Editorial
Guy Ryder, ILO

A new practical Global Coalition on Safety and Health at Work
Pirkko Mattila, Finland, Nancy Leppink, ILO, Jukka Takala, ICOH

Understanding the functioning of OSH knowledge agencies, institutions and organizations
Focus on administrative and scientific governance
Claude Donald Loiselle, ILO

Scope of research conducted by agencies, institutions and organizations engaged in OSH knowledge development
Sara Luckhaupt, NIOSH, CDC, USA, Giuliana De Rosa, ILO

OSH information development and international networking
Suvi Lehtinen, Finland

Provision of occupational health services
Jorma Rantanen, Finland

New Web Portal on OSH Agencies, Institutions and Organizations
Giuliana De Rosa, Claude Donald Loiselle, ILO

Crucial role of OHS experts’ training and education
Kari Reijula, Suvi Lehtinen, Jorma Rantanen, Finland

Mobilizing for prevention in West and Central Africa
Nogbou Alphonse Ahoua, IAPRP, Yves Brou Yeboue Kouame, CNPS, Karidja Kaba Toure, MEPS
Georges Kassi, CACRNP, Ivory Coast

Multiple case study on regional OSH networks
Jorma Rantanen, Finland

A forum for collaboration and knowledge development among OSH experts
Valeria Boccuni, Diana Gagliardi, Carlo Petyx, Pierluca Dionisi, Erika Cannone, Sergio Iavicoli, ICOH

ILO global survey and OSH networking discussed in Singapore
Suvi Lehtinen, Finland

ILO internships
Safe and healthy work is a human right and is a foundational element for sustainable development. And yet some 2.78 million workers continue to die each year from work-related injuries and illnesses, the overwhelming majority (2.4 million) from work-related diseases.

The global economic impact is estimated to amount to 3.94 percent of annual global GDP. Such numbers, along with the growing body of evidence of the benefits of sound Occupational Safety and Health practices, have resulted in a steadily increasing demand for qualitative improvement in the safety and health for all at work.

The toll on human lives from workplace accident and injury today is unacceptable and entirely avoidable – and it is imperative that we act together to make a difference. OSH challenges are a global challenge and as such require global solutions. To this end, the ILO recently joined with partners at the XXI World Congress on Safety and Health at Work in calling for a global OSH coalition.

We must give priority to those most vulnerable at work, including workers in the informal economy and migrant workers. The ILO has highlighted this including in the 2016 report, *Non-standard employment around the world,* and is working to address their concerns including in the Fair Recruitment initiative and in the development of the United Nations Global Compact on Migration.

The ILO is piloting a methodology for identifying OSH vulnerabilities in agricultural supply chains and developing targeted interventions including assisting OSH institutions to strengthen capacities and engaging stakeholders to improve national OSH systems and compliance.

Another area of concern is the need for reliable OSH data that is globally comparable, based upon national data collection systems that can accurately identify and compile statistics on the number of work-related injuries and diseases.

Creating mechanisms for sharing OSH data, knowledge and expertise and finding the means to sustain such networks, is crucial to meeting the new OSH challenges. This special issue newsletter highlights the ILO’s recently completed global survey establishing a comprehensive compilation of OSH institutions, organizations and agencies and their scope of work, and the ongoing support for existing international and regional networks. Efforts such as these and the proposed global coalition on OSH are essential to ensure effective and widespread collaboration and knowledge sharing.

Lastly, we need to anticipate the impact that future jobs and ways of organizing work will have on the safety and health of workers. In doing so, the ILO is promoting a proactive prevention based approach to improving safety and health efforts, rooted in key ILO conventions 155 and 187 in the framework of its Future of Work Initiative.

To achieve a future of work we want, we must draw on the talents of the forty million young people entering the world’s labour markets every year; they are the best educated generation our world has ever seen. Their creativity, energy and skills can yield a high demographic dividend. It calls for investment in youth employment – in decent jobs for young people in which a preventative safety and health culture is an indispensable component.

Mr. Guy Ryder
Director-General
International Labour Organization
ILO head calls for global coalition on safety and health at work

"It has clearly been recognized that certain OSH challenges are also global challenges that require global solutions," said Director General of the ILO, Mr. Guy Ryder. New research data point to a growing body of evidence of the global cost of failing to adequately address existing and emerging occupational safety and health (OSH) concerns, and of the importance of OSH for sustainable development.

The Global OSH Coalition aims to implement the occupational safety and occupational health targets of the UN Sustainable Development Goals through concerted, focused action. It will contribute to fulfilling the commitments that have been made over the last decade in global and regional forums to protect the safety and health of the workers around the world, including those articulated by the UN SDGs, G7, G20, EU, African Union and ASEAN Ministers, and to sustainable development by improving safety and health at work. The Global OSH Coalition will establish targeted priorities and engage in focused action to devise solutions to global OSH challenges. It is a coalition, in which needs and resources can meet and will be translated into practical action.

Recent research data show huge imbalances between the health and safety of workplaces in developed countries and developing countries (1–3). The majority of the global workforce is comprised

A new practical Global Coalition on Safety and Health at Work

At the 21st World Congress on Safety and Health at Work in Singapore in September 2017, the Finnish Minister of Social Affairs and Health, Ms. Pirkko Mattila who is in charge of safety and health at work, announced an initiative to create a new global coalition to implement previously agreed upon declarations and commitments. The Finnish Minister’s idea of a global coalition was strongly supported by the Director General of the ILO, Mr. Guy Ryder during his speech for the opening session for the World Congress. The WHO, ICOH, several other international and regional organizations, and the European Union and the European social partners have also offered their support for the creation of a global coalition.

“We were also impressed by the enthusiastic support for the new initiative, Global OSH Coalition, initiated by Finland during the event. The ILO, WHO, EU, ICOH, IALI, ISSA, the European social partners and Singapore WSH Institute voiced their support for the Coalition. After the Congress, many other organizations and experts have supported the concept of jointly putting agreed OSH principles and declarations into practice. There seems to be a need for joint action.”

Ms. Pirkko Mattila, Minister of Social Affairs and Health, Finland
of several underserved and underprivileged groups of workers: female workers, young workers, ageing workers, workers in small-scale enterprises and the informal sector, migrant workers, child workers, people with poor health status and lowered work ability, and those lacking training and education. They often experience unemployment or underemployment, are exposed to highly hazardous working conditions, lack of legal and social protection, and poverty. Although globalization has improved the situation in many respects, there is also evidence of growing inequalities between the most and least advanced fractions of the global world of work.

The Global OSH Coalition will establish a flexible and enabling governance structure. The ILO will take the Chair and fund a technical secretariat. The Chair will aim to fully integrate the Coalition’s work with initiatives under the UN SDGs related to health and decent work, the G7 Vision Zero Fund focus on OSH global supply chains, the G20 Ministerial Declaration on OSH, and the ILO global OSH flagship programme, Global Action for Prevention.

The membership and organization of the Global OSH Coalition is currently being developed to allow for interested ministries, organizations, institutions and social partners working in the area of OSH to contribute to the work of the Global Coalition and participate in task groups that will address issues such as undeclared work, OSH data and indicators, and enterprise-based zero accident programmes, identified by the Coalition as priority areas for task group work.

The practical approach of the Global OSH Coalition is demonstrated by its immediate continuation of the Task Group (TG), which produced the update of the global estimates of occupational accidents, diseases and costs presented at the Congress in Singapore. The figures announced by the ILO in Singapore were a result of research by Finland, Singapore, the EU, and the International Commission on Occupational Health (ICOH), with the support of ILO (1) (see figure below). This TG will develop more detailed data and evidence, as well as indicators to allow for knowledge-based and unified focusing of resources to implement existing strategies, such as the EU OSH strategic framework and modernization programme.

If the imbalances of work life are not eliminated, the SDGs will not be achieved. Most of the means, research knowledge, information, methods, skills, and human and financial resources to reach the ambitious objectives are available somewhere in the world. They need to be taken into use and shared with all, particularly those with the greatest need. In addition to the challenges of global governance and adoption of international OSH standards, this is also the challenge of global information collection and sharing that is needed in order to learn from good practices that are necessary to achieve the required balance.

References

Modernizing ILO international networking in OSH

International networking in OSH is of paramount importance to the ILO. Building on 55 years of collaboration with CIS National and Collaborating Centres, the ILO engaged the modernization of its networking practices in OSH knowledge and information during the last CIS annual meeting held in 2013 in Turin. Fifty-six representatives of 41 CIS Centres attended this meeting to provide guidance for planning and organizing the future development of their network. Together, the participants worked to consolidate their cooperation by collectively defining a new, modern international networking model for strengthening institutional capacities to acquire and globally use knowledge for prevention. They asked to adopt a need-based approach to knowledge and information development in order to formulate a new strategy and programme framework designed to respond to the priority needs of OSH knowledge agencies, institutions and organizations (AIO), i.e. OSH agencies; research institutes, universities and research chairs; and professional associations and, at times, employers’ and workers’ organizations. Their joint participation in the governance of AIOs is key to ensuring that the outcomes of OSH knowledge development efforts meet quality standards and priority workplace needs.

