

GHS Review Conference for Southeast Asia



Final Report



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The GHS Review Conference for Southeast Asia was a contribution to the *WSSD Global Partnership to implement GHS* and the 11th in a series of regional and sub-regional GHS conferences and workshops which are coordinated and supported through the *UNITAR/ILO Global GHS Capacity Building Programme* with extra-budgetary resources.

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Conference Summary

The “GHS Review Conference for Southeast Asia” was held 21-23 May 2013 in Kuala Lumpur, Malaysia. It was organized through the collaboration of the Ministry of International Trade and Industry (MITI), National University of Malaysia (UKM), United Nations Institute for Training and Research (UNITAR) and International Labour Organization (ILO), with financial support from the Government of Switzerland and the European Union (EU). The conference involved about 100 participants from 14 countries, including government representatives from Southeast Asia, industry and relevant associations, labour organizations, NGOs, and research institutions.¹

The main goal of the conference was to bring together key representatives from government, business and industry, and public interest and labour organizations to discuss GHS implementation and capacity needs. Specific objectives of the conference include, *inter alia*, to:

- take stock of the status of GHS implementation in Southeast Asia;
- learn about Green Chemistry;
- share experience and approaches to GHS implementation;
- explore areas for collaboration and training;
- examine existing institutions and initiatives relevant for GHS implementation; and
- develop joint and shared approaches to capacity building at the national and regional levels.

In order to achieve the conference objectives stated above, the conference was organised and conducted in several sessions, namely the information session on GHS updates and lessons learned in the region; the green chemistry introductory session; current status and updates of GHS implementation in Southeast Asia; GHS in occupational safety and health; consumer campaign for chemical safety in ASEAN based on the GHS; and experience sharing by the industry.

After listening to the presentations delivered by international and national speakers on the first and second day, participants were assigned into different working groups on the third day to discuss and deliberate key actions needed to advance GHS implementation, particularly in the context of the upcoming ASEAN Economic Community 2015. The key actions identified by conference participants include technical cooperation and collaboration; training and capacity building; the definition of GHS ‘implementation’; and awareness and information sharing in the region.

While acknowledging the significant progress within the region with GHS implementation, in order to continue this momentum in the future it was specifically recommended to:

- establish a common platform for information sharing (possibly through a new working group on chemicals in ASEAN);

¹ The Conference agenda can be found in Annex 1 and the list of participants in Annex 2.

- continue technical training and further training of trainers;
- continue further and broad awareness raising using GHS-based labels and SDS; and
- promote GHS to the ASEAN Summit in view of the upcoming ASEAN Economic Community in 2015².

All Conference materials and more photos are available at:

<http://www.unitar.org/cwm/node/220>.

² All materials related to the conference may be accessed at: <http://www.unitar.org/cwm/node/220>

Opening Statements

Prof. Mazlin Bin Mokhtar, Director of the Institute of Environment and Development (LESTARI), National University of Malaysia (UKM) welcomed participants to the GHS Review Conference for Southeast Asia in Malaysia, the fourth regional GHS event after Philippines (2005), Indonesia (2007) and China (2010). Prof. Mazlin expressed his gratitude to UNITAR, ILO and Ministry of International Trade and Industry (MITI) for planning and organizing the Conference, and acknowledged the financial support of the Government of Switzerland and the European Union. He highlighted it was an honour for LESTARI, UKM to be given the opportunity to co-organise this event on matters pertaining to GHS and chemicals management. Prof. Mazlin noted that GHS is an important tool to enhance a sound chemical management system to protect human health and the environment. As Malaysia aspires to become one of the higher income countries in 2020, it is important to balance this development with protection of human health and the environment. This includes enhancing safety of chemicals and controlling side generation of potential hazardous substances as by-products or unintentional releases. Prof Mazlin added that this would mean a greater commitment and dedication in ensuring better chemical safety for workers and special groups of society among consumers, such as children and pregnant mothers. He anticipated that GHS and chemicals management would be one of the important components in the upcoming ASEAN Economic Community. However he added that further discussion and deliberation among ASEAN members are needed on this matter. Prof Mazlin concluded by indicating his hope that UNITAR and ILO can continue to support GHS and related activities in the region.

On behalf of UNITAR and ILO, Mr. Jonathan Krueger, Manager of the Chemicals and Waste Management Programme, UNITAR, expressed the appreciation of the two organizations for the long-standing relationship with the Government of Malaysia, and cooperation from countries of the region as evidenced from the participants of all 10 ASEAN members in the Conference, as well as important regional neighbours such as China and Japan. He indicated that capacity building for GHS implementation is one of the main priorities of UNITAR and ILO to promote sound chemicals management at national and regional levels. Thus, the objectives of the regional conference include taking stock of current status of GHS implementation in Southeast Asia, China and Japan, learning about green chemistry and also exploring areas for further collaboration and platforms for shared and joint learning. He also noted that successful GHS implementation contributes to broader sustainable goals, apart from the satisfaction of international agreements, such as SAICM, the Stockholm and Rotterdam Conventions, the MDGs and providing a framework for improved chemical management. It is a long-term framework to establish bilateral and multilateral relationships for safe and sound chemicals management. He concluded by acknowledging the efforts of all Conference organizers and the support of Switzerland and the EU.

Mr. Sandro Paolicchi, Head of Section, Trade and Economic Relations, Delegation of the EU to Malaysia, expressed his appreciation to the host and organizing partners for their excellent work and commitment towards the event. As far as GHS is concerned, Mr. Paolicchi noted that the usefulness of the classification exercise is invaluable in an increasingly globalised economy. He explained that harmonisation of chemical classification and labelling serves several purposes such as facilitating the safeguard of health and the transport of chemicals that facilitates trade. Furthermore, he added that the advantage of GHS is not new, as it was suggested in Agenda 21, under the chapter of sound management of toxic chemicals, since when GHS capacity building has been pursued aggressively by UNITAR and ILO, alongside various partners. Mr Paolicchi said that legislation to make mandatory otherwise voluntary standards, communication and capacity building are pivotal in the drive towards the implementation of GHS. The implementation of GHS is ongoing by nature that requires continued updates, training and review where cooperation from various partners is necessary. Mr Paolicchi ended his opening by hoping participants will leave the conference with renewed enthusiasm for implementation of GHS.

