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## SEMINAR ON OCCUPATIONAL HEALTH HAZARD AND CONTROL (OHHC) Malaysia's Health Risk Assessment (HRA) Approach



# SEMINAR ON OCCUPATIONAL HEALTH HAZARD AND CONTROL (OHHC) Malaysia's Health Risk Assessment (HRA) Approach

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Despite all efforts and promotions taken by enforcer, employers and OSH practitioners, occupational diseases and poisoning are still a major issue in safety and health in Malaysia. Based on Department of Occupational Safety and Health (DOSH) analysis of occupational disease and poisoning cases in 2013 – 2015 (Figure 1), the highest cases of occupational disease and poisoning were reported from the manufacturing sector which recorded 86% of cases in 2015, 82% in 2014 and in 79% in 2013. Besides manufacturing, higher cases were also reported in public services and agriculture.

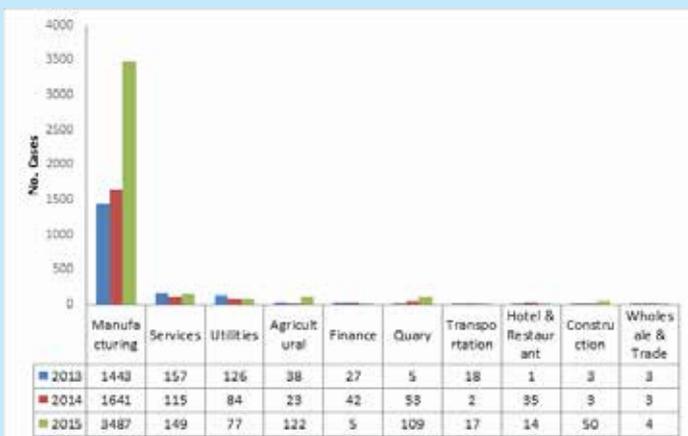


FIGURE 1: Occupational Disease and Poisoning according to sectors for 2013 to 2015 (DOSH, 2015)

This data is further supported by statistics from Social Security Organization (SOCSO) in 2013 and 2014 (Figure 2) showed that manufacturing sector is the main contributor to accident cases which was about 25% in 2014 and in 26.5% in 2013, followed by services, wholesale and construction sectors.

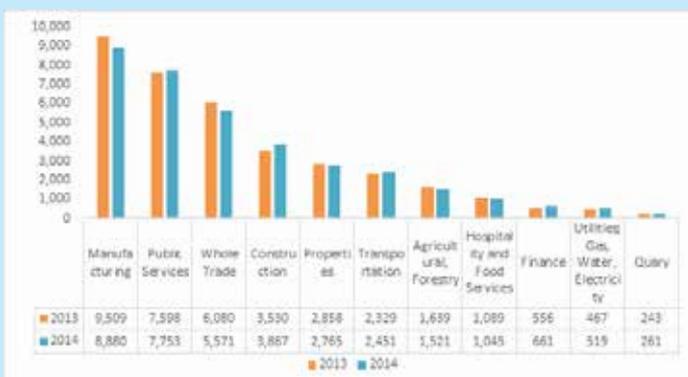


FIGURE 2: Accident reported according to industry for 2013 to 2014 (SOCSO, 2015)

Recognizing that there are needs for more thorough studies on health hazard profiles and existing controls for these industries, NIOSH was entrusted to undertake this study. The Study on Occupational Health Hazard and Control will evaluate the level of the health hazards, exposures and control in the related sectors. In addition, this study will propose health hazard control guidelines which may focus on related OSH legislations & standards, risk & symptoms, best practices of control measures and interventions for critical task with involvement of related enforcement

agencies, practitioners and industries. This kind of research (scope and method) was the **FIRST** occupational health study in Malaysia. Covering 10 types of industries in Malaysia, this study aims to identify the health hazards in work processes and propose effective control measures that are relevant in current practices by industry. A total of 1,356 companies from the whole Malaysia participated in this study. It was the first ever research to be done in Malaysia in such a scale, which aimed at boosting awareness on occupational health hazards in the workplace. The output of the study of exposure and control of health hazards in industries are:

- Development of workers' health hazard exposure profiles;
- Development of workplace health hazards control inventory;
- Development of intervention program involving critical tasks to improve existing health hazards control methods; and
- Development of guidelines for the control of health hazards.

