



20 years Partnership for European Research in Occupational Safety and Health

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Partnership for European Research  
in Occupational Safety and Health

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20  
years

**Partnership for European Research  
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## Preface

This history of the PEROSH network was written to mark its twentieth anniversary. We thought it would be interesting to keep the memory of the events of the last two decades alive and to share these with the younger generations of researchers who have joined us since the early 2000s.

This is an interesting story about the rise of a network dedicated to occupational health and safety research. It was created and continues to exist without any external financial incentive, unlike many research networks. Indeed, it was a response to a need for rapprochement perceived by all the institutions, both at the level of management and research teams, despite their wide variety of status and missions. Another key to its success is undoubtedly its deliberately limited size, which is the result of strict criteria to be met to be part of it, while aiming to maximize its geographical scope. This has been debated several times in the history of the network as a compromise between these criteria and necessity to cope with the diversity of institutes in Europe. However, this small size is not contradictory with a willingness to open up to external partners, for example for participation in projects and dissemination of information.

PEROSH strengthens the links between the directors of the institutions, the scientific departments and the research teams. Sometimes it is also a matter of simple exchanges of information, which were particularly numerous during the pandemic. But PEROSH is much more. Over the past twenty years, it has reached maturity with constantly renewed joint projects and conferences, some of which have become well established.

Everyone recognises the benefit of pooling forces and information, comparing approaches to dealing with issues, and the way in which the network could play the role of a think-tank. Indeed, PEROSH provides added value when it comes to reflecting on the many challenges that the members of this network have to face: the impact of digitalisation, new work organisations, demographic changes, the ecological transition.

All these changes have strong impacts on the world of work and the pooling of ideas of PEROSH members is an important asset to anticipate. PEROSH allows also exchanges between researchers about new techniques for conducting research in occupational health, easing benchmarking activities and dissemination for new ideas. Twenty years is still a young age and the PEROSH network remains proactive with new projects. Among them is the development of actions towards early-stage researchers to help them build international links.

This document tells the story of the first twenty years of this network. I want to pay tribute to all those who have contributed to its success. Thanks also to Frank Pot, the first chairperson of the PEROSH network, for agreeing to write this history and to all those who have contributed to it by providing documents and by reviewing parts of a draft version.



**Louis Laurent**  
Chairperson PEROSH Steering Committee



### PEROSH emerged from the Sheffield Group

Members of the Sheffield group were directors of OSH research institutes in Europe and some other countries : Canada, Russian Federation, USA, Australia, Turkey, Israel, and the Joint Research Centre of the European Commission in Italy.

The Sheffield group was initiated in the late 80s and had its first meeting at HSL (Health & Safety Laboratory of HSE) in Sheffield (United Kingdom) in 1989. The next meetings rotated across the countries/institutes and were chaired by the director of HSL. For the European institutes one of the reasons to meet was the first European Framework Directive on occupational safety and health. Directive 89/391/EEC entered into force on 19 June 1989 and member states were obliged to bring into force laws, regulations and administrative provisions to comply with it by 31 December 1992.

The purpose of the Sheffield Group was to keep each other informed about programmes and policy positions of the institutes and to stimulate occasional collaboration.

The personal contacts turned out to be very helpful for this. A tradition had developed that the business meetings were supplemented with tourist activities. Partners of the directors regularly participated.

At the end of the nineties the idea grew that the institutes representing EU member states should collaborate more closely. Probably this idea was stimulated by the very successful international Work Life 2000 programme (1999 – 2001), organised by the National Institute for Working Life, Sweden, and published in 3 yearbooks edited by Richard Ennals. It was then decided to create PEROSH. At that time the chairperson of the Sheffield Group was David Buchanan, director of HSL.

After the foundation of PEROSH in 2003, the Sheffield Group continued, although more members gradually moved away. Later, new members joined: Republic of Korea, Japan, Singapore. Usually the meetings were combined, one day PEROSH and one day Sheffield Group. Just before the pandemic the group met outside Europe in Montreal, Canada, 2019. Now the pandemic is over, and the activity resumed in June 2023 with a meeting in Korea.

### Closer collaboration

The idea of creating closer and more formal cooperation came from Ib Andersen, the director of the Danish institute at the time.

In the meeting of EU OSH-research directors in Copenhagen, Denmark, on October 9th, 2002, the 'Foundation of a Partnership for European Research in Occupational Safety and Health (PEROSH)' was on the agenda. The idea was discussed positively and accepted in principle. In the same meeting expressions of Interest (EoI) were discussed regarding EU Networks of Excellence (NoE) and Integrated Projects (IP) to support EU-member states to implement EU OSH-legislation and strategies. In the following meeting, January 21st, 2003, in Hoofddorp, The Netherlands, all participants (photo 1) were able to report positive reactions from their governing bodies and it was decided to draw up a formal agreement. In the same meeting Frank Pot (director of TNO Work and Employment at the time) was invited to be the first chairperson. The agreement for 5 years was signed in Rome on the 7th of November 2003.

The 12 founding members were AMI, Denmark; NIWL, Sweden; BIA (of HVBG), Germany; BAuA, Germany; HSL, United Kingdom; INRS, France; INSHT, Spain; ISPESL, Italy; Prevent, Belgium; STAMI, Norway; FIOH, Finland and TNO Arbeid, The Netherlands. All countries except Norway were members of the EU at the time. Norway could become a member of PEROSH because of its association with the EU through its membership of the European Economic Area (EEA). Institutes of the Sheffield Group in European countries that were not members of the EU at the time (CIOP-PIB, Poland; MKK, Hungary; VÚBP, Czech Republic) could not be part of the agreement. They had to wait until the enlargement of the EU in 2004.