Methodology

With financial support from the Government of the Republic of Korea and voluntary technical contributions, a global survey of AIO and an analysis of regional networks were undertaken to constitute the first comprehensive knowledge base on their status, governance and internal organization, resources, research priorities, scope and pricing of services, information and awareness-raising activities, and international networking practices. The information on 159 AIOs from 67 countries was recorded in accordance with a strict set of criteria. This article presents some of the results related to the governance modalities of a subset of 78 government agencies and institutions (Group 1) and established research centres, university chairs and recognized research groups (Group 2) that are specifically engaged in OSH knowledge development. It covers data from 48 countries of various regions and economic development levels. Governance modalities were analysed from three complementary angles: supervision, administrative oversight and scientific guidance.

Governance of AIO

The governance modalities of AIOs either directly or strongly influence the decision-making outcomes on strategic development and daily operations in terms of the organization, conduct and dissemination of scientific work. Decision-making authority is shared among key stakeholders which include selected ministries or public authorities, scientists, academics, professional associations and, at times, employers’ and workers’ organizations. Their joint participation in the governance of AIOs is key to ensuring that the outcomes of OSH knowledge development efforts meet quality standards and priority workplace needs.

Supervision

Nearly all AIOs operate under the supervision of a higher authority, and only 6.5% indicated having no reporting obligations. On average, 18% of AIOs report to more than a single entity, this being less often the case for government-related AIOs (11.8%) than for non-governmental AIOs (24.4%). A majority (60%) of established research centres, research institutes, chairs, partnerships, or consortia function within the framework of, and report to, a university structure, somewhat independently from the world of work.

If AIOs report to a single entity, on average this entity is more likely to be the Ministry of Labour (27.3%) than the Ministry of Health (20.8%), although more than 25% of respondents indicated reporting to other ministries; mainly ministries of social affairs, work or employment. This confirms the predominant linkage to ministries of labour, work, social affairs and/or employment for almost half of government related AIOs. Reporting exclusively to the ministry or authority responsible for social security appeared to be anecdotal (2.6%).

1 In 2013, the functions of the International Occupational Safety and Health Information Centre (ILO CIS) were subsumed into the larger ILO portfolio of OSH activities by decision of the ILO Governing Body.
Administrative oversight
On average, 72% of AIO operations are supervised by an administrative board. Some are exclusively constituted of scientists or OSH professionals (Type I – Scientifico/Professional); a majority are constituted of government representatives from either one, two or more ministries (Type II – Ministerial); and others are primarily bipartite, with an equal number of representatives of employers’ and workers’ organizations (Type III – Social Partnership).

I - Scientifico-Professional (10.7%): Members are exclusively scientists and/ or OSH professionals.

II.a - Mono-ministerial (44.6%): Only one ministry. Sometimes with representatives of employers and workers.

II.b - Dual-ministerial (14.3%): Two ministries, usually with representatives of employers and workers.

II.c - Multiple-ministerial (10.7%): Ministries of Labour, Health and Social Security, at times others and, in most cases with representatives of employers and workers.

III - Social Partnership (19.6%): Bipartite administrative board, with an equal number of representatives of employers and workers. The government usually adopts a supportive role, observes or chairs. In some cases, chairmanship alternates between employers and workers.

Scientific guidance
Slightly more than half of AIOs benefit from the guidance of a scientific advisory committee (SAC). A closer look at membership reveals that scientists are found on 80% of them, government representatives on 50%, and representatives of employers and workers 30% of all SACs. Of the committees with scientist members, more than half have no representatives of government and 68.8% have no representatives of employers or workers organizations.

It is worth noting that 45.5% of the SACs of non-governmental AIOs (Group 2) are exclusively made up of scientists, the proportion of which drops to 11.1% in government-related AIOs. Likewise, when considering the type of scientist members of the SACs, independent scientists are found in 72.7% of non-governmental AIOs but only in 33.3% of government-related AIOs (Group 1). Scientists designated by employers’ and workers’ organizations are SAC members in an almost equal proportion, 15% and 12.5%, respectively, i.e. 1/7 or 14.1% on average.

Conclusion
This survey was the first to document the governance modalities of AIOs. Although multiple stakeholders are involved in decision-making concerning OSH knowledge development, opportunities seem to exist for more inclusive governance of AIOs and a stronger connection with the world of work.

Better understanding of how AIOs relate to the national OSH system is also of paramount importance. Further studies of OSH knowledge AIOs should aim to document the quality of dialogue among stakeholders and the decision-making processes within administrative boards and scientific advisory committees.

Claude Donald Loiselle, ILO
Email: loiselle@ilo.org
In 2016, the ILO conducted a global survey of the agencies, institutions and organizations (referred to hereafter as ‘organizations’) engaged in developing occupational safety and health (OSH) knowledge. The overall aim of the survey was to build a comprehensive knowledge base of the scope of work, governance modalities, research, services, and networking practices of these organizations. The survey had several sections, but the presentation summarized here focuses on the information collected on the organizations’ scope of research.

Introductory questions helped categorize the responding organizations into five groups based on organization type. Although we collected data from all five groups (159 respondents in all), the results were limited to 78 organizations belonging to two groups: government agencies (n = 37) and research centres (n = 41).

The respondents in each of these groups were from countries that varied widely in terms of geography and income. The five respondents from Africa represented five different countries; 18 respondents were from the Americas, representing six different countries; one respondent was from a single country in the Arab States; 15 were from 11 different countries in Asia and the Pacific; and 35 were from 25 different countries in Europe and Central Asia. Each region had respondents from both government agencies and research centres. The respondents of each organization type of each region varied according to the income level of their country, with 10.8% of respondents from individual countries being from lower middle-income countries, 23% from upper middle-income countries, and 66.2% from high income countries. Four respondents represented regional (multi-country) organizations (1 in the Arab States, 1 in the Americas, and 2 in Europe and Central Asia).

The respondents in each category also varied in terms of their level of engagement in research. Most (78.4%) government agencies and all research centres reported that they directly performed research themselves. Many also reported that they funded others to conduct research and/or collaborated with other organizations conducting research without providing funding.

On a scale of 1 (not important) to 4 (very important), the government agencies considered national OSH policy priorities the most important factor when setting research priorities, followed by government OSH strategies. Specific interests or research staff’s areas of expertise were considered the least important. Research centres assigned higher importance to technical considerations, such as the need for more research in the area, and the potential impact of research on the topic. Research centres considered international organizations’ priorities the least important factor, although government agencies rated this factor fairly highly. (Figure 1)

The organizations were also asked about the types of research they conduct. Overall, the most commonly conducted types of research reported by all respondents were surveys (83.3%) and qualitative studies (79.5%). Epidemiological studies, intervention studies, and laboratory research were each conducted by between 48% and 61% of respondents. In addition to the types of research specifically listed in the survey, approximately 20% of organizations indicated that they also conducted other types of research (e.g., longitudinal intervention studies, research on legal matters, field observations and other applied research). In all categories and income groups, each respondent reported performing between three and four types of research, indicating a highly diversified spectrum of research typologies within the same organization.

The next section of the survey collected data on the scope of the research topics covered by the responding organizations. Seventy-four respondents selected at least one of the research topics listed. On average, each responding organization reported performing research on 42 of the 90 given topics. The topics were categorized into five areas: health outcomes, risks or hazards, industry sectors, categories of workers, and other OSH topics.

Of all the research topics listed in the survey, five of the six most often selected belonged to the research areas of health outcomes and risks or hazards. The top three topics, Stress and mental health disorders, Ergonomics and Psychosocial risks, were investigated by about 80% of respondents overall, and an even higher proportion of research centres. These

Sara Luckhaupt, NIOSH, CDC
Giuliana De Rosa, ILO

Scope of research conducted by agencies, institutions and organizations engaged in OSH knowledge development

Issue: International Newsletter on Occupational Health and Safety 2018; Special Issue: 8–9
topics were also among those most often marked as high priorities.

Among the topics categorized as health outcomes and risks or hazards, most respondents also selected Occupational cancer, Respiratory diseases, Other chemical hazards, and Dust and fumes as topics included in their research programmes. The most commonly covered industry sectors were Construction and Human health and social work activities.

There were some notable differences in the likelihood that certain topics were included in respondents’ programmes based on respondents’ income categories. For example, Stress or mental health disorders and Nanotechnology were more likely to be included in programmes in higher income countries. However, Dust and fumes and Pesticides were more likely to be included in lower income countries. Human health and social work sector was also more likely to be covered by research programmes in higher income countries, and Water supply and Mining sectors in those of lower income countries.

When considering the various special categories of workers, most respondents reported that their programmes covered Older workers, Women workers and Young workers. Fewer respondents reported covering Domestic workers, Child labourers or Home workers. As regards other OSH topics, most respondents reported that their programmes covered OSH education and training, OSH management systems, and Occupational health services. Fewer respondents’ programmes covered Small and medium-sized enterprises, Microenterprises, and OSH in the informal economy.

In conclusion, many organizations throughout the world are engaged in a wide variety and broad scope of research related to OSH. Understanding their coverage, priorities, and communication channels is of paramount importance for building a comprehensive knowledge base to facilitate international networking. More survey results regarding research scope will be presented, along with information on the governance modalities, resources and activities of the surveyed organizations, in a forthcoming ILO Technical Report.

**Acknowledgements**

We would like to acknowledge the rest of the core survey team: Claude Loiselle, Suvi Lehtinen, Jorma Rantanen, and Tzvetomira Radoslavova; and all members of the ILO – Modernizing International Networking in OSH Knowledge and Information – Project International Advisory Committee (PIAC).