As part of information dissemination and industrial engagement activities for this research, a Seminar on Occupational Health Hazard and Control was organised and had been officially launched by Ir. Zailee bin Dollah, Deputy Director General of Department of Occupational Safety and Health (DOSH) on 7<sup>th</sup> August 2018 at NIOSH Bandar Baru Bangi. The seminar was also attended by NIOSH top management and experts [including Major (Rtd) Hj. Hanif bin Maidin, Executive Secretary, Hj. Fadzil bin Osman, General Manager of CRD and Hj. Mohd Esa Baruji, OSH Technical Specialist 1 cum as Research Head, OHHC Group]. The seminar was attended by about 130 participants from five core industrial sectors and enforcement agencies in Malaysia. The five core industrial sectors was came from 10 subsectors which were construction, plantation, wholesale & retail trade, water treatment plant, waste collection, healthcare and manufacturing industries include electronics, plastic, metal and furniture. The selection of subsectors were based on among the highest occupational health cases statistic recorded by DOSH and SOCSO.



FIGURE 3: NIOSH top management with Ir. Zailee bin Dollah, Deputy Director General of DOSH (Occupational Health)

In the opening speech, Ir. Zailee mentioned that in 2016, a total of 7,820 cases of occupational illness and poisoning were reported to the DOSH compared to the number of occupational diseases and poisoning in 2015 of 5960 cases, an increase of 31% cases. A total of 2,876 cases were confirmed as Noise-Induced Hearing Disorder, Noise-Induced Hearing



Loss (NIHL), Hearing Impairment and Permanent Standard Threshold Shift. This disorder is still the most common occupational disease experienced by workers (74.5%) compared to other diseases.

This is followed by occupational disease related to musculoskeletal disease, which is 173 cases (4.5%) and 98 cases (2.5%) lung-related occupational diseases. Analysis of occupational diseases and poisoning by the sector found that manufacturing sector recorded the most number of occupational disease cases in 2016, of which 3298 cases (85.4%). This was followed by utility sector, with 227 cases (5.8%) and public sector, 158 cases (4.1%).

“We believe that it is important for us to share all the findings obtained from this study with the industry to ensure that improvements to workplace health issues can be solved practically as well as exchanging views and experiences on the issue”, added Ir. Zailee in his opening speech.



**FIGURE 4: Participants including researchers and organising committee of Seminar on OHHC - Malaysia's HRA Approach**

This study was divided into 2 phases with Phase 1 aimed to determine the critical tasks that has highest risk on occupational health and Phase 2 were focused on the interventions programme. Identification of critical tasks includes all types of hazards and ranked according to their severity rate. The study then continued with the formulation of the intervention programme to control the exposure of health hazard for the critical task. Method used in Phase 1 was validated HRA Checklist which can be used to evaluate the risk of five parameters of health hazards including chemical or dust, ergonomic, heat, noise and biological.

Result of the HRA will then be analysed and supported by expert review (from enforcement, academic and industry opinion & expertise) and literature review (include documents review) to determine the critical tasks from each sectors. For phase 2, the intervention programme will focus on hazards with the highest risk rating in all sectors and control measure preferably engineering control type that are available and practical for the specific hazards. These interventions must be innovative, low cost, high impact and cost effective approach since more than 98.5% business establishments in Malaysia are Micro, Small and Medium-Sized Enterprises (MSMEs) (Reference: Department of Statistic Malaysia, 2017).

Since it is no longer sufficient to simply identifying hazards and assessing the risks, NIOSH should now aim at increasing the understanding on the prevention and control, and focusing the intervention on the task that recorded the highest occupational risk while strengthening the management commitment to workplace health and create better working conditions.



**FIGURE 5: Researchers and Research Assistants of the Study of Exposure and Control of Health Hazards in Industry**

Presentation by the research team was started by Mr Raemy Md Zein (overall research), and followed by Mr Noorul Azreen Azis (construction), Mr Daud Adam (plantation), Madam Siti Nurani Hassan (wholesale and retail), Mr Shahrulnizam Jamen (water treatment plant), Madam Ruzita Mohd Shariff (municipal council), Madam Aqilah Nabihah Omar (healthcare and sanitation), Mr Ismail Abdul Rahman (electronics), Mr Amroun Mustafa (plastics), Mr Muhammad Zulazhar Abdul Halim (metal) and Mr Norhafsam Maghpor (furniture). Besides presenting the methodology and way forward of the research, researchers also share their findings on HRA results, critical task and intervention recommendation for each of the subsector. The abstract and presentation slides were published as technical seminar book (ISBN: 978-967-15635-0).