The directors who signed the agreement in November 2003 can be found on photo 2.

Between January (decision to establish PEROSH) and November (signing the agreement), Ib Andersen (AMI) was succeeded by Palle Ørbæk and Jorma Rantanen (FIOH) by Harri Vainio.

It should be noted that PEROSH since the beginning brings together distinct types of institutes. The institutes were financed by different private, social security and public bodies, sometimes a mixture. Their missions can also be different depending on the OSH infrastructure in these European countries. Sometimes the PEROSH members are that part involved in OSH of a much larger institute active in e.g., accident insurance. A mandatory requirement is that they have a substantial research track record in OSH.

The members agreed to co-operate in order:

- “To create an appropriate EU network of OSH institutes to facilitate:
  - Collaboration on EU research and development projects and programmes.
  - Promotion of knowledge transfer between institutes.



**Photo1.** Meeting January 29, 2003 at TNO, Hoofddorp, the Netherlands. From left to right: Ria Verschuren (management assistant TNO), Roger Stamm (BIA), Hans-Jürgen Bieneck (BAuA), Sergio Iavicoli (ISPESL), Per Malmberg (NIWL), Ib Andersen (AMI), Marta Zimmermann Verdejo (INSHT), Frank Pot (TNO), Margarita Lezcano (INSHT), Jean-Claude André (INRS), David Buchanan (HSL), Jorma Rantanen (FIOH), Trygve Eklund (STAMI), Marc De Greef (Prevent). January 29, 2003, TNO, Netherlands. Copyright TNO.

- To avoid inappropriate and expensive duplication of effort by the sharing of results.
- To act as an expert forum in the development of ideas in support of EU and national policies.”

### Governance

The directors of the member institutes acted as the Steering Committee (SC). The SC elects/appoints a chairperson for a period of 2 years. The institute of the chairperson was supposed to provide secretarial support as well. No fee or financial contribution was required. This had been changed in the next agreement of 2008 when a financial contribution of members became obligatory. At the start there were 12 members and after the EU enlargement there were 15.

### Joint activities

Three scientific pillars were established: 1) work organisation, 2) risk perception and management, 3) emerging risks. Representatives were appointed and meetings initiated in these three fields of interest. Nanotechnology would follow soon (2005) as a fourth topic of interest.

### Issues around the foundation of PEROSH 2002 - 2003

An important issue at that time was the relationship with EU-OSHA. The expectation of the national

directors was that EU-OSHA would become dominant in OSH issues in the EU regarding agenda setting, information and even research although EU-OSHA was not supposed to do research itself. All this at the expense of the national institutes and national legislations and cultures of risk prevention. Furthermore, the national institutes did not wish to become each other's competitors in applying for research or other projects commissioned by EU-OSHA or other EU-bodies. PEROSH had to counterbalance EU-OSHA's ambitions. EU-OSHA's director at the time, Hans Horst Konkolewsky, repeatedly asked for participation in PEROSH meetings or even membership, which were both declined. Nevertheless, the individual institutes developed good relationships with EU-OSHA and its director. Many of them became 'national focal points' of EU-OSHA and applied for projects.

Another issue was that members had to be national institutes and research institutes. Not all founding fathers met these two requirements. Sometimes their funding was both public and private, sometimes an institute was de facto national but not officially, sometimes an institute did little research. After lengthy discussions, compromises were reached on all these points,

which strongly involved the need for PEROSH to represent as many European countries as possible. Because of the national character of the institutes and for practical reasons, it was agreed that no more than one institute per country should be admitted. From the beginning an exception was made for Germany because both institutes were national, already members of the Sheffield Group and very much appreciated.

Connected to this discussion about membership criteria, was the discussion about the fact that some members were partially funded by contract research. Some directors did not want that and thought it was a slippery slope because it would jeopardize their independence. Funding should only come from the government. Nevertheless, it appeared difficult to consider this criterion; all members gradually started conducting contract research for private parties as well as for the government.

Another recurring discussion was whether OSH research should be touted for promoting productivity in addition to health. Everyone believed that health is a value that should not be compromised because of cost or other considerations. But some thought it was tactically sensible to

point out the benefits of productivity as well. However, the first objective in the updated agreement of 2008 is "Cooperate and coordinate their research and development efforts for healthier, longer and more productive working lives". Nowadays ILO, EU etc. also use the phrase 'healthy and productive work'.

From PEROSH regular contact was maintained with Eurofound and DG EMPL as well as several other international organisations such as WHO Collaborating Centres Occupational Health in which a couple of PEROSH members represented their countries.



**Photo 2.** November 7, 2003, Rome, after signing the first agreement. From left to right: David Buchanan (HSL), Harri Vainio (FIOH), Sergio Iavicoli (ISPESL), Cristina Cuenca (INSHT), Frank Pot (TNO), Jean-Claude André (INRS), Hans-Jürgen Bieneck (BAuA), Trygve Eklund (STAMI), Antonio Moccaldi (ISPESL), Marc De Greef (Prevent), Per Malmberg (NIWL), Karlheinz Meffert (BIA), Palle Ørbæk (AMI), Otto Melchior Poulsen (AMI). Copyright ISPESL.

