



HSE ACCOUNTS for 2018



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HSE is SINTEF's highest priority. This means ensuring that we benefit from a safe work environment that promotes good health and enables us to enjoy our work. Our HSE standards aim to satisfy the strategy, policies and aims in the area of HSE.

SINTEF is certified in accordance with three standards: ISO 9001:2015 – Quality Management Systems, ISO 14001:2015 – Environmental Management Systems, and OHSAS 18001:2007 – Occupational Health and Safety Assessment Series. A follow-up audit performed in December 2018 revealed no deviations from these standards. In 2018, SINTEF was registered in EPIM JQS as well as Achilles JQS.

SINTEF's overall strategy defines four overarching aims for our HSE efforts:

- We will experience a positive work environment that promotes good health
- We will have zero work-related sick-leave
- We will suffer no injuries, accidents or losses
- We will present a clear environmental profile

Our HSE efforts are planned and implemented with the aim of continually improving SINTEF's performance. In order to measure improvements, SINTEF has developed indicators based on each of the overarching aims concerned.

HSE goals achieved in 2018:

KPI 2018	Goal	Achievement
Sick-leave (%)	< 3.5	3.9
Work-related sick-leave (%)	0	0.4
Performance appraisal interviews (%)	100	76
H1 – rate of injury-related absence from work (number of personal injuries requiring absence, per million hours worked)	0	1.0
H2 – rate of personal injuries (number of personal injuries, per million hours worked) ¹⁾	0	2.7
Rate of absence from work (number of days off work per million hours worked)	0	10
Accidents leading to damage to the external environment	0	0
Critical risk potential of events (number of potentially critical events per million hours worked)	0	4.8
Reports from fieldwork and travel (number per million hours worked)	> 8	10
Reduction in energy consumption ²⁾ (%)	> 5	5.7 ³⁾
Reduction in travel activity (%) (kg. CO ₂ emissions per year worked ⁴⁾)	> 5	7.2

¹⁾ Excluding first-aid injuries

²⁾ in operation of SINTEF's buildings, compared to 2016

³⁾ Estimated

⁴⁾ From domestic flights, compared to 2016

Health and work environment

In 2018, SINTEF put a number of structural adaptations into effect. These processes have required a significant amount of effort over and above our day-to-day activity on the part of management, staff representatives, and our employees, who have been closely involved in the restructuring process and were given the opportunity to participate in it.

In 2018, SINTEF performed a new work environment survey. This is carried out every second year, and maps our work environment, organisation and management. The survey showed that SINTEF's staff give the organisation a high rating.

Topics that map our psychosocial work environment and safety scored well. Compared to other research organisations, SINTEF's management was particularly highly rated. The results confirm that all in all, while SINTEF is a good workplace, improvements still need to be made. These challenges will be followed up, and we are making efforts to utilise the results to continue to develop SINTEF as a workplace.

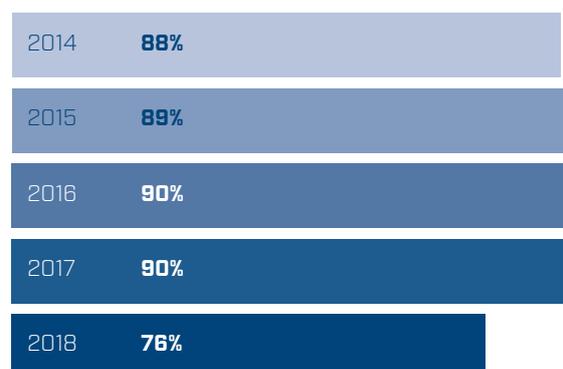
SINTEF pays serious attention to the importance of good HSE training, and the content of its courses is regularly updated. To complement the central courses, our institutes carry out local training efforts to ensure the safety of their laboratory and workshop staff. In autumn 2018, we developed a modular training programme for SINTEF's managers. HSE training currently has an important place in the new management platform.

A new system for staff development with tools for performance appraisal interviews was introduced in all our institutes in 2018. One of its key aims is to improve the quality of our work through personal development, via good dialogue and continuous feedback throughout the year. All of SINTEF's managers have received training in this effort, and have responded with interest and active involvement.