“The objective of this study is to develop a protocol for: (1) assessing the risk of exposure to health hazards, (2) identifying and evaluating the effectiveness of existing control measures in controlling health hazards, (3) developing, implementing and evaluating an intervention program involving critical tasks relevant

to each subsector of the industry, (4) recommending control measures based on regulatory requirements and industry best practices, and (5) developing health hazard control guidelines”, said Mr Raemy Md Zein in his speech.



Many positive feedbacks from participants were obtained and some even requested the seminar to be held more than one day. The participants were interested with the intervention concepts/ designs and were giving their own ideas on developing the engineering control prototype. For the benefit of the industry, OSH practitioners can contact

Consultation, Research and Development Department (CRD), NIOSH for further explanation and discussion on the HRA program and other related information.

NIOSH will organise another similar seminar in 2019 by focusing more in pre and post intervention analysis, experience in implementing control measure in industry and LEAN management analysis (eg Visual Stream Mapping tools). There will be more than 16 interventions to be showcased and hopefully this effort can reduce occupational health diseases or cases in the country. Let's make Malaysia as safe and healthy place to work.



## SciCOSH 2018: OSH RESEARCH TO PRACTICE, ENGAGING WITH INDUSTRY TOWARDS IR4.0

For the 5<sup>th</sup> time, the Scientific Conference on Occupational Safety and Health (SciCOSH) 2018 was held on 28 and 29 November 2018. Located at Le Meridien Hotel, Putrajaya, Malaysia, SciCOSH 2018 was officiated by Chairman of National Institute of Occupational Safety and Health (NIOSH), Tan Sri Lee Lam Thye. In line with the development of global and regional technologies, the **Engaging OSH in Industrial Revolution 4.0 (IR 4.0)** as a theme for SciCOSH 2018 is exactly the time.

Industrial Revolution that has now entered the fourth stage or better known as IR4.0, where the evolution of computation and automation processes is rapidly progressing. As a response to that, Malaysia recently through the Ministry of International Trade and Industry launched the National Industrial Policy 4.0 known as the **4WRD** Industry in line with the digital transformation especially for the manufacturing and services sector in the country. The 4WRD industry is an important initiative for Malaysia to reform and become a developed nation by utilising its internal resources by 2025. NIOSH also took the same initiative and supported efforts towards revolutionising the industry in Malaysia by discussing and inspiring innovation through SciCOSH 2018.

Attended by more than 200 participants came from a wide range of occupational safety and health (OSH) enforcers, practitioners and academicians, SciCOSH 2018 is the best platform for stakeholders to discuss and share the implementation of safety, health and environmental promotions. The 2-days conference also involved 60 research papers in various fields of OSH including ergonomics, construction safety, OSH Technology, occupational health, and occupational safety. Presented by both local and foreign experts, these research findings can be shared and discussed together with participants who are present primarily on the challenges of the new form of impact, hazards and risk from IR4.0.

Various categories of awards were also featured during SciCOSH: The Best Paper, Best Presenter and Best e-Poster awards.

Three winners for each award category were to recognise the effort, innovations, breakthrough and new knowledge pertaining to OSH development by researcher. For the **Best Paper Awards**, the award was given to Mr Asban Dolah from TM Research & Development Sdn. Bhd. with his paper titled Acceleration Impact Study on the Industrial Safety Helmet Harness. It was followed by Miss Noorhasimah Awang from NIOSH Malaysia for second place while Nor'ain Mohd Ramli from Universiti Putra Malaysia for third place.

As for **Best Presenter Awards**, first place was awarded to Dr. Jafri Mohd Rohani (Universiti Teknologi Malaysia) with a presentation titled I.R. 4.0: Technology Integration to Improve Safety and Health in Construction Project. For second and third place were awarded to Ir. Dr. Ezzarhan Abdullah (Department of Occupational Safety and Health) and Abd Razak Abdul Majid (Top Point Binary Consultant) respectively. Meanwhile for the **Best e-Poster Awards**,

the first place was won by e-poster of OSH Empowerment for Principal Employer which had been presented by Madam Siti Nasyrah Ibrahim (NIOSH Malaysia). It were followed by second place by Yuwaneswary Veloo (Insitute for Medical Research) and Fauzana Mustafa (Universiti Selangor) in third place. All winners received a certificate of appreciation with frame and token of souvenir. Evaluation criteria for best paper included novelty, contribution technical correctness & results; and language & writing skill. Meanwhile organisation, style in presenting scientific result, pace, visual aids, introduction & literature review, summary of method, discussion of results and conclusions and response towards audience was taken into consideration for oral and e-poster presentation. Congratulations to all the winners!!!