## Chapter 2

### Wellbeing at work (2008 – 2012/2014)

#### Governance

The agreement 2008-2012 was extended to 2014. A vice-chairperson was added to the chairperson as well as a chairperson of the Scientific Steering Group which was formalised in the new agreement. The secretariat was extended by a part-time scientific secretariat.

A financial contribution of members became obligatory. As stated in the agreement, "Common costs of PEROSH for the scientific secretariat and the chairmanship are financed via bilateral service agreements between the member institute hosting the secretariat and the individual PEROSH member institutes".

At the time of signing the new agreement the number of members was reduced by two (from 15 to 13).

- MKK (Hungary) did not continue its membership because of financial reasons but continued to participate in the Sheffield Group.
- The NIWL in Sweden was closed in 2006 by the new government despite worldwide protests. The official reason was that research should be done at universities.

PEROSH members developed an ever - closer collaboration with EU-OSHA and Eurofound. Many PEROSH institutes were 'national focal point' and many participated in the ERA-NET programme NEW OSH ERA and in the Risk Observatory of EU-OSHA and were national correspondents for Eurofound.

#### Joint activities

In addition to the traditional focus on health protection, there was an increasing focus on health promotion and even wellbeing at work.

In 2008 the following joint scientific working groups were running:

- Psychosocial issues
- Musculoskeletal disorders
- Nanotechnology
- Bioagents
- OSH management
- Crossovers: Multifactorial risks

The Joint Research Programme activity was introduced in 2009. The aim was to develop joint activities on topics of common interest for PEROSH partners.

PEROSH also developed an activity about the identification of research priorities based on a Delphi-study with 250 experts involved. In 2012 PEROSH identified 7 key-OSH challenges to work on:

1. Sustainable employability to prolong working life
2. Disability prevention and re-integration
3. Psychosocial wellbeing in a sustainable working organisation
4. Multifactorial genesis of work-related musculoskeletal disorders
5. New technologies as a field of action for OSH
6. Occupational risks related to engineered nanomaterials
7. Safety culture to prevent occupational accidents

'Wellbeing at work' became the overarching theme at that time as well as an extension of health protection and health promotion. Issues such as work organisation and labour relations were identified as determinants of potential strain or of innovative behaviour, competence development and sustainable employability. Wellbeing at work became part of Dutch legislation and Finnish government policy. A PEROSH Wellbeing Group started to organise a series of biennial conferences which is still ongoing: 2010 Helsinki, 2012 Manchester, 2014 Copenhagen, 2016 Amsterdam, 2019 Paris, break because of the Covid pandemic, 2022 Warsaw (online), and Stockholm planned in 2024. See Figure 1. (next page)

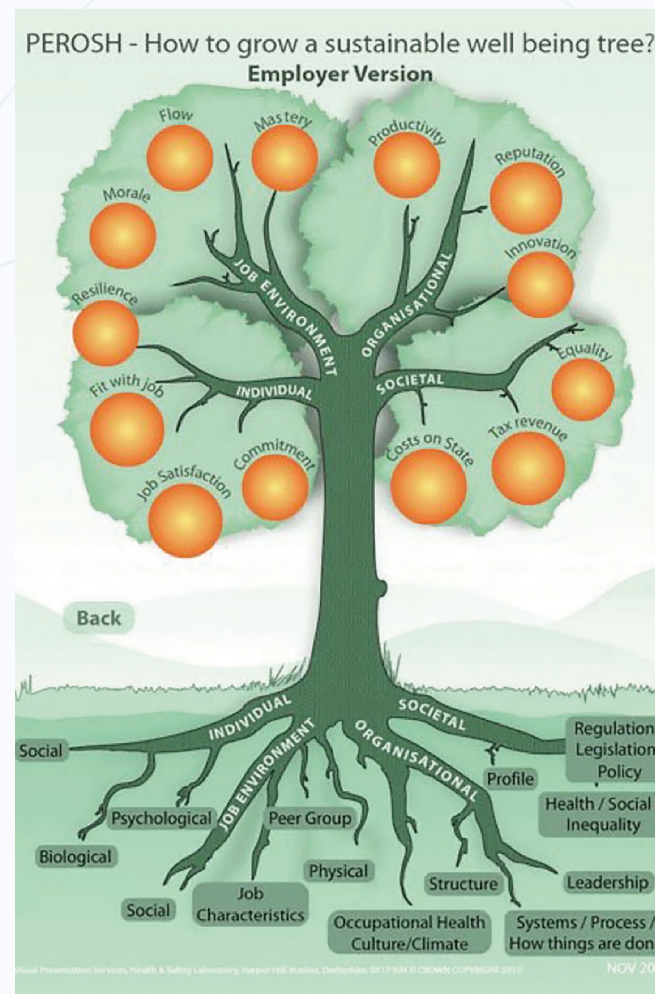


Figure 1. The PEROSH Wellbeing Tree helps to visualise and communicate about the different factors that feed into wellbeing at work. Copyright HSL/HSE



#### Governance

An Executive Committee was formalised (chair, vice-chair, chair of Scientific Steering Group). Instead of the scientific secretariat, a part-time PEROSH-coordinator (manager international affairs) was appointed in 2016, as well as someone for professional communication support.

At the beginning of this period, 13 Institutes were PEROSH members. Two members left for various reasons: VÚBP, Czech Republic (problems with PEROSH-fee) and Prevent after some disagreement. A new member joined, the Austrian General Accident Insurance Fund (AUVA) so that at the end of the agreement PEROSH had 12 members.