Mr. Nik Rahmat Nik Taib, Deputy Secretary General, Ministry of International Trade and Industry (MITI) expressed appreciation of the Government of Malaysia to UNITAR, ILO and UKM for their efforts in organizing the conference, and acknowledged the financial support of the Government of Switzerland and the European Union. He highlighted that the conference objective was to share experiences and to establish further collaboration in GHS implementation, which he was confident would also enhance trade and promote intergovernmental networking. He said the production and use of chemicals is fundamental to economic activities and important to all countries, which has great implications to human health and people's daily lives. Thus the GHS is an important tool for addressing the need of safe chemicals management - it establishes communication systems within and between countries, which directly benefit governments, industries and workers. As far as Malaysia is concerned, the Malaysia GHS Implementation Roadmap (MyGHS) was established in 2010 with 8 strategies and 19 actions plans. Out of the 8 strategies, one of them is cross sectoral while others focus on industry, agriculture, consumers, etc. All sectors - both public and private - are involved in the capacity building in the implementation of GHS, through training sessions such as seminars and advanced training courses. In conclusion, he expressed that vibrant development in chemicals and petrochemicals has contributed to the robust economic development of the country and this industry will greatly benefit from the implementation of GHS in the region and the world. Mr. Nik then officially opened the Conference.

Session 1: Introductory Presentations

This session, which provided information related to the workshop and latest GHS developments, was moderated by Ms. Ingrid Christensen, Senior Specialist on Occupational Safety and Health, ILO.

Mr. Jonathan Krueger, Manager of the Chemicals and Waste Management Programme, UNITAR provided an introduction to the conference, explaining that it was part of the activities under the framework of the Programme “Strengthening National and Regional Capacities to Implement the GHS in ASEAN – Phase II”. He reviewed the organizational arrangements for the conference and acknowledged the financial support of the Government of Switzerland and the European Union. The Conference involved about 100 participants from 14 countries, including government representatives from Southeast Asia, industry and relevant associations, labour organizations, NGOs, and research institutions. His presentation outlined the workshop objectives, which consisted of, *inter alia*, taking stock of the status of GHS implementation in Southeast Asia; learning about green chemistry; sharing of experience and approaches, exploring areas for further collaboration and training as part of an on-going process; examining existing institutions and initiatives relevant for GHS and the sharing of that; and developing joint and shared approaches to capacity building at the national and regional levels in terms of future activities and next steps.

Dr. Peter Dawson, Principal Scientist, New Zealand Environmental Protection Authority (EPA), gave an update on the latest developments pertaining to the GHS. His presentation reviewed development of the GHS document from the first version until the fifth revised edition published in 2013. Some of the changes made in the fifth revised edition included new classification criteria for oxidising solids based on a new test method; the combination of Annexes 1 and 2 into a new Annex 1 giving summary tables on classifications and label elements; and a new section that provides identification codes for the GHS pictograms (matches with the EU CLP regulation) was introduced into Annex 3. Dr. Dawson also explained the current biennium workplan of the UN ECOSOC Subcommittee of Experts on the GHS (SCEGHS) (2013-2014) and areas that will be covered are, *inter alia*, nanomaterials, classifying polymerizing substances, issues on hazard communication and implementation, and the possibility of developing a global list of GHS classified chemicals. Dr. Dawson concluded his presentation by sharing the status of GHS implementation in the European Union, New Zealand, Australia, USA, and Canada.

The introduction and key principles of the Chemicals Convention 1990 (No. 170) was presented by Ms. Ingrid Christensen, Senior Specialist on Occupational Safety and Health, ILO. Before Ms. Christensen introduced the Chemicals Convention, she explained the role of ILO and introduced ILO Labour Standards, particularly on the differences between conventions and recommendations. She explained the key features of the Chemicals Convention 1990 (No. 170), including its scope and definitions, general principles, classification and related measures, responsibilities of employers, duties of workers, rights of workers and their representatives, and responsibilities of exporting states. She indicated that the Chemicals Convention

1990 (No. 170) is relevant for GHS implementation as the convention covers the needs of chemical classification. Currently a total number of 17 countries have ratified the Chemicals Convention 1990 (No. 170).

Ms. Mehdiya Siari, UNITAR Training Associate, presented an overview of UNITAR and the Chemicals and Waste Management Programme. As far as the GHS is concerned, UNITAR and ILO are the designated focal points for capacity building in the UN ECOSOC Subcommittee of Experts on the GHS (SCEGHS). She elaborated on the approaches, strategies, and national and regional activities that are carried out under the UNITAR/ILO GHS Programme. Ms. Siari also highlighted the performance of the WSSD Global Partnership for GHS Capacity Building initiated by UNITAR, ILO and OECD in 2002, and relevant resources including the guidance document on 'Developing a National GHS Implementation Strategy'; 'Understanding the GHS, the Companion Guide to the GHS Purple Book', materials that have now been converted into e-training materials. She concluded that the 10-year partnership has resulted in 94 beneficiary countries; 11 regional workshops; over 85 different awareness-raising materials developed and translated into national and local languages, with more than 65,000 units distributed; 8 peer-reviewed guidance documents and training packages produced and translated into multiple languages; and more than 8,000 trained beneficiaries.

The final presentation in this session was given by Prof. Peter Peterson, Associate Fellow, UNITAR, who provided an overview of achievements and lessons learned in the region. According to him, 'lessons learned' in his presentation means the knowledge and experience gained from the implementation of the national and regional GHS capacity building programme, discussions and conclusions arising during the workshops, and other national initiatives. Prof Peterson highlighted that the GHS capacity building action plans should encompass six important steps, namely national coordination mechanisms; focal points; comprehensibility testing; capacity building; training and awareness raising; and implementation. He emphasised that stakeholders occupy a central role in GHS capacity building action plans, whether in the planning or the implementation stages, and multi-stakeholder participation is essential for success.

Prof Peterson also reviewed the GHS training and capacity building workshops and comprehensibility testing conducted in the region. Furthermore, he elaborated on the integration of the GHS into chemicals management by giving examples of the linkages between GHS and other international chemical conventions, namely the Basel, Rotterdam, and Stockholm Conventions. By considering the synergy of GHS implementation in the region, Prof Peterson gives his views on the roles of GHS in the ASEAN Single Community that is scheduled in 2015. Prof Peterson concluded that the partnerships among ASEAN member countries and collaboration with international organisations had led to success for Phase I and Phase II of the project 'Strengthening National and Regional Capacities to Implement the GHS in ASEAN'.

