ABSTRACTS AGRIOHS 2022, 23/8 in Odense Denmark

1. **A new ILO tool for monitoring new risks and new diseases in Occupational Health: focus on agriculture**

By Claudio Colosio, International Centre for Rural Health, University of Milan

In 2010 a Tripartite ILO meeting in Geneva approved a revised List of Occupational Diseases with more than one hundred causal agents: 40 classes of chemical agents, 6 of physical agents, 8 biological, infectious and parasitic agents, 20 occupational cancer agents and 23 groups of occupational diseases classified by affected organ or function. The participants called for ILO to prepare a monograph aimed at yielding guidance for diagnosis and prevention of the identified occupational diseases, thus triggering a ten-year international, voluntary effort of scientists and practitioners that eventually led to the publication, in February 2022, of a 600-page book. The book is composed of 117 short monographs containing all the details necessary to identify the agent/disease, reaching the diagnosis as well as guiding prevention. All interested readers and professional users can freely download the monograph as pdf from the ILO website (*https://www.ilo.org/global/topics/safety-and-health-at-work/resources-library/publications/WCMS_836362*).

Several chapters address topics of high interest for the agricultural sector, for example pesticides (1.1.36), noise (1.2.1), mechanical vibration (1.2.2), sunlight (1.2.4), extremes temperature (1.2.5), several biological agents (1.3.1 1.3.9), occupational respiratory diseases (2.1.1-2.1.12), skin diseases (2.2.1-2.2.4), muscle skeletal disorders (2.3.1-2.3.8).

There is an increasing awareness among occupational physicians and prevention practitioners that a substantial fraction of diseases in the general population is unrecognized as being of occupational origin and that agriculture is a sector largely underserved, with a poor access to occupational health surveillance and a substantial underreporting of occupational diseases. Therefore, this new tool will encourage physicians to consider the diseases present in this risky sector.

Keywords Agriculture; occupational Diseases; ILO List

2. **Farm dust and lung diseases**

By Torben Sigsgaard, Dept of Public Health, Aarhus University

Farm dust is known to elicit a range of negative effects on the respiratory system like asthma or asthma-like symptoms and Rhinitis. Since the 90ties a range of investigations have repeatedly shown that farm upbringing protects against allergic sensitization. Further, it has been found that farm upbringing protects against a range of NCD's.

The lecture will layout the key findings and the putative mechanisms behind the observations from epidemiological studies.

3. **Title: Behavioral Well-Being Is Key to Public and Occupational Health in Sustainable Agriculture**
   By Michael R. Rosmann, Northeast Center for Occupational Health and Safety, New York

Sustainable agriculture encompasses organic and regenerative practices that preserve and enhance the health of the producers and consumers of agricultural products and the environmental inputs needed to produce food fibers, and biofuels. Another way of conceptualizing sustainable agriculture is that farmers, fishers, and other producers of agricultural essentials seek to leave the inputs they used for their endeavors in better condition for future use than when they began their livelihoods. The health and safety of agricultural producers has improved greatly during recent decades as research, education, and the implementation of beneficial practices and properly designed equipment have significantly reduced occupationally-related injuries and fatalities. However, the behavioral health of agricultural producers has not been addressed sufficiently. More agricultural producers die from suicide than from physical injuries incurred while farming. Farmers' stress levels have been linked with livestock health on farms, as measured by the number of veterinary visits to beef cattle farms and dairies. Agricultural behavioral health is an emerging arena of research and healthcare assistance that utilizes information accrued in the behavioral sciences, such as psychology, sociology, and behavioral genetics. Farming people are learning how to manage their behavior to optimize their health and financial success. The Farm and Ranch Stress Assistance Network in the USA is an example of agricultural behavioral healthcare; similar programs are developing in other countries, but more research, education, and application are warranted. Moreover, how sustainable agricultural practices affect the well-being of producers has not been sufficiently explored.

4. **Climate changes – focus on the EU OSHA report on Agriculture and Forestry: how climate change is creating new and emerging OSH risks**
   By Martina Jakob, Leibniz – Institut für Agrartechnik und Bioökonomie

The effects of climate change will have a significant impact on agriculture and forestry. Our new policy brief looks at how these changes will affect occupational safety and health (OSH) in the sector.

Adapting work practices to take account of the effects of climate change requires the assessment of new and emerging risks, such as increased exposure to heat, disease and pests, and dust. The brief also considers how these changes will affect psychosocial risks for farmers and foresters, with uncertainty over the impact of climate change on production — and the pressure of meeting EU requirements to mitigate climate change and adapt to its impacts — likely to cause considerable stress.