Sara Luckhaupt, MD, MPH
Division of Surveillance, Hazard Evaluations and Field Studies, NIOSH, CDC
Email: sluckhaupt@cdc.gov

Giuliana De Rosa, MRes
Labour Administration, Labour Inspection and Occupational Safety and Health Branch, ILO
Introduction
The ILO International Occupational Safety and Health Information Centre, ILO-CIS, founded in 1959, created an early basis for the electronic handling of OSH information. Since then, the development of ICT and the internet have greatly changed the landscape of OSH information services. In order to examine the status of global OSH information, in 2016 the ILO carried out a global survey among the world’s OSH agencies, institutions and organizations (AIO). Here, we report on the information activities of 78 governmental OSH agencies (N = 37) and OSH research institutes (N = 41) from 48 countries.

Solid information – a basis for well-grounded decisions
The ability of the AIOs to provide the contents for their information services is dependent on several resources, including in addition to their own expert staff members, external information providers, such as research publications and other available media. Their own in-house research activities constitute a basis for understanding and interpreting the results of overall scientific research. Thus, there is an interdependence of information activities and research. The results of scientific research need to be translated into policy briefs to support political decision-makers in their strategic decisions and into practical guidelines for workplaces to help day-to-day decisions on the shop-floor level.

Research – a basis for reliable information
The vast variation in the information needs of OSH actors poses great challenges to the content of OSH information. Regardless of the type of users or the level of decision-making, this information must be scientifically sound and based on evidence. Where scientific research is not sufficiently available, expert knowledge and experience may be used. The cornerstone of OSH information production and dissemination is its reliability. This is ensured by competent institutions in the field of OSH, which have adequate quality management systems (e.g. peer reviews, good research practices and quality assurance systems for publishing and ethical conduct).

As for quality control, in the global survey, more than half of the respondents (40/78) reported having a Scientific Advisory Committee. The ethical review on research proposals was conducted by 68 out of 74 respondents (92 per cent). A total of 83 per cent of the respondents had a written research strategy, and half also had a written publishing policy.

Multiple communication channels needed
Almost all respondents were engaged in OSH research and/or studies. The prioritized communication channels (N=73) for sharing research results among the scientific community were: presentations in scientific meetings (96%), research reports (50.7%), policy briefs (37.0%, i.e. 50.7%) and textbooks (27.4%, i.e. 39.7%). When sharing the results with the public at large, two-thirds of the respondents (N=47, 64%) collaborated with the traditional media through press releases. Posters and leaflets, as well as popularized articles in trade journals were used to the same extent as the newer channels of social media (59% each, N=43). (Figure 1)

Public awareness-raising activities
A wide variety of channels is available for disseminating information and raising awareness regarding OSH. The selection of an appropriate channel depends on the needs of the target group and the information content. In order to be effective, awareness-raising activities require repetition of their message and the use of a multiple set of various media that complement each other.

A total of 64 of the 78 respondents (82%) were actively engaged in public awareness-raising (PAR) activities. Websites were reported as the most used media for PAR activities (61/64, i.e. 95 per

---

**Figure 1. Communication channels, N (%) of responses (N=73)**

<table>
<thead>
<tr>
<th>Communication Channel</th>
<th>N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research reports</td>
<td>63 (86.3%)</td>
</tr>
<tr>
<td>Guidelines and recommendations</td>
<td>46 (63.0%)</td>
</tr>
<tr>
<td>Textbooks</td>
<td>37 (50.7%)</td>
</tr>
<tr>
<td>Policy briefs</td>
<td>20 (27.4%)</td>
</tr>
<tr>
<td>Peer-reviewed journal articles</td>
<td>55 (75.3%)</td>
</tr>
<tr>
<td>Presentations at scientific professional meetings</td>
<td>47 (64.4%)</td>
</tr>
<tr>
<td>Press releases (traditional media)</td>
<td>70 (95.9%)</td>
</tr>
<tr>
<td>Popularised articles (e.g. trade journals)</td>
<td>43 (58.9%)</td>
</tr>
<tr>
<td>Social media</td>
<td>43 (58.9%)</td>
</tr>
<tr>
<td>Fact sheets</td>
<td>29 (39.7%)</td>
</tr>
<tr>
<td>Alert letters</td>
<td>11 (15.1%)</td>
</tr>
<tr>
<td>Posters and leaflets</td>
<td>43 (58.9%)</td>
</tr>
<tr>
<td>Videos</td>
<td>35 (47.9%)</td>
</tr>
<tr>
<td>Other</td>
<td>12 (16.4%)</td>
</tr>
</tbody>
</table>
Group 1 and Group 2 AIOs of the ILO global survey reported having a total of 14,091 professionals and 13,425 support staff members who could contribute to information production (N respondents, 66 and 62, respectively). This forms a multidisciplinary resource base for OSH research, information dissemination and the provision of OSH services. A good number of the respondents also collaborated with other organizations in the implementation of various activities, which further expands the available resources. However, despite this number of available experts, globally there is a general shortage of human resources in OSH, with large differences among countries.

International networking – a basis for effective sharing and learning

In today’s work life, international institutional and professional collaboration and networking are typical features of OSH research and information and collaboration in general. The networks provide forums for sharing and exchanging information, for joint projects, training and education; for quality assurance of scientific research; and for learning from peers. The internet and ICT have provided new opportunities and efficiency for access to and the dissemination of information, and for information processing, deposition and knowledge management. Traditional face-to-face communication, however, is still the core of international networking that aims for impact, as achieving influence and the impact of information is not only a question of availability, but also of acceptability, feasibility and deep understanding of content.

The number of contacts with individual national institutions or other professional networks in the ILO global survey was relatively modest, while contacts with International or Regional organizations,
Table 1. Frequencies of international network partners named by respondents

<table>
<thead>
<tr>
<th>Name of partner</th>
<th>Number of nominations</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSN</td>
<td>5</td>
</tr>
<tr>
<td>ENETOSH</td>
<td>4</td>
</tr>
<tr>
<td>EU-OSHA</td>
<td>11</td>
</tr>
<tr>
<td>EUROSNET</td>
<td>4</td>
</tr>
<tr>
<td>ICOH</td>
<td>6</td>
</tr>
<tr>
<td>ILO + ILO-CIS</td>
<td>16+2</td>
</tr>
<tr>
<td>ISSA</td>
<td>7</td>
</tr>
<tr>
<td>PERSOSH</td>
<td>7</td>
</tr>
<tr>
<td>Sheffield Group</td>
<td>4</td>
</tr>
<tr>
<td>WHO</td>
<td>20</td>
</tr>
</tbody>
</table>

In addition, 81 various institutions or networks were mentioned 1-3 times.

Introduction

The practical improvement of working conditions, the prevention of health and safety hazards and occupational diseases at the workplace, and the protection of workers' health and work ability often requires external occupational health services (OHS), as guided by ILO Conventions No. 161 (1), No. 155 (2) and No. 187 (3). Several models and channels for these services are available from both public and private providers (4). The ILO global survey focused on the provision of services provided by government agencies and institutions (Group 1), research institutions and universities (Group 2), and professional associations active in OSH (Group 5). Here we discuss the services provided by Group 1 and Group 2 collectively referred to as Knowledge Organizations. The total number of respondent Group 1 + Group 2 institutions was 78.

Provision of OHS by Knowledge Organizations

The provision of OHS in this survey varied only slightly between the two types of organizations (Group 1 and Group 2). A half of Group 1 and Group 2 organizations provided services; one third directly to workplaces and a sixth indirectly through mediators, via the public health system or insurance. Within the Group 2, however, universities and research groups were less active; one third provided services and two thirds of these providers did so indirectly through mediators, the public health system or insurance (Figure 1). Service provision by public and private institutions was equally active.

The income level of countries had an impact on Knowledge Organizations’ service provision activity. All institutions of low- and middle-income countries (LMIC), and two thirds of those in upper-middle income countries (UMIC) provided OHS, whereas only one third of high-income countries (HIC) institutions provided services, only 25% of these doing so directly. The more advanced countries, which in general have a higher coverage of OHS also use several other service provision channels, for example, companies’ own in-house services, companies’ group services and commercialized services.

In order to fill the large global gap in the coverage of OHS, the ILO, WHO and ICOH promote the provision of basic OHS, BOHS (5). A third of the respondent institutions provided support for BOHS. These activities were originally intended for SMEs and the self-employed and informal sector, mainly in LMIC and UMIC countries, but in the ILO global survey, provision of BOHS was reported more by the HIC countries’ institutions.

Conclusions

Existing information resources could be better utilized if electronic information was easily accessible according to the needs of users. The internet and websites are widely used among the survey respondents. An electronic information forum for ILO-OSH, including the profiles of the AIOs, would offer an excellent opportunity for sharing OSH information and a basis for more productive networking.

The development aid programmes and the technical assistance programmes of International Organizations could also contain elements and funding for networking, as such collaboration could enhance the impact of learning from peers.

Suzi Lehtinen
Finland
Email: suvi.a.lehtinen@outlook.com

Provision of occupational health services

Jorma Rantanen, Finland
tion and assessment of the risks from health hazards’, ‘Surveillance of factors in the working environment and working practices’, ‘Advice on occupational health, safety and hygiene and on ergonomics, and individual and collective protective equipment’. Worker-oriented activities such as ‘Surveillance of workers’ health in relation to work’, i.e. health examinations, ‘Collaboration in providing information, training and education’, ‘Participation in analysis of occupational accidents and diseases’ were also widely reported by HIC and LMIC respondents. Some individual worker-oriented services, such as first aid treatment and rehabilitation, were reported either rarely (11.1%) or not at all by the respondents from HIC countries.