During the discussion session, questions were raised by participants related to the scope of GHS implementation, whether the GHS implementation should cover only the industrial workplace or it should also cover other sectors such as the agriculture sector. Participants expressed their concerns regarding the difficulties to implement GHS in all sectors and they also indicated that the 'definition' of GHS implementation is not well defined. UNITAR responded that the GHS implementation should cover all related sectors, for example, for the agriculture sector they can refer to the latest WHO guidelines that already incorporate GHS elements. Participants also asked about the global list of GHS classified chemicals - according to Dr. Peter Dawson the SCEGHS is now looking in to this matter.



Session 2: Introduction to Green Chemistry

This session introduced green chemistry and experience sharing by industry that has adopted the principles of green chemistry. The session was moderated by Mr. Jonathan Krueger, Manager of the Chemicals and Waste Management Programme, UNITAR.

Ms. Blandine Trouille, Senior International Trade Specialist, International Trade Administration (ITA), at the US Department of Commerce, provided an introduction to Green Chemistry. In her presentation, she linked the GHS with the ITA-led Advanced Manufacturing and Innovation in Chemicals Management Initiatives (AMICMI) by indicating the importance of chemical hazard communication, and the progress that actors, in the chemical industry, are making toward reduction and elimination of hazardous materials in their manufacturing processes and products, when/where possible. She also gave a brief introduction on green chemistry definition and principles, as currently developed in the United States, to highlight that under increased competition in global chemicals manufacturing and trade, some companies look into research and development toward alternative options that reduce or eliminate hazardous substances and that would lead to costs savings, as well as the creation of a niche market.

She noted that green chemistry, engaging in more sustainable manufacturing practices to produce less hazardous chemical products and processes, promotes innovation with solid consequences for competitiveness through new intellectual property rights, increased value-added, reduced production costs (via water, energy efficiencies, etc.) as well as a potential decreased in regulatory costs since the products and processes, being less hazardous, require less chemicals management controls. It also appeals to overall consumers' demand. Ms. Trouille concluded her presentation by emphasizing that investment, collaboration, research, information sharing and communication are urgently needed to further develop alternative chemical products and processes and continue to contribute to the enhanced protection of human health and the environment.

Ms. Trouille then made a presentation on behalf of Richard Engler, Programme Manager, Green Chemistry Programme, Office of Pollution Prevention and Toxics, US EPA, as an introduction to the applications of green chemistry. In the USA, where environmental regulations started in the 1970s due to major pollution issues in the country, environmental protection has meant for decades controlling exposure to hazardous substances. To further strengthen chemical risk management, the US changed the focus in the Pollution Prevention Act from managing exposure to managing hazard. This modification led to the voluntary program on green chemistry: pollution prevention at the molecular level. For the US EPA, Green Chemistry is the design of chemical products or processes to reduce or eliminate the use or generation of hazardous substances that covers five main areas, namely greener synthetic pathways; greener solvents or reaction conditions; designing greener chemicals; inherently safer chemistry; and process analytical chemistry. Ms. Trouille further elaborated on the costs/benefits equation of green chemistry by

showing some examples of companies that have applied green chemistry principles and brought new products and/or processes to the market, successfully. In conclusion, green chemistry is a philosophy and not simply a discipline – it is a journey towards a greener future with constant need to assess, review and improve further. While it is not a solution to all environmental problems, companies engaged in the discipline of green chemistry are at-the-ready to demonstrate that it is economically relevant to their bottom line, and to 21st century trading patterns in chemicals.

Mr. Michael Tay, Rochester Midland Corporation (RMC), presented the perspective of RMC following up the practical application of green chemistry that demonstrates the theoretical groundings in a practical setting. Mr Tay explained that RMC promotes ‘green to the core’ and to ensure sustainability via “3P” – People, Planet and Profit. He demonstrated various RMC green products that adopted a green chemistry approach, for example, using bio-based surfactants to replace toxic substances more commonly used in cleaning agents. With the collaboration with University of North Carolina, a comparison study between routine housekeeping and green housekeeping was conducted and the results showed that the green housekeeping has performed better compared with conventional housekeeping.

During the discussion session, several questions pertaining to green chemistry were raised, such as criteria and parameters to define a green process, and the scope of green chemistry (e.g. whether it covers “green production”). Ms. Trouille responded that green chemistry covers the entire lifecycle of the process and the product, from production and manufacturing of the raw material used, until the disposal of the product. The potential challenges to be brought to the company is basically the consistency of their claims of them being “green”, for which to a certain extent they would require further 3rd party certification.

Session 3: Status of GHS Implementation in Southeast Asia

This session provided an opportunity for countries to provide information about the status and updates of GHS implementation in their countries; the session was moderated by Dr. Peter Dawson, Principal Scientist, New Zealand Environmental Protection Authority (EPA) and Ms. Mehdiya Siari, UNITAR Training Associate.

Mr. Qiming Luo, Ministry of Industry and Information Technology of China (MIIT), presented the status of GHS implementation in China by introducing the inter-ministerial coordination committee led by MIIT and involving 11 other participating agencies. Under the framework of this committee, lead agencies for different sectors, namely industry, transport, agriculture and consumer sectors were identified. In order to support technical aspects of GHS, the Expert Consultative Committee of GHS was established in May 2012, where the main tasks of this committee are to give inputs and advise in drafting or revising relevant standards, laws and regulations; to develop a list of chemicals that are classified and labelled according to GHS criteria; to draft action plans and supporting policies for GHS implementation; and to provide technical support to evaluate annual progress and conduct awareness and training sessions. He also presented the Chinese National Standards that are related to GHS, particularly standards associated to chemical classification, labelling and SDS. Mr. Luo acknowledged the 2 year national GHS capacity building project supported by UNITAR/ILO and he elaborated the outputs and findings according to three main components, namely GHS gap analysis; national strategy; and GHS awareness and training. Based on the findings of GHS gap analysis, he summarized that challenges still remain for GHS implementation in China, for example, standards for aspiration hazard and hazardous to the ozone layer are not yet released due to their implications on other existing classification systems; building blocks of the GHS in the newly revised *Regulations on the Control over Safety of hazardous chemicals* is still being studied; elements and contents of labelling of pesticides and workplace are different compared to GHS requirements; and the revised standards for SDS is harmonized with the SDS requirements in GHS but there are some SDS items in the GHS not covered in the standards. During the period of project implementation, the national strategy and action plans for GHS were established and numerous GHS awareness and training sessions were conducted in China.

