the current level is high when it comes to managing the enterprise, knowing what's required and actual conditions on facilities and at plants.

But there's still a way to go.

We see this in our audits of and meetings with the companies, we read it in whistleblowing reports from employees, and we know it because the industry is changing and knowledge about working environment risk is steadily growing.

The working environment encompasses how work is organised, planned and executed. Having a good one is important not only in itself, but also for keeping major accident risk low.

As a discipline, this subject has many facets which encompass a broad range of risk conditions and factors.

In these pages, we provide a *general overview* of the working environment field and *insights* into some central and current issues.

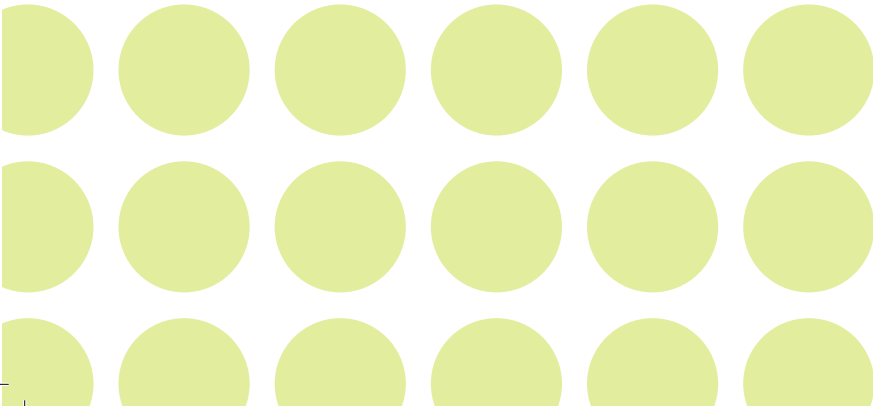
Our area of responsibility has been expanded in recent years. In addition to oil and gas, we now supervise carbon transport and storage, offshore renewable energy production and seabed minerals.

In other words, we have become more than a petroleum regulator.

Developing new industries on the NCS will call for wise heads, able hands and an attentive eye on both safety and the working environment. That will call for innovative thinking – and we are building further on the best knowledge, technology and regulation learned from the petroleum sector.

Maintaining and further developing a good working environment will also be a key requirement for new industries. Our intention is that Norway's Working Environment Act (WEA) will extend to them as well.

Øyvind Midttun
Editor



FRONT COVER: A challenge from industrial worker Roald Sandal opened the way to greater openness about dyslexia – a condition many people struggle with. The Federation of Norwegian Industries, the Norwegian Union of Industry and Energy Workers and Dyslexia Norway have now launched a collaboration on dyslexia-friendly workplaces in the process and petroleum supplier industries. Read Sandal's story on page 26. (Photo: Morten Gjerstad)



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The ambition that Norway's petroleum industry will lead the world for HSE has been adopted by the Storting (parliament). No room exists to prioritise it away. (Photo: Anne Lise Norheim)

BY ØYVIND MIDTTUN

A question of priorities

Demand for Norwegian oil and gas is record high, and new projects are queuing up. But devoting time and resources to reducing working environment risk is at least as important as before.



The petroleum industry is cyclical by its very nature. Activity fluctuates in line with prices and the business cycle. That also affects how the companies prioritise their commitment to working conditions.

“Both booms and busts are challenging for the industry,” says Roar Høydal, discipline leader for occupational health and safety at the PSA.

“Devoting long-term and purposeful efforts to the working environment is demanding in such a landscape. But a stable commitment is needed to achieve continuous improvement.”

Difficult “The industry’s been through some very difficult years,” he points out. “Thanks to this downturn, we’ve seen signs that some players have reduced the priority given to the working environment.

“We’re now at the other end of the scale – the companies are making huge earnings from high oil and gas prices and record demand.

“At the same time, they have plans for a number of major development projects in the time to come – which will unleash a fight over resources and expertise.”

According to Høydal, one question then is how the players will ensure they have sufficient resources to pursue necessary improvement work.

Another is how they will ensure the capacity and competence to staff the new projects while also conducting the necessary checks and following up with measures on producing fields.

Competence Capacity and competence – the key to safety has been the PSA’s main issue in 2022. Its aim is to remind the industry that safe operation in an increasingly complex industry can only be secured through a competent workforce and good manning.

The importance of this issue has been reinforced by Russia’s war in Ukraine and the difficult energy position in Europe, where Norway is now the main gas supplier and reliable delivery ranks as the top priority.

A key question is then what consequences these conditions will have for those working at the sharp end offshore or at the land plants – in control rooms and process facilities, on the drill floor, doing maintenance or providing catering.

“They’re the people doing the job and experiencing the physical burden,” Høydal emphasises.

Challenges Right now, the industry faces big and demanding challenges in maintaining both energy deliveries and a high level of safety and the working environment in all its phases and parts.

New energy and industrial activities offshore

are also set to be developed in parallel with petroleum operations.

The PSA's main issue for 2023 precisely reflects this challenge:

MAIN ISSUE 2023
*FOR SAFE AND STABLE ENERGY PROGRESS.
COLLECTIVELY AND CONCURRENTLY*
(read more on pages 48-49).

"We face big and demanding assignments and challenges," Høydal emphasises. "The industry must stand together and work towards a common goal if we're to succeed."

World leader He stresses that levels of HSE in Norway's petroleum sector are high, that much good work is being done – and that this is how it should be.

"At the same time, we at the PSA see a shift in attitudes towards what's 'good enough' among certain players in the industry.

"That contrasts with the earlier stance, when the ambition to be the world leader for HSE was to a greater extent an important driving force.

"Although the level of HSE in Norway is very good today, room for improvement still exists. We can't lower our ambition of leading the world."

He emphasises that "good enough" is not acceptable. "The ambition of a world-leading petroleum sector has been adopted by the Storting [parliament]. There's no room to prioritise it away.

"On the contrary, this goal commits the companies to work long-term and purposefully to achieve continuous improvements in the working environment.

"That target remains unchanged, and it applies in both good times and bad."

Correspondence This ambition is also a matter of capacity and competence, Høydal observes. "There must be correspondence between tasks and resources.

"The companies mustn't bite off more than they can chew, and push the working environment to one side. Identifying its condition and assessing its risks must continue, and be followed up by action.

"Responsibility for operation rests with the companies. Regardless of how they choose to work, they must be aware of how plans, measures and changes to operations, organisation and parameters can affect working environment risk for both individuals and at the organisational level." ★

BY GUNLAUG LEIRVIK

FACTS

THE WORKING ENVIRONMENT EXPLAINED

THIS IS ABOUT WORK

- The working environment relates to how work is organised, planned and executed.
- It varies from workplace to workplace, and therefore calls for different approaches.
- It affects worker health and commitment to the job, and company profits and productivity.
- Preventive working environment efforts based on knowing what works represent a good investment both for the individual employee and for the enterprise.

RECIPE

The Working Environment Act (WEA) is the basic legislation governing the world of work in Norway. It can be viewed as a framework and a recipe book, with goals, requirements and rules of the game on how to ensure a good working environment for each employee, for the enterprise, and for society.

Adopted to ensure secure employment terms and equal treatment in working life, the WEA is also intended to protect against physical and mental harm. In addition, it aims to secure a healthy and meaningful working day and contribute to a more inclusive workplace.

RISK

Workers may be exposed to a number of hazards – termed risk factors – in their working environment. Good management can identify and deal with these, so that they present the lowest possible threat to employee health.

While a good working environment is important in itself, it is also a precondition for keeping the major accident risk low.

