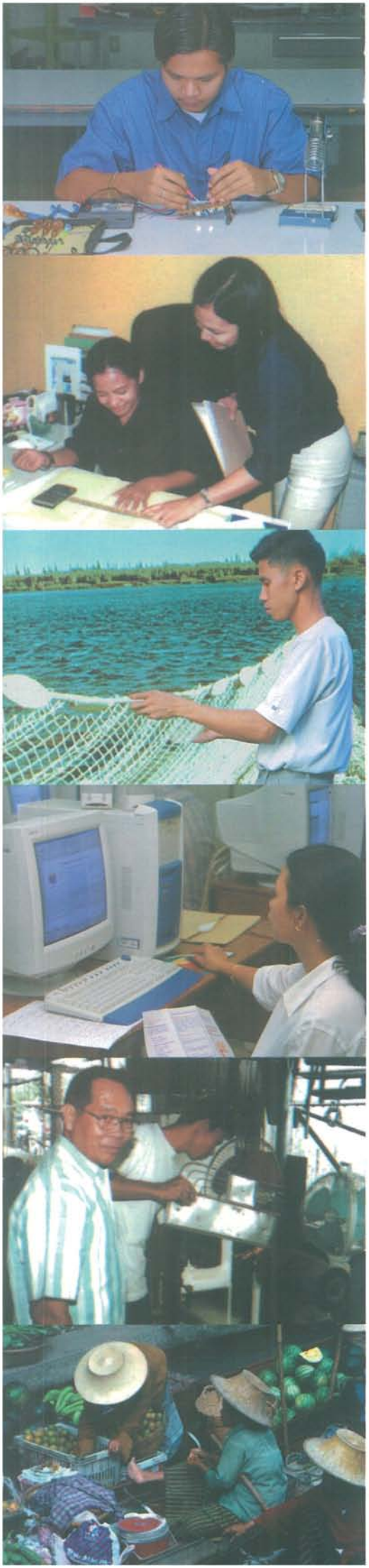

Working Paper 9

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Occupational Safety and Health in Indonesia

Pia K. Markkanen

International Labour Organization
Subregional Office for South-East Asia and the Pacific
Manila, Philippines

ILO Subregional Office for South-East Asia and the Pacific Working Paper

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This working paper series takes over the former SEAPAT working paper series which has published eight issues. From the ninth issue onwards, the ILO Subregional Office for South-East Asia and the Pacific takes responsibility of the editorship and publication, with the objectives of sharing research outcomes in the current labour issues, identifying emerging issues of concern, and stimulating discussion on policy, thereby contributing to the fulfilment of the Decent Work for all.

The views expressed in the working papers are entirely those of the authors and do not necessarily reflect the views of the ILO or the organisations with which the authors are affiliated. Comments and suggestions on the working papers are welcome.

For more information, please contact us at:

ILO Subregional Office for South-East Asia and the Pacific
19th Floor, Yuchengco Tower, RCBC Plaza
6819 Ayala Avenue, 1229 Makati City
P.O. Box 4959 Makati City, Philippines
Tel. No. (632) 580 9900
Fax No. (632) 580 9999
E-mail: manila@ilomnl.org.ph
Website: www.ilo.org/manila

Foreword

Occupational Safety and Health (OSH) is a global concern for all employers, workers and national governments. According to estimates by the ILO, every year there are some 2 million deaths worldwide due to work-related causes. Of these, some 354,000 are due to fatal accidents. In addition, there are more than 270 million occupational accidents and 160 million work-related diseases which affect workers every year. The financial cost for these work-related hazards is significant. The ILO estimates that more than $1.25 trillion, which is equivalent to 4 percent of the world's Gross Domestic Product (GDP), is lost each year due to occupational accidents and diseases.

The rate of fatal accidents in developing countries is four times higher than that in industrialized countries. In developing countries, most work-related accidents and illnesses occur in primary industries such as farming, fishing and logging, mining and construction. Low literacy and poor training regarding safety methods lead to high death rates from fires and exposures to hazardous substances, affecting among others those in the informal economy. Hazardous substances kill 340,000 workers per year, causing untold suffering and illness including cancer, heart diseases and strokes. Poor ergonomic practices cause a range of musculoskeletal disorders, affecting the quality of life and the productivity of workers. Furthermore, psychosocial issues at the workplace such as stress are associated with serious health problems including heart diseases, strokes, hormonal cancers, and a range of mental health problems.

Occupational Safety and Health issues are an important part of the ILO's agenda. The International Labour Conference in 2003 discussed OSH standards as part of an integrated approach – and reached agreement on a global OSH strategy which calls for "coherent and focussed" action to reduce the number of work-related deaths, injuries and diseases.

The ILO calls for joint efforts to improve the safety of workers. The global OSH strategy consists of the creation of a strong safety and health culture in all enterprises and the introduction of a systematic approach to OSH management. A systematic approach to OSH management at the enterprise level has been developed in the *ILO Guidelines on Occupational Safety and Health Management Systems* (ILO-OSH-MS 2001).

Strategies to improve working conditions should be extended to cover all workers and, in particular, workers in small- and medium-sized enterprises and in the informal economy, and workers in vulnerable groups including young, disabled and migrant workers, and the self-employed. Workers in vulnerable groups in the informal economy should be given special consideration. The strategies need to be gender sensitive to protect both men and women workers. The ILO supports developing OSH training mechanisms to reach all workers and their representatives and employers through training packages such as *Work Improvements in Small Enterprises* (WISE) and *Participatory Action Training for Informal Sector* (PATRIS).

Fatalities, accidents and illness at work can be prevented. We must promote a new '*safety culture*' in the workplace backed by appropriate national policies and programmes. We believe that all of our efforts in creating safe and healthy workplaces are essential to the ILO's mission, which is shared by our tripartite social partners, to promote Decent Work.

The improvement of OSH and working conditions is recognised as a priority in the recently adopted Tripartite National Action Plan for Decent Work for Indonesia. Together we can make a real impact in improving occupational safety and health.

I believe that the publication of this working paper, prepared by an OSH expert Ms. Pia K. Markkanen, is timely as we focus on the development of National Plans of Action on OSH for Indonesia. I hope this working paper will stimulate discussion on key issues of concern in OSH in Indonesia and suggests steps to be taken to improve the OSH standards.

Jakarta, April 2004

Alan Boulton
Director
ILO Office in Indonesia

Pia K. Markkanen
Occupational Safety and Health in Indonesia
(*Keselamatan dan Kesehatan Kerja di Indonesia*)

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Abbreviations and acronyms

ACCI	Australian Chamber of Commerce and Industry Confederation
ALPK3	Association of Training Institutions for Occupational Safety and Health (*Asosiasi Lembaga Pelatihan Keselamata dan Kesehatan Kerja*)
APINDO	Employers' Association of Indonesia (*Asosiasi Pengusaha Indonesia*)
APOSHO	Asian Pacific Occupational Safety and Health Organization
ASEAN OSHNET	Occupational Safety and Health Network among ASEAN Nations
A2K3K	Association of OSH Construction Experts (*Asosiasi Ahli Keselamata dan Kesehatan Kerja di bidang Konstruksi*)
BOHSU	Basic occupational health services unit
BPKB	The Centre on Learning Activity Development (*Balai Pengembangan Kegiatan Belajar Jayagiri*)
DEPNAKER	Department of Manpower and Transmigration
DKKB	The Bandung Municipality Health Office (*Dinas Kesehatan Kota Bandung*)
DK3N	National Tripartite OSH Council (*Dewan Keselamatan dan Kesehatan Kerja Nasional*)
HIPERKES	The Center for Development of Occupational Safety and Health (*Pusat Pengembangan Keselamatan Kerja dan Hiperkes*)
IAKKI	Association of Occupational Safety Professionals (*Ikata Ahli Keselamatan Kerja*)
IDKI	Association of Indonesian Occupational Health Doctors (*Ikatan Dokter Kesehatan Kerja Indonesia*)
ILO	International Labour Organisation
IPEC	International Programme for the Elimination of Child Labour
PATRIS	Participatory Action Training for Informal Sector
JAMSOSTEK	Employees' Social Security Programme (*Jaminan Sosial Tenaga Kerja*)
JISHA	Japan Industrial Safety and Health Association
JICA	Japan International Cooperation Agency
JICOSH	Japan International Centre for Occupational Safety and Health
KADIN	The Indonesian Chamber of Commerce and Industry (*Kamar Dadang dan Industri Indonesia*)
KNK3	The National Commission for Occupational Safety and Health (*Komisi Nasional Keselamatan dan Kesehatan Kerja*)
KOPI	The Intertextual Film Community (*Komunitas Perfilman Intertextual*)
KSPSI	All Indonesian Workers Union (*Konfederasi Serikat Pekerja Seluruh Indonesia*)
K3	*Keselamatan dan Kesehatan Kerja* (occupational safety and health)
LIPS	Labour Information Centre (*Lembaga Informasi Perburuhan Semarak*)