Ms. Toeti Rahajoe, Ministry of Industry, Indonesia, shared the GHS implementation journey in Indonesia that commenced in 2004, two years after the APEC's commitment on GHS. Several GHS related regulations were gazetted in Indonesia and the latest regulation is the Decree of Minister of Industry No. 23/M-IND/PER/4/2013 concerning the Revision of Decree of Minister of Industry No. 87/M-IND/PER/9/2009 concerning the GHS. This decree stipulates that single chemical substances must be classified according to GHS classification criteria, and SDS must be associated with the chemicals where information on the SDS should be reviewed and revised every 5 years. She added that all single chemical substances for both domestic production and import must comply with GHS requirement that came into force on 24th March 2010; whereas chemical mixtures are given a grace period until 31st December 2016,

with an exemption for Small Medium Enterprises (SMEs). Ms. Toeti acknowledged the 2 year national GHS capacity building project supported by UNITAR/ILO and she indicated the number of participants that participated in the awareness and technical training programmes.

Ms. Veronica Chow, Ministry of Manpower, Singapore, presented that there are five regulatory or controlling authorities, including Ministry of Manpower, for the different aspects or nature of hazardous chemicals in Singapore. As far as GHS is concerned, the activities to support GHS implementation started in 2002 after the endorsement by APEC member countries. The GHS Task Force was first established in 2005 and it is now co-chaired by the Ministry of Manpower and Singapore Chemistry Industry Council (SCIC). Various GHS related activities and programmes are carried out in Singapore, such as the establishment of a virtual GHS expert group; development of standards and guidance materials on GHS; developing the industries' capability on GHS awareness training courses; establishment of a GHS web-page for information sharing; and recently in 2013 developing a GHS (cellphone) apps. She highlighted that in the past the industry raised their concerns for not being ready to implement GHS. Hence the Task Force, considered the feedback and delayed the timeline for phase 1 of the GHS implementation. The Singapore and with some of the other countries are aligned to European Union implementation timeline. She also emphasized the importance of a lead agency in facilitating cooperation and communication between government and industry, and always engaging stakeholders for first-hand information. Besides training and capacity building, legislation and enforcement of the legislation are important to the implementation of GHS in Singapore.

Mr. Sri Ram Letchimanan, Ministry of International Trade and Industry Malaysia (MITI), reviewed the GHS implementation structure in Malaysia where MITI is chairing the GHS National Coordinating Committee that coordinates GHS implementation in four sectors, namely industry, transport, agriculture and consumer sectors. During the two year national GHS capacity building project that is supported by UNITAR/ILO, Malaysia established a GHS Implementation roadmap (MyGHS) that consists of a total of 8 strategies and 19 action plans.

At the same time, the GHS comic that illustrates the GHS in a comprehensive manner was developed and distributed to stakeholders and the public, including students. He also highlighted that the Department of Occupational Safety and Health Malaysia (DOSH) is finalizing the draft regulations that have incorporated GHS elements, tentatively known as Occupational Safety and Health (Chemicals Classification, Labeling and Safety Data Sheet) Regulations 201X (CLASS). In addition, the Department of Standards Malaysia has published Malaysian Standard (MS1804:2008) on GHS-Specification for Classification, Labelling and Formulation of Safety Data Sheet for Chemical Products in 2008. Various challenges were discussed during his presentation, namely legal challenges, technical challenges, implementation challenges and dissemination challenges, and he recommended some potential solutions to address these challenges, for example, engaging the assistance of other ASEAN partners for technical support.

Ms. Nella Granadillos, Occupational Safety and Health Center (OSHC), Philippines, elaborated the GHS implementation structure in the Philippines where the Board of Investment (BOI) is the coordinating agency in the National GHS Implementation Committee, composed of 30 government agencies, 6 industry associations, and 5 public interest and labour organisations. On 4 November 2010, the BOI on behalf of the Government of the Philippines commenced the two years national GHS capacity building project supported by UNITAR/ILO. During the project period, draft guidelines for the 'Implementation of a Chemical Safety Program in the Workplace' that incorporates the provisions of GHS was prepared by the OSHC and the Bureau of Working Conditions (BWC), under the Department of Labor and Employment (DOLE). On the manufacturing and importation of industrial chemicals, the Environment Management Bureau (EMB) drafted the implementing rules and regulations. As far as consumer chemicals are concerned, the Food and Drug Administration (FDA), an agency under the Department of Health (DOH), has prepared a draft to classify and label household hazardous chemicals and consumer chemicals through consultations with various stakeholders. According to Ms. Granadillos, OSHC and BOI conducted trainings on GHS basic and intermediate courses for government personnel and stakeholders, in cooperation with SPIK (industry association), the Integrated Chemists of the Philippines (ICP), as well as other member agencies and civil society groups. Continuing information campaign to implement GHS is carried out through dissemination of GHS posters and brochures and promotion through mass media.

Ms. Aurus Kongphanich, Ministry of Public Health, Thailand, outlined that two subcommittees were established via inter-ministerial coordination, namely the Subcommittee on GHS under the Hazardous Substance Committee and the Subcommittee on Policy and Plan under the National Coordinating Committee on Chemicals Management. These subcommittees have successfully incorporated GHS as one of the priorities in the 3rd National Strategic Plan for Chemicals Management (2007–2011) and continue to reaffirm the integration of GHS capacity building into the 4th National Strategic Plan for Chemicals Management (2012–2021).

According to Ms. Kongphanich, the Department of Industrial Works has developed the key regulatory scheme to implement GHS within the scope of the Hazardous Substance Act 1992 and the enforcement of hazardous substances in industrial settings that results in the Notification of Ministry of Industry on the System of Hazardous Classification and Communication of Hazardous Substances in 2012. The Ministry of Industry's Notification outlines criteria for GHS classification and information required for SDS (based on GHS 3rd revised edition), where the transition period for single substances is one year and for mixtures it is 5 years. Two GHS related databases were established in Thailand, namely the database and computer software model that have classified 500 industrial chemicals based on the GHS criteria developed by Department of Industrial Works; and the Thai First Response Information Database for accidents involving chemicals/dangerous goods that was jointly developed by the Ministry of Transport and GTZ, where this database contains information of approximately 3,000 commonly used substances. Ms. Kongphanich highlighted GHS training and capacities sessions carried out in Thailand, as well as the awareness training materials developed in the Thai language. She concluded her

presentation by envisaging the way forward for GHS implementation in Thailand and she emphasized that GHS implementation is a high priority under the 4th National Strategic Plan for Chemicals Management (2012–2021) that was approved by Cabinet on 12 April 2011.