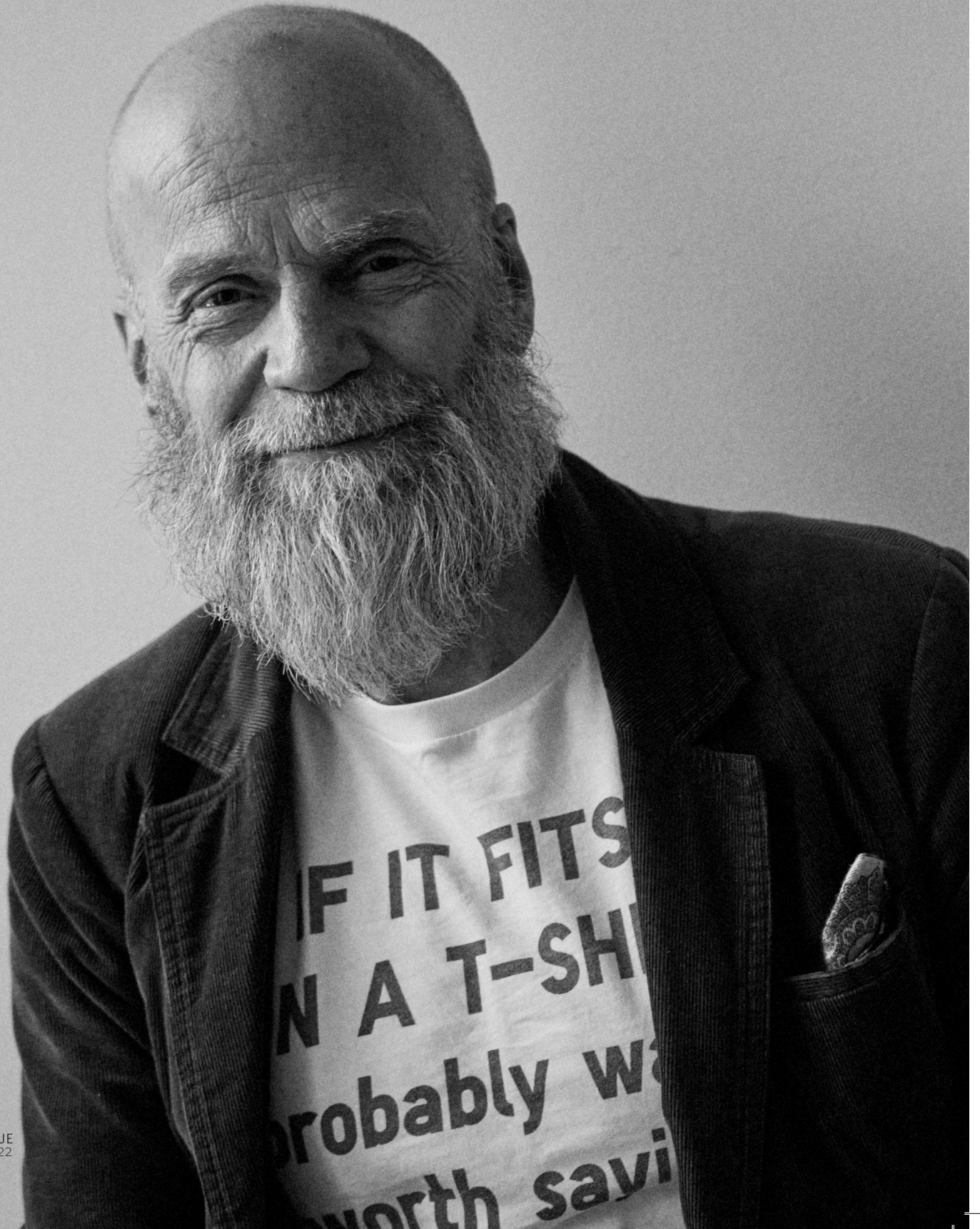
In order to understand the causes of major accidents and thereby take effective countermeasures, factors which are interdependent – such as technology, management systems, organisation, people and corporate culture – must be viewed in relation to each other.

Human factors are an important discipline at the interface between working environment conditions and major accident risk.

RISK CAN BE MANAGED

Working systematically and preventively is important for success in reducing risk and creating a good working environment. The requirements set by the HSE regulations for the petroleum sector are reflected in the steps shown in this model for managing working environment risk.





Good conditions at work pay off – even in the share price

Mårten Westberg claims to have the world's simplest investment strategy. "It's based on checking the working environment," he says.

The 61-year-old Swede is not a qualified economist or analyst, but has made a living for many years from trading shares on the basis of working environment surveys from potential investment objects.

He says that many people have both rejected and been very sceptical about his method. "But it's totally logical, of course.

"A good working environment means satisfied employees, and they mean profitable growth. My results are the proof – I've outperformed the stock market every year."

Asking the good questions It was not given that Westberg, who now heads the European Institute of Behavioural Analysis (Eiba), would get involved in share trading.

In his youth, he took a master's in communication at the University of Wisconsin and was introduced to a discipline which fascinated him and shaped his career.

"The research they did there yielded figures with significance far beyond the area under study," he explains. "Quantitatively oriented, it sought to ask the right questions."

After his return to Sweden, this way of thinking continued to shape Westberg. He got a job, and was then asked to complete an employee survey which frustrated him.

"It involved 109 questions, virtually all of which I considered to be meaningless. I also discovered that the survey results weren't being handled systematically by management."



"It's totally logical," says investor and analysis boss Mårten Westberg. "A good working environment means satisfied employees, and they mean profitable growth." (Photo: Åsa Tällgard)

He decided to do something about this, and carried out a regression analysis of the subject said to be of the greatest concern to his employer – reducing sickness absence.

“It transpired that only seven of the 109 questions dealt with this problem,” he recalls. “In other words, almost 95 per cent of the survey wasn’t directed at what the company maintained was the key issue. That was meaningless.”

Own company In the mid-1990s, Westberg established his own Interactive Survey company with the aim of improving and simplifying processes related to employee studies.

Starting from the seven questions about sickness absence at his former employer, he initiated an investigation at Swedish financial group Nordea.

“Beginning with a company which has offices from north to south in Sweden was perfect,” he observes. “Such a big geographical range made it possible to explore trends which were obviously unrelated to where a workplace was located.”

The results were clear: the level of satisfied personnel – and thereby content customers – related directly to profitability. Respect was the most important factor.

Those employees who felt respected and listened to were the most satisfied and had the lowest sickness absence. And these were the people who generated the most profits for Nordea.

Impact on pricing Based on his findings from this survey, Westberg decided to test whether respect and a positive working environment also had an impact on share prices.

He began to study working environment surveys at a number of firms, and then to relate the findings these provided directly to the stock market pricing of the companies concerned.

A pattern began to emerge – enterprises

demonstrating a clear price rise were those which had strengthened their business through a good working environment.

“And my strategy was thereby served up to me – invest in the working environment,” says Westberg. “I needed 28 years of analysis to establish this, but it was worth the effort.”

Although the relationship between positive conditions at work and share prices has given him a wide scope in his own career, he calls attention to something even more important.

“My findings can help to give managers better arguments for making a commitment to a good working environment.”

Heavenly equation Westberg calls it the priest’s dilemma – the fact that sinners do not go to church. “To persuade them to attend, sermons usually focus on doom and gloom,” he notes.

“The same applies to the working environment. Efforts in this area at many companies are confined to avoiding harm, discontent and – in the worst case – work-related fatalities.

“By showing that a positive commitment to such measures also improves profitability, however, you can quite simply incorporate heaven itself in this equation.

“The priest won’t get hold of the sinners, either, without taking some new action.”

Westberg has ceased his share trading. The introduction of the general data protection regulation (GDPR) means results from working environment surveys are no longer as accessible as before.

He confines himself today to being a “working environment missionary”, as he puts it. And he has a clear word of advice for chief executives.

“If you believe that profitability is important and that your share price is important – listen carefully to your workforce.” ★



Mårten Westberg's conclusion is short and sweet: invest in the working environment. "My findings can help to give managers better arguments for making a commitment to a good working environment." (Photo: Åsa Tällgard)

Norwegian GOLD

Pål Molander, former head of Stami, has often highlighted many of the same factors cited by Mårten Westberg when addressing Norwegian industry.