The more advanced type of services, such as ‘Advice on planning and organization of work’ were directly provided by only one fourth of LMIC institutions, but much more often, by a half, according to UMIC and HIC countries’ respondents.

Provision of occupational safety and health services, OSH
Occupational safety and health services are guided by ILO Convention No. 155 on Occupational Safety and Health. OSH services require competence in safety engineering, risk assessment, accident prevention and overall improvement of work environment and work organization. OSH experts are often supported by ergonomists, occupational hygienists and experts in risk assessment, toxicologists, and particularly occupational health physicians and nurses.

A number of specific OSH services were provided by the respondent institutions (Figure 3). Most of these were work environment-oriented. All LMIC respondents, 87 per cent of UMIC respondents and 41 per cent of HIC institutions, also assessed compliance with laws and regulations, which is a legitimate task of OSH inspectors. In other words, lower income countries respondents seemed to be delegated with both, services and enforcement.

Research
A third, 35 per cent, of direct service providers also carried out research on oc-
Occupational health. Their research was relevant, and associated with the typical risks and practical problems found in OHS such as organic solvents, dusts and fumes, and extreme temperatures. Service providers carrying out research also often included training in their agenda.

Over one third of respondents did both, provided BOHS services and conducted occupational health research. Similarly, support for the establishment and implementation of OSH management systems was associated with research on this theme.

The service providers collaborated with external bodies in the development and practical provision of services. Government agencies, universities and workers’ organizations were the most common partners of the service providers.

**Financing and pricing of services**

Several alternative financing systems are available for OHS, including private non-profit services such as full financial responsibility of the employer either directly or through insurance; joint financing of group services by several smaller companies; or financing from the public health budget, social insurance, or private-for-profit financing. The direct providers of services who needed to generate over 50 per cent of their funding from external sources tended to set service fees. On the other hand, half of the respondents whose main source of funding was from other sources, for example, public budget, did not report chargeable services. In addition, the pricing policy was dependent on the financing model. Only 12.5 per cent of service providers in HIC countries served for profit, whereas the respective figure among the providers of LMIC was 37.5 per cent and 33.3 per cent in UMIC countries. They seemed to use the services-for-profit fees as a source of their overall financing.

**Communication**

The service providers were asked which of 11 different communication channels they used for promoting their services. In general, the use of various channels was very rich; all were in active use and the majority was used by over half of the providers. Government agencies (Group 1) used them systematically more actively and were more versatile than research institutes, universities and research groups (Group 2). The website was the most commonly used channel, followed by public meetings, social media, mediators, newspapers, and workplace visits. The traditional channels; newspaper, radio and television, were utilized notably less than research institutes, universities and research groups.

**Governance**

Governance modalities (notably, the presence and composition of an Administrative Board, AB) did not seem to be directly associated with the overall activity of the provision of OHS as a whole. Their presence, however, appeared to play a role in designing the content of services. The participation of the social partners in particular seemed to be associated with the general development of a more work environment-oriented content of services and their provision on a non-profit basis. The presence of a scientific advisory body seemed to support collaboration with external partners in service provision; with government bodies and universities.

**Conclusions**

Occupational health services are an important instrument for protection and promotion of workers’ health and work ability. Government agencies are more active in service provision, in the comprehensive content of services and in the use of various communication media.

In general, there is a need to extend coverage and develop the content of OHS and OSH services globally. This development is effectively guided by ILO Conventions No. 161, No. 155 and No. 187. To solve the problems of coverage and content of services, we recommend the promotion of these international instruments by International Organizations and ratification and implementation by all countries, particularly by UMIC and LMIC countries.

**References**


---

Figure 3. Typical OSH services provided by Knowledge Organizations (%)


---

**Figure 4. Use of various communication media for promotion of services (Group 1 N = 31; Group 2 N = 39)**

**Jorma Rantanen, Professor**
Visiting Scientist
Helsinki University
Email: jorma.h.rantanen@gmail.com

---

**ICOH News**

International Congress on Occupational Health
ICOH 2018
29 April - 4 May 2018
www.icoh2018.org
The International Labour Organization (ILO) has launched a new web portal in the form of a global database on OSH Knowledge Agencies, Institutions and Organizations (AIOs). This unique source of information was developed with the aim of improving knowledge and information sharing around the world, and of supporting the development of new collaboration between AIOs on priority topics of interest.

The innovative database was developed as part of ILO efforts to modernize international OSH networking, building on the former CIS experience (1959-2013). Organizations featured in this database include governmental agencies, research institutes, professional associations and other civil society organizations, workers’ or employers’ organizations, and national or sector-based consultative bodies actively engaged in undertaking, developing and sharing knowledge information for prevention.

The majority of organizations that responded to the ILO global survey conducted in 2016 agreed to be featured on the new web portal, thus constituting the current knowledge base that the database draws from. This initial content is expected to grow rapidly as AIOs discover its existence and potential. The information available covers the main functions, governance and resources, research areas and strategy, delivery of services, public awareness-raising activities, and international networking practices of 159 AIOs from 67 countries, and 15 international AIOs. It also includes sections with contact information and instructions on how to access the organizations’ knowledge resources.

The database is available to the public for consultation. Users can browse information and download source documents such as reports and publications as they are made available by the AIOs. The portal makes searching content easy and allows the extraction of information by country and/or topic. It is integrated into the ILO information technology environment and thus allows cross-referencing with other information sources such as LEGOSH, which covers national legislation in OSH (www.ilo.org/legosh). Contact information is made available so that AIOs and users can engage directly with another in order to initiate direct exchanges of experience on research, service provisions and/or public awareness-raising.

The new web portal was developed with a view to facilitate the active participation of AIOs for content provision. An AIO designated contact person can contribute and/or update information directly into the database by using personal login credentials that are provided and managed by the ILO administrator. The modalities for incorporating new information follow a series of steps that are meant to ensure the quality and reliability of the information featured: Contribute, Review, Approve and Publish. AIOs participate as contributors and the information is relayed to the ILO for interactive review and approval upon completion. As the administrator of the database, the ILO approves and publishes the overall content on the web portal. AIO-related information on the web portal can be modified or updated in the background and later published or withdrawn at any time. Simple step-by-step guidelines for the data entry process are provided for AIOs, along with friendly advice from the ILO responsible officials.

The new web portal and its corresponding database aim to generate a virtuous circle of OSH knowledge and information sharing. It is a tool to connect institutions and people with the knowledge they need to advance prevention. AIOs from around the world are encouraged to contribute to the database and be featured on this new web portal, share information on their activities and achievements, and connect with peer organizations and experts.

Further information is accessible through the ILO knowledge base in OSH: www.ilo.org/safework/info/lang--en/index.htm.

Please contact the ILO at osh-survey@ilo.org to feature your AIO on the new web portal.
Figure 1. Screenshot from the Public Web page of the OSH database, capturing the themes and content of a contribution

Figure 2. Screenshot from the Public Web page of the database, capturing content from the 'Knowledge development' section of a contribution
Crucial role of OHS experts’ training and education

Work life and organizations all over the world are undergoing rapid changes. At the same time, the working population is developing dynamically as regards ageing, migration and the competence structures of employees. This all emphasizes the important role of occupational health (OH) in preventing work-related adverse health effects, but also in maintaining the work ability of all employees. The quality of OH services (OHS) is closely related to the competence of OH personnel. OHS cannot be of good quality unless OH experts are well trained. OHS action models and tools are useless if the personnel is not properly qualified to use them.

Numbers of OHS experts

The UN High Level Commission on Health Employment and Economic Growth (2016) has proposed an increase of 40 million experts in health services by the year 2030 if we are to meet the UN Sustainable Development Goals (SDG). Today, the working population comprises 60%–70% of the total working-age population in all countries. Thus, it would be fair to allocate at least 1.5% (600 000 experts) of the proposed total resource to OHS.

Table 1 shows the total number of experts working in OHS in 49 countries of the OHS survey of the International Commission of Occupational Health (ICOH) (Rantanen et al., 2017). According to the survey, the number of physicians working in OHS is approximately 143 000, i.e. 1 physician per 16 416 workers. The number of nurses in OHS overall is 75 365, making a density of 1 nurse per 31 261 workers. If a density of 1 physician per 5 000 workers and 1 nurse per 2 500 workers was considered reasonable for enabling the provision of basic OHS, the additional need for the whole global workforce would be 500 000–600 000 OH experts (physicians and nurses).

Quality of OHS – a call for multiprofessional expertise

Another concern involves the qualitative needs related to OHS, in which the training of OH experts plays a significant role. Table 2 shows the data concerning the availability of special expertise training for OHS in 49 ICOH survey countries (Rantanen et al. 2017).

The great innovation of OH is based on the multi-professional team work of OH experts who aim for the same goal. OH professionals have to be able to communicate with other experts from different fields of interest and to understand the basics of the relevant science in order to resolve the problems related to work.

Work life itself, technologies, work organizations and working contracts are in a state of rapid change. Moreover, working populations are undergoing dynamic development due to ageing, migration and other mobility and competence structures. OH experts, their knowledge and their practical skills need to keep up with such developments. In practice, this means continuous development of training curricula, and due to the pace of the globalization process, also the harmonization of training programmes and the competence profiles of OH experts worldwide.