Ms. Ha Nguyen, Vietnam Chemicals Agency, reviewed the structure of chemicals management in Vietnam and background on the establishment of the Vietnam Chemicals Agency. As far as GHS is concerned, numerous laws and regulations in Vietnam are related to GHS. In addition, Ms. Ha indicated that the Vietnam Chemicals Agency cooperates with the Sweden Chemicals Agency (KemI) to develop ‘Guidelines for the implementation of chemicals classification and labelling in GHS’, and as an output of the cooperation, Circular 04/2012/TT-BCT on ‘Guiding on Labeling and Classification for Chemicals compliance with GHS’ which was issued on 13 February 2012. Ms. Ha concluded her presentation by highlighting some challenges for GHS implementation, *inter alia*, a lack of technical guideline; inadequate management structure; lack of coordination and cooperation; attitude from the industry and enterprise; and insufficient information exchange.

Mr. Phetsavang Sounnalath, Department of Labour Management, Ministry of Labour and Social Welfare of Lao PDR, expressed his views on the lack of a national committee and specific regulations for GHS implementation in Lao PDR. However, the environmental laws in Lao PDR that cover issues related to environmental pollution also cover issues pertaining to the use of chemicals. He gave examples of the efforts carried out by Lao PDR in managing and regulating ozone depleting substances. Besides that, the Ministry’s Decree on Management of Substances and Chemicals in Industry (No. 1041/MIC) was published on 28 May 2012, where the general provision of this Decree is to ensure chemical hazardous properties are conveyed via labels and SDS. The technical name of the chemicals should be written in Lao and English on the label. Mr. Sounnalath also shared the practices in regulating the use of pesticides in Lao PDR.

Dr. Khin Pa Pa Soe, Ministry of Industry, Myanmar, stated that the Chemicals and Related Substances Law was submitted to the Parliament for approval (note: the Chemicals and Related Substances Law was enacted 3 months after the conference, i.e. on 26 August 2013, and relevant rules were submitted to Attorney General for their consideration). While waiting approval from the Parliament, they have established a working group to discuss and deliberate issues related to GHS and this working group consists of governmental agencies, and the private sector, which includes NGOs. She shared the challenges for GHS implementation in Myanmar, which includes a lack of financial and technical support; lack of voluntary support from industry; lack of cooperation and among agencies; lack of human resources; and lack of basic knowledge of chemicals among the public. She also indicated GHS related activities that were carried out in Myanmar, such as conducting GHS awareness and training sessions for government and industry; participation in GHS training organized by AOTS; and development of GHS awareness training materials. In her presentation, she identified ways forward that could facilitate GHS implementation in Myanmar, for example, preparing a national chemical profile;

translating the purple book into the national language; and establishing a group of experts and a chemicals management database.

Prof. Hiroshi Jonai, Nihon University, Japan, started his presentation with the introduction of the concept of GHS, where the three technical aspects of classification, labelling and SDS were highlighted. He elaborated that the hazard communication system should be the basis of chemical control systems, but this is not stressed in the GHS as it is common to Europe and the US, but not to Japan. The regulatory principles to convey hazard information vary among countries due to different cultures and customs, for example the Hazard Communication Standard (HCS) in the USA focuses on ‘worker’s right to know’ whereas the CLP Regulation in the EU adopts ‘supplier’s obligation to inform’ principles. In Japan there is no comprehensive system that has been developed yet, and problems occur when accidents happened in a setting where no hazard communication system is available. He added that GHS implementation for specific substances is mandatory through the Industrial Safety and Health Law (labels and SDS) and the PRTR Law (SDS). Other than the specific substances, “effort-obligation” is required and the effort-obligation may be difficult for foreign companies to understand. He concluded his presentation by raising some of the GHS implementation issues to be considered in Japan, including the lack of a GHS-based system for consumer products, especially pictograms and hazard statements, which is a challenge for the Japanese (and thus a good educational system is needed).

Mr. Nazri Haji Anuar, Ministry of Home Affairs, Brunei Darussalam, shared their involvement in GHS implementation where they have been trained to respond directly with pictograms supplied on the packaging. As far as GHS is concerned, it was found that lack of awareness among government agencies, and the initiatives to coordinate efforts among all stakeholders is still absent. He concluded his presentation by highlighting the need to enhance GHS awareness and to strengthen capacity to implement GHS in Brunei.

During the discussion session, questions were raised by participants related to the GHS awareness raising materials. Some participants indicated that it was challenging to identify the scope of information to be incorporated in GHS pamphlets due to differing target audiences. To address this challenge, some have suggested that pamphlets should be as simple as possible and assuming the audiences are “first-timers”. On the other hand, industry representatives emphasized that implementation of GHS should decrease the burden to industry for the export of chemicals. An issue related to chemical databases was raised and some of the participants suggested that a regional chemical database should be established for information sharing within the ASEAN community.



Strengthening National and Regional Capacities to Implement the GHS in ASEAN - Phase II

2010-2012

1. Project Overview



In the context of the UNITAR/ILO Global GHS Capacity Building Programme, and funded by the European Union, a 3-year project to strengthen national and regional capacities to implement the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) in countries of the Association of Southeast Asian Nations (ASEAN) is taking place from 2010-2012.

The project builds on the successful first phase conducted from 2005-2007 (which trained more than 1,500 government, industry, and non-governmental beneficiaries).

The project aims to strengthen capacities to implement the GHS in four countries (Indonesia, Malaysia, Philippines, and Thailand) of the Association of Southeast Asian Nations (ASEAN). Support activities will also take place in the People's Republic of China. Regional activities to strengthen capacities for GHS implementation will involve all 10 ASEAN countries, as well as China and selected countries from Central and East Asia.

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2. The GHS

The UN Globally Harmonised System of Classification and Labelling of Chemicals (GHS) is considered as a foundation for sound chemicals management and is a logical and comprehensive approach to standardising and harmonising the classification and labelling of chemicals. It includes criteria and guidelines for:

- Defining health, physical, and environmental hazards of chemicals;
- Creating classification processes that use available data on chemicals for comparison with the de-

finied hazard criteria; and

- Communicating hazard information, as well as protective measures, on labels and Safety Data Sheets (SDS).