In a speech at the Safety Forum's annual conference in 2021, he referred to figures which show that Norwegian employers make demands on employees above the EU average while managing to preserve a high level of personnel autonomy. Employee participation and respect are core values.

Molander calls this combination "Norway's gold", because it contributes to growth, stability and good occupational health.

Poor working environments cost Norway NOK 75 billion every year, according to a 2018 analysis by Oslo Economics for the Ministry of Labour and Social Inclusion.

BY GUNLAUG LEIRVIK

FACTS

FACTORS PROMOTING GOOD HEALTH

Knowing what influences occupational health and work-related sickness absence is important in maintaining a sustainable working life and promoting its quality.

Equally significant is understanding which preventive measures need to be taken and how, in order to encourage job commitment and good health.

That makes systematic HSE work to reduce the risk of illness and accidents a fundamental precondition for a workplace where people stay in fine shape.

This perspective extends beyond risk as such, since it involves not only protecting people from hazards but also actively turning the spotlight on positive and health-giving factors in the working environment.



Six factors When talking about a good working environment, six factors generally play a role in every workplace.

1

DEMANDS AND INFLUENCE

Employers can make demands, but provide opportunities to exercise influence. It is important for employees to be able to balance demands of the job with opportunities to control their own working conditions. That contributes to greater involvement, stronger identification with the job and more efficient work process.

2

CLARIFY EXPECTATIONS

Doing a good job is easier when expectations have been clarified. Management and employees doing this jointly will contribute to a working environment where personnel know what's what.

3

FEEDBACK AND RECOGNITION

Feedback and recognition motivate people to do a better job. Gaining positive attention in this way means a great deal for the working environment.

4

INTERACTION AND COLLABORATION

Good interaction between managers and employees yields results. Equitable and supportive management is important, and conferring not only trust and responsibility but also resources and opportunities to do the job plays a key role in the working environment.

5

PREDICTABILITY

Being predictable is important in uncertain times. The experience of influence and control can make it easier for the individual to handle change processes. Predictability also ensures that productivity does not necessarily decline in demanding times.

6

OPENNESS AND RESPECT

Openness and respect contribute to a more secure working environment. Appropriate whistleblowing routines and practices are important, while good dialogue between management and workforce contributes to an open and positive culture.



A GOOD TO BE

Photo: Jan Inge Haga

BY OLAV HOVE

PLACE

Joar Tiller and Charlotte Bjørnvik are at opposite ends of their career paths, but agree that working out on the NCS is positive and meaningful.



“It’s not a home, of course, but it’s definitely something more than just a workplace,” emphasises 59-year-old Tiller after lengthy reflection.

He gets a nod of agreement from Bjørnvik, who is 30 years his junior. That assent is unsurprising, given how much they have in common despite their differences in age and experience.

“Both of us have undoubtedly been shaped by being raised in typical north Norwegian industrial communities,” says Bjørnvik, and receives a concurring nod in her turn.

Call Tiller hails from Mo i Rana, but after graduating from Trondheim Engineering College in 1986 he listened to the rallying call from former mayor Arne Rettedal that “Stavanger’s the place”.

“I moved south because that’s where the jobs were,” he explains. “Roughly half my classmates from Trondheim ended up there.”

Since 1980, he has worked for Conoco-Phillips – initially on land and then for more than two decades as an offshore installation manager (OIM).

“I arrived at a time when the pioneers were starting to retire,” he says. “I heard stories about the ‘cowboy’ conditions and so on, but very little of that remained in the culture when I went offshore.”

He feels it is important to get across that he has always worked in a system which has been thorough and properly run, particularly on the safety side.



A lot has happened on the Ekofisk field since it came on stream in the early 1970s – not least with the working environment. This photograph was taken during the installation of Ekofisk 2/4 Kilo in 1986. (Photo: Norwegian Petroleum Museum/Husmo Foto)





“But it’s certainly true that big strides have been made in the HSE field throughout these years,” he adds.

Tiller was already an experienced OIM on the Eldfisk Bravo platform when Bjørnvik was still a child at Ørnes in Meløy local authority, which lies north of Mo i Rana in Nordland county.

She had decided on her career plans at an early age, and was very impatient to secure an apprenticeship to complete her training as a process operator.

As early as the age of 18, she was already boarding a helicopter headed for the Ekofisk field. That was in 2011.

“It was an overwhelming experience to see the platform complex with my own eyes for the first time,” she recalls. “I felt a kind of reverence. But I acquired a good mentor on arrival, and was placed on a shift where I found it easy to be happy.”

Smaller Both she and Tiller agree that being offshore differs from “normal” life. Everything is smaller. People get closer to each other.

At the same time, things can easily acquire larger dimensions because you have to remain where you are. There are no opportunities to escape. That can be challenging.

“Take conflicts, for example,” says Tiller. “As a manager, you must have your antenna out and get to grips with such things as early as possible.

“That applies wherever you are, of course, but a clash on a platform which goes too far can easily become a safety risk. You can’t allow that to happen.”

But he adds that conflicts are few. People on a platform become a kind of family. An OIM’s strategy must be to spend a lot of time out among people



in order to chat and observe.

“It’s important to have a good picture of what’s happening. One consideration is safety, another is that people must feel they’re seen, heard and informed.”

Key Information is the key, Bjørnvik agrees. “When it flows well, we have secure workers and safe operation. When it doesn’t, we struggle.”

That represents precisely one of the challenges it is necessary to be aware of, says Tiller. He adds that increased diversity is one of the biggest changes to have occurred since he started offshore.

What was previously a male-dominated industry has altered a great deal in terms of gender distribution and ethnic background over these years.

“It’s good that we reflect society as a whole, but this also demands that you manage to adapt the flow of information

to such diversity,” Tiller observes.

Both he and Bjørnvik believe communication is good. Paradoxically, however, they note that this can create problems on the home front.

The pair agree that the current position, with an increased military presence around the platforms, has not had much of an impact on their everyday work – precisely because they have been informed in detail about developments.

“But those at home aren’t,” says Tiller. “They see a news story which perhaps dramatises more. That means the greatest fears are felt by those on land in their own living room.”

Drawbacks A long life offshore has taught Tiller that being away from the family for 14 days at a stretch can have its drawbacks. “The social and relational bonds can be cut when you return offshore,” he



The Ekofisk field is a city in the sea, providing food, a bed and employment for those working there on 14-day tours. But it will never be quite like home. (Photo: Eileen Brundtland)



acknowledges. “It demands a lot from those at home.”

Bjørnvik agrees. With two children aged one and six respectively, she has experienced that. Although working on land right now, however, she would not hesitate to go offshore again.

“I got things to go well even though I was away for 14 days at a time, but it depends on having a partner who agrees and is willing to make an effort.”

Satisfied In other words, the two workers talking at the ConocoPhillips head office in Stavanger are well satisfied with their lives offshore, which they characterise as meaningful, secure and stable.

But, as Tiller says, much has altered since he joined the industry in the late 1980s. Bjørnvik also sees clear changes in the working environment since becoming involved in 2011.

“If you look at safety equipment, for example, a lot’s happened. Particularly in this company,” says Tiller, and notes that the pair of them work on an ageing facility.

“Today, safety’s built in from the start to a much greater extent than before. We’ve got much better detectors, we test more, we’re more secure. It’s a case of continuous improvement – which is necessary.”

Bjørnvik notes again that this is a matter of information flow. Getting a lot of good communication spreads a sense of security.

Barriers Another big change mentioned by Tiller is barriers. “Our thinking on these today differs significantly from the way we thought in the 1990s.

“If a barrier weakens now – let’s say a number of emergency lights aren’t functioning – a very systematic approach is followed in correcting it, taking compensatory measures and giving everyone a sense of responsibility.”

Bjørnvik is currently working in an onshore office on a project related to operational risk management (ORM). “We’re creating a system for visualising such aspects as barrier weakening. It’ll be adopted offshore as soon as we’ve finished.