See https://osha.europa.eu/en/publications/agriculture-and-forestry-how-climate-change-creating-new-and-emerging-osh-risks

5. **Collapse of the Dutch Agricultural Miracle? Impact of the Green Deal Reform on aspects of One Health**
   By Gert van der Laan, Foundation for Learning and Developing Occupational Health (LDOH)

After World War II, the Dutch agricultural sector embarked on a farming revolution that propelled the Netherlands to a leading place in global food production. Stimulated by the Government and Wageningen University the Dutch agri-food system, shaped by the strong export orientation of the sector aimed at high production of crops and animals using large amounts of fertilizers, pesticides, import of soja and using cheap natural gas for heating the greenhouses (high input-high output model), became the 2e exporter of agricultural products worlwide. Agricultural exports from NL exceeded 100 billion euros in 2021! 'We feed the World'was the slogan. These developments have a huge impact on different aspects of the One Health Triangle:

- Environmental health is declining with loss of biodiversity and soil quality. Highly intensive agriculture dominates the landscape of The Netherlands with more than 90 square kilometers of greenhouses. Grassland for dairy production is covering more than a quarter of the land surface. Nitrogen deposition is exceding the limits.
- Animal health is at risk: the densily human populated country has more than four times the average European livestock density; the bio-industry is threatening animal welfare and a source of zoonoses. Avian influenza affected many poultry flocks: more than 450.000 chicken were culled by Authorities just in the first half of 2022 to control the outbreak.
- Human health is affected by organic dust in the neighbourhood of mega stables. The outbreak of Q-fever in The Netherlands is one example. Farmers are dealing with mental stress and depression due to economic uncertainty. Cheap labour is provided by more than 500.000 migrant workers who have to deal with bad working conditions, inadequate housing and limited acces to medical care

The current size and scale of the Dutch agri-food system, shaped by the strong export orientation of the sector, makes it difficult to meet long-term ecological targets as well as societal expectations with existing business models and technologies. The legislative response at National and EU level ('Green Deal') is leading to economic uncertainties and social unrest. The recent Dutch nitrogen crisis has made this question more pertinent than ever ("You can't have it all.")
In the presentations some issues, especially on workers health and ways forward, will be discussed.

6. **Cattle handling injuries: Underlying causes and prevention**
   By Kent Nielsen, Department of Occupational Medicine, Goedstrup Hospital

Farming is one of the most dangerous occupations around the world. Meta-analyses have identified a number of risk factors for injuries such as male gender, younger age and large farm size. However, these risk factors are difficult to translate into preventive efforts.

A high proportion of injuries on farms happen during cattle handling, and the presentation will report on a study aiming at identifying underlying causes of cattle handling injuries related to the physical surroundings and the behavior of cattle and humans. Knowledge of these underlying causes will help guide preventive efforts.
The study consists of structured interviews with 97 persons, who had been injured during cattle handling within the last 12 months. The interview covered information about the injury incident and the role of the physical surroundings and the behavior of cattle and humans in the incident. Afterward the interviews were analyzed by an experienced safety researcher and an experienced agricultural work environment advisor to identify possible preventive actions related to the physical surroundings and the type of human behavior.
The results show that most injuries happened while the cattle were trying to flee from something they perceived as unpleasant, such as hoof trimming, or as a result of the cows' reflexive behavior, such as kicks. Up to 70% of the injuries could have been prevented through changes in the physical surroundings, primarily more appropriate driving lanes, better restraint system during handling and treatment, and correction of design flaws in existing installations. Human behavior was a factor in all but one injury. Risky work planning was the primary human factor in 1/3 of the injuries and so was risk taking behavior.
The study shows a great potential for preventing cattle handling injuries by improving the physical surroundings and work planning, to better take human and animal behavior into account

7. **How the Danish Health and Safety department use the data of reported accidents in the industry of agriculture to optimize the visits on the farms and prepare for special campaigns?**
   By Lars Nebel Møller, Danish Health Inspectorate

The Danish Work Environment use the data of reported accidents from hospitals, doctors and Occupational clinics in the industry of agriculture to optimize the Inspections/visits on the farms and prepare for special campaigns.
The Danish work Environment have a risk model, which is data that comes from a big database with 8-10 different parameters to optimize which farm to inspect/visit in the Danish agriculture and when.
Farmers or people who work on farms is only two percent of the working population in Denmark, but they have a high incident of accidents.
The Danish Work Environment use different “tools” to make the work environment more safety in the Danish agriculture.
The Danish Work Environment have statistics of what kind of accidents is the most common in agriculture.
Is there any particulare patterns or challenges according to the work environment in the industry of agriculture?