The GHS is an important tool that countries can draw upon to develop national chemical hazard communication systems by providing a basis for the establishment of comprehensive chemical safety programmes. It represents an important step in harmonising national

and regional chemical hazard classification and communication systems and has a great potential to improve chemical safety across all relevant sectors. GHS implementation efforts can also serve to support the implementation of other international chemicals agreements in particular the Basel, Montreal, Rotterdam and Stockholm Conventions and the Strategic Approach to International Chemicals Management (SAICM).



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Session 4: GHS in Occupational Safety and Health

This session, which provided information related to the GHS and occupational safety and health, was moderated by Dr. Iona Pratt, Senior Advisor, UNITAR.

Mr. Amin Wahab Syaikhul, Indonesian Federation Labour Union of Chemical, Energy, Mines, Oil-Gas and General (FSPKEP) noted that workers are most likely to be affected by the use of chemicals in the workplace where a higher risk of exposure could be the result of handling, transporting and storing these chemicals. Thus, workers need to know the specifications of the hazardous chemicals they use and/or handle, as well as information about the specific protective measures required to avoid the adverse effect that might be caused by those hazards. The tools most commonly used for providing this information are the labels and SDS. Mr. Amin emphasized that with the implementation of GHS worldwide, the same format in label and SDS across countries' borders will definitely improve the safety of workers through consistent and comprehensive communication of chemical hazards. He ended his presentation by giving examples of industries that already adopt GHS pictograms in their premises.

Ms. Nella Granadillos, OSH Centre Philippines, provided a background on ASEAN Occupational Safety and Health Network (ASEAN-OSHNET), noting that it is envisioned as an effective network to foster a safe and healthy working environment for a productive and competitive workforce. She also elaborated the roles of ASEAN member countries in the network. Ms. Granadillos shared the recent activities carried out under ASEAN-OSHNET and some of the activities that are closely related to GHS. For example, GHS training for OSH officers in the region; and development of ASEAN Guidelines on Classification, Labelling and Packaging of Hazardous Chemicals.

Ms. Letchumi Thannimalay, SIRIM Berhad, Malaysia, introduced the GHS Classification Toolkit developed by SIRIM Berhad (a national standards development agency) where the main objective of the toolkit was to facilitate GHS classification for mixtures. The GHS Toolkit contains data for 700 chemicals that are already classified according to GHS and it can classify mixtures/products that contain a large number of ingredients/chemicals, such as detergent. She explained that the GHS toolkit applies concentration limits, summation methods and additivity formula to classify mixtures. Compared with manual classification for mixtures, she said manual classifications are time consuming with a tendency for errors. She ended her presentation by saying that the GHS Toolkit was anticipated to assist industry, particularly SMEs, to comply with GHS requirements.

Dr. Majahar Abd Rahman, Department of Occupational Safety and Health (DOSH), Malaysia, reviewed chemicals management related legislations and enforcement agencies in Malaysia. He presented the draft Occupational Safety and Health (Chemicals Classification, Labeling and Safety Data Sheet) Regulations (CLASS) which incorporate GHS elements and will be gazetted soon. He also introduced the Industry Code of Practice on Chemical Classification and Hazard Communication (ICOP-CCHC) where the ICOP-CCHC detailing requirements specified in CLASS Regulations, together with a list of 228 classified chemicals. Other initiatives being carried out by DOSH are

the establishment of a Chemical Information Management System (CIMS); revising the Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations 2000; enhancing the Chemical Health Risk Assessment (CHRA) and introducing a Simple Risk Assessment and Control for Chemicals (SiRAC). He ended his presentation by envisaging formation of a Global Chemical Safety Management Index in the future.

During the discussion session, participants raised several questions pertaining to GHS and OSH. This includes accessibility of the GHS Toolkit developed by SIRIM Berhad; toxicology testing required for new chemicals; the possible date for the enforcement of CLASS regulations; availability and accessibility of SDS by workers and issues pertaining to the comprehensiveness of chemical labels and SDS; and further elaboration on the roles of coordinating countries under the ASEAN-OSHNET framework.

Session 5: Consumers Campaign for Chemicals Safety in ASEAN based on the GHS

This session, which shared insights from the consumer campaign for chemical safety in ASEAN, was moderated by Ms. Elaine Lucero, Acting National Coordinator, Ecowaste Coalition.

Mr. Foon Weng Lian, Federation of Malaysian Consumer Associations (FOMCA), provided a background on FOMCA, followed by an introduction on the programme funded by European Union and coordinated by UNITAR, entitled 'Chemical Safety Awareness Raising for Consumers in South East Asia Countries'. Under the programme, a GHS awareness brochure was published in 7 different languages and approximately 1,500 copies of the brochures were distributed to participating countries. The website for project information sharing and dissemination was established and hosted by FOMCA. Mr. Foon highlighted challenges for GHS implementation for consumer sector, which include funding, different levels of GHS adoption, and lack of awareness and capacity building activities. He concluded his presentation by indicating government should provide financial support and work together with local consumer organizations on the awareness raising for the consumer sector; and that there is a need to establish a regional focal point for all consumer organizations in the region.

Ms. Aurus Kongphanich, Ministry of Public Health, Thailand, shared the GHS pilot school project that was carried out in Thailand. The Food and Drug Administration (FDA), in collaboration with Office of the Basic Education Commission (OBEC), has developed learning content on GHS chemical hazard communication and integrated this in to health and physical education groups via the compulsory education curriculum of primary school level 2 in Thailand. Another supplemental book entitled 'Label: knowledge for smart use' incorporates more comprehensive chemical safety and GHS chemical hazard communication and is being developed by FDA and OBEC. She ended her presentation by showing conference participants the GHS multimedia learning animation developed by FDA, namely 'My House - Safety First: How to use hazardous substances products in household'.

Dr. Goh Choo Ta, Institute for Environment and Development (LESTARI), National University of Malaysia (UKM) shared the preliminary findings of the project entitled 'Chemical Safety in School Laboratory', funded by the Potential HiCoE (Higher Education Centre of Excellent) LESTARI awarded by the Ministry of Higher Education. Dr. Goh elaborated the background of the project and highlighted five criteria that enhance laboratory safety, namely information and procedures; equipment and facilities; knowledge and awareness; waste disposal; and emergency response plan. He concluded his presentation by indicating that the analysis of the project is still on-going and should be completed soon.