The training of existing and forthcoming OH experts to meet the requirements of modern work life (and the UN SDGs) should be organized by ensuring up-to-date content and sufficient volumes of training. Both global and regional surveys on OH experts’ training have recently shown quantitative and qualitative shortages of training throughout the world. Different types of curricula are available, and harmonization is urgently needed.

Information on existing curricula should also be compiled.

Occupational health – prevention at the core

Occupational health and medicine as a medical speciality for physicians differs significantly from other areas of health care. OHS action models, tools and work processes are not designed to merely examine patients or treat their work-related diseases. OH has a wider target than individuals and illnesses, and thus OHS must be planned to meet the needs of workplaces.

While other medical specialities mainly focus on diseases and their outcomes by examining patients, OH focuses on preventing adverse health outcomes. Together with the employer and employees, OH also aims to prevent accidents and harmful exposures related to work. When other areas of medical care operate in hospitals, OH meets its clients ‘hands on’ at workplaces, carrying out assessments of the work environment, work organization or possible risks related to work processes. Today, through western societies, the majority of health care resources are spent on clinical medicine and patient care, while prevention lacks funding.

One of the most important areas of OH is the assessment and support of work ability. OH should play a significant role in consultations related to how workers’ work ability matches the demands of their work. In general, the role of work in hu-
man health and well-being increases the importance of OH specialists among other experts in health care practice.

Training curricula

The training of physicians working in occupational medicine worldwide varies greatly. This is partly due to the different types of medical education in different countries in general, but also to the differences between the national health care systems. Local legislation and the role of OH among other areas of health care also have a significant impact on the arrangement and content of training.

In many countries, specialization in occupational medicine (OM) focuses mainly on the clinical aspects related to diseases caused by physical, chemical or psychological factors at work. An OM specialist is typically a clinician who examines patients with a suspected occupational disease and consults other specialists on the risks related to exposure at work.

In some European countries, the term ‘occupational medicine’ has been changed to ‘occupational health’, in order to clearly indicate the shift of expertise from the clinical aspect to the needs of clients (workplaces). For instance, in Finland, basic training for physicians to be certified as general practitioners lasts on average six years. After this, specialization in, for example, occupational health takes another six years (Figure 1). After this, the OH specialist can receive advanced training to also become a specialist in occupational medicine (another two years). The main focus during the last two years is on occupational diseases.

Harmonized programmes needed

The process of harmonizing the competence requirements of OH physicians is on its way in Europe, for instance. Training and education, especially training in skills and multi-professional team work, needs to be further developed. International collaboration and the use of solutions based on information technology in training activities are urgently required.

References

Kari Reijula, MD, PhD; Suvi Lehtinen, MSc; Jorma Rantanen, MD, PhD

Kari Reijula, Professor
Department of Public Health
- Occupational Health
Helsinki University
Helsinki, Finland
Email: kari.reijula@helsinki.fi

Table 1. Total number of OHS professionals in 49 countries (Rantanen et al. 2017)

<table>
<thead>
<tr>
<th>Profession</th>
<th>Number of respondents</th>
<th>Number of professionals</th>
<th>Density of professionals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupational health physicians</td>
<td>43</td>
<td>143 522</td>
<td>1/16 416</td>
</tr>
<tr>
<td>Occupational health nurses</td>
<td>29</td>
<td>75 365</td>
<td>1/31 261</td>
</tr>
<tr>
<td>Occupational hygienists</td>
<td>29</td>
<td>35 290</td>
<td>1/66 761</td>
</tr>
<tr>
<td>Safety engineers</td>
<td>28</td>
<td>149 147</td>
<td>1/15 796</td>
</tr>
<tr>
<td>Ergonomists/ Physiotherapists</td>
<td>24</td>
<td>9 753</td>
<td>1/241 567</td>
</tr>
<tr>
<td>Psychologists</td>
<td>19</td>
<td>2 953</td>
<td>1/797 833</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>416 030</td>
<td>1/5 663</td>
</tr>
</tbody>
</table>

Table 2. Availability of special OHS expertise training in 49 countries (Rantanen et al. 2017)

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Number of countries</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specialty in occupational medicine or occupational health (Physician)</td>
<td>44</td>
<td>90</td>
</tr>
<tr>
<td>Specialty in occupational health (Nurses)</td>
<td>21</td>
<td>43</td>
</tr>
<tr>
<td>Specialty in occupational hygiene</td>
<td>28</td>
<td>57</td>
</tr>
<tr>
<td>Specialty in occupational psychology</td>
<td>13</td>
<td>27</td>
</tr>
<tr>
<td>Specialty in ergonomists/physiotherapists</td>
<td>24</td>
<td>47</td>
</tr>
</tbody>
</table>

Figure 1. Schedule for specialist training to become an OH physician in Finland

Step 1: Basic training for Medical Licence degree (six years)
Step 2: Occupational Health Specialist training (another six years) as follows:

Basic qualification training, 2 years
- Service in municipal health centres and hospital, 9-12 months
- Service in occupational health service, 6 months
- Other university approved service, 6-9 months

Specialized qualification training, 4 years
- Training in occupational health care units, 2 years
- Rotation in other relevant clinical disciplines, 1 year
- Assessment of work ability and physical rehabilitation, 6 months
- Service at the Finnish Institute of Occupational Health, 6 months

Evaluation
- The use of logbook after every 6 months and always at the end of a rotation

Theoretical courses 100 hours
Management training 10-30 ECTS
National written exam

RL 2017:4 October 12  


Governments, social security institutions and civil society organizations from the Francophone countries of sub-Saharan Africa are collaborating regionally to improve safety and health at work under the leadership of Interafricaine de la Prévention des Risques Professionnels (IAPRP). They recently decided to work collaboratively to strengthen educational capacities to prevent work-related injuries and diseases with the support of the ILO, more specifically by integrating occupational health and safety (OH&S) into technical vocational education and training (TVET). This article introduces the participatory process undertaken to design the IAPRP’s sub-regional programme and model country project.

**Building on prior achievements**

Mainstreaming OH&S in education has been a key priority for economically advanced countries for the last 25 years. Important work was undertaken in Europe and other countries collaborating on this topic, notably within the framework of EU projects and the International Section of the ISSA on Education and Training for Prevention during 2000–2010. A milestone was achieved with the adoption in 2003 of the Québec City Protocol for the integration of occupational health and safety competencies into vocational and technical education, which has the following key principles:

1. The OH&S competencies associated with each step in the performance of a task must be integrated into the educational process for a given occupation.
2. The focus of evaluation integrated into the educational process should be the mastery of the required knowledge and recommended practices relating to OH&S.
3. The education community should adopt exemplary OH&S practices as well as policies and rules to ensure their implementation.
4. Material, equipment and facilities must satisfy the recognized occupational health and safety standards and rules.

**The power of networking**

Twelve years later in Bilbao, while celebrating the 10th anniversary of the ENETOSH network, the President of CACRNPC called for international support for organizing a Pan African Seminar on OH&S Education in Abidjan. His initiative triggered a consultative process with interested parties which continued until the key stakeholders reached an agreement to narrow down the technical span.
Together they organized the round-table discussion.

**Achievements to date**

The two-day event held in Abidjan on 10 and 11 October 2017 initiated the process of integrating OH&S into TVET in the sub-region and in the Ivory Coast by deciding on the objectives to be achieved. Discussions aimed to clarify the roles, mandates and capacities to be mobilized, in order to successfully integrate OH&S into TVET in the context of that country, and thus inform similar efforts in others. Most key conditions of success and the underlying issues that needed addressing were identified as the discussions progressed relentlessly, as these were crucial aspects to take into account in formulating the project implementation strategy. Furthermore, this inter-institutional dialogue identified a possible financing strategy for integrating OH&S into TVET using existing national funds. NSSO representatives from Senegal and Niger also participated in the event.

Participants largely benefited from the technical contributions of experts from Switzerland (SUVA), France (INRS) and Canada (CNESSST), who presented their countries’ experience in this matter. In a spirit of true friendship, they enthusiastically engaged in the work of the sub-groups on practical aspects in planning the way forward. They also visited TVET schools in order to better understand the local context and the challenges of building a culture of prevention among competing priorities. Lastly, they participated in the debriefing meeting with the technical committee the next day, to capitalize on the lessons learned.

**Conclusion and the way forward**

This round-table comes as a milestone in mobilizing stakeholders for prevention in West and Central Africa. Invaluable information was shared for preparing the sub-regional programme with IAPRP and its Ivory Coast component, while also inspiring the next steps to be taken in Senegal and Niger in particular. The ILO, IAPRP and the stakeholders in the host country are actively following up the outcomes of the round-table. The participatory process created the momentum needed for collectively preparing the ILO-IAPRP programme proposal and developing the Ivory Coast specific project.

---

**Mr. Nogbou Alphonse AHOUA**  
Secretary General of IAPRP  
a.ahoua@cnps.ci

**Prof. Yves Brou YEOUKE KOUAME**  
Director of Prevention at CNPS Ivory Coast  
y.yeouke@cnps.ci

**Dr. Karidja KABA TOURE**  
Director of OH&S, MEPS  
k.toure@gmail.com

**Mr. Georges KASSI**  
President of CACRNPC  
georges.kassi@ifps-ci.net

Ivory Coast

Kindly contact Mr. Claude Donald Loiselle at ILO Geneva for additional information (loiselle@ilo.org).
Multiple case study on regional OSH networks

Background
In today’s globalizing and internationalizing work life, international institutional and professional collaboration and networking are typical features of OSH research and information distribution. Networks provide forums for sharing and exchanging information and knowledge, for quality assurance of scientific research, and for learning from peers. The internet and ICT have provided new opportunities and efficiency for access to and dissemination of information, for information processing and deposition, and for knowledge management.