“Although I see that we’re working systematically and well, and that this has got a lot better since I started, it’s about the same thing – continuously improving yourself.”

Unimpressed Both Tiller and Bjørnvik welcome changes which improve safety. Only one possible innovation leaves them unimpressed.

“I can’t quite get used to the idea of having a control room on land for manned offshore facilities,” Tiller comments, while accepting that he is sticking his neck out as an ageing OIM.

He is therefore quick to emphasise that this is not a matter of technophobia, and that he appreciates that the fewer people working offshore, the lower the risk of injury.

“Where I’m concerned, this issue is about relationships – the ability to talk face to face with people, to listen to them,” he says. “I’m convinced that this is more important for safety and the working environment than you might think.”

Bjørnvik backs him up: “It’s not as easy to build up secure relationships via a screen. The pandemic has surely taught us that.” ★



Meaningful, secure and stable – Charlotte Bjørnvik and Joar Tiller appreciate offshore life, even though it can have its challenges. “The social and relational bonds can be cut when you return offshore,” Tiller says. “It demands a lot from those at home.” (Photo: Jan Inge Haga)

BY GUNLAUG LEIRVIK

FACTS

EMPLOYEE PARTICIPATION

Norway makes employee participation a regulatory requirement. The principle is that those exposed to risk must be involved in decisions related to HSE.

The elected safety delegates and members of the statutory working environment committees (AMU) in companies have a particular role to play in this area.

This provision seeks in part to draw on the collective knowledge and experience of the workforce to ensure that issues have been adequately considered before decisions are taken.

ROLES IN HSE WORK

Everyone is required to contribute to creating a good working environment, but responsibilities differ according to the role played in the enterprise.

Employee's duties: Employees not only have the right to participate in decisions which affect the working environment and safety, but also a duty to comply with the safety instructions and routines established for their workplace.

An employee must contribute to implementing HSE measures and participate in organised safety work.

Employer's duties: The employer is responsible for ensuring that the working environment is fully acceptable and accords with the WEA, while also having the right to manage.

That makes them primarily responsible for the working environment, and they must involve employees in the process in order to fulfil their responsibility.

AMU: Comprising management and employee representatives, this body is charged with working for a fully acceptable working environment in the enterprise.

It participates in planning safety and environmental work, and keeps a close eye on developments in these areas. Its duties are prescribed by the WEA and the regulations on organisation, management and employee participation.

Safety delegates: Elected by the workforce, these officials work to protect their interests in issues relating to HSE. They must see to it that work is done in a way which protects employee safety, health and welfare.

Union officials: They must support their members on general working conditions as well as in individual cases, and serve as a link between management and workforce.

Company health service: This provides a specialist advisory resource for preventive HSE work. It has a free and independent role in assessing the working environment, and supports both employer and employees in following this up.

Inter-party collaboration: Statutory collaboration between employer and employees.

Tripartite collaboration: Covering employers, employees and government, this has a long tradition in Norwegian industrial relations.

Where the petroleum sector is concerned, it specifically means a constructive collaboration between these parties on improvements – including for safety and the working environment.

Several tripartite bodies have been established for the industry, with the Regulatory and Safety Fora as two of the most important.

CHECKLIST FOR IMPROVEMENT

The PSA has produced a checklist for use by employers and employees in implementing and following up provisions for employee participation.

1

Does the company have governing documents which show how systematic provision is made for employee participation in HSE work (section 3-1, WEA)?

2

Which routines does your enterprise have to ensure sufficiently early involvement of the safety delegates and the AMU in cases with significance for HSE (section 13, framework regulations)?

- Is it clear which issues the safety delegates and the AMU will be involved in?
- Are regular meetings held between management and safety delegates?

3

How has your enterprise ensured that safety delegates, management and AMU members have the knowledge required to handle HSE risk in their safety area (section 13, framework regulations, section 6-5, WEA, and sections 3-18 to 3-20, regulations on organisation, management and employee participation)?

- Is a training programme available soon after election as a safety delegate/AMU member?
- Do safety delegates/managers/AMU members have updated and relevant training in the regulations and risks for their workplace?
- Is the type and content of 40-hour courses assessed?
- Other expertise-building?

4

How does your enterprise ensure that safety delegates and AMU members have the time required to carry out their duties (section 13, framework regulations, section 6-5, WEA)?

- Is time allocated for involvement in plans and activities?
- Is enough time allocated for preparing and executing safety delegate work?
- Is time made available for this work?

5

What routines does your enterprise have for following up compliance with the regulations and your own governing documents on making provision for employee participation (section 21, management regulations)?

- When did your enterprise last conduct a review of this?

More information on this subject is available at psa.no.



BY EILEEN BRUNDTLAND

FROM SHAME TO SUCCESS

Roald Sandal was an industrial worker who hid his inability to write for many years. The challenge he faced gave rise to a pilot project – and opened the road to the world's first dyslexia-friendly workplace.



DET SKJER
FOR DU ANER DET



Photo: Morten Gjerstad

T This is the story of a man who felt he was in the world's best job – until he had enough of the steadily growing demands for form-filling and other forms of writing.

It is also the story of HSE vice president Harald Eik, who met Sandal with curiosity and a desire to help.

Of Arild Magnussen, Sandal's colleague and friend, who joined him in clearing the way for openness about challenges which many industrial workers struggle with.

Of a strong trade union, which drove forward change together with the company.

And of Sandal's daughter, Hanne.

Nickel A long, narrow, zebra-striped pedestrian walkway crosses the big square from the main gate to the door of the administration block at Glencore Nikkelverk in Kristiansand.

Rounding the corner, a forklift truck stops for a group of workers, eye contact is established with the driver, and the pedestrians cross. Traffic safety is important in a complex with many buildings and sharp bends.

Nickel has been produced at the works just outside the city centre since 1910. And this major industrial workplace in southern Norway has always been conscious of its social responsibility.

It was and aims to continue being the place for those with able hands who have failed for various reasons to thrive at school. Now its ambition is also to lead the way on dyslexia.

Tests "My workplace used to be the world's best," says Sandal, who started at the plant 25 years ago. "Do the job, produce nickel and try to pass the internal tests.

"Until, that is, the office staff decided we also had to fill out forms. That's when my little secret came to light – I couldn't write."

He managed initially by faking and copying. But as the number of written manuals, forms and safety procedures grew, his frustration increased and he was constantly in opposition to management.

"In my eyes, that lot were my enemy," Sandal says. "They destroyed my working life. I could do the job, I was good at it. And they ruined it. I was unhappy at work, there was constant pressure, and I tried to hide away as much as possible."

He received good support at home from his wife, but life at work became too difficult when Eik wanted to introduce yet another form. Over dinner, Sandal told his family that he couldn't cope any more.

"I can't fill out the new form," he complained. "They won't understand my handwriting, they'll start laughing at me again. I can't stand it."

Hanne then spoke up: "But, Dad, if the vice president doesn't know, he obviously can't do anything."

Confrontation Eik had no idea that Sandal had faced difficulties with writing since his childhood. "I was going to introduce a new form for personal safe job analysis, and therefore went round to all the safety meetings," he recalls.

When the turn came to the nickel service department, he found himself confronted by a furious Sandal – who felt he was being driven out of work.

"Why can't I take part?" he asked. "Why am I being excluded?"

Sandal expected an escalation of his conflict with management, but Eik met his anger with curiosity and wanted to know more about what this meant and how the problems could be overcome.

That marked the start of the Hanne project – named after Sandal's daughter – at the nickel works.

The world's best workplace, says Roald Sandal (centre). But he struggled with writing, while colleague and friend Arild Magnussen had reading difficulties. Their problems led to a pilot project – and Norway's first dyslexia-friendly workplace. (Photo: Morten Gjerstad)

“I realised that, as head of HSE, I’d undermined Roald’s professional pride,” admits Eik. “He knew his job, but couldn’t fill out the forms. A lot of people here are good at their job, but that’s not because we’ve written good procedures.