8. **Safety and prevention in Agriculture and CRiskA - app for Chemical Risk Assessment**
   By Peter Lundquist, Work Science at the Swedish University of Agricultural Sciences and Christina Edstrand Senior Advisor Health and Safety, SEGES

Peter Lundquist: Prevention of occupational injuries in Swedish agriculture
Agriculture is one of the most dangerous sectors from a global point of view. This is also the situation in Sweden with many fatal and non-fatal injuries. An initial problem is the low frequencies of injury reports from farmers. Studies have shown that only about 10% of the injuries reported which gives a false view of the official statistics. Over time, a number of different types of approaches been applied in order to prevent and reduce the number of injuries. Applying the Haddon E-principles (Enforcement, Engineering & Education) or a mix of them has been used with the roll-over protection (ROPS) on tractors as the most successful – implemented over 60 years ago. A period during the 1980s with the Farmers Occupational Health Services (Lantbrukshälsan), appreciated by farmers but was closed down when Sweden joined the European Union 1995. A national 5-year program (Safe Farmers common sense, 2009-2013) had a major focus on information and education, which appeared to reduce the number of fatalities over time. A national Agricultural Work Environment Committee (LAMK) has been a coordinating and driving force over the years. Research on work science and injury prevention provided for many years by the Swedish University of Agricultural Sciences, is no longer a prioritized research area. For the future there is hope for an up-coming new 5-year program organized by the Swedish Board of Agriculture which will combine injury prevention with support for farmers stress and mental health which hopefully makes a real impact!
Christina Edstrand: CRiskA - app for Chemical Risk Assessment Greater demands are placed on employers, to instruct their employees, in the safe handling of chemical products with Hazard Chemical signs, and chemical risk assessments. There are too many accidents, when handling chemistry and chemical processes, therefore employers must have a greater focus on instruction. This can be done in different ways, for example via documents and signs, that show employees, the dangers of handling chemical agents and chemical processes. It can be quite timeconsuming, to prepare the documents and therefore SEGES Innovation has developed an app, that can make it significantly easier for the employer and the employee, to find the necessary information. By scanning the barcode with the phone, the information is easy and fast to get.

9. **Wellbeing in agriculture - social, physical and mental health**
   Magdalena Wachnicka – Witzke ISSA International Social Security Association, Section on Prevention in Agriculture and Erich Koch Sozialversicherung für Landwirtschaft, Forsten und Gartenbau

All European agricultural social insurance institutions are responsible for the prevention of occupational accidents, i.e., they are supposed to prevent physical injuries and diseases related to work. They do not have a mandate for wellbeing that is separate from this. The fundamental concept of wellbeing, to varying degrees and in

different ways, nevertheless plays an increasing role in the prevention work of agricultural social insurance institutions in Europe (ENASP institutions). ENASP programs have wellbeing as an implicit or mediating objective, although not always under the term "wellbeing" as this is not a robust concept in national law. The current experience of all agricultural social security institutions shows that this approaches have positive effects. There are differences in emphasis between social, physical and mental health.
In terms of individual countries, this means:
France has a specific agricultural policy approach that emphasizes social health. Wellbeing here means "bien-être“. Against the specific social background and in the current context, it seems rather socio-politically charged. In view of the upheavals in agriculture, the Mutualité Sociale Agricole (MSA) is involved in the new national "Plan for the Prevention of Malaise in the Agricultural Sector" as the provider of agricultural social security. In addition, the MSA offers programs for farmers who are retiring. Especially in these offers, the MSA attaches great importance to the "bien-être".
In Poland, the implementation of "Vision Zero" plays a particularly important role. The agricultural social organization there, the KRUS, follows the ISSA guidelines and emphasizes the "Vision Zero" goals in its public relations work, for example through the national youth competition "My Vision Zero - Family Safety, Health and Well-Being on the Farm". It thus automatically focuses on the social aspects as well.
In Germany, the responsible organization, the SVLFG, focuses on mental health services without using the term "wellbeing“. Especially in its group services, the SVLFG emphasizes the importance of reducing stress and mental strain. More recently, these have increasingly been online offerings. They also involve - foreign-language - employees. The focus here is on the mental health of the individual.
In Austria, the situation is similar to Germany. To some extent, the wellbeing approach comes into play in the context of agriculture-specific health services. As in Germany, it is primarily the so-called health services where the wellbeing approach is visible.
In Finland, the concept of wellbeing is increasingly translated into practical offerings. For example, there are wellbeing days for reindeer herders. The organization there, the Mela, like the KRUS in Poland, is not responsible for health insurance benefits, but is a pension and accident insurance provider. All other ENASP members have comprehensive responsibility, i.e., they also include health insurance benefits.
The examples show that different approaches can be observed depending on the scope of the legal mandate, national culture and linguistic understanding.