In connection with the introduction of the new system, we have not managed to put sufficient pressure on maintaining the level of performance appraisal interviews in our departments. We decided to introduce a new organisation-wide practice whereby these interviews will be held during the early months of the year. This may have led to some staff who had previously been interviewed in the course of the autumn postponing their interviews until after the new year. We are now setting up a system to ensure that managers have good oversight over the degree of implementation of performance appraisal interviews throughout the year.

Performance appraisal interviews: percentage held

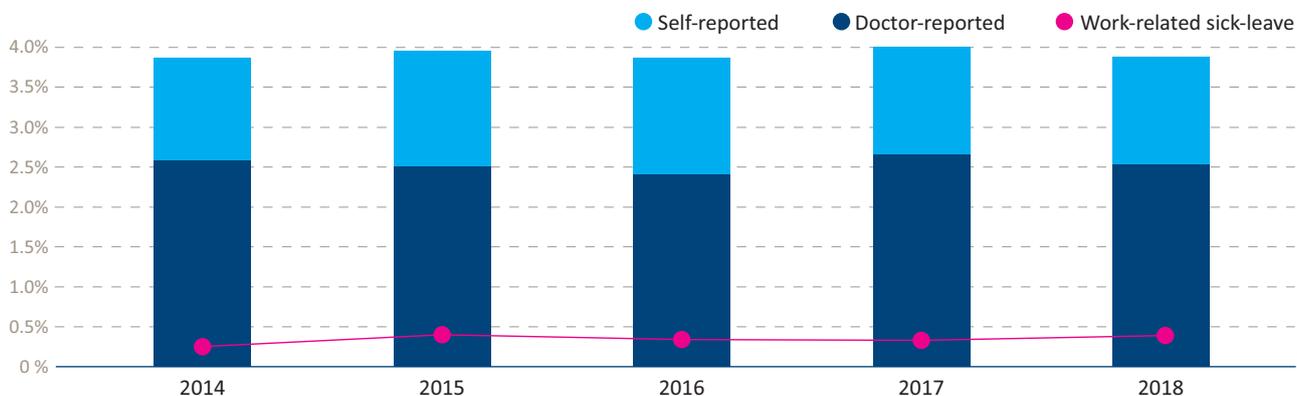


Work-related health issues and sick-leave

The overall rate of sick-leave taken in 2018 was 3.9%, which is higher than the 3.5% that SINTEF aims for. Work-related sick leave ended up at 0.4%. Sick-leave is taken at different rates among our institutes. Work-related and other causes of sick-leave are systematically followed up by our insti-

tutes, and more attention was paid to these efforts in 2018. Employees taking sick-leave are followed up by maintaining close contact with them, and rates of absence are kept at a low level through the implementation of good management principles.

Sick-leave



SINTEF's company health service conducts targeted health interviews with members of staff who are exposed to potentially hazardous health conditions in their work environment. Employees are selected for these interviews

on the basis of a risk assessment of their exposure situation, and they are carried out every third year for each individual employee. In 2018, 156 targeted health interviews were held.

Safety

In 2017, SINTEF Group management decided to raise the level of HSE efforts within four areas designated for improvement. The project took place in 2018, targeting all SINTEF managers and staff, and the improvement efforts will continue in 2019. The objective of the exercise is to reduce the number of personal injuries and achieve permanent alterations in behaviour in our laboratories and workshops. Changing safety culture is a task that requires patience. Our efforts to tackle HSE issues appear to have had a positive effect, in that we experienced fewer injuries in our laboratories and workshops in 2018, an outcome that inspires us to continue our efforts.

SINTEF's institutes have drawn up their own plans for following up the four areas for the improvement of HSE culture:

- Technical safety, order and tidiness
- Clearly defined safety management
- Greater awareness of risks and barriers
- Staff responsibility for own safety

In 2018, SINTEF carried out an internal audit on the topic of safety management. The target group was research managers, and the scope of the audit was safety culture and practice, management, responsibility and competence. The audit revealed many examples of good management practices that will be shared across the organisation.