LPKM UNPAR	The Parahyangan Catholic University - Centre for Community Services (*Lembaga Pengabdian Kepada Masyarakat – Universitas Katholik Parahyangan*)
LPM ITB	The Bandung Technology Institute - Centre for Community Services (*Lembaga Pengabdian Masyarakat – Institut Teknologi Bandung*)
LSK-K3	Institute for Certification of Competencies in Occupational Safety and Health (*Lembaga Sertifikasi Kompetensi Keselamatan dan Kesehatan Kerja*)
MPK2LK	Society for Occupational Safety, Health, Work Environment (*Masyarakat Peduli Keselamatan Kesehatan & Lingkungan Kerja*)
NGOs	Non-government organizations
NIKKEIREN	Japan Employers Association
OSH	Occupational safety and health
OSH-MS	Occupational safety and health management system
PEI	Indonesian Ergonomics Association (*Perhimpunan Ergonomi Indonesia*)
PERDOKI	Association of Occupational Specialist Doctors of Indonesia (*Perhimpunan Dokter Spesialis Okupasi Indonesia*)
PERDOKLA	Association of Maritime Specialist Doctors (*Perhimpunan Dokter Spesialis Laut*)
PKHI	The Hyperbaric Medical Association of Indonesia (*Persatuan Kedokteran Hiperbarik Indonesia*)
PGRI	The Indonesian Teachers' Union (*Persatuan Guru Republik Indonesia*)
PHC	Primary health care
PKBI	The Sidikara Foundation (*Perkumpulan Keluarga Berencana Indonesia Jawa Barat*)
PNKK	*Direktorat Pengawasan Norma Keselamatan dan Kesehatan Kerja*
PUSKESMAS	Health centre (normally located in sub-districts) (*Pusat Kesehatan Masyarakat*)
PWI	The West Java Journalist Association (*Persatuan Wartawan Indonesia Jawa Barat*)
SKEPO	An NGO in Bandung called *Yayasan Sketsa Pojok*
SPTSK	The South Bandung Leather, Garment and Textile Workers' Union (*Serikat Pekerja Tekstil, Sandang dan Kulit Bandung Selatan*)
UNDP	United Nations Development Programme
UKK	Occupational health effort (*Upaya Kesehatan Kerja*)
WISE	Work Improvement in Small Enterprises

Summary

This working paper summarizes the foremost issues on occupational safety and health (OSH) situation in Indonesia. The purpose of the paper is to suggest sensible activities and programmes to be developed. The report is based on information in existing materials and papers, opinions expressed by the representatives of different organizations dealing with OSH, as well as comments and views of ILO OSH specialists.

The Indonesian OSH regulatory framework is broad; nevertheless, there is an on-going debate whether the regulatory framework is adequate to protect workers. The ILO recommends that the main Law No. 1 of 1970 on Work Safety be upgraded to a stronger OSH Act reflecting more clearly the provisions of the ILO's Occupational Safety and Health Convention (No. 155, 1980).

There have been several positive developments in Indonesia since the ILO conducted an OSH advisory mission in January 1995 and produced a comprehensive report with recommendations. Indonesia is the only country in Asia that has mandated by the law the implementation of occupational safety and health management system (OSH-MS) at large enterprises. Reporting and dissemination of accident data has improved. An Indonesian OSH information repository has been set up and made publicly available under the ASEAN OSHNET.

The work safety and health inspection has been decentralized since 1984: the provincial Governments carry out inspections independently and autonomously, without the close supervision of the Central Government. Some welcomed this initiative. Others instead argue whether the OSH inspection became overly decentralized and resulted more detriment than progress in the overall Indonesian work environment situation. It is admitted by many ILO constituents that during the economic crisis many Indonesian companies cut back first OSH investments. Compared to issues like wages and benefits or employment and unemployment, OSH gains limited attention in the collective bargaining.

After reviewing the major work safety and health policy issues, the paper formulates the following recommendations:

- Develop programmes and activities focusing on the most vulnerable and least organized workers in the informal economy and small sized enterprises.

- Pilot the PATRIS methodology for a new informal sector occupation, in addition to the footwear manufacturing.

- Encourage OSH organizations to collect, provide and analyse data on work-related accidents.

- Develop national action programmes for OSH as a tripartite effort.

- Upgrade the Work Safety Act (Law No.1, 1970) to a stronger OSH Act based on the provisions of the ILO Occupational Safety and Health Convention (No. 155, 1980) and its accompanying Recommendation.

1. Introduction[1]

During the 1990s, Indonesia, as many other Asian countries, has undergone a period of rapid growth until 1997 and suffered subsequently from the financial crisis. Both phases have their own peculiarities: during the growth, the number of work-related injuries tends to increase, whereas during the recession, unfortunately, occupational safety and health (OSH) becomes one of the first areas to be curtailed. The ILO views that workers' safety and health is a basic human right and this right has to be secured no matter whether the country is in economic growth or in recession. We should not be too preoccupied to make or save money at the expense of human lives and health.

1.1 Objective

This paper reviews key issues in occupational safety and health (OSH) in Indonesia. The paper is based on the information from existing materials and documents, opinions expressed by the representatives of different organizations dealing with OSH, as well as comments and views of ILO OSH specialists.

The paper covers the following areas: polices, laws and regulations; administration and enforcement; key agencies; academic education, research, training and information activities; and, international networking. As OSH for the workers in the informal economy is a high priority, we will discuss this subject extensively. The paper presents suggested actions that address informal sector, small enterprises, database development, initiation of the national OSH profile, and upgrading the Work Safety Act (Law No.1, 1970).

The objective of this paper is to stimulate discussions among the ILO officers and the ILO constituents in Indonesia, Government agencies, employers' and workers' organizations, and non-government agencies, to delineate necessary OSH strategies, priorities, and possible realistic activities. As a long-term objective, it is anticipated that this paper could be a starting point for the development of national action programmes for OSH in Indonesia.

1.2 Organisation of the paper

The paper comprises 12 sections. The following Section 2 describes the methods how we have developed the paper. Section 3 provides background information on the current labour force, accident numbers, and selected findings of the ILO OSH advisory mission in 1995. Sections 4 and 5 cover key issues on OSH policies, regulatory framework and law enforcement. Section 6 explains research, education, training and information. The roles of the Tripartite National Occupational Safety Council, employers' and workers' organizations are portrayed in Sections 7 and 8, while Sections 9 and 10 discuss the safety and health of (i) workers in highly hazardous industries (agriculture, mining, construction, forestry, and fishing); and (ii) workers in the informal economy. Section 11 looks into national OSH

[1] Author's note: The views expressed herein are my responsibility and they do not necessarily reflect either the views of the International Labour Organization or the University of Massachusetts, Lowell, wherein I am currently affiliated. I would like to thank and acknowledge the help and guidance received from Mr. Alan Boulton, Ms. Sioe Lan Djoa, Mr. Kenichi Hirose, Dr. Tsuyoshi Kawakami, and Mr. Seiji Machida for the development of this document. My thanks are extended to Dr. Zulmiar Yanri, Director of Occupational Health Standards, Department of Manpower and Transmigration, for her comments on earlier version of the paper.

campaigns, and finally, Section 12 concludes with the priority areas and suggested future actions.

Four appendices supplement the paper. Appendix I presents the OSH achievements by the ILO Programme on Combating Child Labour in the Footwear Sector[2]. The programme is being implemented in the footwear community of Cibaduyut of the City of Bandung. The ILO-IPEC Bandung Footwear Team has undertaken some significant activities – their approach shows a good practice to tackle the challenge of improving safety and health in the informal sector by (i) involving and empowering the community, and (ii) developing and disseminating information. Appendices II and III provide the lists of relevant OSH legislations and professional OSH organizations in Indonesia. Appendix IV presents the recommendations made by the ILO OSH advisory mission in 1995.

2. Methods

This paper is based on the existing literature and document reviews as well as on opinions expressed by officers of Indonesian government agencies, employers and workers' organizations and the ILO specialists.

A comprehensive review, titled *Policy and Condition of Occupational Safety and Health in Indonesia*, was prepared by Hadi Topobroto[3] in 2002 as an undertaking to the ILO. The findings of this review have largely reflected in the present paper. Another important source is ASEAN OSHNET database on the Internet[4], which has been developed by the Directorate of OSH Standards of the Ministry of Manpower and Transmigration (DEPNAKER).

In addition to these key sources, the following references have been used: (i) ILO OSH advisory mission report, 1995 [5]; (ii) policy papers and materials prepared by the various Indonesian OSH organizations, in particular, the collection of papers presented at the International Conference for the Informal Sector in Bali in 1997; (iii) relevant newspaper articles, especially the ones published in the English language newspaper, the Jakarta Post; and (iv) appropriate parts of the author's[6] personal research based on the qualitative in-depth interviews. In view of the confidentiality of the interviews, the names of the interviewees have not been disclosed.

[2] Hereinafter *the ILO-IPEC Bandung Footwear Team*.
[3] Mr. Topobroto is currently the Chairperson of an NGO called *the Society for Occupational Safety, Health and Work Environment*.
[4] ASEAN OSHNET Occupational Safety and Health Network; 2003; available at http://www.asean-osh.net/
[5] *Strategy for the Improvement of OSH and Working Conditions*; Report of an ILO Advisory Mission and Proceedings of a National Workshop, Jakarta 16-17, May 1995
[6] A doctoral research being undertaken by the Work Environment Department, the University of Massachusetts in Lowell; titled on G*ender Links to Chemical Safety in the Home-based Footwear Manufacturing.* For this research, Indonesia was selected as a case-study country along with the Philippines.

3. Background information

3.1 Labour force and work accidents

Indonesia's labour force has been estimated as 95.7 million, with 58.8 million men and 36.9 million women[7]. About 44 percent of the total labour force work in agriculture and more than 60 percent work in the informal economy.[8]

In 2002, the Minister of Manpower and Transmigration, Jacob Nuwa Wea, expressed his concern on occupational safety. The Minister mentioned that the work accidents caused losses of 71 million person-hours and 340 billion Rupiahs of profit.[9] The following Table 1 presents accident cases and compensations paid for the period 1995-1999. The data have been drawn from the ASEAN OSHNET database.

Table 1.: Number of recorded work-related accidents and the amount of compensation, 1995-1999

Year	Accident cases				Compensation Paid (in billion Rupiahs)
	Total	Fatal	Permanent disabilities	Temporary disabilities	
1995	65,949	902	13,282	51,765	39
1996	82,066	784	8,907	72,375	50
1997	95,759	1,089	7,877	86,773	71
1998	88,336	1,375	11,860	78,163	76
1999	80,542	1,476	11,871	67,195	83

Source: The ASEAN OSHNET.[10]

During the writing of this paper, the most recent accident numbers were released in January 2003. Recorded workplace accidents in Indonesia increased from 98,902 cases in 2000 to 104,774 cases in 2001. During the first half of 2002 alone, there were 57,972 recorded work accidents.[11] Although the concerns over these accidents numbers are legitimate, there have been obvious improvements in accident reporting and information dissemination to the public.