SciCOSH 2018 also witnessed a Memorandum of Understanding (MoU)

between NIOSH Malaysia and the Japan National Occupational Safety and Health (JNIOHS) to collaborate in various area such as construction safety, ergonomics, environment and the safety of the chemical process. During the ceremony, NIOSH was represented by its Executive Director Mr. Ayop Salleh while JNIOHS was represented by its Director General, Dr Yasuo Toyosawa and witnessed by NIOSH Chairman, Tan Sri Lee Lam Thye. The cooperation also saw both sides agreed to share expertise and knowledge, research (technical & publication) and resources (scientific equipment & laboratory facility) that could be utilised jointly.

With the collaboration from several bodies and related parties, SciCOSH 2018 was also recognised as Continuing Education Programme (CEP) by DOSH, Continuous Contractor Development Programme (CCD) by Construction Industrial Development Board (CIDB) and Continuing Professional Development (CPD) programme by Ministry of Health (MOH) to all participants especially for OSH competent persons and practitioners in this country.

SciCOSH was organised in 2010 for the first time. The biennial conference is consistently organised by NIOSH, an agency under the Ministry of Human Resources responsible for carrying out research, consultation, training and dissemination activities related to OSH in this country. The SciCOSH 2018 conference organising committee was led by Haji Fadzil Osman as chairman and assisted by five working committees, namely Secretariat, Scientific, Promotion & Registration, Logistics & Technical and Programme Management & Protocol. As a team and also support by sponsored involved, SciCOSH 2018 had been organised successfully and was expected to provide useful output to stakeholders involved. The abstract and presentation materials can be uploaded from [www.myscicosh.com/download](http://www.myscicosh.com/download).

Hopefully we will meet again with a more exciting contents and surprise at 6<sup>th</sup> SciCOSH in 2020, year of celebration for Developed Malaysia.



## PUSPANITA NIOSH MENGANJURKAN LAWATAN SOSIAL KE KUNDASANG, SABAH.



Pada 16-18 November 2018, Biro Lawatan dan Sosial Puspanita NIOSH telah mengadakan lawatan sosial ke Kundasang, Sabah selama 3 hari 2 malam. Seramai 20 orang kakitangan wanita NIOSH mengikuti lawatan yang terdiri daripada ahli-ahli Puspanita NIOSH.

Lawatan 3 hari tersebut, rombongan Puspanita NIOSH telah mengadakan beberapa aktiviti lawatan antaranya ialah sesi kunjungan ke Rumah Anak Yatim, Kg Langsat di

Kundasang, Sabah pada hari pertama lawatan. Kunjungan ke rumah anak yatim tersebut bagi menyampaikan sumbangan daripada Puspanita NIOSH dan sesi beramah mesra bersama dengan anak-anak yatim yang menghuni rumah tersebut.

Hari kedua lawatan ke Bukit Pyramid atau lebih dikenali sebagai Sosodikon Hill. Bentuk bukit-bukit yang unik seperti piramid menjadi penggemar aktiviti mendaki. Seterusnya rombongan Puspanita NIOSH telah melawat Kundasang Desa Cattle atau di panggil Desa Farm di mana ia terletak di Tanah Tinggi Mesilau, adalah sebuah ladang ternakan lembu tenusu yg dikatakan mempunyai suasana seperti berada di New Zealand. Ladang Teh Sabah, turut dilawati iaitu satu-satunya ladang teh organik yang terletak di Borneo. Dikelilingi hutan yang berusia 130 juta tahun, Ladang Teh Sabah menawarkan pemandangan yang sangat menarik digabungkan pula dengan udara pergunungan yang menyegarkan,

ia merupakan ladang teh organik yang seumpamanya yang terletak di Kepulauan Borneo. Di Pekan Ranau pula, rombongan sempat berkunjung ke Kolam Air Panas Poring yang terletak di kawasan tanah rendah, kolam air panas ini cukup kaya dengan kandungan sulfur yang dapat melegakan badan dan meningkatkan kesihatan. Rombongan turut merasai pengalaman urutan kaki 'spa ikan' di sungai Moroli Ikan Tagal Kg Luanti. Aktiviti akhir hari kedua, rombongan dibawa merasai keindahan pemandangan pergunungan, perkampungan dan sawah padi dengan merasai flying fox yang berkepanjangan 125 meter ini dengan pemandangan yang cukup memukau mata memandangi.