At SINTEF, we use a wide range of chemicals in the course of



our activities. In view of certain events in 2018 we prioritised efforts to clearing up our chemical storage system and to revising the relevant procedures. We still need to be vigilant with regard to how we deal with chemicals and to ensure that we are sufficiently aware of potential hazards.

SINTEF publishes single-page HSE notices that have the aim of improving the reporting of undesirable incidents and encouraging good exchanges of experiences within the organisation. These notices are used in a number of connections – at management meetings, departmental meetings, work environment committee meetings and external meetings.

We share many premises with NTNU, and are fully aware of the necessity for close cooperation in safety matters. Efforts to strengthen coordination in this area are under way, with special attention being paid to exchange of experience of undesirable events.

Personal injuries

SINTEF aims for zero personal injuries, and we are making strenuous efforts to implement preventive measures to ensure that our staff do not suffer injuries at work.

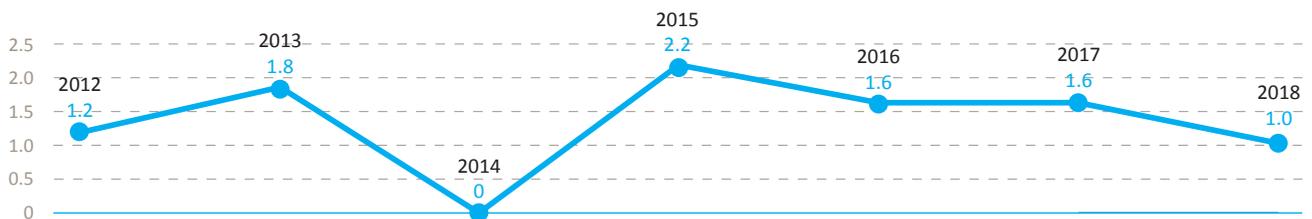
In 2018, we registered 24 injuries, eight of which required medical treatment. Three of them led to sick-leave being taken, while 16 were logged as first-aid cases. These figures represent a positive reduction compared with 2017, when

the number of personal injuries registered was 31. The frequency of injuries leading to sick-leave being taken (H1) and the frequency of personal injuries (H2) were 1.0 and 2.8 respectively.

Three cases of injuries that required sick-leave resulted in 29 days of absence from work, equivalent to a rate of absence of 10.0.

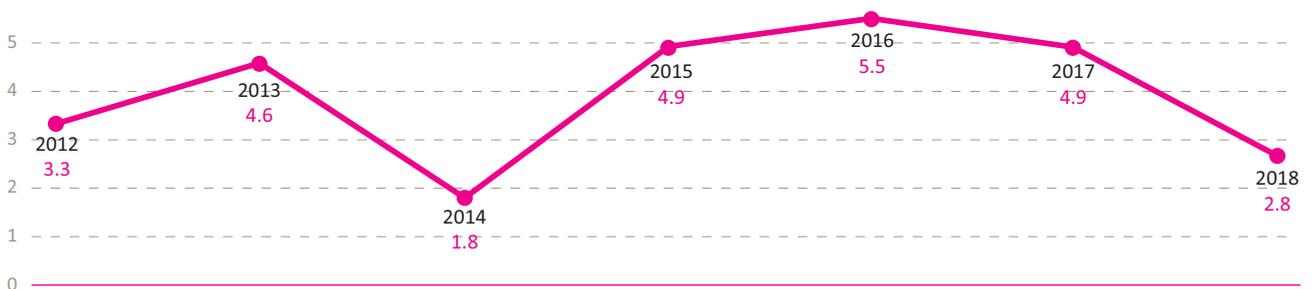
Frequency of injuries leading to sick-leave being taken (H1 value)