3.2 ILO OSH advisory mission in 1995

The 1995 ILO OSH advisory mission report[12] stated the following issues as main achievements: (i) increased awareness; (ii) conduct of trainings for a number of relevant staff members; (iii) development of a series of training curricula; (iv) development of legislations in various fields; and (v) promotion of an independent inspection system.

[7] Data Source: The Department of Health, Indonesia, *Strategic Planning of Occupational Health Program 2002 – 2004*, 2002.
[8] Ibid.
[9] The Jakarta Post, 17 September 2002.
[10] ASEAN OSHNET website. See further information on accident statistics at: http://www.asean-osh.net/indonesia/osh%20statistic.htm.
[11] Taufiqurrahman M; Unidjaja FD; *Companies must improve workers' safety: Mega;* The Jakarta Post, 14 January 2003.
[12] *Strategy for the Improvement of OSH and Working Conditions*; the ILO, 1995.

The review by Mr. Topobroto highlighted that the Government of Indonesia has expressed political will to improve OSH and that the current laws are sufficient for implementing the necessary OSH measures. It was pointed out that the weakness rests on the enforcement of the laws as well as on low awareness, behaviour, and conduct to instill safety and health culture at enterprises. In turn, it was suggested that realistic and concrete action programmes be launched: *the national OSH programme needs to be formulated to enable all parties concerned to participate and contribute* (Topobroto, 2002).

4. Policies, laws, and regulations

4.1 Laws on occupational safety and health

Indonesia has an extensive legal OSH framework. Relevant OSH laws and regulations have been listed in Appendix II. The main law on OSH is the *Work Safety Act* (Law No.1, 1970). This law covers all workplaces and emphasizes primary prevention.

The Health Act (Law No. 23, 1992) dedicates its Article 23 for occupational health stating that occupational health is carried out so that all workers can work in good health without endangering themselves or their community, and to gain optimal work productivity along with the labour protection programme (the Department of Health, 2002).

4.2 Occupational safety and health management system

In Asia, Indonesia has adopted one of the most comprehensive law on OSH management system (OSH-MS) at large or high-risk enterprises. The regulation stipulates that "Any company employing 100 employees or more, or containing harmful potential issued due to process characteristic or production material which may cause occupational accident such as explosion, fire, contamination and occupational disease is obligated to implement an OSH-MS."[13] [14]

A systematic audit, endorsed by the Government, is necessary to measure the OSH-MS practice. A company is awarded an OSH-MS certificate if it complies with at least 60 percent of 12 main elements, or in 166 criteria. Currently, an agency, called PT Sucofindo, is authorized by the DEPNAKER for auditing and certifying the companies for OSH-MS. An institution, called Patra Nirbaya, has been approved by the Department of Mining and Energy to carry out similar activities in oil companies (Topobroto, 2002).

On one hand, some perceive OSH-MS as an effective system to deal with the OSH challenges in the globalization era. On the other, some opinions voice that it is not easy to persuade the companies to implement OSH-MS properly because the enforcement is not stringent enough.[15] Out of estimated 170,000 enterprises, only about 500 of them have so far been audited for the OSH-MS (Jakarta Post, 14 January 2003).

[13] Regulation of the Department of Manpower and Transmigration; No: PER.05/MEN/1996 on Occupational *Safety And Health Management System.*

[14] Besides Indonesia, OSH-MS is mandated by law in Singapore and in the special Administrative Region of Hong Kong for example at large construction sites, shipyards, and chemical factories. Since 2002, Thailand requires an OSH-MS at establishments with major hazard installations.

[15] This paragraph reflects anonymous sources interviewed by Pia Markkanen.

Moreover, the recently passed Manpower Act (Law No. 13, 2003) refers to OSH-MS (Articles 86 and 87). First, the Act stipulates that every worker has the right to receive protection against safety and health hazards, protection against immorality and indecency, and treatment that shows respect to human dignity and religious values. Second, it states that every enterprise must apply an OSH-MS, to be integrated into the enterprise's general management system. The OSH-MS application rules are now being determined and specified for forthcoming Government Regulations.[16] The Director of OSH Standards of DEPNAKER identifies two particular priorities: (i) establishment of a more coherent national OSH administration, and (ii) promotion of OSH-MS. [17]

4.3 OSH committees

The establishment of OSH committees is meant to improve the OSH enforcement and implementation at the enterprise level. All companies hiring more than 50 workers must have an OSH committee and register it at the local DEPNAKER office. However, many companies have not established such committees yet. Even if it is the case, the committees are often not functioning properly (Topobroto, 2002).

4.4 Employees' social security scheme (JAMSOSTEK)

Based on the Employees' Social Security Act in 1992 (Law No.3, 1992), the Government established a public limited liability company, PT JAMSOSTEK.[18] The Act covers the benefits related to (i) employment accidents, (ii) old age, (iii) death, and (iv) health care. The compulsory coverage applies to employers hiring 10 employees or more, or paying a monthly wage payroll of 1 million Rupiahs or more. Workers injured at work are entitled to benefits covering (i) the cost of transportation, (ii) the cost of medical examination, treatment, and/or hospital care, (iii) the cost of rehabilitation, and (iv) cash payments consisting disability or death allowances.[19]

Compensation of employment injuries is considered as the employers' responsibility and therefore employment injury schemes are normally financed by employers. In general, there are three methods of setting the contribution rates: (i) uniform rate which is applicable to all enterprises regardless of the past experience or industry; (ii) differential rates according to risks or industry but independent of the actual experience of the individual establishment; (iii) merit or experience rating where the rate is fixed or adjusted individually for each establishment on the basis of the accident record and safety conditions in the individual workplace. [20]

[16] Act of the Republic of Indonesia (No. 13, 2003) Concerning Manpower; unpublished and unofficial English translation by the ILO Jakarta, 2003. In September 2003, a National Tripartite Workshop was organised jointly by DEPNAKER and the ILO Jakarta to gather inputs from various departments and stakeholders involved in the implementation of OSH-MS for the preparation of a draft Government Regulation on OSH-MS.
[17] Consultations with the Director of OSH Standards by ILO, 2003.
[18] JAMSOSTEK is an acronym of Jaminan Sosial Tenaga Kerja and means s*ocial security for the workforce*. It is also called Workers' Compensation Insurance Company of Indonesia.
[19] Social security and coverage for all - Restructuring of the Social Security System in Indonesia; ILO Jakarta 2002.
[20] Ibid.

4.5 ILO Conventions related to OSH

As of 2003, Indonesia has not ratified any OSH-related ILO Conventions except for the Convention on the Hygiene (Commerce and Offices) (No. 120, 1964). However, by the year 2000, Indonesia had ratified all eight fundamental conventions of the ILO underpinning the Declaration on the Fundamental Principles and Rights at Work.

How do the ILO constituents in Indonesia perceive the ILO Conventions? One interviewee pointed out that numerous OSH-related labour standards create confusion in developing the national policy in Indonesia. Another source stated that the most important thing is not the ratification of the Convention itself, but the implementation of OSH measures in a proper way.[21]

Since Indonesia is a predominantly agricultural country with about 70 percent consisting of rural and agricultural area, the most recent ILO-OSH Convention on Agriculture (No. 184, 2001) and its accompanying Recommendation are considered to be useful policy tools. However, it is widely viewed that the country is not ready for the ratification of this Convention due to a low OSH awareness among the agricultural workers. General education level of agricultural workers in Indonesia is low, on average 3-4 years in the primary school. The employers' organization (APINDO), DEPNAKER, the Department of Agriculture, and the National Tripartite OSH Council (DK3N) have discussed how to teach OSH for farmers in a simple and effective way. Before Indonesia considers the ratification of the ILO OSH Agriculture Convention, a robust education and training programme needs to be implemented in the first place.[22]

5. Enforcement

According to the Work Safety Act (Law No.1, 1970), the Department of Manpower and Transmigration (DEPNAKER) is responsible for setting-up the national OSH policy to ensure the universal and smooth implementation in Indonesia. For sectoral and technical implementation, the DEPNAKER may decentralize its monitoring function broadly. Directorate General of OSH Standards undertakes general monitoring of OSH regulations while labour inspectors and OSH experts, appointed by DEPNAKER, undertake direct monitoring. [23]

It should be noted that occupational safety and health regulations are also included in laws such as the Health Act, as well as regulations related to mining, nuclear power, oil and gas, industry etc under the jurisdiction of such Government agencies as the Department of Health, the Department of Mining and Energy which is responsible for mining inspection, and the Department of Industry.

According to the 1995 ILO advisory mission report, an integrated inspection system was initiated by the ILO/UNDP project in 1984. As it was not possible to unify OSH inspectors and labour inspectors, a strategy was adopted to gradually expand the concept of integrated inspectors by training newly recruited inspectors. The ILO report also pointed out

[21] Views of two anonymous sources interviewed by Pia Markkanen.
[22] This paragraph presents the views of one anonymous source interviewed by Pia Markkanen.
[23] Comments by Dr. Zulmiar Yanri, Director of Occupational Health Standards, August 2003.

that the number of inspectors was too small and that investments were scarce on areas such as training, transportation costs, and salaries. For example, the Department of Mining and Energy encountered difficulties in upgrading its inspectorate knowledge of new mining methodologies and safety measures (The ILO OSH advisory mission report, 1995).