During the discussion session, participants acknowledged that hazard communication is a very important element to educate students and the public. For university students, they must go through the SDS before they start their experiment.

Questions were raised pertaining to the commitment by Ministries to promote GHS among school students. In this regards, Thailand responded that the Ministry of Education is willing to collaborate as long as the awareness materials are not too complicated, and only lower secondary school students that are not preparing for exams are allowed to participate in the GHS awareness session.

Session 6: Lessons learned and Challenges of GHS Implementation from the Perspectives of Industry

This session, which focused on the perspectives from industry pertaining to lessons learned and challenges of GHS implementation in Malaysia, was moderated by Ms. Veronica Chow, Senior Assistant Director (Occupational Hygiene), Ministry of Manpower, Singapore.

Ms. Marie Goh Chooi Fong, Communication and Administration Manager, Malaysian CropLife and Public Health Association (MCPA) provided a background of the CropLife Network that is composed of 15 countries in Asia-Pacific, including MCPA. She explained that the development and manufacturing of pesticides go through a rigorous risk-based assessment. In Malaysia, the agriculture industry practises good agricultural practices, where instructions on the use of pesticides are carefully elaborated, including guidance information on emergency response. She pined that the current pesticides labels provides full information. For pesticide registration purposes, all the sections in the registration form (that are similar to the SDS) must be filled for approval from the Malaysian competent authority. All the required procedures were already in practised by the industry, even before the GHS was developed. Thus, she sensed that the industry is ready for GHS implementation apart from the need of a transition period to align the existing practices with GHS.

Ms. Teoh Sue May and Ms. Siti Rosemina Bux, members of Chemical Industries Council of Malaysia (CICM), jointly presented the industry perspective of GHS implementation. They presented that industry worked closely with the government authorities on GHS issues. They mentioned that the industry actively participated in the preparation of a Malaysian Standard on GHS and jointly produced a few basic training modules for DOSH (Malaysia). They pined from an industry perspective that the international trade of chemicals to other countries is challenging as there is a need to comply with the importing or exporting countries legislation; challenges can be in the form of native language(s) for SDS and (or) labelling. Multi National Companies (MNCs) have translation tools to aid them but SMEs companies do not have such resources. The SDS and labelling in the local language is the pivotal challenge faced by the industry. They felt that it is very helpful to have a list of GHS classified chemicals that are agreeable to all stakeholders in Malaysia. However, the process of developing such list should consult various stakeholders such that chemicals are not over-classified

During the discussion session, common challenges where raised such as different building blocks were adopted by different countries, the consideration of a global UN list of GHS classified chemicals; and the critical aspect of a common transition grace period in terms of GHS implementation for mixtures.



Session 7: Results of Group Discussion and Conference Conclusion

The last session of the conference was an open sharing session where the participants from each country were grouped together into three groups to brainstorm on a key issue of “With the GHS now being implemented in other parts of the world and in view of the upcoming ASEAN Economic Community 2015, what is the key action needed to advance GHS implementation?”

Prof. Mazlin provided the Conference with the background on ASEAN Economic Community 2015 before the groups commenced their brainstorming sessions.

Presentation from Group 1 (Cambodia, Indonesia, Japan and Singapore):

- Establish common platform for different countries to share information:
 - Technical aspects
 - Building Block Approach
 - Guidelines and relevant legislation
 - Requirements of GHS in terms of label, SDS, language
 - Disseminate the updates in GHS Purple Book
 - Implementation aspects
 - GHS implementation schedule – timeline, grace period and roadmap
 - eHelp (from National level) Country focal point – sectorial experts (where applicable)
 - Training and capacity building – lack of trainers
 - Who to maintain the platform?
- Incorporate GHS as agenda item in regional meetings such as APEC Chemical Dialogue and ASEAN-OSHNET.

Presentation from Group 2 (China, Lao PDR, Myanmar and Thailand):

- Six domains of key actions to advance GHS implementation were identified:
 - Focus on awareness raising using all channels of communication.
 - Technical capacity building as it is still needed for regulatory agencies and business, especially custom officers.
 - Information sharing on GHS implementation where there is a need to clarify the use of building blocks, list of substance, cut off limits, and transition period for each sector.
 - Initiate WG and sub-committee (by ASEAN) on chemicals:
 - Harmonisation of regulation and a harmonised list of controlled substances with suggestion of having the EU list as a starting point
 - Public database website should be in English so that information can be shared more effectively
 - Chemicals safety and GHS to be incorporated into education

- The availability of technical support to assist ASEAN countries in advancing the implementation of the GHS

Presentation from Group 3 (Brunei, Malaysia, Philippines and Vietnam):

- Define definition of GHS implementation
- Undertake awareness building
 - Develop promotional materials such as leaflets
 - Outreach through consumer association
 - All forms of media to maximise exposure on GHS to consumers
- Establish a One-stop centre for GHS
 - A need for a common language
 - Summarised information on GHS
 - A helpdesk function that could improve the efficiency of the one-stop centre.
 - Funding for the one stop centre to be identified.
- Share knowledge
 - Training of enforcement taskforce
 - Harmonisation of the Purple Book and the FAO/WHO guidelines for pesticide users
- Conclusion of proposal: to be taken up in the ASEAN summit in view of the upcoming ASEAN Economic Community in 2015

The various countries presented their group discussion. Suggestions were raised to move forward the GHS agenda in ASEAN member countries. For example, the EU's experience in implementing GHS can become one of the case studies for the ASEAN Economic Community.

However, detailed study should be carried out taking in to account the different cultures and customs of the countries in the region.

Closing Remarks

Prof. Mazlin congratulated the organisers and participants for their fruitful efforts during the discussions and acknowledged the commitment by ASEAN member countries for GHS implementation in the region. He also summarized the key findings from the GHS conference held in Jakarta and China, and linked to the discussion from this conference. He expressed his sincere appreciation to the conference participants and hoping that they will convey conference outputs to their national competent authorities and follow-up with the GHS implementation in their respective countries.

Mr. Krueger expressed the appreciation of UNITAR/ILO for the support of MITI and UKM, as well as the sponsors of the conference (the Governments of Switzerland and the European Union). He thanked all participants and the experts for their commitment and constructive suggestions, and concluded by looking forward to continued GHS implementation in Southeast Asia.