10. One Health in the Dairy Industry: Employing a One Health Approach in Studying Cross-species Influenza D Infections on Dairy Farms

By Laura Pulscher, David Douphrate*, Anabel Rodriquez, Morgan Valley and Gregory C. Gray*

Influenza D virus is thought to be one of the causes of bovine respiratory disease complex. In this presentation we will describe a 16-month, prospective study of up to 60 dairy workers, their dairy cattle, and the dairy cattle environment to ascertain molecular and serologic evidence of cross-species influenza D virus transmission.

11. Challenges and the future of agriculture in low and middle income countries

By Dinesh Neupane, Johns Hopkins US and Sashikala Chandrasekar, Chair Scientific Committee Rural Health: Agriculture, Pesticides, Organic Dusts

Dinesh Neupane: Occupational health and safety among agriculture workers in Nepal

Nepal is predominantly an agrarian country. The agricultural sector employs over 64% of the working population and contributes to 34% of the gross domestic product.1 Very little is explored regarding occupational health and safety among agriculture workers of Nepal. There is no compensation system for farmers in Nepal for their treatment cost and loss of productivity. They generally work under unsafe conditions, which increases the risk of injury and death. Although surveillance data are not available, one study estimated approximately 20,000 work-related accidents per year in Nepal2, and a study conducted in the eastern part of Nepal reported that 69 % reported being injured in the past year.3 Out of them, hands tools (75%) were the leading mode of injury, 80% had cuts, and 43% had injured fingers. The use of toxic pesticides, inadequate use of personal protective equipment, and poor hygienic practices are also common among farmers in Nepal.4 Thus, there is a need for systematically documenting the magnitude of the problem, identifying possible solutions, and implementing a cost-effective strategy in Nepal.

Dr. Sashikala Chandrasekar: Challenges & Future of Agriculture in India

India ranks second worldwide in farm output. 67% of the population are in rural areas and 58% of rural workers are into agriculture. Hazards in the agricultural sector must be reduced, as it is not only an occupational issue but also a social and public health problem. New initiatives for reducing the hazards in the agricultural sector are introduced in India.

Pesticides are actively spread in the environment as they are used extensively to control pests and to increase the yield of cultivated crops. Farmers are not aware of the pesticide toxicity and its grave consequences. Awareness programs on best practices on the usage of pesticides, ergonomics, and safe use of machineries in agriculture are necessary. The goal is to bring behaviour change by nudging for safe agricultural practises, use of personal protective equipment and proper handling of pesticides. Spraying of pesticides by drones and other new innovations are also being introduced.

Stubble burning after harvest exposes the farmers to air pollution. Many initiatives are being taken to reduce this issue. It is an environmental hazard and a public health issue also.

Satellite images predicting crop pattern for monitoring & data-analysis is a great development. Emergence of Agri tech Start-ups and App based information on agriculture, weather, data on crops and on marketing of pest control & agricultural equipment is seen as a promising development. All these initiatives will give a positive impact in the agricultural sector in India in the coming days.

12. Pesticide exposures and health consequences with a focus on LICs

By Erik Jørs, Clinic of Occupational Medicine OUH and Clinical Institute SDU

Pesticides are well known to cause acute poisonings among farmers poisoned occupationally and more seriously among victims of self-harm poisoning. Chronic health problems due to pesticides such as neurological damage, impaired lung function, diabetes, cancer and developmental deficits in children are suspected and more or less well documented.
In this lecture pesticide health effects, their background and possible preventive measures in LICs will be discussed with a background in own experiences from Bolivia, Uganda and Nepal.

13. Demonstration of exoskeleton to reduce physical workload in agriculture!

By Arne Urskov, exoskeletter DK

Practical demonstration and trial of different exosceletons.