Networking is a process that facilitates the exchange and generation of information and knowledge among individuals, groups or institutions that share common interests. Today, computerized and internet-based communication systems provide the technical platform for such networking. The ILO global survey identified 20 OSH networks with wide variation in structures, geographical coverage, mission, policies, membership, and methods of operation.

The objective of the multiple network analysis project was to study in more detail a sample of well-established OSH Networks in order to understand the critical characteristics and success factors behind their generation, organization, functions, and achievements. More specifically, the ILO defined the following objectives:

a) To generate a standard set of descriptors of Networks for constitutional models and for functions and outputs,
b) To produce six regional Network Profiles on the basis of the standard descriptors,
c) To produce a cross-cutting analysis and evaluation of the six regional networks as regards their structures and functions.

Access to the internet is a critical prerequisite for networking. About 75%–90% of the populations in advanced economies have access to the internet, but the rates are substantially lower in the low and middle-income countries (LMICs), resulting in a 50% world average (Figure 1). Most LMICs have limited capacity to engage in the necessary steps towards the effective absorption of international OSH information needed to formulate a national OSH policy; or for adopting tailored, risk-based OSH programmes, or using and developing OSH knowledge. In the ILO global survey, the OSH institutions in even the LMICs seemed to have practically 100% access to the internet and their multilateral networking with the International Organizations, WHO, ILO, ISSA, EU-OSHA was more common than their formal, inter-institutional bilateral networking. Thus, even in the LMICs, OSH institutions may play an important role in mediating OSH information from international sources to government authorities, national institutions, enterprises, social partners, training and education institutions, and other stakeholders, including the public at large, which may not have access to the internet.

Figure 1. Access to the internet in different parts of the world. (Source: ITU. Note: * Estimates. This chart’s penetration rates refer to the number of women/men using the internet, as a percentage of the respective total female/male population. CIS refers to the Commonwealth of Independent States).
Participants of the study

A total of six sub-regional networks were chosen for analysis using the following criteria:
- geographical distribution,
- availability of data (feasibility),
- substantive orientation (occupational safety, occupational health, integrated),
- willingness to participate.

The participant networks were active in different regions of the world, and represented advanced economies, upper middle-income countries (UMICs) and LMICs (Table 1).

The six networks are active in countries with a total population of two billion, i.e. one billion workers or more.

All networks were analysed using 13 different parameters (some combined below) considered to be the key features of well-working networks. A summary of the most typical findings of the multiple case analysis are presented below.

Mission & Policy
All the networks reported their missions and policies and presented them on their websites. A number of mission items or policy objectives were common to all, such as collaboration and sharing of OSH information. However, substantial differences were observed in many objectives: two networks focused on a limited number of objectives, whereas three had a wide, multidisciplinary profile. The description of missions varied and the analysis of functions and activities showed more versatile profiles than a brief mission statement.

Formal status and constitution
The formal statuses of networks differed substantially: The ASEAN-OSHNET has a strong governmental profile, steered, supervised and supported by the ministries of labour, and safety and health authorities of the member states. The IAPRP and the ALASEHT are voluntary expert networks of professionals in social security and OSH authorities, respectively. PEROSH is a network of the governmental national or insurance-governed OSH Institutes, and the BSN and SEENWH are typical voluntary expert networks with no formal status. Formal status has an influence on, for example, the resource basis of the network.

Basic orientation
The networks’ formal status and mission are reflected in their basic orientation; IAPRP and ALASEHT are strongly and almost exclusively safety and accident prevention oriented, BSN and SEENWH dominantly occupational health oriented, and ASEAN-OSHNET and PEROSH are highly multidisciplinary, covering safety, health, work environment, work organization and psychosocial orientation.

Geographical coverage
Typically, the analysed networks cover 10–15 countries with collective populations varying between 120 million of the SEENWH and 633 million of the ASEAN-OSHNET. The geographical location naturally influences on activity profiles: for example, communicable diseases and heat stress in tropical regions and the hazards of cold work in northern areas.

Table 1. Participant networks

<table>
<thead>
<tr>
<th>Network</th>
<th>Subregion</th>
<th>Number of institutional members</th>
<th>Constituency population (mill) (UN 2015)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IAPRP, Inter African Association for the prevention of occupational risks</td>
<td>Western and Central Africa</td>
<td>15</td>
<td>184</td>
</tr>
<tr>
<td>ALASEHT, Latin American Association of Safety and Hygiene at Work</td>
<td>Latin America</td>
<td>8 active, 4 corresponding, 2 adherent members = 14</td>
<td>536¹</td>
</tr>
<tr>
<td>ASEAN OSH-NET, The Asean Occupational Safety and Health Network</td>
<td>South East Asia</td>
<td>10</td>
<td>633</td>
</tr>
<tr>
<td>BSN, Baltic Sea Network on Occupational Health and Safety</td>
<td>Baltic (Northern European) Sub-region</td>
<td>12</td>
<td>166²</td>
</tr>
<tr>
<td>PEROSH, Partnership for European research in Occupational Safety and Health</td>
<td>EU Europe</td>
<td>13 + 3 collaborating members</td>
<td>397³</td>
</tr>
<tr>
<td>SEENWH, South-East European Network on Workers’ Health</td>
<td>South-East Europe</td>
<td>10</td>
<td>120</td>
</tr>
<tr>
<td>Total</td>
<td>6 Subregions</td>
<td>68 ordinary members and 9 corresponding or collaborating members = 77</td>
<td>2036</td>
</tr>
</tbody>
</table>

¹ = 89 million in corresponding members’ countries.  
² = Only Northwestern District of Russia included  
³ = 366 million in collaborating partners’ countries  
**Membership and stakeholders**
Membership structures also vary. IAPRP is a network of social security institution experts, whereas ALASEHT and ASEAN- OSHNET are closer to OSH authorities, and BSN, PEROSH and SEENWH are closely related to national occupational health or OSH institutes. About a third of PEROSH members are, however, research institutes governed by national social insurance. As all are professionally and research oriented, social partners do not directly participate in the governance of these networks.

**Organization, focal point, institutional support**
International networking needs international structure and national organization, which vary greatly. The degree of institutionalization is different in different networks; ASEAN- OSHNET and PEROSH are strongly institutionalized, IAPRP and ALASEHT are also organized in association-like structures, but BSN and SEENWH are less institutional and very much dependent on the activities of individual experts, although they are supported by the national institutes. This has an impact on operational activities and, for example, financing and resources.

**Leadership and coordination**
All the networks are steered by a collective body, general assembly, annual meeting of members, coordinating board, or steering committee. Operational responsibility is assigned to the president, secretary general, chairman, or coordinator, and is supported by the secretariat. Operationally, management may rotate in 2–3-year cycles or be assigned for longer periods. Usually, the coordination of the scientific activities is assigned to a special coordinator and an advisory committee.

**Resources: Human, technology, financing**
Specially assigned resources and finances (budget) are available for ALASEHT, ASEAN- OSHNET and PEROSH (members’ contributions), but BSN and SEENWH work with no stable financial basis (temporary project funding and some funding and in-kind contributions are received from members).

**Strategy and programmes**
All the networks have drawn up and periodically updated a strategy and action programmes for the implementation of their mission and practical objectives. The content of the strategies varies according to the type of network: some focus strongly on supporting the policy objectives of the government authorities, others orientate more towards their research priorities, and the majority contribute to both public needs, training and research. Depending on the formal status of the network some, for example, ASEAN- OSHNET, ALASEHT and PEROSH, have a strong policy impact.

**Functions, activities and knowledge management**
The key prerequisite for networking is the establishment of a well-functioning internet platform and website, which is found in all networks. The structure and content of the websites vary; typically they describe the network mission, strategy and programmes and communicate network projects, programmes and events. Daily interaction channels may also be provided. Member countries’ or institutions’ profiles, or both, are presented, and some websites have project descriptions, publications and reports, even special data banks and repositories. Strongly institutionalized networks with better resources can provide their members with notable support through their web data services. A most valuable asset of the networking is the information resources made available from all individual member institutions, keeping the members up to date with developments and outputs of their peers.

While the exchange and communication of information are a core activity for all the networks, their research, training and advisory activities have different weights in the strategies and programmes, due to their different missions and orientation. SEENWH is unique with its South-East European Workplace Academy (SEEW A) activity, which was established as an advanced expert training activity in the SEE subregion. The BSN also works closely with the respective Nordic NIV A Institute, and other networks provide training for their constituents.

Research is one of the key activities of all networks, though with different weights. PEROSH has established a systematic method for the identification of the most important priorities for European OSH research. A limited number of projects, fewer than 10, are carried out at the same time, and the responsibility for the coordination of each project is assigned to a single member institution with participation of different numbers of other members. It is a rule that every member must participate at least in two projects. Some networks such as ALASEHT and ASEAN- OSHNET consider the governmental strategic objectives in their priority setting. All the other networks carry out research and development projects in parallel with several other activities, while PEROSH is predominantly a research network.

Most of the networks publish a newsletter for internal information within the network as well as for external communication. Both e-publications or printed newsletters may be available.