ISPESL had been incorporated in INAIL in 2010 and thus the Italian member became INAIL. The name BIA (HVBG) changed into IFA (DGUV), AMI changed into NFA, INSHT changed into INSST.

In Sweden a new platform 'Sustainable Work 2020' started to develop in 2014, seeking collaboration with PEROSH members. In 2017 a joint workshop was organised to discuss opportunities in and possibilities to advocate more attention to OSH in the EU research agenda Horizon 2020. One of the results was a joint Position Paper 'Work in Europe 2030'. Not all PEROSH members opted for this advocacy. This cooperation ultimately brought the membership of the new Swedish Agency SAWEE as a member of PEROSH in 2020.

#### Joint activities

The cooperation grew more and more, not only in the field of research, but also on strategic issues.

Joint projects running in the period of the new agreement:

- Dose-Response-Relationships
- Health impact assessment for Occupational Respiratory Diseases
- Futures, Foresight, and priority setting in OSH
- Wellbeing at work
- Physical activity and workload
- Nano exposure & contextual information database
- Promotion of zero accident vision
- Prevention through design
- Respiratory diseases and protective devices
- Ageing workforce
- Clearing house OSH evidence
- UV indirect

Another activity is the PEROSH production of position papers. In this period, three position papers were produced in collaboration with EU-OSHA and published the 18 June 2015:

1. "The Challenge for Europe in a Changing World – Inclusive, Innovative, and Reflective Societies."
2. "Leadership in Enabling and Industrial Technologies."
3. "Health, Demographic Change, and Wellbeing."

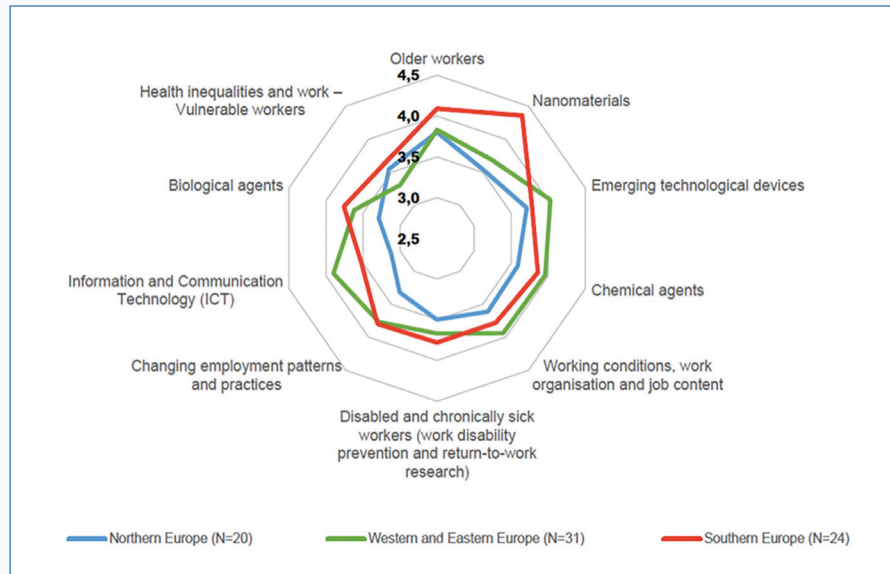
The work for the first paper was achieved in the frame of the futures project.

A review of European research priorities (Gagliardi et al., 2017) was carried out by an interdisciplinary group of PEROSH researchers from member institutes, including foresight specialists, using a modified Delphi study. The authors note that it is the first published study providing, "a reliable expression of the perspective of the European OSH Research Community together with an analysis of differences between European geographical areas."

Among the emerging topics new issues have been identified such as: "OSH management in new forms of employment (e.g., crowdsourcing, internships, zero hours contracts); impacts of innovation and new ways of working (i.e., telework, e-work, boundary less work); health and safety in human-computer interaction and the introduction of unsafe and unhealthy work equipment following the reduction of barriers to the free movement of goods." The researchers also note the high importance attributed to two transversal priorities: translation of research results into practical and effective tools; and support for OSH implementation in micro, small and medium enterprises. Figure 2 illustrates the differences in priorities by geographical area.

## Chapter 4

### Expansion of collaborative projects (2018 – 2022)



**Figure 2.** Research priorities by European geographical area on a scale of 5 (high) to 1 (low) from PEROSH study (Gagliardi et al., 2016).

### Governance

At the end of the preceding agreement 12 institutes were PEROSH members. This number rose to 14 due to the arrival of two new members:

- Switzerland: Unisanté, Center for Primary Care and Public health, member from 1 January 2019
- Sweden: SAWEE, Swedish Agency for Work Environment Expertise, member from 1 January 2020.

In 2019, PEROSH published “PEROSH strategy 2019-2023”. The vision of the PEROSH network, “PEROSH seeks impact and adds value through the exchange of knowledge and good practices across Europe to the benefit of all” was confirmed and the list of common activity detailed: research programmes, research conference, researcher exchanges.

It was also said: “Research institutes in other European countries will actively be offered membership if they have a national role and are willing to commit to our mission, vision, activities and ambitions”.

The Brexit in January 2020 has been a significant event in Europe. All members agreed to keep HSE within PEROSH. This had little consequences on PEROSH, the only one being to display HSE neutrality when PEROSH is issuing opinions or positions papers for EU policies.