“We’re an industrial workplace which brings together people with intelligent hands. They’re good workers, and we must customise for them. We’re going to be a workplace where everyone is taken seriously.”

Openness When the project began in 2019, Eik imagined that it would primarily concern digitalisation and technical solutions.

“But I learned that this is first and foremost about openness and expunging the shame.

Then it’s important to learn what dyslexia actually involves.”

The first step was for Sandal to take Magnussen, his good friend and colleague, on a tour of all the departments to talk about their challenges.

“I’ve got the same problem myself, except that my difficulty is with reading,” says Magnussen. “But I felt it was incredibly embarrassing and painful to go round and tell people about this. Fortunately, we were met with sympathy and understanding.”

He found his own motivation in many years of frustration over how little the trade exams were customised for dyslexia sufferers. Always failing these tests meant he never got a pay increase.



His goal now was to do something for the young people coming after him.

Magazine “The other step we took was to produce a magazine which was sent home to all our employees in order to emphasise that we considered this important,” says Eik.

Plans called for managers to learn about the issue at a collective gathering. That approach was scuppered by Covid, so the courses had to be run in several rounds limited to seven participants at a time.

This proved important. At every session, somebody raised a hand to open up about reading and writing difficulties – either their own or among family and close friends.

“All credit is due to Roald and Arild for taking the lead and being the first two who dared to breach the taboo around this subject,” says Eik.

“Today we know that at least 10 per cent of our personnel face one challenge or another with reading and writing.”

Since then, the company has done a lot to simplify communication. Text in procedures has become shorter and clearer, for example, with descriptive illustrations. And internal tests can now be taken orally.

Morning meetings in all departments have an oral review, rather than passing out the information in writing. Supervisors also know who can benefit from an extra run-through afterwards.

“We’re not out to change people with dyslexia,” emphasises Eik. “We’re the ones who’ll be altering the way we customise work.”

He is full of praise for union officials, who have played a unifying role with everyone working on the project. “We’d never have got anywhere without their commitment,” he emphasises.

Room Alexander Andersen, chief shop steward for the Norwegian Union of Industry and Energy Workers at Glencore, notes that there was still room for industrial workers with various challenges until well into the 2000s.

However, today’s growing demands for documentation are helping to leave many otherwise handy people behind.

“The work Roald and Arild started here represents a big step towards Norwegian industry taking back the social responsibility it used to have,” Andersen says.

Eik agrees. “There’s no mismatch between strategic goals and what must be done to

HSE vice president Harald Eik (right) got to grips with Roald Sandal’s challenges. “We’re an industrial workplace which brings together people with intelligent hands,” he explains. “They’re good workers, and we must customise for them. We’re going to be a workplace where everyone is taken seriously.” (Photo: Morten Gjerstad)





Lene Gjødestøl, who currently heads the Hanne project, is dyslexic herself. Her advice to others is to be open about the challenges. “If the company doesn’t know you need customisation, it’s difficult,” she points out. (Photo: Morten Gjerstad)

ensure that everyone thrives at work,” he says.

“Now that we know how to reach those with reading or writing difficulties, life’s got easier for everyone. The benefit is a safe and attractive workplace with stable production.”

Commoner “Issues with reading, writing, maths and language are commoner than most people think,” says project manager Magnvor Lunåshaug at the Dyslexia Norway society.

“It’s estimated that 40 per cent of the population suffers from such challenges to a greater or lesser extent, and 10 per cent have more serious and lasting difficulties.

“Unfortunately, this subject is very taboo for many people. Some sufferers have never told anyone else about it, either at home or in the workplace.”

Her organisation works to spread information about both problems and strengths, and to make people understand that dyslexia does not reflect any lack of intelligence.

“Customising the working day, providing access to the right aids, is important,” she says.

“Where industry is concerned, these difficulties can represent a safety risk because employees may have problems understanding or communicating both orally and in writing.”

She emphasises that dyslexia is found among all types of employees, doing both practical and administrative jobs, and regardless of title and role.

“In today’s society, with its masses of information, knowledge about and customisation for everyone with such challenges can help to enhance mastery of tasks and increase acceptance. That in turn makes it more secure for them to be open about their position.”

Meant much For process operator Lene Gjødestøl at Glencore, the customisation process has meant much. She is herself dyslexic, and chose to be open about it when arriving as an apprentice eight years ago.

“I found reading handbooks heavy going,” she says. “But I’ve received a lot of help from colleagues who read things for me, look through what I’ve written and correct mistakes.”



She has taken over as head of the Hanne project, ensuring that the pressure is being kept up on the measures implemented and planned.

A number of digital aids have already been developed, including a personal safety form for mobile phones which reads the text to the user. It can be completed by speaking the entries.

"I'm also keen to develop videos which show how work operations should be carried out," Gjødestøl reports. "Scanning a QR code on a machine, for example, will bring up a video which shows what valves and positions are to be used."

She has the following advice for dyslexics: "First and foremost, you must be open about it. If the company doesn't know you need customisation, it's difficult. And then it's only a matter of starting at one end, working with simplified texts and making things more oral."

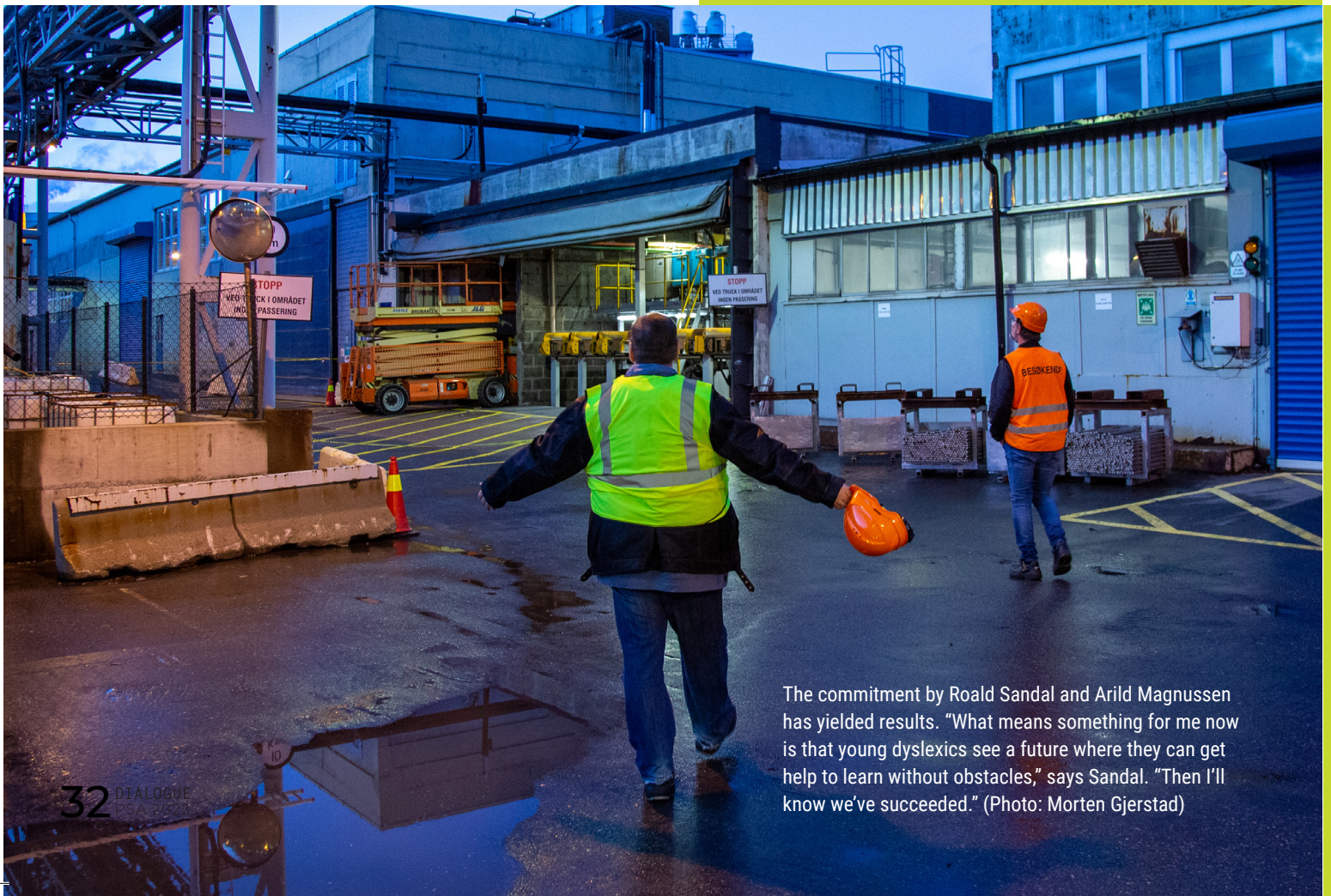
Results Night has fallen when Sandal and Magnussen stroll over the zebra stripes and out of the main gate. Many years of fighting over the issue have brought results, but also cost a lot of energy.