**Outputs, quality, quantity, overall achievements**
Some of the networks, such as ASEAN- OSHNET and PEROSH have well-established follow-up systems for the evaluation of their activities, outputs and even impacts. Some self-evaluations have also been carried out. So far, systematic evaluations by external evaluators are not available. Depending on structure, status, institutionalization and resources, the networks report different numbers of outputs on their websites. Constant outputs are regular meetings, training events, good
practice guidelines, publications, and research reports. BSN has worked hard to improve the registration and statistics of occupational accident and diseases. IAPRP, ALASEHT and ASEAN-OSHNET have produced good practice guidelines and ASEAN-OSHNET has also produced standards. In general, the networks report several achievements, which would be impossible for an individual country or institution to do alone, thus confirming the added value of networking.

Summary
On the basis of the analysis, as well as two decades-long practical experience, the features of a well-working networking can be listed, as in Table 2. The list may be expanded in the course of further technical developments and as experience is accumulated, but the overall conclusion is a positive impact, increased contacts, more effective exchange of information and experiences, learning from peers, and increased productivity. Much still remains to be developed, but already today OSH networking can be considered a successful activity.

Table 2. Characteristics of successful professional networks

- Collectively approved mission, policy, strategy, objectives and targets, aiming at some kind of utility or (professional) productivity
- Limited number of members sharing the same vision (social capital) or membership determined by special criteria such as research area or institutional or professional status
- Practice of inviting members to draw up interest, competence or activity profiles
- Clear rules regarding responsibilities, conditions of operation, sharing of activities and division of work
- Well-identified coordinating body and focal point for speaking in the collective voice of the network
- Formal status and representative role in relation to other respective professional networks
- Coordinator or “leader” with competences and capacities to lead the activities of the network
- Certain degree of institutional support (for example, communication technologies), maintenance of websites, ICT platforms, data depositories, and financial resources for implementation of the above
- Growing interest in outcome-orientation by carrying out collectively agreed-on functions, special projects, training and education events, organization of conferences and publishing of research results
- Annual meetings in vivo and publishing of network newsletter or e-newsletter considered important instruments for both cohesion and the functions of the network
- Growing emphasis given to behavioural and ethical principles in networking.

Jorma Rantanen, Professor
Visiting Scientist
Helsinki University
Email: jorma.h.rantanen@gmail.com
In the field of occupational safety and health (OSH), the development and dissemination of information and knowledge that may meet the needs of governments, employers and workers are a prerequisite for identifying key priorities, adopting relevant strategies and implementing national OSH programmes. In over 100 years of its history, the International Commission on Occupational Health (ICOH) has played a basic role in spreading occupational health worldwide and has become a real ‘forum’ for the exchange of information and knowledge among OSH experts and professionals at an international level.

ICOH was founded in Milan, Italy, on 13 June 1906. In that year, Milan hosted the International Exhibition, a fair to celebrate the world’s human ingenuity achievements in the fields of science, technology and the arts. The event marked the opening of the Simplon Tunnel, a railway tunnel connecting Milan to Switzerland and France. This was a huge engineering task, which paid a high price in terms of deaths, accidents and diseases. Such a sacrifice of human lives was one of the reasons that led a group of physicians to organize an international Congress dedicated to occupational health issues, within the Milan Exhibition, thus giving birth to the International Commission. Since its foundation, ICOH has set itself the goal of fostering the scientific progress, knowledge and development of occupational health and safety in all its aspects. Still today ICOH continues to count the dissemination of information among its priority objectives. The Seoul Statement on the Development of Occupational Health Services for All, adopted at the 31st International Congress on Occupational Health (ICOH 2015, 31 May – 5 June 2015, Seoul, Republic of Korea) clearly stated that the effective exchange and dissemination of information on all aspects of occupational health and good practices should be promoted and encouraged.1

As WHO reported2, workers represent half the world’s population and are the major contributors to economic and social development. Despite the availability of effective interventions to prevent occupational hazards and to protect and promote health at the workplace, large gaps exist between and within countries with regard to the health status of workers and their exposure to occupational risks. Still today, only a small minority of the global workforce has access to occupational health services. Occupational injuries and diseases occur more significantly in developing countries, where workers still lack adequate social protection and services. The need for effective OSH information in such countries is even more urgent as a useful tool to prevent risks and hazards in working conditions.

ICOH has always paid special attention to the OSH needs of developing countries, with the aim of promoting their

1 “Effective exchange and dissemination of information on all aspects of occupational health should be promoted and encouraged, and good practices and guidelines should be shared via international collaboration between occupational health professional bodies, International and Non-Governmental Organizations, WHO, ILO, and ICOH and other relevant institutions and associations. Dissemination of this knowledge should be supported by international and national experts’ communities, employers, workers and governmental organizations.” Seoul Statement on the Development of Occupational Health Services for All, June 5, 2015, Seoul, Republic of Korea.

progressive inclusion in the ICOH global network and raising the level of awareness regarding workers’ health problems in such countries.

In 2003, ICOH members in developing countries made up about 22% of total membership. However, twelve years later, in 2015, the data on membership available at the end of the triennium showed an almost equally balanced distribution between members from industrialized countries (52%) and members from developing countries (48%). One of the reasons for this result was the adoption of a fee system, with different fees for members from industrialized and developing countries. The General Assembly, held during the ICOH 2015 Congress, approved a further adjustment of the triennial fees, with a view to increasing accessibility for developing countries, considering the recent changes in the global economy.1

In order to encourage the participation of members from developing countries in the ICOH international Congresses, special initiatives have been promoted. In particular, economic support is provided to special categories of participants, such as ICOH members from developing countries and young members, based on criteria established by an ad-hoc Committee. Furthermore, fellowship funding opportunities are now offered. During the 31st ICOH Congress in 2015, two ICOH members from developing countries were granted partial fellowship to attend the ILO Master in Occupational Safety and Health (Turin School of Development, Italy). As a further benefit, important OSH publications are now distributed to congress participants. In the ICOH Congress in 2015, for example, two new important publications were made available to participants: the new ICOH Code of Ethics and the OH Guide ‘Creating a Safe and Healthy Workplace. A Guide to Occupational Health and Safety for Entrepreneurs, Owners and Managers’, (edited by Tee L. Guidotti and sponsored by the Scientific Committee on Occupational Health and Development).

The ICOH National Secretaries also play a key role in the processes of knowledge and information exchange at national and regional levels, in the organization of regional meetings, and in encouraging more active involvement of members in ICOH activities. The National Secretaries represent the activities of ICOH in the country or area that they are designated, and promote cooperation and communication among ICOH members of their country/area and links to other ICOH bodies. In the current triennium, the synergy between ICOH Officers and National Secretaries has made it possible to hold productive meetings in terms of knowledge transfer and the sharing of experiences, results and membership recruitment strategies in countries such as Peru and Nepal.

Another strength of ICOH is its collaboration with international organizations and bodies involved in various activities related to OSH, in particular with the World Health Organization (WHO) and the International Labour Organization (ILO). In its capacity as a Non-Governmental Organization in official relations with WHO and the ILO, ICOH contributes to programmes and campaigns aimed at improving the OSH system on a global level.2

The commitment of ICOH to providing a forum for the exchange of information and knowledge and developing dialogue and collaboration among OSH experts worldwide has grown considerably over time, thanks partly to the continuous growth of its international networking and the persistent contribution of its members from all over the world. It is essential that we continue in the same direction in order to reach our increasingly ambitious goals and to keep OSH issues high on the agenda.

Valeria Boccuni1,2, Diana Gagliardi1,2, Carlo Petyx1,3, Pierluca Dionisi1,2, Erika Cannone1, Sergio Iavicoli1,2

1 International Commission on Occupational Health (ICOH)
2 Italian Workers’ Compensation Authority (INAIL)
3 Department of Occupational and Environmental Medicine

Epidemiology and Hygiene
via Fontana Candida
1 - 00078 Monte Porzio Catone (Rome), Italy
v.boccuni@inail.it, d.gagliardi@inail.it, c.petyx@inail.it, p.dionisi@inail.it, s.iavicoli@inail.it

1ICOH currently has three different fees, which depend on member countries’ GDP per capita (countries with a GDP below 5000 USD; countries with a GDP between 5000 and 15000 USD; countries with a GDP of 15000 USD or more). http://www.icohweb.org/site/members-info.asp

2 ICOH carries on its close collaboration with WHO in implementing the WHO Global Plan of Action on Workers’ Health (2008–2017). In the last years, ICOH has supported many regional and country level activities, pilot projects and the development of practical guidelines for Basic Occupational Health Services (BOHS) for underserved workers and workers without access to occupational health services so far. Currently, ICOH is collaborating in the Systematic reviews on the burden of additional pairs of occupational risks and health outcomes for the WHO/ILO joint methodology for estimating the work-related burden of disease and injury.
Close to 3500 occupational safety and health (OSH) experts gathered on 3–6 September 2017 in Singapore for the triennial ILO-ISSA World Congress. The Occupational Safety and Health Division, Ministry of Manpower, Singapore was the national host of the congress, which was organized in collaboration with the International Labour Organization (ILO) and the International Social Security Association (ISSA). The theme was ‘A Global Vision of Prevention’.

One of the symposia in the Congress, organized by the ILO, discussed the development of information as a part of international collaboration and networking. International collaboration and networking strive to solve the shortage of resources through joining forces.