### Joint activities

In the period 2018 - 2022 a lot of attention was paid to translating research evidence into OSH-policy.

New joint research projects were approved by the PEROSH Steering Committee

- Development and validation of a practical monitoring and assessment tool for injury prevention at workplaces

- International Comparison of Sampling Strategies for Hazardous Substances
- Measurements of Physical Activity & Workload
- Ergo fire fighter
- Tonal noise
- Prolonging working life
- Waste workers' exposure to microorganisms
- HiPoSisAs: Complex blue light and IR exposures
- Nanotraining
- European harmonization of exposure assessment for asbestos in the workplace
- Futures II

The benefits of the Joint Research Programme for PEROSH are fourfold. Firstly, institutes join forces so that projects draw on their European-wide pool of researchers; this enables research of a breadth and scope that could not be done by a single institute. Secondly, research teams have ready access to national-level information such as survey data, guidance for industry and health and safety professionals, how prevention measures are implemented, and grey literature, which facilitates benchmarking activities. Thirdly, institutes leverage national funding through collaboration and avoid unnecessary duplication of research activities. Finally, the diversity of research approaches and culture leads to a mutual enrichment.

Many projects address the need to both facilitate and undertake the synthesis of research evidence. The common driver across PEROSH is the importance of robust evidence to underpin and inform decision-making and advice to workplaces by national policymakers, regulators, and other stakeholders. The project aims include:

- (a)** generating or synthesising evidence that can be used at national level to underpin and inform decision making and advice for workplaces by national policymakers, regulators, and other stakeholders on healthy and safe working practices;
- (b)** collective development of practical tools and guidelines for use by OSH professionals and companies to support occupational health and safety;
- (c)** development of data review methodologies, taxonomies and databases to enable national-level research and survey data to be captured and used systematically for transnational evidence synthesis.

- (d)** comparisons of national-level health and safety practices and guidelines to identify new avenues for exploration by the wider research community to deliver common needs for Europe.

Another activity grew during this time, the organisation of information sharing workshop. They are tools to organise a project, to exchange information on emerging topics or to connect researchers working in the same thematic area. These workshops are organised at a pace of two every year.

- Work-related stress and related mental-health issues (2019)
- Metalworking fluid and respiratory ill-health (2020)
- Information sharing workshop HSE guidelines for intelligent robots (2020)
- Information sharing workshop: Innovating with virtual and augmented reality in Safety (2021)
- Information sharing workshop metalworking fluids (2021)
- EMF exposure of EAS (Electronic article surveillance) systems at workplaces (2022)
- Exoskeletons (2023)
- Interactive work (2023)

PEROSH started a programme to

stimulate the exchange of researchers amongst its member institutes funding 1-2-week visits. Such an exchange will further strengthen the collaboration between the members and benefit the career of researchers who expand their network. The exchange focuses on - but is not limited to - the current collaboration PEROSH members accomplish in the framework of the Joint Research Programme.

Some individual members of PEROSH have responded together to the public consultation in 2020 on the European Pillar of Social Rights and the new EU Strategic Framework on Health and Safety at Work. In line with the PEROSH strategy (PEROSH 2019), their position paper strongly recommends the transfer of scientific knowledge into policymaking and strives to provide the evidence that informs and underpins decisions by national and European policymakers on healthy and safe working lives. The topics addressed in this position paper were:

- Making use of European research in occupational safety and health
- A new Strategic Framework in times of COVID-19
- Digitalisation and the changing world of work
- Keep tackling work-related diseases
- Work-related spatial mobility: Mak-

- ing mobility safe and healthy
- OSH systems: meeting the needs of the changing world of work

The Covid-19 pandemic did not stop the PEROSH activities although it prevented face to face meetings and slowed down most of the projects. The use of digital tools has been stimulated and this led to an enhancement of the activity with the development of online meetings, collaborative platforms and webinars online. These are still in use after the pandemic. Although they do not replace face-to-face meetings, they are very useful tools to organise quickly meetings with many institutes.

During the pandemic PEROSH institutes have been very active to advise the public bodies, the companies, the people in charge of prevention, to qualify personal protective equipment. PEROSH organised a special directors meeting about collaboration in COVID activities the 24 March 2020. This was the beginning of various exchanges about national activities and research results regarding COVID. A common Internet PEROSH COVID platform was started within a few days by AUVA to share information between PEROSH members and outside.

This platform has been used throughout the pandemic and was open to external organisations. Lessons learned through this collaboration platform were shared on different conferences.

An emblematic event symbolising the end of this period was the PEROSH conference in Madrid, 29 - 30 September 2021. For many researchers this was the first face to face meeting in the last two years.

Moreover, intensified collaboration required an updated website and digital tools for joint activities. PEROSH updated its website in 2019 and introduced a repository where all results (articles, reports, presentations, etc.) from its joint projects and activities can be retrieved. Currently this repository has 180 results in it and these are searchable on institute's name, author's name and any other keyword one might think of. The whole PEROSH website can be searched on any key word possible.

In 2020 PEROSH issued its first e-Newsletters, but still hosted an archive of pdf Newsletters on its website. During the pandemic TEAMS was introduced as digital tool to collaborate and from 2021 onwards PEROSH webinars were organised on several themes, mostly related to the e-Newsletters just published.

29-30 September, 2022 | Brussels, Belgium | Square – Brussels Convention Centre



Madrid, PEROSH conference 29-30 September 2021. Copyright INSST.