As in many other countries in Asia and the Pacific, Indonesia faces problems with OSH enforcement – few competent inspectors, limited resources to conduct adequate number of inspections, and limited follow-up inspections after the citations or violations. Further, inspections focus mainly on the formal sector; therefore, OSH or the Government's role in it in rural areas is often unheard of.

5.1 Directorate General of OSH Standards in DEPNAKER

As aforementioned, work safety inspection has been decentralized and the responsibility has been transferred to the provincial Governments since 1984. At the Directorate General of Labour Inspection of DEPNAKER, about 1,400 inspectors are involved in the labour inspection nationwide. About 400 of labour inspectors are qualified for OSH inspection, under the jurisdiction of the Directorate General of OSH Standards (PNKK) [24] (Topobroto, 2002).

The PNKK Directorate is composed of four sub-directorates: (i) Mechanics, steam engines and pressure vessels; (ii) Occupational and environmental Health; (iii) OSH Institutions and expertise; (iv) Building construction, electrical installations, and fire hazards. Besides the workplace inspection, PNKK investigates accidents, conducts training courses and seminars, and promotes OSH implementation. Furthermore, they examine and certify the heavy or hazardous machinery operators. As a result of a reorganisation of DEPNAKER in 2003, the Directorate General of OSH Standards was divided into two Directorates, namely, the Directorate of Occupational Safety Standards and the Directorate of Occupational Health Standards.

Large companies in Indonesia must have a medical doctor, either on the permanent, the full-time, or the part-time basis. Workers' periodical and pre-placement medical examinations must be carried out by the doctors recognized by DEPNAKER (Topoproto, 2002). All workplaces must be equipped with first-aid kits.

5.2 Occupational Health Centre of the Department of Health

Occupational health services are the mandate of the Occupational Health Centre, under the Secretariat General of the Department of Health. The Centre is divided into (i) Occupational Health Services Section, (ii) Occupational and Environmental Health Section, and (iii) Administrative Unit.[25] The Centre has set up a Strategic Plan of Occupational Health Programme to carry out nation-wide efforts. OSH is one of the programmes in achieving *Healthy Indonesia Vision 2010* – the current policy of the Department of Health. *The Healthy Indonesia Vision 2010* was established to encourage national health development, increasing evenly distributed and accessible health services for individuals, families, and communities (The Department of Health, 2002).

[24] PNKK stands for *Direktorat Pengawasan Norma Keselamatan dan Kesehatan Kerja.*

[25] *Warta Kesehta Kerja*; Media Komunikasi Kesehatan Kerja; Edition 1, 2002. The Newsletter published by the Occupational Health Centre.

The challenge is how to extend occupational health services to all working communities with limited facilities and infrastructure. Basic occupational health data on workers is scant, and so are human resources in terms of quality, quantity, and geographical distribution. Consequently, work-related illnesses are not handled efficiently, hence, preventive measures are seldom undertaken.

Box 1: Occupational Trauma Centres

In October 2002, the fourth Indonesia's trauma centre was inaugurated in Yogyakarta. Previously, such centres had been launched in Jakarta, Palembang, and Surabaya. The purpose of these trauma centres is to help workers suffering serious work-related accidents and reduce work-related fatalities. The Yogyakarta Governor estimated that the trauma centre in the province could save 85 percent of workers' lives who had serious accidents at work. For example, the Yogyakarta centre is equipped with an ambulance, complete with a set of communications equipment, and first-aid medical equipment.

While trauma centres are welcomed initiatives, we should keep in mind that if the duty of trauma centres is only to treat the workers this is then only a form of a tertiary prevention. To fully contribute to the OSH improvement, it is hoped that these trauma centres would participate and collaborate with companies to promote primary prevention methods: identifying, eliminating, and controlling the hazards, as well as planning awareness raising programmes for employers and workers.

(Source: Jakarta Post, 1 October 2002)

6. Research, education, training, and information

6.1 The Center for Development of Occupational Safety and Health (HIPERKES)

The Center for Development of Occupational Safety and Health (HIPERKES) was established in 1964. It was formerly called the National Institute of Occupational Health and Safety. The Center is the research arm of DEPNAKER under the Directorate General of Manpower Planning and Developments.

The HIPERKES carries out the following functions: (i) factory services to identify hazards, exposure measurement and assessment, design and hazard control, monitoring and evaluation; (ii) training and education for managers, safety and health committees, workers and trade unions, medical doctors at the enterprises, and nurses, (iii) OSH research on various subject areas, (iv) pre-placement and periodical medical examination, and (v) consultation on environmental impact assessment of industrial discharges. One of the important duties of the HIPERKES is to make recommendations for OSH standards and assist in the standard development process. The HIPERKES has industrial hygiene and environmental laboratories, as well as an occupational health laboratory for measuring physical fitness and identification of occupational diseases. [26, 27]

[26] Promotional brochure published by HIPERKES.

[27] ASEAN OSHNET, OSH institutions, available at: http://www.asean-osh.net/indonesia/osh%20expertise&services.htm.

6.2 NGOs and professional associations

In Indonesia, a number of NGOs and professional associations carry out various works in the area of OSH; Appendix III provides a list of these existing NGOs and professional organizations. For example, an NGO called Society for Occupational Safety, Health and Work Environment is planning to translate the ILO Encyclopaedia of Occupational Health and Safety into Bahasa Indonesia.

Lembaga Informasi Perburuhan Semarak (LIPS) – the Labour Information Center – is a labour rights organization based in Bogor. The LIPS conducts research and training, and collect information and documentation on a variety of labour rights issues. They are active collaborators of the US-based Maquiladora Health and Safety Support Network, the Labor Occupational Health Program (LOHP) at the University of California at Berkeley. [28]

6.3 Education of OSH at the university level

The first industrial hygiene, ergonomics, and general OSH education started at the Sebelas Maret University of Surakarta (Solo) in 1984. Then, the Airlangga University of Surabaya and the Public Health Faculty of the University of Indonesia followed.[29] At present, the University of Gadjah Mada in Yogyakarta and the University of Udayana in Denpasar offer similar programmes. Moreover, the Institute of Technology in Bandung and the Trisakti University in Jakarta have included OSH in their curricula (Topobroto, 2002). The School of Medicine of the University of Indonesia provides an OSH postgraduate programme in occupational medicine.[30]

6.4 International training

A representative from the workers organization KSPSI appreciated the ILO's contribution to the trade union training; consequently, they have a programme generating future trainers. Nonetheless, it is hoped that the ILO would play more active role in monitoring their activities, programmes, and their future plans. For example, there are many trainers with adequate OSH knowledge who are not very active.

The major international OSH training support comes from Japan (see also Section 8.1 later). The Denmark-funded Workers' OSH Education Project was implemented in Indonesia, the Philippines, and Thailand. Until 1998, this project supported training of OSH trainers for the national trade union centres in these countries. The aforementioned Maquiladora Health and Safety Support Network have conducted an OSH training course for NGOs and trade union members in Jakarta in 2000. The follow-up training course was organized in 2002. [31]

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[28] Maquilladora Safety and Health Support Network Newsletter; 11 April 2003; Vol VII, No. 7, available at http://mhssn.igc.org/news.htm.

[29] History of Occupational Safety and Health in Indonesia, by Safe Design, 2000. Available at http://safe.gq.nu/safstory.html.

[30] *Health and Safety at Work for All: Proceedings of International Conference on Occupational Health and Safety in Informal Sector in Bali*; The Department of Health; 1997.

[31] Maquiladora Health and Safety Support Network; *June 26-29th Jakarta, Indonesia, Training With NGOs and Unions*; http://mhssn.igc.org/indo.htm

The 1995 ILO OSH advisory mission report stated that the use of the training packages developed under the ILO technical cooperation projects remained rather limited. This was mainly due to the lack of funds or commitment to organize courses. It was also noted that not all trained staff continue to work in the area of OSH due to transfer to other offices or resignation from the Government service.

6.5 Information provision: ASEAN OSHNET and ILO OSH information centres

In 2002, Indonesia hosted the secretariat of the Occupational Safety and Health Network among ASEAN countries (ASEAN OSHNET). The network was established to foster cooperation among the members of ASEAN countries, improve the capacity of national centres in OSH promotion, research, training, and information dissemination. ASEAN OSHNET aims at harmonizing OSH standards and guidelines among ASEAN nations (Topobroto, 2002).

Activities of ASEAN OSHNET include gathering and sharing OSH information such as training courses and materials, appropriate technologies, standards and guidelines; developing a regional OSH knowledge-base which is relevant and responsive to the needs of ASEAN Member Countries; research in collaboration with universities, specialised research institutions, the private sector, and relevant NGOs. As indicated above, the ASEAN OSHNET database contains Indonesian OSH information on regulations, work accident data, research projects, professional organization, etc (ASEAN OSHNET, 2003).

In addition, there are two ILO designated OSH information centres. The National ILO-OSH Centre is located at DEPNAKER's Directorate General of OSH Standards (the current ASEAN OSHNET Secretariat); and (ii) the Collaborating ILO-OSH Centre is placed at the Employers Association APINDO.

7. National Tripartite Occupational Safety and Health Council (DK3N)

The National OSH Council (DK3N) was set up by DEPNAKER in 1982 as a tripartite body to provide recommendations and advice to the Government at the national level. Members of this Council comprise of all key OSH organizations, including the employers' and workers' representatives. Its tasks are to collect and analyse OSH data at the national and provincial level, assist DEPNAKER in supervising the provincial OSH councils, undertake research activities, as well as organize training and education programmes. During 1998-2002, DK3N held at least 27 workshops and seminars on various subjects and on industrial sector-related areas. They have published a number of books and a quarterly periodical (Topobroto, 2002).

The DK3N is an active member of the Asian Pacific Occupational Safety and Health Organization (APOSHO) and cooperates closely with Japan Industrial Safety and Health Association (JISHA), Japan International Centre for Occupational Safety and Health (JICOSH), and the US National Safety Council (Topobroto, 2002).