Annex 1: Conference Agenda

Time	Session
	Tuesday 21st May 2013
8.30 am	Registration Welcome and Opening remarks
9.00 am	Prof. Dr. Mazlin Mokhtar, Director, Institute for Environment and Development (LESTARI), National University of Malaysia (UKM)
9.10 am	Dr. Jonathan Krueger, Manager, Chemical and Waste Management Programme, UNITAR (On behalf of UNITAR and ILO)
9.20 am	Mr. Sandro Paolicchi, Head of Section – Trade and Economic Relations, Delegation of the European Union to Malaysia
9.30 am	Dato' Nik Rahmat Nik Taib, Deputy Secretary General, Ministry of International Trade and Industry (MITI)
9.40 am	Group Photo
10.00 am	Coffee Break
10.30 am	Session 1: Introductory Presentations Moderator : Ms. Ingrid Christensen, ILO
10.30 am	Introduction to the Workshop, Dr. Jonathan Krueger, UNITAR
10.40 am	Latest Developments on the GHS, Mr. Peter Dawson, EPA, New Zealand
11.00 am	Introduction to and Key Principles of the Chemicals Convention, 1990 (No. 170), Ms. Ingrid Christensen, ILO
11.20 am	The UNITAR/ILO Programme for Capacity Building to Implement the GHS, Ms. Mehdi Siari, UNITAR
11.35 am	Achievements and Lessons Learned in the Region, Prof. Peter Peterson, UNITAR
11.55 am	Discussion
12.30 pm	Lunch Break
2.00 pm	Session 2: Introduction to Green Chemistry in ASEAN Moderator: Dr. Jonathan Krueger, UNITAR
	Advanced Manufacturing and Innovation in Chemicals Management : the case of Green Chemistry, Ms. Blandine Trouille, US Department of Commerce
	Green Chemistry : Introduction and Applications,

	Ms. Blandine Trouille, US Department of Commerce
3.30 pm	Coffee Break
3.45 pm	The Rochester Midland Experience, Mr. Michael Tay, Rochester Midland Corporation (RMC)
	Discussion – moderated by Ms. Blandine Trouille, US Department of Commerce
5.30 pm	Adjournment Day 1
7.00 pm	Evening reception hosted by the Government of Malaysia
Wednesday, 22nd May 2013	
9.00 am	Session 3 : Status of GHS Implementation in Southeast Asia Moderator: Mr. Peter Dawson, New Zealand
9.00 am	Status of GHS Implementation in China, Mr. Qiming Luo, Ministry of Industry and Information Technology
9.15 am	Status of GHS Implementation in Indonesia, Ms. Toeti Rahajoe, Ministry of Industry
9.30 am	Status of GHS Implementation in Singapore, Ms. Veronica Chow, Ministry of Manpower
9.45 am	Discussion
10.00 am	Coffee Break
10.15 am	Status of GHS Implementation in Malaysia, Mr. Sri Ram Letchimanan, Ministry of International Trade and Industry
10.30 am	Status of GHS Implementation in Philippines, Ms. Nella Granadillos, OSH Centre
10.45 am	Status of GHS Implementation in Thailand, Ms. Aurus Kongphanich, Ministry of Public Health
11.00 am	Status of GHS Implementation in Vietnam, Ms. Ha Nguyen, Vietnam Chemical Agency
11.15 am	Status of GHS Implementation in Laos, Mr. Phetsavang Sounnalath, Labor Management Department
11.30 am	Status of GHS Implementation in Myanmar, Dr. Khin Pa Pa Soe, Ministry of Labor, Employment and Social Security

11.45 am	Status of GHS Implementation in Japan, Prof Hiroshi Jonai, Nihon University
12.00 pm	Status of GHS Implementation in Brunei, Mr. Nazri Haji Anuar, Ministry of Home Affairs
12.15 pm	Discussion
1.00 pm	Lunch Break
Wednesday, 22nd May 2013	
2.30 pm	Session 4 : GHS in Occupational Safety and Health Moderator : Dr. Iona Pratt, UNITAR
2.30 pm	Current issues related to GHS from the perspective of Labour Union, Mr. Amin Wahab Syaikhul, FSP/KEP Chemicals
2.45 pm	ASEAN – OSHNET Activities, Ms. Nella Granadillos, OSH Centre Philippines
3.00 pm	GHS Classification Toolkit, Ms. Letchumi Thannimalay, SIRIM Berhad, Malaysia
3.15 pm	Incorporating GHS into Malaysia OSH Regulations : The proposed CLASS Regulation, Dr. Majahar Abd Rahman, Department of Occupational Safety and Health (DOSH), Malaysia
3.30 pm	Discussion
4.00 pm	Coffee Break
4.15 p.m	Session 5 : Consumers Campaign for Chemicals Safety in ASEAN based on the GHS Moderator : Ms. Elaine Lucero, Ecowaste Coalition
4.15 – 4.30 pm	Report on the ASEAN Campaign on Chemicals Safety for Consumers, Ms. Foon Weng Lian, FOMCA
4.30 – 4.45 pm	Experience of Thailand with Consumers Awareness Raising, Ms. Aurus Kongphanich, Food and Drug Administration
4.45 – 5.00 pm	Chemical Safety in School Laboratories : Preliminary Findings, Dr. Goh Choo Ta, Institute for Environment and Development (LESTARI), National University of Malaysia (UKM)
5.00 – 5.30 pm	Discussion
5.30 p.m	Adjournment Day 2

	Thursday, 23rd May 2013
9.00 am	Session 6 : Lessons learned and Challenges of GHS implementation from the Perspectives of Industry
9.00 am	Moderator : Ms. Veronica Chow, Ministry of Manpower Presentation by industry representatives Ms. Marie Goh Chooi Fong, Communication and Administration Manager, Malaysian CropLife and Public Health Association (MCPA) Ms. Teoh Sue May and Ms. Siti Rosemina Bux, members of Chemical Industries Council of Malaysia (CICM)
9.50 am	Discussion
10.00 am	Coffee Break
10.15 am	Breakout session for group discussion
12.30 pm	Lunch Break
2.00 pm	Session 7: Conference conclusion and follow-up activities
	Moderator : Prof. Dr. Mazlin Mokhtar, Director, Institute for Environment and Development (LESTARI), National University of Malaysia (UKM) Summary of Discussions Conclusions and way forward
3.30 pm	End of Conference

Annex 2: List of Participants

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