## Chapter 5

### Facing digital and green transitions (From 2023)

#### Governance

The organisation set up in the period 2014-2018 appeared to be very efficient. However, it relies upon contracts passed between the organisation in charge of the secretariat and external contractors. This renders the change of a host organisation more and more uneasy.

It was agreed by the steering committee, at the very end of 2022, to take time to tackle this issue. The agreement has been extended, with TNO keeping the secretariat. For the first time the SC chairperson and the secretariat was not from the same organisation. This has been made possible in particular by the development of (digital) collaborative tools during the pandemic facilitating more easily remote collaborative work of the executive committee and the secretariat.

#### Joint activities

New projects are being prepared in particular one which has been suggested by the SSG, "Lessons for OSH we have learned from the pandemic".

Two additional information sharing workshops are planned for 2023:

- Interactive work: exploring and shaping the effects of the technological transformation
- Exoskeleton

In addition, new actions will be implemented as requested by the steering committee, such as action towards young researchers and possibly new strategic papers.

#### Discussion and outlook

Today, there are many developments affecting the way work is done and this

evolution is far from being over. These include new forms of work organisation such as teleworking, platform work, the increased use of information technology to prescribe work and the consequences of changes in the flow of goods around the world. Similarly, the evolution of technologies has a strong impact on the worker: Internet of Things, robotics, the arrival of artificial intelligence. Often these technologies are approached from the angle of innovation, and it is also important to analyse their consequences for occupational health. Finally, the ecological transition is impacting the processes and activities with the rise of recycling, with a potential impact on the workplace.



Collaboration with robots. Simulation of workplace at INRS. Copyright: INRS - G. Kerbaol.



Recycling of electronic waste: sustainable but also safe? Copyright NFA.



Net zero emission: Test with high pressure hydrogen at HSE. Copyright HSE.

All these developments can be factors for improving occupational health but can also be the source of new risks. These issues are of concern to the institutions in charge of OSH and PEROSH, sometimes in conjunction with EU OSHA, provides a forum for exchange.

### **Current policies bring interesting challenges and opportunities for PEROSH-activities**

PEROSH members follow national strategies defined by their governments or their stakeholders. There are convergences related to European trends but also specificities related to their mission and their national context. This diversity is a source of richness for PEROSH. They nevertheless share the common values that appear in the European strategy.

Responding to the wish to make the European Union a more social union as well, the European Commission launched the European Pillar of Social Rights in 2017 which included a chapter with key principles on 'Fair Working Conditions'.

The key principles are elaborated in the 'EU strategic framework on health and safety at work 2021-2027. Occupational safety and health in a changing world of work' (2021).

The strategic framework focuses on three crosscutting key objectives for the coming years: managing change in the new world of work brought about by the green, digital and demographic transitions, improving prevention and increasing preparedness for any potential future health crises.

In the European Pillar of Social Rights Action Plan (2021) the importance of social dialogue for 'More and Better Jobs' is emphasised. "Social dialogue, information, consultation and participation of workers and their representatives at different levels (including company and sectoral level) play an important role in shaping economic transitions and fostering workplace innovation, in particular with a view to the ongoing twin transitions and the changes in the world of work".

The European Commission has set targets that go even further and relate to the socio-economic system with wellbeing of the worker at the centre: "Industry 5.0 is characterised by going beyond producing goods and services for profit. It shifts the focus from the shareholder value to stakeholder value and reinforces the role and the contribution of industry to society. It places the wellbeing of the worker at the centre of the production process and uses new technologies to provide

prosperity beyond jobs and growth while respecting the production limits of the planet. (European Commission, 2021)"

The European Social Partners Framework Agreement on Digitalisation, signed in June 2020 by the EU's cross-sectoral social partners, reflects its signatories' shared commitment to optimising the benefits of digitalisation in the world of work and addressing its challenges. This includes work content and skills, working conditions, work organisation and work relations. The national occupational safety and health research institutes, members of PEROSH, have missions that depend on their country. What they have in common is that they are all involved in occupational health research. They are also involved in transferring knowledge to companies, occupational health experts, people in charge of prevention and their governments. All of them base their activities on solid evidence from research. As stated in the PEROSH strategy 2019-2023 "PEROSH creates and exchanges new knowledge and practice on occupational safety and health (OSH) and makes it accessible to policy makers, workplaces and other stakeholders in Europe". The 14 institutes of the PEROSH network work together to exchange views, cooperate to facilitate knowledge generation in key areas, and disseminate and exchange knowledge and information. In conclusion, I quote Trainor et al.: "Since its inception in 2003, the partnership has continued to develop and strengthen its activities and outreach" (Trainor et al., 2022).