Aktiviti hari terakhir, rombongan Puspanita berkunjung ke perkampungan Tamparuli iaitu sebuah pekan kecil yang terletak dalam kawasan Tuaran, Sabah dan kebanyakan penduduknya dari suku kaum Dusun. Rombongan dapat merasai melalui Jambatan Tamparuli sebuah jambatan yang berusia puluhan tahun. Turut melawat Pasar Filipina Kota Kinabalu yang menyajikan pelbagai barangan basah, kering dan cenderahati untuk dibawa pulang.

## NIOSH RUN PUTRAJAYA 2018

NIOSH Safety Committee (NOSHCOM) dengan kerjasama Bahagian Kesihatan Pekerjaan (OHD) dari Jabatan CRD menjalankan Program OSH Solution Service iaitu Total Wellness and Health Promotion (TWHP) kepada kakitangan NIOSH yang terpilih bagi mempromosikan budaya gaya hidup sihat di tempat kerja selari dengan aktiviti pelaksanaan kerajaan Malaysia di dalam National Strategic Plan for Non Communicable Disease (NSP-NCD) 2016-2025.

Bersempena dengan Program TWHP tersebut, sekretariat NOSHCOM dan OHD telah mengadakan satu aktiviti larian yang dinamakan NIOSH RUN PUTRAJAYA 2018. NIOSH Run Putrajaya 2018 ini telah berlangsung pada 23 November 2018 bertempat di Taman Seri Empangan, Presint 5, Putrajaya.

Lebih kurang 40 orang kakitangan NIOSH yang mengikuti Program TWHP 2018 dan kakitangan yang telah mendaftar di aplikasi BookDoc (Active@Work) menyertai larian pada pagi itu. Pelancaran melepaskan peserta larian NIOSH Run Putrajaya 2018 telah dilaksanakan oleh Encik Khairunnizam bin Mustapa, Pengurus Besar Jabatan CRD.

Peserta memulakan larian sekitar jam 8.30 pagi dan menamatkan larian sejauh 5 km di sekitar kawasan Taman Seri Empangan Presint 5, Putrajaya. Pihak NIOSH mengucapkan tahniah dan syabas kepada semua peserta yang terlibat di dalam program yang julung kali diadakan ini.



## SEMINAR KESELAMATAN DAN KESIHATAN PEKERJAAN UNTUK PENGAMAL MEDIA 2018

Pada 1 November 2018, NIOSH telah menganjurkan Seminar Keselamatan dan Kesihatan Pekerjaan untuk Pengamal Media 2018. Seminar ini telah diadakan di Dewan Rafflesia, Menara NIOSH, Bandar Baru Bangi, Selangor yang telah dirasmikan oleh Pengerusi NIOSH, YBhg Tan Sri Datuk Seri Lee Lam Thye. Turut hadir di majlis perasmian pada pagi itu adalah Setiausaha Eksekutif NIOSH, Tuan Mejar (B) Hj Hanif Maidin.

Kira-kira 50 orang peserta yang terdiri daripada para wartawan, pengamal media, blogger dan juru kamera dari pelbagai organisasi media tempatan telah menyertai seminar tersebut. Pada hari tersebut juga, Bahagian SSCD dan ERCD dari Jabatan



ETDRO telah membuat Demonstrasi Keselamatan di Tempat Tinggi dan Ruang Terkurung di Ruang Hangar NIOSH dan Simulator Ruang Terkurung. Pendedahan tentang aspek keselamatan mengikut Prosedur Kerja Selamat (SOP) yang betul telah ditunjukkan kepada semua para peserta seminar. Peserta seminar juga telah diberi peluang untuk melakukan aktiviti bekerja di tempat tinggi di Ruang Hangar dan di dalam Simulator Ruang Terkurung sambil di bantu oleh pasukan demonstrasi NIOSH.

Majikan perlu peka dan menyediakan peralatan keselamatan serta perlindungan perubatan dan kesihatan yang sesuai kepada para wartawan dan jurukamera yang bertugas di zon bahaya. NIOSH bersedia bekerjasama dengan organisasi media untuk menganjur program-program latihan bagi pengamal media tempatan pada masa akan datang.