Number of injuries leading to sick-leave, per million hours worked



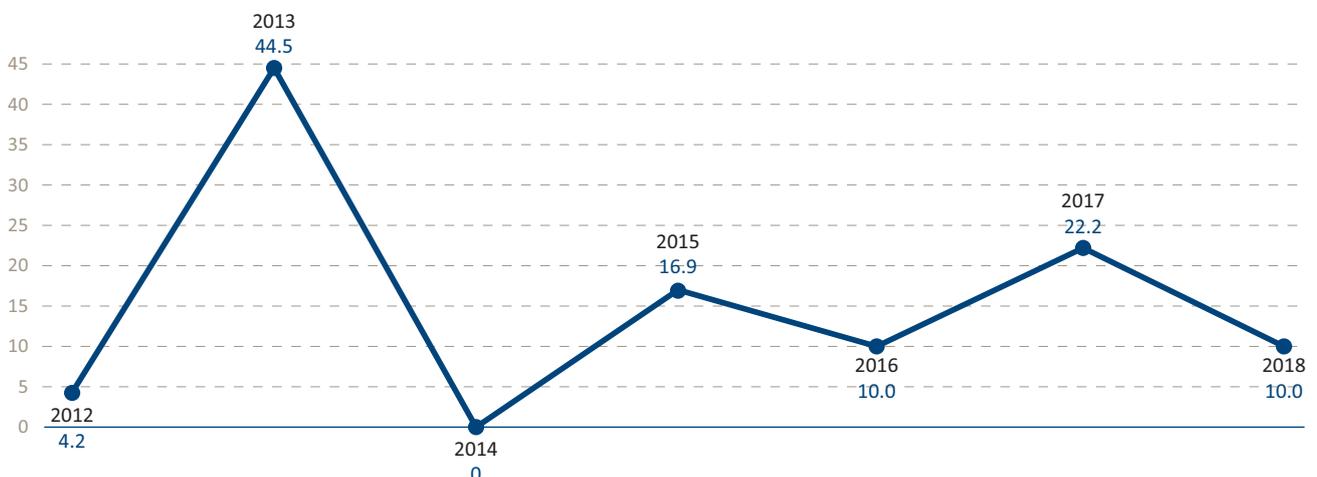
Frequency of personal injuries (H2 value)

Sum of injuries leading to sick-leave and other injuries (excluding injuries requiring first-aid) per million hours worked.



Frequency of absence from work (F-value)

Number of days of absence from work due to injury, per million hours worked

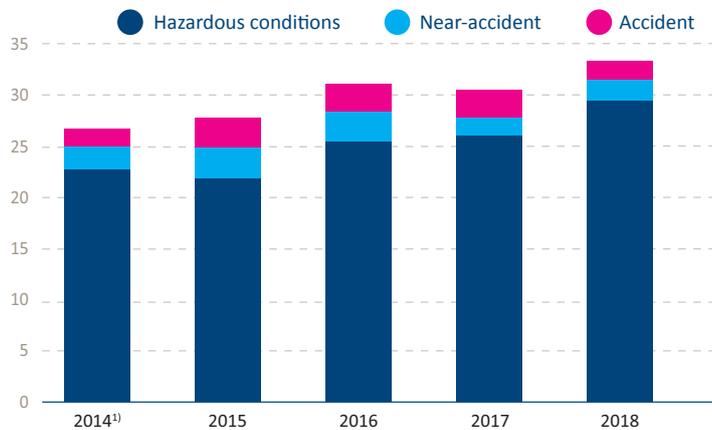


HSE reports

In 2018, SINTEF registered around 600 HSE reports in its deviation system, 32 of which were accidents, while 37 were near-accidents. After a fall in the number of hazardous conditions and observations in spring 2017, the curve began

to rise again, and the total of 532 hazardous conditions and observations recorded in 2018 is equivalent to a rate of 29 reports per 100 years of work.

HSE reports per 100 years worked



¹⁾ These figures do not include companies owned by SINTE Holding

Accident: An event that has led to injury (including injuries requiring first-aid), illness and/or damage to/loss of fixed assets, damage to the environment or to a third party.

Near-accident: An event that under slightly different conditions could have led to injury, illness and/or damage to/loss of fixed assets, damage to the environment or to a third party.

Hazardous conditions: Circumstances or conditions that could potentially lead to personal injury, illness and/or damage to or loss of property, damage to the environment or injury to a third party.