BIOS of Presenters

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Torben Sigsgaard, Dept of Public Health, Aarhus University
Since the outset my studies have been focusing on individual susceptibility with a focus on atopy and gender as risk factors (1-3). My group found a lower risk of atopic sensitization in Danish farming students in the SUS-study (4) and later we were able to show, that this protective effect was mediated through farm upbringing. In a follow up study we could show that the effect of farm upbringing lasts into adulthood (5-7).
My interest in gene environmental interaction (G*E) was sparked with the finding, that heterozygotes for rare Z-allele of □-1-antitrypsin (A1A) had a higher risk of bronchial responsiveness (BHR) in the SUS study (4) of young farmers where we, as the first group, were able to demonstrate a G*E interaction between A1A and farm-exposure for BHR (8).
Parallel to the epi studies I have conducted a range of toxicological studies on human volunteers studying environmental exposures to PM from air pollution and different organic compounds like farm exposure and indoor air pollution (9-20). These studies have included front-line methods for exposures as well as effect-outcomes and encompassed monitoring the heart, lungs incl exhaled breath, nasal volume and inflammatory markers, blood, urine, eyes and skin. The outcomes span molecular-, cellular-, metabolomic- and inflammatory markers.

Michael Rosmann, Ph.D., is a psychologist and farmer in Iowa, USA. His life's work is to advance the healthy welfare of the land and other assets needed for agriculture, especially the behavioral well-being of people involved in agriculture.

Dr. Martina Jakob
1987-1994 Diploma in agriculture Technical University of Berlin
1988-1989 Practical year on a dairy farm in New Zealand
1991 DAAD Student exchange to the University of Western Sydney, Australia
1999-2000 Specialist for renewable raw materials
2000-today Scientist at Leibniz Institute for Agricultural Engineering and Bioeconomy, Potsdam
2001 REFA certificate process data management
2005 phD thesis: "Evaluation of work processes in horticulture using 3-D-motion analysis”
2007 Ludwig Wilhelm Ries award oft he Max-Eyth-Gesellschaft Agrartechnik/VDI MEG

Gert van der Laan specialist in Occupational Medicine, founder of the Netherlands Center for Occupational Diseases, University of Amsterdam. Advisory work in NL,

European Commission and ILO in Guidance Documents for recognition and prevention of occupational diseases. After retirement from university training/ teaching activities in Occupational health surveillance in Italy, Turkey, Tanzania, Central Asia and Nepal. Dedicated to improving workers health, especially in agriculture, past Chair ICOH SC Rural Health.

Kent J. Nielsen Is a senior researcher at the Department of Occupational Medicine, Goedstrup Hospital. He has been working with safety research since 2001, with a primary focus on safety culture, safety climate and leadership.
Since late nineties, I started to study bigger cohorts within the Danish twin registry (21-26) and the ECRHS (27-37). Here the focus broadened from respiratory diseases to NCDs more broadly and this was truly the consequences of moving to effects of drinking water green space, and air pollution working with the CIRRAU center, the Danish Blood donor study, and the entire population in the BERTHA Project (38-50). Currently my research is on NCDs and negative birth outcomes focusing on the individual susceptibility and the totality of environmental exposures, within the before mentioned cohorts and the entire Danish population NNF-funded BERTHA project on big data, health and environment.

Lars Nebel Møller is a experienced inspector in the Danish Health and Safety department with great knowledge to the industry of agriculture. Educated physiotherapist and former ambulance driver in England

Peter Lundqvist is a Professor in Work Science at the Swedish University of Agricultural Sciences and he has been active within agricultural health and safety for many years. Right now with a focus on injury prevention, mental health and rural crime. He is also very active within a number of international organizations and networks. He will from September this year, change his role into Professor Emeritus, but will continue with external funded research and international collaborations.
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Christina Edstrand
Senior Advisor Health and Safety
Health and safety advisor for 18 years, mainly on Danish farms.
8 years at SEGES and 10 years at YoungFarmers Organisation.

Dr Erich Koch is Head of the Self-Governance/Public Relations Unit at SVLFG Headquarters in Kassel, Germany. In Germany, the SVLFG is comprehensively responsible for the social security of people working self-employed in agriculture and their families. In addition, agricultural employees are insured against accidents and occupational diseases here. The SVLFG has a budget of about 7.4 billion euros and about 5,000 employees. Secretary General of the European Network of Agricultural Protection Systems (ENASP).
Chairman of the Committee for Agricultural Social Law of the German Society for Agricultural Law (DGAR).

Member of the Scientific Advisory Board of the Institute for Agricultural Law at the University of Göttingen.
Member of the Scientific Advisory Board of the journal Kwartalnika "Ubezpieczenia w Rolnictwie. Materiały i Studia (Poland).
Member of the editorial board of the German journal Agrar- und Umweltrecht (AUR).