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PEROSH position papers



## Appendix 1

### Sheffield Group directors and institutes 2005

Directors, Representatives	Institutes	Countries
Tom Fisher	National Occupational Health and Safety Commission	Australia
Diane Gaudet	IRSST, l'Institut de recherche Robert-Sauvé en santé et en sécurité du travail	Canada
Dr. Palle Ørbæk	AMI, Work Environment Institute	Denmark
Dr. Jean-Claude André	INRS, National Research and Safety Institute	France
Dr. Jenő Molnár	MKK, Public Foundation for Research on Occupational Safety	Hungary
Dr. Trygve Eklund	STAMI, National Institute of Occupational Health	Norway
Prof. Frank Pot	TNO Work and Employment	Netherlands
Prof. Danuta Koradecka	CIOP-PIB, Central Institute for Labour Protection - National Research Institute	Poland

Directors, Representatives	Institutes	Countries
Dr. David Buchanan	HSL, Health & Safety Laboratory of Health and Safety Executive	United Kingdom
David R. Wilkinson	Protection and Security of the Citizen, European Commission Joint Research Centre	Italy
Prof. Leodegario Fernández Sánchez	INSHT, National Institute of Safety and Hygiene at Work	Spain
Prof. Hans-Jürgen Bieneck	BAuA, Federal Institute for Occupational Safety and Health	Germany
Marc De Greef	Prevent	Belgium
Prof. Nicolai Izmerov	RAMS, Russian Research Institute of Occupational Health	Russian Federation
Prof. Eduard Petrossiants	Research Institute for Occupational Safety and Health Problems	Russian Federation
Menachem Schwartz	IIOSH, Israel Institute for Occupational Safety and Hygiene	Israel

Directors, Representatives	Institutes	Countries
Mustafa Cetin Ozmen	Occupational Health and Safety Centre	Turkey
Dr. Harri Vainio	FIOH, Finnish Institute of Occupational Health	Finland
Dr. Miloš Paleček	VÚPB, Occupational Safety Research Institute	Czech Republic
Dr. Ing. Karlheinz Meffert	BIA, Institute for Occupational Safety and Health of the German Social Accident Insurance	Germany
Dr. Antonio Moccaldi and Dr. Sergio Iavicoli	ISPESL, Institute for Occupational Prevention and Safety	Italy
Inger Ohlsson	NIWL, National Institute for Working Life	Sweden
Dr. John Howard and Dr. Marilyn Fingerhut	NIOSH, National Institute for Occupational Safety and Health	USA





Sheffield Group, 2007. From left to right: Sandra Munster (management assistant TNO), Marilyn Fingerhut (NIOSH), Antonio Moccaldi (ISPESL), Trygve Eklund (STAMI), Diane Gaudet (IRSST), Palle Ørbæk (AMI), Eddie Morland (HSL), Ingrid Halewijn (TNO), Frank Pot (TNO), Danuta Koradecka (CIOP-PIB), Miloš Paleček (VÚPB), Hans-Jürgen Bieneck (BAuA), Marc De Greef (Prevent), Karlheinz Meffert (BIA), Jean-Claude André (INRS), Harri Vainio (FIOH), Menachem Schwartz (IIOSH), Paulien Bongers (TNO). Copyright: TNO

## Appendix 2

### Chairpersons Steering Committee PEROSH



**2003 - 2005**  
**Frank Pot,**  
director TNO Work  
and Employment



**2005 - 2007**  
**Hans-Jürgen**  
**Bieneck,**  
president BAuA



**2007 - 2010**  
**Palle Ørbæk,**  
director-general AMI



**2010 - 2014**  
**Didier Baptiste,**  
scientific director  
INRS



**2015 - 2018**  
**Dietmar Reinert,**  
director IFA



**2019 - 2022**  
**Paulien Bongers,**  
scientific director  
TNO Healthy Living  
& Work



**2023**  
**Louis Laurent,**  
scientific director  
INRS



### Appendix 3

## Chairpersons Scientific Steering Group PEROSH



**2008 - 2015**  
**Dietmar Reinert,**  
director IFA



**2015 - 2016**  
**Andrew Curran,**  
director of science  
HSE



**2016 - 2021**  
**Mary Trainor,**  
head of science  
quality and impact  
HSE



**2021 - 2023**  
**Louis Laurent,**  
scientific director  
INRS



**2023**  
**Margrethe Schøning,**  
department  
director corporate  
governance STAMI

### Appendix 4

## PEROSH coordinators



**Nele Roskams**



**Claire Dubois**



**Daniela Treutlein**



**Jan Michiel  
Meeuwen**



## Appendix 5

### PEROSH Member Research Conferences: themes and topics aligned to sustainable and innovative workplaces that are healthy and safe