"My ship has sailed," admits Sandal. "I'll get no education. What means something for me now is that young dyslexics see a future where they can get help to learn without obstacles. Then I'll know we've succeeded."

The biggest gain is that the number of dyslexics taking their trade certificate at Glencore has risen sharply. "The days when people thought we were stupid or backward have gone," Sandal says. ★

DYSLEXIA

- The word means quite simply "difficulties with words".
- It covers problems with learning letters and distinguishing them from each other.
- Several forms have been identified, with varying seriousness.
- Dyslexia is an innate, heritable condition and does not reflect lack of ability or poor teaching.



The commitment by Roald Sandal and Arild Magnussen has yielded results. "What means something for me now is that young dyslexics see a future where they can get help to learn without obstacles," says Sandal. "Then I'll know we've succeeded." (Photo: Morten Gjerstad)

Oil sector following suit

The dyslexia project at Glencore Nikkelverk has had spinoffs, and the petroleum industry is also aiming to get better at customising for employees with reading and writing difficulties.



A pilot project on a dyslexia-friendly workplace was launched this year by the Federation of Norwegian Industries (NI), the Norwegian Union of Industry and Energy Workers (Industry Energy) and Dyslexia Norway.

Supported by the IA industry programme for oil and gas suppliers (see pages 34-35), it seeks to make companies a better place to work for all employees.

“Such a project has great significance for our members, since many workplaces out there experience these challenges,” says

Frode Alfheim, president of Industry Energy.

“It’ll ensure that personnel in the industry have an even more secure and inclusive workplace. That’s important both for those at work today and for new recruits to the sector.”

He is supported by NI managing director Stein Lier-Hansen: “It is important for employers to make provision for all their personnel.

“Customising strengthens HSE work and can contribute to preventing accidents, enhancing efficiency and reducing sickness absence.” ★

PILOT

The following companies are involved in the pilot project. It will develop certification criteria in collaboration with the participating companies. This is intended to lead to a permanent project run by Dyslexia Norway, allowing every company in Norway to become a dyslexia-friendly workplace.

- Glencore Nikkelverk, Kristiansand
- Ineos Rafnes, Bamble
- ESS Support Services AS, Stavanger
- Aibel AS
- STS Gruppen AS, Bergen
- Aker Solutions AS, Eggersund
- Coor, Bergen
- TechnipFMC, Ågotnes

BY GUNLAUG LEIRVIK

FACTS

INCLUSIVE WORKING LIFE (IA)

The main purpose of the agreement on a more inclusive working life (IA) is to create a space with room for all by combating sickness absence and withdrawal (failing to resume gainful employment after an absence).

Important tools for achieving this objective include a working environment programme, the industry programmes and the working environment portal.



The IA agreement was originally entered into between the government and employers/unions in 2001. These parties agreed in November 2022 to extend the existing accord by two years until the end of 2024.



Working environment programme

This aims to help more enterprises pursue preventive working environment work in a systematic and knowledge-based way. It is intended to strengthen and motivate a common commitment to such work, and to help enterprises see the value and effects of these efforts.

The programme is a cross-agency collaboration between the Labour and Welfare Administration (NAV), Stami, the PSA and the Norwegian Labour Inspection Authority.



Working environment portal

This website gives information on preventive working environment measures. It provides key facts and figures on the working environment, as well as knowledge-based tools tailored to the challenges faced in different industrial sectors.

THE WORKING ENVIRONMENT

AID is a sector-adapted and web-based tool for development and improvement in this area. It offers discussion and reflection tasks which help to identify the good aspects of a working environment and how it needs to be improved. With the tool's help, an action plan is drawn up for developing an enterprise's own working environment.

A GOOD DAY AT WORK is a tool adapted to each sector. It provides insights into what the working environment is about and covers the five biggest challenges in this area for each industry.



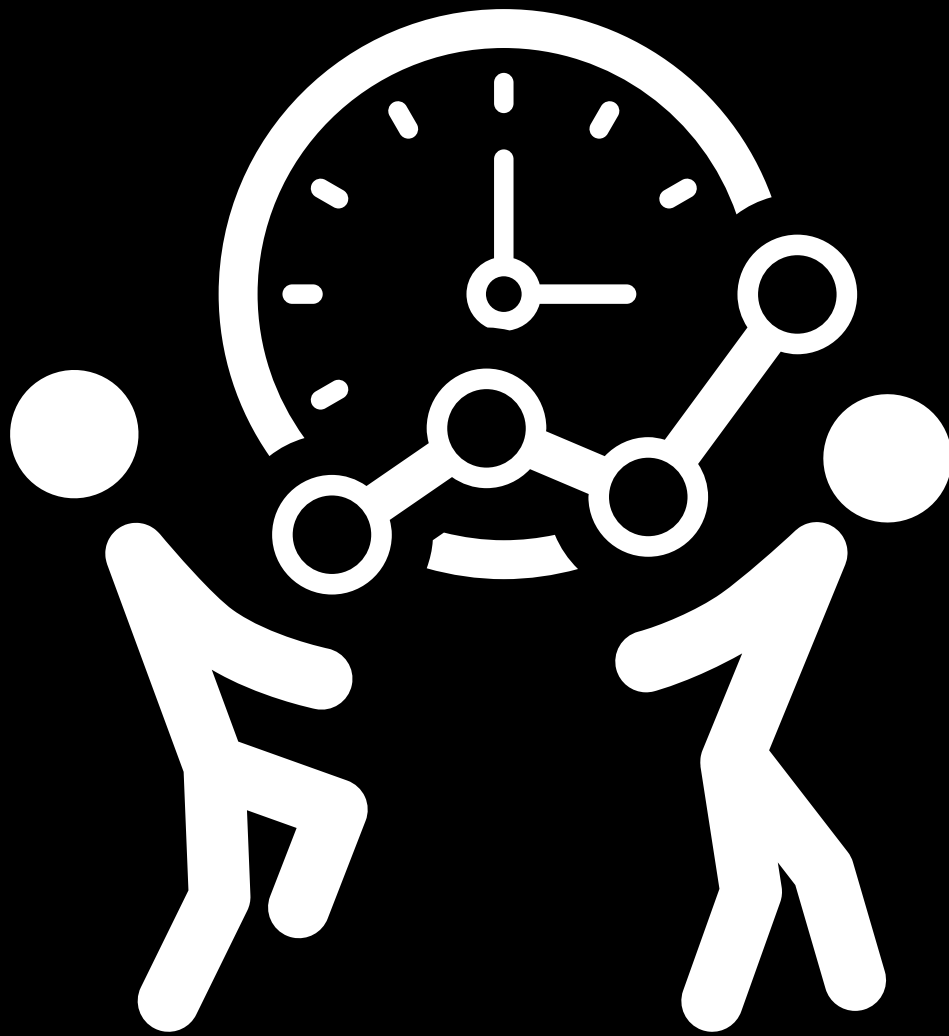
Industry programmes

Two industry programmes are currently running in the petroleum sector under the IA agreement. One is led by the Federation of Norwegian Industries and covers the supplier industry, while the other is headed by Offshore Norge for companies in the catering segment.