Laura A. Pulscher, MSc, PhD is a Postdoctoral Fellow in the One Health Laboratory at the University of Texas Medical Branch in Galveston, Texas. Dr. Pulscher received her PhD at the University of Sydney in Sydney, Australia where she studied health related threats to the critically endangered Christmas Island flying-fox. She also holds a Master of Science in Global Health from Duke University where she studied the ecology of tick-borne pathogens in northern Mongolia. Dr. Pulscher earned her BSc in Wildlife Biology from Colorado State University. Dr. Pulscher is particularly interested in emerging pathogens at the human, domestic animal, and wildlife interface. She has a varied background focused on human, animal, and environmental health and has studied a range of emerging pathogens including prions, respiratory, and tick-borne pathogens at the human-animal interface across multiple countries.

David Douphrate, PhD, MPT, MBA, CPE, CSP is an Associate Professor in the Department of Environmental and Occupational Health, School of Public Health at Texas A&M University, College Station, TX, USA. Dr. Douphrate earned a PhD in Occupational Ergonomics and Safety from Colorado State University in Ft. Collins, CO. Dr. Douphrate also holds a Master of Physical Therapy (MPT) from the University of Texas Medical Branch at Galveston, TX, and Master of Business Administration (MBA) from the University of Mary Hardin-Baylor in Belton, TX. Dr. Douphrate earned his BS degree in Kinesiology from Texas A&M University. Dr. Douphrate is a Certified Professional Ergonomist and Certified Safety Professional. His research and outreach focus for the past twenty years has been concentrated in the agricultural industry. Dr. Douphrate has partnered with a multitude of agricultural producer operations in many states, working diligently to learn industry needs while simultaneously gaining the trust of industry stakeholders (i.e., owners, managers and workers). Through these efforts he is recognized as a trusted partner to address worker health and safety on farms through research, outreach, and translation/dissemination initiatives. Dr. Douphrate is a member of the International Dairy Research Consortium (IDRC) which is located within the NIOSH-funded High Plains and Intermountain Center for Agricultural Health and Safety (HICAHS) located at Colorado State University, Ft. Collins, CO, USA. The IDRC is a consortium of international researchers interested in addressing the health and safety of dairy workers (and livestock workers in general) through research and outreach. The IDRC welcomes any international researcher who wishes to collaborate on projects to address health and safety issues among dairy or livestock workers around the world.

Dinesh Neupane
Dinesh Neupane is an Assistant Scientist at the Johns Hopkins Bloomberg School of Public Health. He has a broad interest in improving health care by engaging community

health workers at the primary health care level for non-communicable diseases in low and middle-income countries. He oversees COBIN, the largest community-based NCD cohort in Nepal. He is a member of the Lancet Commission on Hypertension Group. He is the co-editor of the Emerging Authors' Program for Global Cardiovascular Disease of the US Centers for Disease Control and Prevention. He founded the Nepal Development Society, a Nepal-based not-for-profit organization that focuses on research, innovation, and development. He is a fellow and a member of the South and Central Asia Advisory Group of the International Society of Hypertension. He has published more than 100 scientific articles, most of them in the field of non-communicable diseases and environmental health. He received the Health Research Outstanding Award from the Nepal Health Research Council and the Hans-Ibsen's Hypertension award from the Danish Society of Hypertension. At Johns Hopkins, he provides project management and scientific support as a core member of the Resolve to Save Lives team. He conducted the first study in Nepal exploring pesticide exposure among farmers in Nepal. He was the co-editor of a special issue published by Environmental Health Insights on pesticide poisoning in low and middle-income countries. Lately, he is also working to explore the effect of climate change on human health, particularly focusing on occupational exposure to high-heat environments and chronic kidney disease.

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More than 35 years of work experience in public sector and private sector industries
Associated with NGOs for Public Health and Rural Health activities
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Presented papers in many National and International Conferences
Recipient of oration awards and many other awards for the contribution in the field of Occupational Health
Participated in the United Nations Sustainable Development Goals programs in UN HQ, New York

Erik Jørs MD, MIH, PhD Clinical physician at Odense university Hospital and associate professor at the University of Southern Denmark. Working in Bolivia, Uganda and Nepal with interventions to reduce pesticide poisonings among farmers since 2001 and ongoing. Chair of ICOH Scientific Committee of OHS in Mining 2015-22, founder and NGO-Dialogos board member since 1994, Daily leader of the International Committee within the Danish Society of Occupational Medicine.