Among others, the DK3N has made the following recommendations: (i) amend the Work Safety Act (Law No.1, 1970) to better respond to the challenges of the globalization

and change its name from *Work Safety Act* into "Occupational Safety and Health Act"; (ii) designate 12 January as the national OSH day; and (iii) revise the Labour Law and for numerous ministerial regulations concerning chemicals, occupational diseases, national OSH campaigns, OSH-MS, etc. (Topobroto, 2002). Box 2 below illustrates the Council's vision on OSH targets for Indonesia to be achieved by 2010.

Box 2: OSH targets set by DK3N (Source: DK3N)

DK3N has established OSH development targets to be achieved by 2010, in line with the Government Programme of Healthy Indonesia 2010:

- OSH is a culture at all workplaces so there will be an optimum efficiency in supporting national economy growth;
- OSH management is conducted at all companies to control work-related accidents and illnesses according to the prevailing regulations;
- Workplace and the surrounding environment meet the OSH requirements for workers and the surrounding communities;
- All Government institutions have implemented their functions in developing and supervising the OSH implementation on regulations under the coordination of Manpower and Transmigration Department;
- OSH National Standardization System has been implemented and has resulted in an OSH Indonesian National Standard for every level of production process, from planning to the end product, all sectors, and dimensions;
- OSH education and training has resulted in professional staff competent in all OSH skill level and curriculum that has been properly organized, and are able to meet the technology ability that rapidly change;
- Informal sector workers and community in general have truly understood and implement work culture by upholding personal safety and health and the community in their work.

8. Employers' and workers' organizations

8.1 APINDO

APINDO (Employers' Association of Indonesia), established in 1952, has about 9,000 direct members and 100,000 indirect members. There is a close cooperation between APINDO and KADIN (the Indonesian Chamber of Commerce and Industry). KADIN members are automatically direct members of APINDO. APINDO has been the member of DK3N since its establishment[32] and has incorporated safety and health and environmental protection issues in the policy statement. It also organizes seminars and training courses. With the ILO's technical assistance, APINDO conducted a training course on WISE[33] (Topobroto, 2002).

APINDO is actively collaborating with Australian Chamber of Commerce and Industry Confederation (ACCI). In 1996, with assistance from Japan Federation of

[32] Source: a representative of APINDO, 2002.
[33] Work Improvement in Small Enterprises.

Employers' Associations (NIKKEIREN)[34], APINDO conducted an OSH survey on existing laws and regulations covering over 60 subject areas (Topobroto, 2002). The NICC[35] allocated grants not only for conducting workshops in Indonesia, but also sending APINDO practitioners to attend a four-week job training in Tokyo. Also one OSH officer is sent annually to Manila to join the OSH training run by the Japan International Cooperation Agency (JICA). [36]

It was viewed by an APINDO representative that the financial crisis deteriorated the OSH performance in Indonesia. The person mentioned: "OSH is not only for the workers benefit, but also for the enterprise benefit, in terms of productivity, profit margin, and also for the sustainable development in terms of business and especially for export commodities".[37]

8.2 Workers' organizations

KSPSI [38] (Confederation of the All Indonesian Workers Union) leads 18 labour union federations. KSPSI has offices in 30 provinces (regional executive boards) and 316 cities and districts. It has also representative offices in 12,000 companies with total members approximately 5 million across Indonesia. In each province, KSPSI has its own safety and health board which have a responsibility to work together with the companies in developing OSH. [39]

It was mentioned that workers' OSH awareness is very low. Compared to issues such as wages, welfare benefits or employment, OSH gains limited attention in the collective bargaining processes. A KSPSI representative pointed out that the OSH is a priority; nonetheless, KSPSI is preoccupied with the issue of wages as a source of dispute: "People tend to think that they have to get enough wages first, fulfil their income needs, and increase welfare before they "can afford" thinking of OSH. What is the meaning of wages without enough safety or enough proper health? The economic crisis weakened OSH situation; previously, in the New Order Era when the economy was more stable, more attention was paid to OSH, but not at the moment."[40]

9. Hazardous occupations and industries

Hazardous occupations – where most work related injuries and illnesses occur – happen in agriculture, construction, mining, forestry, and fishing. The ILO considers that these five areas are often the most hazardous industries. Along with the petroleum industry,

[34] Since May 2002, NIKKEIREN and the other major employers' organisation KEIDANREN (Japan Federation of Economic Organizations) have been consolidated into one economic organisation called NIPPON KEIDANREN (Japan Business Federation).
[35] The international cooperation arm of NIKKEIREN.
[36] Anonymous source interviewed by Pia Markkanen.
[37] Ibid.
[38] In Indonesia, more than 60 trade union organisations have registered at the national level since Indonesia's ratification of the ILO Conventions 87 and 98. Major trade union organisations include KSPSI, ITUC and KSBSI.
[39] Another anonymous source interviewed by Pia Markkanen.
[40] Ibid.

these five sectors bear a major significance for Indonesian economy. In this section we will briefly look into the OSH issues in these industries.

An ILO discussion paper by Rizwanul Islam provides the following employment composition for Indonesian hazardous sectors: [41]

- agriculture, about 37.7 million workers (44 percent);
- mining and quarrying, 774,211 workers (0.9 percent);
- construction, about 3.8 million workers (almost 4.5 percent).

Table 2 below presents the number of reported work accident cases to JAMSOSTEK by industrial sector for the period 1996-1999.

Table 2: Number of work accidents reported to JAMSOSTEK by sector, 1996-1999.

Industry	Accident Cases			
	1996	**1997**	**1998**	**1999**
Forestry	16,871	19,561	19,640	16,835
Mining	4,429	14,487	8,658	7,803
Manufacturing	48,431	51,821	49,540	46,109
Construction	7,351	2,397	3,987	3,802
Electricity, gas, & water supply	752	2,055	1,663	1,463
Services	4,232	5,438	4,848	4,530

Data source: ASEAN OSHNET [42]

9.1 Agriculture

We have briefly mentioned the OSH issues in agriculture in relation to ILO Conventions (see Section 4.5 earlier). Along with livestock raising, Indonesian crop products include: rice, cassava, maize, sweet potatoes, coconuts, sugarcane, soybeans, peanuts, tea, coffee; rubber, palm oil, and tobacco (ASEAN OSHNET).

Agriculture encompasses the entire spectrum of work safety and health hazards. Pesticides can lead to poisonings or serious illnesses whereas heavy machinery and equipment used in agriculture are sources of serious injuries and fatal accidents. Animal and crop dust may result in allergies and respiratory diseases. In the tropics, workers also suffer from over-exposure to heat and sun. Other hazards include all types of repetitive strain injuries due to lifting, carrying, repetitive work and awkward postures as well as numerous and psychosocial issues. Lack of clean drinking water and insufficient hygiene can bring infectious diseases. Contacts with dangerous plants, attacks of wild animals, as well as insect and snakebites are not uncommon. [43]

[41] Islam R; *Indonesia: Economic Crisis, Adjustment, Employment and Poverty*; Issues in Development; Discussion Paper No. 23; the ILO; 1998; available at http://www.ilo.org/public/english/employment/strat/publ/iddp23.htm.
[42] ASEAN OSHNET, accident data, available at http://www.asean-osh.net/indonesia/osh%20statistic.htm.
[43] Myers M; Chapter on Agriculture and Natural Resource Based Industries; in *ILO Encyclopaedia of Occupational Health and Safety*; Fourth Edition; Stellman JM (Ed); Vol III; the ILO; Geneva; 1998.

9.2 Construction

In general, any construction project (e.g. building construction, infrastructure development, demolition) is filled with hazardous trades and tasks. Most fatal injuries happen when construction workers fall from height or when they are hit by moving or falling objects. Hazardous exposures include noise, hazardous materials (e.g. paints, solvents, oils), dust (e.g. silica and asbestos), fumes (e.g. welding work), and vibration. As in agriculture, construction workers suffer from all kinds of repetitive strain injuries and extreme weather conditions. Psychosocial issues in the construction are notable because of irregular and temporary nature of construction projects.

9.3 Mining

In 2000, the main (non-petroleum) mineral mining products were bauxite, coal, gold, silver, copper, iron, nickel, tin, and coal.[44] Major coalmines are located in Sumatra and Kalimantan whereas the largest copper-gold deposits exist in Sulawesi and Iriyan Jaya.[45]

The ILO[46] estimated that around 77,000 small-scale mines exist in Indonesia, each comprising 300,000 to 500,000 miners, including women and children. Especially underground mining is very dangerous; miners often die in tunnel collapses, gas explosions, fires, floods, and elevator failures.[47] Moreover, both underground and surface miners suffer from lung diseases due to many years' exposure to coal or other mineral dust. In some gold mines, mercury pollution has been a serious problem not only for the worker health but also for the public health and the environment. Mercury is used to separate gold from ore (ILO Small-Scale Mines Report, 1999).

9.4 Forestry

In 1991, Bernt Strehlke, an ILO Forestry and Wood Industries Specialist, reviewed employment and working conditions issues in Indonesian forestry work. At that time, it was estimated that the number of different types of forestry workers was around 250,000.[48] Dangerous working practices were observed in all workplaces, notably in tree felling. Although logging workers may have used safety helmets, footwear was often insufficient – it was not uncommon to see barefoot chainsaw operators. Chainsaws lacked such safety features such as front handle guards or anti-vibration devices. [49]

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[44] *Badan Pusat Statistik*, Indonesia. Central Bureau of Statistics, Indonesia. http://www.bps.go.id/sector/minning/table2.shtml.

[45] Directorate General of Geology and Mineral Resources; Presentation slides on *Mining industry in Indonesia: a year after the decentralization policy in coal sector*; http://www.nedo.go.jp/informations/events/140924/jusmady.pdf.