Conference year and host institute	PEROSH Member Research Conferences: themes and topics aligned to sustainable and innovative workplaces that are healthy and safe
<b>2015 CIOP-PIB, Warsaw, Poland</b>	<p>Theme: Translational Research in Occupational Safety and Health</p> <ol style="list-style-type: none"><li>1 Prevention through design: approaches and applications in light of "Industry 4.0". Including: influence of machine and human autonomy; additive manufacturing; virtual reality.</li><li>2 Ageing at work: Translational OSH Research in the context of demographic change. Including: good practice in prolonging working life; psychological and organisational aspects.</li><li>3 Tools for working environments as means of translating research into usable e-solutions. Including: promoting evidence-based ill-health management; evaluation of mental workload.</li></ol>
<b>2017 IFA, Sankt Augustin, Germany</b>	<p>Theme: Innovative solutions for occupational safety and health</p> <ol style="list-style-type: none"><li>1 Hazardous substances. Including: leading indicators to track interventions to prevent lung diseases; metalworking fluid; di-isocyanate paints; workplace monitoring methods.</li><li>2 Smart industry. Including: collaborative robots; 3-D printing; impact of change and the role of leadership; anticipated futures in digitalised full-time work at home.</li><li>3 Work-related musculoskeletal disorders. Including: psychosocial risk factors; workplace interventions; sedentary working; prevention potential of personal monitoring devices.</li></ol>
<b>2019 NFA, Copenhagen, Denmark</b>	<p>Theme: Innovative solutions for Occupational Safety and Health</p> <ol style="list-style-type: none"><li>1 Impact on society: How do we realise and measure the impact of our research outcomes to improve workplace health and safety? Including: evaluation of campaigns.</li><li>2 Sustainable and prolonged working life: How are we tackling current and emerging challenges? Including: foresight on digitalisation; training at schools; barriers and enablers.</li><li>3 Carcinogens and chemical substances: How do we deal with occupational cancer and increase awareness of chemical exposures in the workplace?</li></ol>
<b>2021 INSST, Madrid, Spain</b>	<p>Theme: Innovative solutions for Occupational Safety and Health</p> <ol style="list-style-type: none"><li>1 Pandemic and post-pandemic challenges: What are we learning and what have we learned from this crisis?</li><li>2 Building bridges across OSH boundaries: experience on projects where the tight cooperation and full understanding of other fields is needed: Industry, Education, Health, Social Services, Industry, etc.</li><li>3 Old problems waiting for innovative solutions: Innovative approaches, new technologies and fresh science or better tailored solutions for the "classic OSH" problems</li></ol>
<b>2023 SAWEE, Stockholm, Sweden</b>	<p>Theme: Safe, health-promoting and sustainable working life for all</p> <p>Special Anniversary event</p> <ol style="list-style-type: none"><li>1 Work organisation and OSH</li><li>2 Emerging, OSH questions and new techniques for exposure and hazard identification</li><li>3 Anticipating future questions</li></ol>

## List of abbreviations

<b>AMI, Denmark</b>	Arbejdsmiljøinstituttet   <a href="#">Work Environment Institute</a>	<b>INSHT, Spain</b>	Instituto Nacional de Seguridad e Higiene en el Trabajo   <a href="#">National Institute of Safety and Hygiene at Work</a>
<b>AUVA, Austria</b>	Allgemeine Unfallversicherungsanstalt   <a href="#">General Accident Insurance Fund</a>	<b>INSST, Spain</b>	Instituto Nacional de Seguridad y Salud en el Trabajo   <a href="#">National Institute of Safety and Health at Work</a>
<b>BAuA, Germany</b>	Bundesanstalt für Arbeitsschutz und Arbeitsmedizin   <a href="#">Federal Institute for Occupational Safety and Health</a>	<b>ISPESL, Italy</b>	Istituto Superiore per la Prevenzione e la Sicurezza del Lavoro   <a href="#">Institute for Occupational Prevention and Safety</a>
<b>BIA (HVBG), Germany</b>	Berufsgenossenschaftliches Institut für Arbeitssicherheit, (Hauptverband der gewerblichen Berufsgenossenschaften)   <a href="#">Institute for Occupational Safety and Health of the German Social Accident Insurance</a>	<b>MKK, Hungary</b>	Munkavédelmi Kutatási Közalapítvány   <a href="#">Public Foundation for Research on Occupational Safety</a>
<b>CIOP-PIB, Poland</b>	Centralny Instytut Ochrony Pracy - Państwowy instytut Badawczy   <a href="#">Central Institute for Labour Protection - National Research Institute</a>	<b>NFA, Denmark</b>	Nationale Forskningscenter for Arbejdsmiljø   <a href="#">National Research Centre for the Working Environment</a>
<b>EU-OSHA, Bilbao</b>	European Agency for Safety and Health at Work	<b>NIWL, Sweden</b>	National Institute for Working Life
<b>FIOSH, Finland</b>	Finnish Institute of Occupational Health	<b>Prevent, Belgium</b>	Prevent-Foundation
<b>HSL/HSE, United Kingdom</b>	Health & Safety Laboratory of the Health and Safety Executive	<b>SAWEE, Sweden</b>	Myndigheten för arbetsmiljökunskap   <a href="#">Swedish Agency for Work Environment Expertise</a>
<b>IFA, Germany</b>	Institut für Arbeitsschutz der Deutschen Gesetzlichen Unfallversicherung   <a href="#">Institute for Occupational Safety and Health of the German Social Accident Insurance</a>	<b>STAMI, Norway</b>	Statens arbeidsmiljøinstitutt   <a href="#">National Institute of Occupational Health</a>
<b>ILO</b>	International Labour Organization	<b>TNO, The Netherlands</b>	Nederlandse Organisatie voor Toegepast Natuurwetenschappelijk Onderzoek   <a href="#">Netherlands Organisation for Applied Scientific Research</a>
<b>INAIL, Italy</b>	Istituto Nazionale per l'Assicurazione contro gli Infortuni sul Lavoro   <a href="#">Italian Workers Compensation Authority</a>	<b>Unisanté, Switzerland</b>	Unisanté   <a href="#">Center for Primary Care and Public Health</a>
<b>INRS, France</b>	Institut National de Recherche et de Sécurité pour la prévention des accidents du travail et des maladies professionnelles   <a href="#">National Research and Safety Institute for the Prevention of Occupational Accidents and Diseases</a>	<b>VÚPB, Czech Republic</b>	Výzkumný Ústav Bezpečnosti Práce   <a href="#">Research Institute of Occupational Safety</a>
		<b>WHO</b>	World Health Organization



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Second PEROSH  
Research Conference Germany 2017.  
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PEROSH SC meeting, Bonn, 2018, renewing the agreement.  
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PEROSH SSG meeting, Helsinki, 2019.  
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