Their main aim is to help companies establish measures which reduce ill-health and keep more people at work. As far as possible, they will encompass measures which the companies have already identified or are in the process of implementing.

The supplier and catering sectors have been chosen because they are characterised by considerable restructuring. Catering companies will concentrate primarily on sickness absence, while the supplier industry is seeking measures which reduce withdrawal.





Time to fight risk

Long working hours, night work and extended tours of duty can increase risk for both health and safety.

“Some people think working time is primarily a question of pay,” says Elisabeth Vaagen at the PSA. “But it’s also a risk factor, which the companies must include in their overall risk assessment.

“Research shows that working shifts, at night and for long hours can have negative consequences. The risk of undesirable incidents and work accidents increases with the time spent at work, particularly beyond 12 hours a day.”

Vaagen, who is a member of the PSA’s occupational health and safety discipline team, notes that many shift workers struggle to function at work and to get enough sleep between shifts.

Onerous Figures from the RNNP process show that the more overtime you work, the more these extra hours are perceived as onerous. Long working days also leave less time for rest and restitution.

The proportion of workers on the NCS who do so much overtime that it is felt to be a burden has increased steadily – from 11 per cent in 2015 to about 19 per cent in 2021.

In recent years, the PSA has identified a number of breaches of the regulations related to overtime, extended offshore periods, high workloads, insufficient rest and restitution, and inadequate capacity and competence.

“Our concern is that such conditions increase the risk of reduced attention and weakened

understanding of the position,” says Vaagen.

“That can lead in turn to errors and serious incidents. Long working days and a high workload over time have negative health effects for the individuals, too.

“We’re also getting whistleblowing reports related to such conditions.”

Legal limits “We see examples of companies operating at the edge of the law as defined in the regulations without adequate management of the risk which working time can represent,” Vaagen adds.

She emphasises that hours at work must comply with the regulatory restrictions. And companies must make good assessments to ensure that workers are not exposed to unfortunate physical or mental burdens – and can thereby pay proper attention to safety.

Rules on working time in the safety regulations are not always assessed in association with the regulatory requirements on risk reduction and organisation, she notes.

“An integrated approach must be taken to the regulations, both the safety provisions and other requirements. The companies can’t choose to lie at the extreme limits of the regulations without assessing the consequences.

“Employers have a special responsibility for ensuring that an adequate level of manning and prudent working hours are maintained.” ★

PLAIN SPEAKING

Research shows that extended periods of offshore working (overtime, long work sessions and lengthy periods away from land) affect health and safety through general mechanisms.

These include insufficient time for and reduced quality of sleep (sleep disruption), inadequate restitution between work sessions, and increased exposure to chemical, physical and mechanical factors.

Night work disrupts the diurnal rhythm and sleep, and increases the risk of fatigue and reduced cognitive function (Stami, 2021).

BY GUNLAUG LEIRVIK

FACTS

RISK FACTORS

Conditions which increase the threat of health complaints, illness or death are termed risk factors.

The working environment concept covers the way work is organised, planned and executed. Everything which affects this can be divided into various working environment conditions. These must be assessed along with safety and health risks – both individually and collectively.

Being well informed about the working environment is crucial for efforts to prevent sickness absence in and withdrawal from working life, and provides a good basis for prioritising action.

Working environment conditions which are significant for health and safety include the following.

ORGANISATIONAL AND PSYCHOSOCIAL WORKING ENVIRONMENT

■ **Negative influences could be:** unpredictable or long working hours, very demanding jobs combined with a low degree of control, lack of information, unresolved conflicts, limited or not very constructive feedback from managers, conflicting or unclear expectations, role conflicts, job insecurity, and poorly implemented reorganisations.

⊕ **Positive influences could be:** management support, autonomy, balance between demands for and control over own work, adequate training, employee participation, positive challenges, perception of equitable treatment, and supportive colleagues.



PHYSICAL/CHEMICAL WORKING ENVIRONMENT

- Noise
- Vibration
- Chemicals (gas, dust/fibres) with skin contact and inhalation
- Indoor climate
- Climate factors – excessive cold or heat
- Lighting
- Radiation

Factors which can affect risk: level, frequency and duration of exposure, training, work organisation, chemical substitution, technical measures taken, use of PPE.

MECHANICAL/ERGONOMIC FACTORS

- Working with hands at or above shoulder height
- Static or monotonous, repetitive work
- Working with torso twisted or bent
- Squatting, kneeling or the like
- Sedentary work
- Heavy physical labour

Factors which can affect risk: duration, frequency, work organisation, customisation, variation, pressure of time, aids, training and temperature.

Photo: Anne Lise Norheim

BY EILEEN BRUNDTLAND

Better control of chemicals



Many workers handle or are in contact with carcinogenic substances at work. Exposure limits for benzene have been much reduced by new learning and the great attention paid to this chemical compound. Diesel exhaust fumes are now also in the spotlight.

The PSA has worked for many years to increase the industry's knowledge about and awareness of chemical health risks, with a particular concentration on benzene.

"Research shows a clear link between contact with benzene, even at low levels, and the risk of lymphatic cancer and leukaemia," says Morten Lunde in the occupational health and safety discipline team.

Norway's occupational exposure limit for this gas was cut by 80 per cent in 2021, and a further 50 per cent reduction is expected within the next few years. That poses new demands for players in the petroleum sector.

"The industry has taken the benzene challenge seriously, and many of the companies have good practices for handling it," says Lunde.

"However, we see that shielding against exposure is largely based on the use of PPE. That's considered to be a weak barrier."

Hazard At the same time, greater attention is being paid to diesel exhausts. Personnel exposed to these fumes report such complaints as nausea, dizziness and headaches.

"Findings from our audits indicate that a number of offshore facilities face challenges related to diesel exposure," says Hilde Nilsen, who leads the PSA's work in this area. "We've also received several whistleblowing reports on it."

The industry has long lacked good measuring methods and clear cut-off points in this area. However, a first occupational exposure limit for diesel exhaust – measured by elemental carbon – is due to come into effect on 21 February 2023.

Lung cancer A blend of gases and particles, diesel exhaust fumes are classified as carcinogenic by the International Agency for Research on Cancer (IARC). Long-term exposure can increase the risk of chronic pulmonary disease and lung cancer.

Sources These fumes derive from a number of sources, with main power generation on mobile facilities as a big contributor.

Diesel-driven forklifts, cranes, fire pumps, emergency generators and various permanent or temporary generating sets may be highly significant at local level. And supply ship engines can also contribute.

The PSA has worked for many years to improve the industry's knowledge about and awareness of chemical health risks. (Archive photo)



Technical measures to reduce exhaust gases, such as replacing diesels with electric drives or other engine types, or diverting fumes away from people, have already been widely adopted.

Over time, electrification of both equipment and facilities is likely to make a positive contribution to reducing exhaust pollution.

Knowledge A collaboration project between the PSA and Stami was launched in 2022 to increase knowledge in the industry about exposure to diesel exhausts.

Information has been acquired on challenges related to these fumes and company practice in managing the risk. Stami is responsible for collating these data.

They in turn will provide part of the basis for a report on the state of knowledge about diesel exhaust fumes in the petroleum sector.

“We’ve previously known little about where and under what conditions the challenges have been greatest,” explains Nielsen.

“The outline of a risk picture is visible, but more measurements are needed in order to better understand the level of fumes on offshore facilities and at plants on land.”

Noting that the PSA sees the companies increasingly taking measurements, she emphasises that responsibility for mapping risk in this area rests with them.

“They must keep abreast of learning and regulatory changes. The risk is largely managed today by direct readings of gas components in diesel exhaust fumes, which reduces control of exposure to elemental carbon.