[46] *Social and labour issues in small-scale mines*; Report for the Tripartite Meeting on Social and Labour Issues in Small-scale Mines, Geneva 17-22 May, 1999; http://www.ilo.org/public/english/dialogue/sector/techmeet/tmssm99/tmssmr.htm.

[47] Kahn J; *China's Coal Miners Risk Danger for a Better Wage*; New York Times; 28 January 2003.

[48] *Strehlke B;* Forest management in Indonesia: employment, working conditions and occupational safety; available at http://www.fao.org/docrep/u8520e/u8520e06.htm.

[49] Ibid.

9.5 Fishing

Fishing industry in Indonesia is one of the largest in the world. An environmental protection *Down to Earth* bulletin[50] highlighted that many Indonesian communities that depended on coastal resources for their livelihoods were overwhelmed by large fishing enterprises. Furthermore, pollution from agriculture, mining, and other industries has destroying effects on mangrove forests and coral reefs which are necessary for coastal biodiversity. [51]

In 1999, the ILO held a Tripartite Meeting on Safety and Health in the Fishing Industry.[52] For the preparation of the ILO report, a survey was conducted in several member states including Indonesia. The survey results indicated that drowning was a leading cause of death among fishermen. Many accidents originated from stepping on, striking against, and being struck by an object or from falls and over-exertions. Accident causes included extreme weather conditions, fatigue, poor vessel condition, lack of the vessel maintenance or repair, inadequate or inappropriate tools and equipment. Frequent accidents were musculoskeletal injuries, contusions and crushing injuries, near drowning, and effects of extreme weather exposure. [53]

10. Workers in the informal economy

Among others, Soekotjo Joedoatmodjo, the Chairperson of the DK3N, has reviewed OSH in the informal economy in Indonesia.[54] Majority of workers in the informal economy are women and children, who work under poor working conditions and unregulated working hours, and with low wages. It has been reported that workers in the informal economy in Indonesia suffer from malnutrition, parasitic diseases, asthma, skin allergies and cancers, chemical poisoning, food poisoning, musculoskeletal disorders, respiratory track problems, lymphoid and blood diseases, etc. Their work hazards include noise, vibration, heat stress, poor lighting, unsafe electrical wiring, exposure to dust and chemicals, and poor ergonomics (Joedoatmodjo, 1999).

An Indonesian OSH specialist[55], who was interviewed, mentioned that the informal sector workers need more attention, especially, from the relevant Government agencies such as the Department of Health, DEPNAKER, and the Department of Industry and Trade. Besides the OSH awareness raising, they need a support on how to run their businesses. The interviewee mentioned: “Firstly, how to improve the management, how to survive and develop, and therefore the Department of Industry and Trade is the most important source. Workers in the informal economy need more resources, small credits, and advise how to manage these resources. Secondly, how could they promote their sales and products? And

[50] *Coastal communities hit hard by fishing industry*; Down to Earth bulletin; No. 51, November 2001; International Campaign for Ecological Justice in Indonesia; available at http://dte.gn.apc.org/51fsh.htm.
[51] Ibid.
[52] Safety and Health in the Fishing Industry; Report for the discussion at the Tripartite Meeting on Safety and Health in the Fishing Industry; ILO; Geneva; 1999; available at http://www.ilo.org/public/english/dialogue/sector/techmeet/tmssm99/tmssmr.htm.
[53] Ibid.
[54] Joedoatmodjo S; *Occupational Safety and Health for the Informal Sector: Seeking better Solutions for Indonesia*; 1999; available at http://www.aposho.org/about/msword/ksiv-1.doc
[55] An anonymous source interviewed by Pia Markkanen.

how to address the OSH in the workplace: improve ventilation, not using certain hazardous solvent-based glues but water-based ones, improve ergonomics, and all in all, how to be in line with the regulations."[56]

10.1 Action by the Department of Health

International Conference on Occupational Health and Safety in the Informal Sector

The Department of Health, in collaboration with the World Health Organization, organized the "International Conference on Occupational Health and Safety in the Informal Sector" in Denpasar, Bali, Indonesia during 21-24 October 1997. Technical papers in the Conference Proceedings[57] analyse the OSH situation of informal sector workers in different sectors and diverse jobs. The Conference Statement pointed out that every worker has the right to OSH irrespective of the kind of an occupation or a size of an enterprise. It concluded that workers in the informal economy form an important segment of the workforce and their safety and health rights cannot be ignored.

Primary health care (PHC) based occupational health approach

In Indonesia, the Department of Health has initiated measures to address the informal economy. Health care services are provided by health officials at over 4,300 UKK[58] posts in provinces, districts, and communities. It is estimated that more than 3,000 public health officers throughout Indonesia are providing health care for workers in the informal economy (Topobroto, 2002). Also, the Directorate of Occupational Health has published a number of OSH booklets on workers in the informal economy in various activities.

Umar Achmadi and Widyastuti Wibisana have also profiled the nature of work in the informal economy as well as explained the primary health care service approach for the informal sector workers.[59] Many rural and urban informal sector workers suffer malnutrition and parasitic diseases. Specific diagnoses by medical doctors include: high lead levels in the blood among the battery workers, decreased lung function among wood cottage industry workers, dermatitis among soybean workers, pterigium[60] among fishermen, and eardrum damage among the pearl divers.

The Primary Health Care (PHC) approach aims to increase (i) availability of occupational health services; (ii) implementation of occupational health programmes and directing them towards the community participation; (iii) better collaboration between the health agencies and the working community; and (iv) inter-governmental coordination. This approach dates back to Alma Ata Declaration[61] which highlighted the need to set up the primary health care units in the community: by promotive, preventive, curative, and rehabilitative services (Achmadi & Wibisana, 1997; Soekodjo, 1999).

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[56] Ibid.
[57] The Department of Health: *Proceedings of International Conference on Occupational Health and Safety in Informal Sector*; 1999
[58] UKK stands for Upaya Kesehatan Kerja, which means *Occupational Health Efforts*.
[59] Achmadi U; Wibisana W; The PHC Based Occupational Health Care Delivery system – Experience from Indonesia; in the Proceedings of International Conference on Occupational Health Safety in the Informal Sector; the Department of Health; 1997.
[60] Callous on the eye. Source: http://www.eyecarecontacts.com/pinguecula.html.
[61] International Conference on Primary Health Care, held in 1978, in Alma Ata, the former USSR.

Since the 1980s, the Department of Health has been implementing several pilot projects based on primary health care (PHC) based occupational health services. PHC programmes are carried out in the Basic Occupational Health Services Units (BOHSUs) established in the communities. They provide basic services in first-aid for accidents as well as for workers who suffer from general diseases. They encourage the utilization of safety equipment and organize environmental clean health programme. The funding system for these activities is by the community through a cooperative organization in developing "*health funds*". The local Government provides a facility for an occupational health service unit and other necessities to start the unit (Achmadi & Wibisana, 1997; Joedoatmodjo, 1999).

The BOHSUs are expected to be one of the strategic solutions to overcome safety and health problems of the workforce in the informal economy. They will be further developed as community-based occupational health action. The BOHSUs are supervised by the respective Health Centre (PUSKESMAS). Their success depends heavily on capacities of doctors and staff at PUSKESMAS as well as allocated resources. PUSKESMAS is a motivator, in particular for cross-sectional collaboration. Normally, a PUSKESMAS is located in each subdistrict and a BOHSU in each village (Achmadi & Wibisana, 1997; Joedoatmodjo, 1999).

10.2 Portrayal of some women workers in the informal economy

Astrid Sulistomo has described some case studies on women workers in the informal economy in Indonesia.[62] Majority of women have at least two jobs: at home and outside the home. These studies have shown that women receive less education, less health care, less free time, and less financial reward – therefore, fewer opportunities to decide for themselves. Due to their low economic and educational status, common diseases are still predominant among working women, for example; malnutrition, anaemia, infectious diseases, high blood pressure, malaria, visual problems, hearing loss, pesticide poisonings, and respiratory problems. With no knowledge about the health risks and safe work practices, women have to work under poor conditions.

Postgraduate education in Occupational Medicine, at the Department of Community Medicine of the University of Indonesia, requires a conduct of case studies on occupational health problems. Sulistomo illustrated, among others, the following three cases:

- A 60-year-old woman who had completed the 2nd grade from elementary school had been widowed for 26 years with two children. She earned her living by washing clothes. Eventually, she started to suffer from a tumour near her right eye it was diagnosed as type of skin cancer (melanoma malignum). Fortunately she managed to get help from a charity organization who paid all the expenses for the operation and treatments;

- A 36-year-old married woman with two children, who had worked ten years as a seamstress in a home-based workshop, began to complain about the weakness of her fingers. Six months earlier, she had noticed some sensory loss on her left fingers, especially at night, but did not pay attention to it. Physical examination

[62] Sulistomo A; *Case Studies on Health Problems of Women Working in Informal sector in Jakarta and it's surroundings*; in the Proceedings of International Conference on Occupational Health Safety in the Informal Sector; the Department of Health; 1997.

indicated that she was underweight and anaemic, and electromyography[63] test showed that she had *carpal tunnel syndrome*[64] in her both hands;

- A 28-year-old woman hairdresser complained about the damaged fingernails. She works alone at home in a 12 square meter room equipped with a small fan, but no air-conditioning. Her working time is irregular. She rarely washes her hands after using hair chemicals. Sometimes, she even has problems with using the running water. Dermatological and parasitologic examinations revealed that she had abrasion and yeast infection in her fingernails. She was treated by a dermatologist and later her condition progressed.

Other case studies indicated neuropathy[65] after more than 20 years of pesticide spraying, allergic contact dermatitis associated with the detergent use in dish-washing, back injury after selling groceries for 18 years, a seamstress suffering from asthma, etc. Usually, workers in the informal economy delay to seek treatment due to lack of money – the reason why their health is not a priority to themselves.