The Symposium was chaired by Dr. Margaret Kitt of US NIOSH, and moderated by Mr. Claude Loiselle of the ILO. One of the symposium presentations dealt with the analysis of various sub-regional networks (Professor Jorma Rantanen), another described one of these, the European PEROSH, in more detail (Dr. Dietmar Reinert). The results of the ILO global survey on OSH organizations worldwide were described, their research activities in particular (Dr. Sara Luckhaupt of US NIOSH). One of the PEROSH research projects was discussed by Dr. Diana Gagliardi of INAIL, Italy. The challenges of sub-regional networking were presented by Dr. Joseph Silvere Kaptue of Cameroun. Professor Jorma Rantanen, Finland, described the network analysis carried out as a part of the ILO global survey. He described the six sub-regional networks, and had prepared an actor profile for each of the six networks. The typical characteristics of each network were the collectively approved mission, policy, strategy, objectives, and targets, which aimed at some kind of utility or (professional) productivity. The networks usually included training and education, information, research, and advisory services in their profiles, but the weight of the different activities varied in the individual networks. The OSH networks typically have a limited number of members, who share the same vision (social capital). He concluded that all well-established and smoothly-functioning networks seem to need clear rules regarding operations, the sharing of activi-
ties and the division of work. They also benefit from a well-identified focal point which acts as the voice of the Network. A co-ordinator or ‘leader’ with competences and capacities to lead the activities of the Network is needed, as well as a certain degree of institutional support. He also emphasized the need for ethical principles in modern networking.

Dr. Dietmar Reinert, Germany, described the activities of the European PEROSH network, founded in 2003, which currently has 13 member institutions from 12 European countries, and represents a large pool of more than 2000 European OSH experts. The main objectives of PEROSH are: to strengthen cooperation in OSH research and accelerate the generation of knowledge in key OSH areas (eight joint research projects), to disseminate new findings regarding OSH issues and to act as an EU ‘think tank’.

In its administrative structure, PEROSH has a Steering Committee, which consists of a Chair, Vice-Chair and Institute Directors, an Executive Committee for day-to-day decision making and a Scientific Steering Group (Institutes’ scientific directors).

The PEROSH group has identified seven key OSH challenges to work on (2012 publication):
1. Sustainable employability to extend working life
2. Disability prevention and reintegration
3. Psychosocial well-being in a sustainable working organization
4. Multifactorial genesis of work-related musculoskeletal disorders (MSDs)
5. New technologies as a field of action for OSH
6. Occupational risks related to engineered nanomaterials
7. Safety culture to prevent occupational accidents.

Three position papers, published in 2015, issue future OSH research challenges in the European research agenda and programmes, as follows: 1. Challenge of Europe in a changing world – inclusive, innovative and reflective societies; 2. Leadership in enabling and industrial technologies; and 3. Health, demographic change and wellbeing.

In her presentation, Dr. Sara Luckhaupt, NIOSH, USA, reported the results of the ILO global survey on agencies, institutions and organizations (AIO) and their research activities. She mentioned that the global survey covered a total of 159 respondents, but the focus of her presentation was the research scope of 78 organizations belonging to two groups: 37 government OSH agencies and 41 OSH research centres. There were differences between the responses of the two groups as regards the factors for setting research priorities. The Government Agencies considered the ‘National OSH policy priorities’ and ‘Government OSH strategies’ the most important and the ‘Specific interests or areas of expertise of research staff’ the least important. The Research Centres in turn regarded the ‘Need for more research in the area’ and ‘Potential impact of research on the topic’ as the most important, and ‘International organizations’ priorities’ as the least important. These results reflected the roles and missions of the two groups of institutions. The research priorities and main conclusions regarding policy challenges are presented in an article on pages 8-9 of this Special Issue.

In her presentation, Dr. Diana Gagliardi, INAIL, Italy, described a PEROSH-based project on the recognition and assessment of OSH research future needs and priorities, especially from the viewpoint of the European OSH research community. The assessment was carried out using the Delphi method, in two rounds. Top priorities were ranked on the basis of the selections of the experts participating in the Delphi questionnaire survey. In the second round of the Delphi study, the general ranking of the five most prioritized topics was as follows: older workers, nanomaterials, emerging technological devices, chemical agents, and working conditions and work organization. The results of the study have been disseminated through fact sheets and an open access scientific article. The Fact sheet is available on-line at http://www.perosh.eu/wp-content/uploads/2016/09/FACCHEET_fin_layout-Bprior-.-4-pag_version2.pdf and the Open access article at http://bmjopen.bmj.com.

Dr. Joseph Silvere Kaptue made his presentation as a member and on behalf of the Cameroun’s Society for Occupational Health and Safety (Société Camerounaise de Sécurité et Santé au Travail – SCSSST). He discussed the contribution of professional associations to the development of safety and health at work, with Cameroun as an example. He started by describing the major shortcomings of the OSH system in his country, which are typical for many low-income and middle-income countries. The inadequacy of qualified human resources was mentioned as the main challenge, in addition to the weakness of OSH legislation and other normative measures. More emphasis should be placed on the whole social protection sys-
tem of the country, as well as on sufficient financial resources. He reported on the continuous need for workers’ education, taking into consideration the low literacy rate. This is a challenge to employers, who are responsible for their workers’ safety and health. Public awareness of the prevention of risks should be raised through several channels throughout society. He also reported on the importance of developing the informal economy, as more than two-thirds of the working population has no social protection.

A lively discussion followed the presentations, moderated by the Chair and Mr. Claude Loiselle. Dr. Margaret Kitt concluded the session with the following remarks: Networking creates the basis for wide utilization of existing OSH information and new research results. Networks need clear objectives, full commitment of their members, and good co-ordination and leadership in order to be effective in their activities. ILO plays a vital role in facilitating international networking, improving the utilization of OSH information and in helping to build capacities and OSH knowledge in the countries.

Suvi Lehtinen
Finland
Email: suvi.a.lehtinen@outlook.com

www.safety2017singapore.com

See you in Canada in 2020!
Editor: How did you obtain an internship with the ILO, and what was it like?

I have seen people working in harsh conditions in my country and have wanted to join in the efforts to make work safer and healthier for them. I actively sought information and discovered it was possible to apply for an internship on the ILO website. I met the selection criteria and convinced them how passionate and motivated I really am about OH&S!

I was assigned to support work on enhancing educational capacities in the area of OH&S. My primary duties consisted of compiling and analysing information related to the ratification of ILO Conventions from all sub-Saharan French-speaking countries, conducting thorough research of existing academic programmes relevant to OH&S in the sub-region, and assisting in the development of a project proposal with IAPRP (www.iaprp.org), which is a 14-country association dedicated to promoting and advancing prevention in West and Central Africa. I also had opportunities to work on other priority Branch matters.

What have you learned?

I have learned a great deal about the mandate and functioning of the ILO, about technical matters, and also about myself. I now understand how vital the work of the ILO really is around the world. Dividing into reports, exchanging ideas, debating with colleagues, and participating in meetings have provided me with a much better understanding of the ILO’s mission to promote social justice and Decent Work across its different areas of intervention. I have learned a lot about International Labour Standards in relation to OH&S and examples of how they are applied in practice. I now understand why member States’ ratification of ILO Conventions is so important, and how the ILO accompanies its constituents for their effective application. In addition, I had the opportunity to attend high-level discussions on the occasion of the 106th International Labour Conference, and to observe how the ILO’s unique tripartite governance model operates in addressing global issues in the world of work, such as migration, for example.

How did you adapt to an international work environment?

Being French-speaking helped me obtain this internship opportunity. That said, I did have to work harder and invest the necessary time, as mastery of the English language greatly facilitates relations with colleagues and making new friends. I was able to significantly improve my English language skills with the support of my supervisor and through socialization with other interns from around the world.

What advice would you give other young professionals wishing to complement their studies with an internship at the ILO or a similar organization?

Go for it! Especially if you come from a developing country! It is a very rewarding experience. Be clear about your learning objectives and be open to the guidance and comments you receive, as the emphasis really is on learning outcomes.

Information on ILO internship opportunities: http://www.ilo.org/public/english/bureau/pers/vacancy/intern.htm

ILO internships

The Editor asked a young professional, Bernard Foe Andegue from Cameroon, to write a few lines about his recent internship experience in OH&S with the ILO in Geneva.
You are holding in your hands the Special Issue of an OSH Newsletter, produced on the ILO’s request. This Special Issue is based on the ILO global survey on OSH knowledge agencies, institutions and organizations (AIO) which was undertaken in 2016 to constitute, for the first time, a comprehensive global knowledge base of their scope of work and international networking practices. Data have been analysed in order to identify the most important policy challenges related to OSH knowledge development. A multiple case-study analysis of six regional OSH networks was also undertaken to describe and analyse the challenges to their functioning and development.

The Special Issue of the OSH Newsletter is published through the collaborative effort of the ILO, the International Commission on Occupational Health (ICOH), and the Department of Public Health / Occupational Health of Helsinki University (HU).

We are looking into the possibility of re-establishing a regular International OSH Newsletter in the continuity of this collaborative effort as a means for all OSH agencies, institutions, organizations and specialists to communicate one with another. Other potential partners and sponsors such as international organizations, governmental OSH agencies and institutions as well as OSH professional associations are welcome to join. For this purpose, we would very much appreciate your feedback concerning the need for an OSH Newsletter and your ideas about its contents. You may send your comments to suvi.a.lehtinen@outlook.com by 30 April 2018.

Thank you so much for your interest! Enjoy your reading!

The Editors