Preparedness

In 2018, there was one incident that was sufficiently serious to require an intervention by SINTEF's emergency preparedness organisation.

An internal audit of SINTEF's preparedness in 2018 showed that we are exposed to few incidents that we need to learn

from and that there is a need for full-scale preparedness exercises, as well as exercises together with NTNU.

All our institutes carried out planned preparedness exercises in the course of the year, and a preparedness day was also organised for SINTEF Group management.

Ethics

Ethics, values and management make up a central pillar of SINTEF's overarching strategy. Our ethical guidelines are available to everyone both in SINTEF's Ethics Compass and on our web-site.

In 2017, the Norwegian Parliament passed a new law concerning the organisation of research ethics. In accordance with this legislation, in 2018 SINTEF developed a new ethics training module for three SINTEF School courses: 1) Research Methodology course; 2) New Project Manager course; 3) Ethics Module for the "Managers Platform"

– a new training programme for SINTEF managers.

There is growing involvement at institute level for ethical evaluations of business areas, international research projects and overseas contracts. SINTEF's ethics representative acts as adviser and discussion partner for the entire SINTEF organisation. The ethics representative scheme also means that SINTEF meets the requirements of the Work Environment Act for an anonymous internal reporting channel.

Physical environment

SINTEF's policy regarding the physical environment sets out requirements for how we operate our buildings and perform our research. Through its systematic efforts to reduce loads on the environment, SINTEF accepts its environmental responsibilities and meets the expectations of its clients.

In 2018, our staff displayed a high level of involvement in caring for the physical environment, and we have paid particular attention to reducing the environmental impact of our day-to-day operations. SINTEF has adopted an action

plan for the environment that features energy-efficient operation, good waste treatment and reduced travel. Our most important contributions to improving the environment are our international cutting-edge research projects and other research activities aimed at reducing energy consumption and exploiting renewable energy resources, performing climate research, and developing environmental technology.

In 2018, no incidents that affected the physical environment were reported by SINTEF.

SINTEF's HSE Plan for 2019

SINTEF's action plan for 2019 will be based on its overarching HSE goals:

- SINTEF will provide its staff with a work environment that promotes good health
- SINTEF will have a zero rate of work-related sick-leave
- SINTEF will have a zero rate of injuries, accidents and losses
- SINTEF skal framstå som en bedrift med tydelig miljøprofil

Sub-goals/KPI Objectives 2019	Measures
<ul style="list-style-type: none"> • Performance appraisal interviews = 100% • Sick-leave <3.5% • Work-related sick-leave = 0% • H1 – rate of injury-related absence from work (number of personal injuries requiring absence, per million hours worked) = 0 • H2 – rate of personal injuries (number of personal injuries per million hours worked) = 0* • Rate of absence from work (number of days off work per million hours worked) = 0 • Critical risk potential of events (number of potentially critical events per million hours worked) = 0 • Reports from field-work and travel activity (number per million hours worked) > 8 • Accidents leading to damage to the external environment = 0 • Separation of waste from SINTEF's buildings > 60% • Reduction in energy consumption in operation of SINTEF's buildings > 15% by end of 2021, compared to 2017 • Reduce CO₂ emissions from domestic flights by 5% compared to 2018 levels • Performance indicator for environmental benefits gained in projects 	<ul style="list-style-type: none"> • Implement new systems for personal development of staff • Follow up work environment survey • Close follow-up of sick-leave • Continue current efforts concerning the HSE upgrade • Improve reporting of incidents from field-work and travel • Cooperate with NTNU on sharing experiences of HSE incidents • Implement new project manager training programme • Implement new modular management training programme • Profile environmental contributions from project deliveries and develop performance indicator • Perform new environmental mapping • Follow up certification audits • Draw up flight statistics for each department in order to encourage discussion and raise awareness • Gather statistics and purpose of flights in order to draw up aims for 2020 • Improve facilities for and access to video and Skype for conferencing purposes • Document and publicise how SINTEF contributes to combatting climate change via our research

* excluding first-aid injuries



Technology for a better society