10.3 Working children

Appendix I illustrates a case study of the on-going ILO Programme to Combat the Child Labour in the Footwear Sector in Indonesia. In particular, it captures the significance of safety and health in ILO-IPEC Footwear Team's efforts when addressing this particular hazardous form of child work.

The Government of Indonesia has established a number of national policies on child labour elimination. These include: Law No. 4 of 1979 on Children's Welfare, Law No. 2 of 1989 on National Education System, Law No. 20 of 1999 on Minimum Age (Ratification of the ILO Convention No. 138), Law No. 1 of 2000 on the Eliminating the Worst Forms of Child Labour (Ratification of the ILO Convention No. 182), and Presidential Decree No. 59 of 2002 on the National Action Plan to eliminate the worst form of child labour. [66]

11. The national OSH campaigns

11.1 Work Safety and Health Month

Every year, the Safety and Health Month is observed from 12 January to 12 February, under the coordination of the DK3N. The event has a high visibility, attended by the relevant Ministers, often by the President of the Republic, and covered by various media representatives. The National Work Safety Day has been designated as 12 January.

[63] Electromyography is a nerve conduction test.
[64] Carpal tunnel is one of the most common repetitive strain injuries – a constriction of a median nerve in the wrist. Symptoms often include numbness, tingling in hand/wrist, thumb, index and/or middle finger.
[65] Nerve damage.
[66] Unpublished fact sheet developed by the ILO-IPEC Bandung Footwear Team.

11.2 National Occupational Safety and Health Month in 2003

The 2003 national OSH campaign was extensively reported by national newspapers, in particular the English paper the Jakarta Post. President Megawati Soekarnoputri called upon Indonesian companies to improve the safety of their workers. She was responding to reports on the increasing number of fatalities occurring at the workplace. As already mentioned, the number of workplace accidents in Indonesia has steadily increased from 98,902 in 2000 to 104,774 in 2001. In the first half of 2002, 57,972 accidents were recorded.[67]

At the campaign, the Minister of Manpower and Transmigration said that DEPNAKER would not hesitate to take stern action against any company violating standard safety measures for workers. The Minister also stated that the Government lacks the personnel to oversee the implementation of the law, moreover, some of the officials practice corruption, collusion and nepotism with the business owners. He also pointed out that a lack of discipline among workers and business owners contributed to the increasing number of work-related accidents and illnesses.[68]

Chairperson of the DK3N mentioned that by the end of 2002, only 80 establishments out of the 170,000 companies operating in Indonesia had been granted the zero accident certification. Director of the HIPERKES pointed out that Law No. 1 of 1970 on Work Safety was too lenient – those who violated the regulation were only required to pay a fine of 1 million Rupiahs (US$900) or a one-month prison term or both. The new Manpower Act imposes heavier punishment on violators: higher fine of 400 million Rupiahs and a longer period of imprisonment.[69]

12. Conclusions

12.1 Targeting the most disadvantaged workers

Both the ILO OSH specialists and the ILO constituents in Indonesia call upon to steer the resources and capacities towards the most disadvantageous workers. In the past, priority was given for strengthening large enterprises, in particular those applying OSH-MS. Work in this area is important, thus, acknowledged as an achievement. Nevertheless, OSH-MS implementation is not the most flagrant OSH concern in Indonesia. The majority of Indonesian labour force works in urban or rural informal sector or in small enterprises.[70]

As aforementioned, the Department of Health has already successfully initiated PHC-based OSH approaches for the informal sector. In line with the on-going work by the Department of Health, the ILO – in collaboration with the Tripartite National OSH Council,

[67] Setiogi SP, *Systematic measures needed to improve safety on the job;* 15 January 2003; The Jakarta Post, Jakarta.
[68] Taufiqurrahman M; Unidjaja FD; *Companies must improve workers' safety: Mega*
14 January 2003; The Jakarta Post, Jakarta.
[69] Taufiqurrahman M; Local companies negligent about workers' safety, 10 January 2003; The Jakarta Post, Jakarta.
[70] Discussions with Dr. Kawakami, Senior Specialist in OSH, ILO Sub-regional Office for East Asia.

DEPNAKER, the Department of Trade and Industry, employers' and workers' organisations, and relevant NGOs – could start discussions and support the constituents to set up feasible programmes and activities.

The OSH activities undertaken in the ILO-IPEC Footwear Team in Bandung represents a good practice to tackle the challenge of improving OSH in the informal sector: by establishing a community-based OSH committee and child labour monitoring system; promoting grass-root training, and carrying out information dissemination activities. The Bandung Team successfully applied the ILO PATRIS[71] methodology in the day-to-day monitoring work. Likewise, it would be worthwhile to find out how the Department of Health would perceive the ILO PATRIS methodology, for example, when combining it in their PHC-approach and their research on informal sector workers.

12.2 Low global OSH awareness

Workers' low OSH awareness is an indisputable concern.[72] Nevertheless, it is necessary to emphasize that the lack of understanding is not a case of workers alone: work safety and health awareness is low among all. Medical doctors receive insufficient OSH training; this results in difficulties in diagnosing illnesses and linking them to workplace hazard exposures, thus, hindering the primary prevention at the workplace. Besides medical doctors, mainstream engineers are frequent key players in safety and health. Usually, these conventional engineers do not receive adequate OSH education either; for example, only few chemical and mechanical engineers are required to demonstrate their comprehension in toxics use reduction, safer and cleaner product design, or on industrial hygiene. Nevertheless, "engineering controls" are on the top of the hazard control hierarchy to eliminate and minimize work safety and health risks. More often than not, most business school graduates have studied hardly any work safety and health subjects. Any entrepreneur who considers starting a business needs at least basic knowledge and skills in the workplace risk identification, exposure assessment, existing OSH regulatory requirements, etc to implement preventive measures against accident and health hazards successfully.

Furthermore, when one describes working conditions in developing and even in developed countries, the first, the most frequently-heard, and unfortunately often the only narrative is: "workers do not use respirators or masks". Sadly, these *workers-don't-use-masks* attitudes indicate how poorly hazard prevention principles have been instilled in societies. It is not that only workers' OSH awareness is low – the global OSH awareness is low. To promote a global safety culture, we all must transform our thoughts and behaviour from *workers-don't-use-masks* attitude to *hazardous-exposures-shouldn't-exist-here* approach.

12.3 Information collection — database development

Data on the current situation and past trends are necessary when developing effective OSH policies and action programmes. ASEAN OSHNET has already set up a database on safety and health information for Indonesia. It is recommended that any organization carrying out OSH work would develop similar internet-based, bilingual repositories by collecting and uploading information on policies from various organizations, pamphlets, training materials, activities, and best practices for improving working conditions.

[71] PATRIS stands for the Participatory Action Training for Informal Sector. This methodology was first developed in Africa.

[72] Workers low OSH awareness was stated in a number of interviews conducted by Pia Markkanen.

12.4 Upgrading the Safety and Health Law

As already mentioned, the legislative OSH framework in Indonesia is broad (see the list in Appendix II). However, the existing OSH Law, the Work Safety Act (Law No. 1, 1970), is not sufficient. It is recommended that the Act be upgraded reflecting the provisions of the ILO's Occupational Safety and Health Convention (No. 155, 1980) and its accompanying Recommendation (No.164, 1980).

The ILO 1995 OSH advisory mission report pointed out that codifying and simplifying laws and regulations would benefit both employers and workers. This work has already been initiated – information has been made available by the ASEAN OSHNET secretariat on their website.

12.5 The way ahead: developing national OSH action programmes

Finally, it is expected that this paper could stimulate discussions among the ILO officers and constituents on the development of national action programmes for OSH in Indonesia, as a tripartite undertaking.[73] Box 3 summarizes the concerns and recommendations for immediate action that this *working paper* has addressed.

Box 3: Summary of suggested future actions

- Developing programmes and activities to help the workers in the informal economy and small sized enterprises by building on the work already initiated by the Department of Health;
- Testing the suitability of PATRIS methodology for a new informal sector occupation (other than the footwear manufacturing);
- Encourage OSH organizations to collect, provide and analyse data on work-related accidents, as already initiated by Directorate of OSH Standards of DEPNAKER
- Developing a national action programmes for OSH as a tripartite effort;
- Upgrading of the Work Safety Act (Law No.1, 1970) into a stronger OSH Act based on the provisions of the ILO Occupational Safety and Health Convention (No. 155, 1980) and its accompanying Recommendation.

[73] In Asia, such national action programmes were developed, under the ILO support, for Thailand. See Machida S; *Programme of Action for Occupational Safety and Health in Thailand towards the 21st Century: an Advisory Report*; the ILO-EASMAT; 2000

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Appendix I: Case study on child labour and occupational hazards in the footwear sector in Cibaduyut, Bandung

Introduction

Since December 1999, the ILO/IPEC has undertaken a programme to tackle the problem of child labour in the footwear production sector in Cibaduyut, Bandung. A rapid assessment carried out by ILO/IPEC in the area, in April 1999, found 1046 child labourers involved in footwear production. The assessment was carried out in 456 out of the 1132 footwear workshops, both among sub-contractors and direct producers, situated in the Cibaduyut area.

OSH concerns

Many footwear-manufacturing workers of Cibaduyut, including children, suffer from a number of serious injuries and illnesses. A study conducted by the Ulil Albab Health Foundation found out that most of these footwear industry child workers suffered from headaches, colds, twisted muscles, respiratory diseases like asthma, nose bleeding, and other. The monitoring results on the ILO-IPEC Footwear Team indicate that most workshops have poor ventilation, illumination, chemicals handling practices, fire prevention, ergonomics, as well as tools and machine safety. Particular challenges include: (i) increasing the awareness among the community members that the footwear production is a hazardous occupation; (ii) continuing the development of a community-based child labour monitoring system; (iii) improving working conditions; and (iii) increasing the Government's involvement in minimizing the safety and health hazards and combating child labour.