“No appropriate measuring equipment able to take direct readings of the latter is available at present. It’s important that the industry now collaborates to find a solution for integrated management of this type of risk.” *

LIMITS

National occupational exposure limits have been set in Norway for most chemical substances classified as carcinogenic. They specify a maximum level for the average concentration of a substance in the respiratory zone of a worker over an eight-hour period.

In the offshore industry, these limits have been corrected for a longer working day.

Lying as far as possible below the exposure limit should be an objective, since these levels do not distinguish clearly between safe and unsafe concentrations.

	Eight-hour exposure limit	12-hour exposure limit
DIESEL EXHAUST FUMES (measured as elemental carbon)	0.05 mg/m ³	0.03 mg/m ³
BENZENE	0.2 PPM	0.12 PPM



CHEMICALS AND CANCER

Roughly three per cent of cancer cases in men, and 0.1 per cent among women, can be attributed in Norway to carcinogenic substances in the workplace.

According to the World Health Organisation (WHO), cancer accounts for more than half the deaths related to occupational causes in western countries.

Investigating exposure

The PSA has circulated a questionnaire to the whole industry aimed at identifying the risk to personnel of contact with carcinogenic chemicals and chemical compounds.

Norway's petroleum sector still uses such substances, including in maintenance, processing and production. Carcinogens can also be liberated during work operations and processes.

"The companies were asked to answer questions on their use of chemicals," explains Sølvi Sveen in the PSA's occupational health and safety discipline team.

"We also sought information on who's exposed to these substances and under which conditions, and what measures have been taken to limit the health risk."

How many Company responses include details on how many carcinogenic chemicals they use. Most report a figure of around five, but a couple stand out with a substantially higher number.

"That so many of the companies report low figures is an indication that processes aimed at eliminating carcinogens have had an effect," says Sveen.

"The industry has been working over many years to replace chemicals with alternatives which pose a lower risk to health. We're seeing the results of that now."

Respondents to the survey also listed the three carcinogenic chemical products or compounds they used which are associated with the highest exposure risk.

Benzene and diesel exhaust fumes recur frequently among the top three at all the companies, but such components as asbestos, welding fumes, alpha quartz and formaldehyde also appear.

Most exposed This type of risk is unevenly distributed in the industry. The most exposed occupation groups include mechanics and personnel employed on technical cleaning.

"The biggest challenge with the latter group is that it's relatively small and comprises people who travel around doing the same job on several facilities," explains Sveen.

"It's therefore particularly important that providers of this type of service ensure that overall exposure for the individual does not become excessive."

The regulations require employers to identify and assess risk related both to the use of carcinogenic chemicals and to jobs which could lead to the release of such substances.

"On the basis of these assessments, they're then required to take appropriate measures to remove or reduce this exposure," Sveen emphasises. ★

The results of the survey are summarised in a report published at psa.no





BY ØVIND MIDTTUN

Keeping track of trends

With changes in Norway's petroleum sector both far-reaching and rapid, the PSA is looking at how operating parameters are altering and the potential impact on the working environment and safety.



“**W**e need to know more about how these frameworks are being transfigured and the effect that could have,” says Irene B Dahle in the PSA’s occupational health and safety discipline team.

The authority has followed up operating parameters in the petroleum industry over many years, including its earlier prioritisation of groups exposed to risk as well as various projects and supervisory activities.

This topic has also occupied a key place in the PSA’s main issues for 2021 and 2022: side by side with the suppliers and capacity and competence – the key safety respectively.

Through the annual RNNP process, the PSA also has a fairly good basis for saying something about the exposure picture for various groups and segments in the industry, both on land and offshore.

Structural In recent years, the Norwegian petroleum industry has experienced a number of structural adaptations and efficiency processes.

The most important of these relate to new compensation formats and operating models, greater demands for flexibility and the introduction of new technology.

Observed consequences include lower manning levels offshore, looser forms of workplace affiliation and pressure on expertise, education and training.

The allocation of roles and responsibilities between operator and contractor, the organisation of work, and the individual’s employment terms are also in flux.

Interpretation The PSA is constantly being confronted with new issues related to operating parameters, including interpretations of the regulations and whistleblower reports on

availability and working-time arrangements as well as illegal temporary hires.

Following up how the companies manage HSE across a number of employers is also challenging, with forms of affiliation changing and complexity increasing.

Rapid “Big changes are happening, and at a relatively rapid pace,” says Dahle. “A high level of activity has speeded up this process even further, giving added relevance to many of the key issues.

“The sector is experiencing increased pressure on efficiency and production. It’s important to ensure that this doesn’t happen at the expense of HSE.

“These changes are creating unrest and concern. We’re receiving reports from employees in the industry, and see this when we conduct audits or meet the companies.”

Complicated He says that the picture is complicated and that the PSA needs to know more about what changes to operating parameters involve and their significance for the working environment and safety.

To learn more about these aspects, it has launched an extensive programme of research and studies. Being implemented by Safetec in collaboration with NTNU Samfunnsforskning, Sintef and Oslo Economics, this work also covers possible consequences for employee participation and collaboration.

Particular emphasis is being given to changes in forms of affiliation, including temporary hires, and in contracts and collaboration – including compensation formats.

Due in early 2023, findings from the project will be used by the PSA in professional contexts and supervisory activities, and will be shared with the industry. ★

EXAMPLES OF CHANGES

Forms of collaboration, contract models and compensation formats/incentives:

- fully integrated drilling contracts, and alliance deals
- increased use of activity-driven manning, such as campaign-based maintenance
- greater use of performance-based compensation formats, with more of the risk transferred from operator to contractor
- more competitive tendering for individual maintenance and modification assignments.
- Manning reductions offshore through digitalisation and transferring functions to land, multiskilling/cross-training (often across players) and new forms of collaboration between operator and supplier.
- Increased adoption of advanced technologies to complement and replace jobs previously done by people. In that context, the PSA sees ever-growing use of technologies which utilise machine learning. These can process large quantities of real-time and historical data rapidly and with greater resolution and precision – for drilling and well work, for example.
- Looser forms of affiliation – increased use of temporary hires and flexible availability arrangements.

For safe and stable energy progress Collectively and concurrently

A demanding geopolitical position is making its mark on Norwegian gas production, and overall petroleum activity is now sky-high. This is paralleled by a large and growing need to establish new Norwegian ocean industries which ensure greater breadth and volume in energy provision – and meet the climate goals.

It is important for the PSA that safety – including security against deliberate attacks – is maintained in all phases of the petroleum industry, and that today's quality and experience are

retained and tailored to new energy industries.

Putting good and appropriate regulations for offshore renewable energy production in place is now a matter of urgency. The PSA has an important role to play in this work, and is ready to both accept and maintain its responsibility.

All of us face big and demanding challenges today. We will succeed if everyone works collectively and concurrently for safe and stable energy progress. ★

**Use the main issue 2023 for reflection,
discussion – and action!**



Photo: Anne Lise Norheim





RESPONSIBLE PUBLISHER
PETROLEUM SAFETY AUTHORITY NORWAY
Professor Olav Hanssens veg 10
P O Box 599
NO-4003 Stavanger
Tel: +47 51 87 32 00
E-mail: postboks@ptil.no
Website: www.psa.no

EDITORIAL STAFF

Inger Anda (editor-in-chief/journalist)
Øyvind Midttun (editor/journalist)
Eileen Brundtland (journalist/web editor)
Olav Hove (journalist)
Gunlaug Leirvik (journalist)
Janne-Beth Carlsen N'Jai (graphic designer)
Margrethe Hervik (distribution)
Rolf E Gooderham (English editor/translator)

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HSE: Health, safety and the environment
IA: A more inclusive working life
NCS: Norwegian continental shelf
PPE: Personal protective equipment
PSA: Petroleum Safety Authority Norway
RNNP: Trends in risk level in the petroleum activity
Stami: National Institute for Occupational Health
WEA: Working Environment Act