In the footwear industry, efforts in substituting solvent-based glues with water-based ones are crucial. Local exhaust ventilation and administrative measures (e.g. work hour adjustments, work rotations, housekeeping, etc) are important interventions to protect workers' health and safety. Personal protective equipment (e.g. dust masks, gloves, respirators, goggles, etc) should be considered as a last resort control measures if work hazards cannot be removed or reduced in other means. However, for example, local exhaust ventilation is not easy to be implemented in the home-based informal sector shoe workshops. Proper ventilation systems to remove hazardous solvent vapours are expensive and they require regular maintenance.

Child and women workers in the Cibaduyut footwear sector

Child workers in the footwear sector do not only come from the Cibaduyut community itself but also from neighbouring communities. Children may or may not be the shoe workshop owners' relatives. Most child workers have a low level of education because of their early involvement in the footwear production. They dropped out of school because it was easier to earn money by working as an assistant to a skilled shoemaker. Children carry out many similar tasks as adult workers do, in particular: gluing, cutting, hammering nails, spraying paints, and grinding. These assistants usually do not need many skills, hence, they earn a low income, or in some cases, no income at all. Poverty certainly is one of the main reasons for child labour but other factors also exist. Cibaduyut has a long tradition of producing footwear, therefore, entering the trade and learning skills at early age may provide employment opportunities as a skilled shoemaker later on. Many boys start working in the

footwear sector after graduating from the elementary school. In Cibaduyut, girls tend to have higher education than boys. Those few girls who are involved in the shoe production carry out finishing and packaging tasks at workshops.

Women who own a footwear workshop — usually jointly with her husband — generally perform such tasks as administration, bookkeeping, marketing, sales, or managing raw material supplies. Wives of the skilled shoemakers usually help their husbands in gluing, cutting, sewing, cleaning, and packaging. Women are rarely trained as skilled shoemakers.

What can the social partners do to eliminate hazardous child labour and implement OSH measures?

Community involvement: OSH Committee

In October 2002, OSH training was held in Cibaduyut. The key footwear community members attended the event. Among the outcomes, a community OSH Committee was established. The objective of this Committee is to improve work environment and to strengthen the child labour monitoring. Some shoe workshop owners have given their commitments by not employing children and improve working conditions.

Fact sheets and an OSH booklet

The Footwear Team, in collaboration with the programme implementing agencies, developed a practical OSH booklet and fact sheets for the community. These tools were translated into Indonesian and distributed in Cibaduyut.

Key partners

Joint efforts from the key stakeholders are needed: the Government, employers' representatives (business associations and individual business owners), trade unions, universities, non-government organizations, and media representatives (journal, television, newspapers, etc). The ILO-IPEC Footwear Programme's key partners in combating child labour include:

- SKEPO (Yayasan Sketsa Pojok), an NGO providing training and research services on various social issues, conducted two baseline surveys on small-scale footwear manufacturing in Cibaduyut.
- The Bojongloa Kidul Teachers' Union (PGRI - *Persatuan Guru Republik Indonesia Cabang Bojongloa Kidul*) implemented an action programme to reintegrate school dropouts from hazardous footwear work by involving elementary and junior high school teachers.
- The West Java Journalist Association (PWI - *Persatuan Wartawan Indonesia Jawa Barat*) conducted an awareness raising campaign against child labour in collaboration with media.
- The South Bandung Leather, Garment and Textile Workers' Union (SPTSK - *Serikat Pekerja Tekstil, Sandang dan Kulit Bandung Selatan*) established an association for the skilled shoe makers (Tukang's association).
- The Parahyangan Catholic University - Centre for Community Services (LPKM UNPAR – *Lembaga Pengabdian Kepada Masyarakat – Universitas Katholik Parahyangan*),

implemented a micro-finance programme. The University also set up a programme to strengthen business management skills among the small scale employers.

- The Bandung Technology Institute - Centre for Community Services (LPM ITB – *Lembaga Pengabdian Masyarakat – Institut Teknologi Bandung*) implemented a training programme on footwear design for working children. They have also renovated four model shoe workshops to demonstrate low-cost work environment improvements.
- The Sidikara Foundation (an NGO dealing with community organizing) as well as the West Java Branch Indonesia Family Parenthood Association (PKBI – *Perkumpulan Keluarga Berencana Indonesia Jawa Barat*) has established three children's creativity centres in Cibaduyut.
- The Ulil Albab Health Foundation provides child workers and their families with health services.
- The Bandung Municipality Health Office (*Dinas Kesehatan Kota Bandung*) provided free-of-charge health services for child workers and their families.
- The Centre on Learning Activity Development (BPKB – *Balai Pengembangan Kegiatan Belajar Jayagiri*), the Government agency under the Department of National Education, provided child workers and their siblings with non-formal education.
- The Intertextual Film Community (KOPI – *Komunitas Perfilman Intertextual*), an *NGO*, developed a documentary on the ILO-IPEC Footwear Programme and its fight against child labour.
- The Iqbal Foundation, an NGO dealing with community organizing, conducted an awareness raising campaign against child labour targeting the religious leaders.

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Appendix II: Laws and regulations related to OSH in Indonesia

Year	Area/subject/ sector	Name	Agency	Information source
1964	OSH general	Department of Manpower and Transmigration Decree No 7 (4/PMP/1964) on stipulates conditions for health, hygiene, lighting, humidity, housekeeping, indoor air quality, and ventilation systems.	DEPNAKER	1, 2
1967	Agriculture	Law on cattle breeding and veterinary health.	DEPKES	1
1967	Mining	Law No 11, 1967. Basic regulations for mining.	Department of Mining and Energy	1
1969	Mining	Government Regulation No 32 on the implementation of law no 11, 1969	Department of Mining and Energy.	1
1969	Hygiene	Government Act No. 3 (1969) on hygiene in commerce and service companies. This law was adopted as a result of the ratification of the ILO Convention No 120.	DEPNAKER	1
1970	OSH general	Government Act No 1 (1970) on Work Safety. It requires safe and healthful workplaces, plant health and safety committees. Employer reporting to Government agencies, Government inspections.	DEPNAKER	1,2,3,4
1972	Fire safety	Department of Manpower and Transmigration Decree No 158	DEPNAKER	3
1973	Mining	Government Act No 19, 1973 on Regulation and Inspection of Work Safety in the Area of Mining.	Department of Mining and Energy	1
1973	Chemicals	Government Regulation No. 7 (1973) sets forth requirements on the use and handling of pesticides. Not allowed to use unregistered pesticides. The Department of Agriculture grants permissions when the pesticides are used. Storage and distributions are regulated by the Trade and Industry Minister by the suggestions of the Department of Agriculture.	DEPNAKER, Department of Agriculture, Department of Industry and Trade	1,2
1975	Radiation protection	Government Regulation No. 11 (1975) on radiation protection officers at atomic installations. To protect workers, people, and surrounding environment from the radiation hazards.	Department of Mining and Energy	1, 2
1975	OSH general	The Government Act No 25 (1975) updated the requirements for Act No 1 (1970)	DEPNAKER	1

Year	Area/subject/ sector	Name	Agency	Information source
1976	Training	Department of Manpower and Transmigration Decree No 1 (1976), PER/01/MEN/1976, on compulsory industrial hygiene training for medical doctors.	DEPNAKER	1
1978	Forestry work	Department of Manpower and Transmigration Decree No 1 (1978), PER/01/MEN/1978, on OSH in forestry: tree cutting, logs transportation, equipment, first-aid, and lighting for night work.	DEPNAKER	1
1978	Noise exposure, heat stress	Department of Manpower and Transmigration Circular SE-01/MEN/1978 sets forth (i) the occupational exposure limit of 85dBA for an 8-hours day, 40-hour work week; (ii) the requirements of ambient temperatures between 21-30 degrees centigrade, humidity levels for 65-95 %, and requires employers to take specific action to lower temperatures above 30 degrees.	DEPNAKER	2, 3
1978		Department of Manpower and Transmigration Decree PER/03/MEN/1978 on conditions for the appointment and responsibilities of work safety officers and experts.	DEPNAKER	1
1979		Department of Manpower and Transmigration Decree PER/01/MEN/1979 on compulsory industrial hygiene training for paramedics of companies.	DEPNAKER	1
1979	Oil and gas	Governmental Regulation No 11 (1979) on OSH at refining and processing of oil and natural gas.	Department of Mining and Energy	1
1980	Construction	Department of Manpower and Transmigration Decree PER/01/MEN/1980 on OSH in building constructions	DEPNAKER	1, 2
1980	Medical examinations for workers.	Department of Manpower and Transmigration Decree PER/02/MEN/1980 on occupational health services that sets the requirements for pre-employment and periodic medical examinations for workers by competent medical doctors.	DEPNAKER	1,2,3
1980	Fire Safety	Department of Manpower and Transmigration Decree PER/04/MEN/1980 sets forth conditions for installing and maintaining fire extinguishers.	DEPNAKER	1, 2

Year	Area/subject/ sector	Name	Agency	Information source
1981	Reporting of occupational diseases	Department of Manpower and Transmigration Decree PER/01/MEN/1981 on compulsory reporting of diseases caused by work.	DEPNAKER	1,2
1982	Pressure tanks	Department of Manpower and Transmigration Decree PER/01/MEN/1982 on requirements of pressure tanks.	DEPNAKER	1, 2
1982	Welding	Department of Manpower and Transmigration Decree PER/02/MEN/1982 sets forth the requirements for welding in the workplace, including the qualification of welders.	DEPNAKER	1, 2
1983	Health Services	Department of Manpower and Transmigration Decree PER/03/MEN/1982 on requirements of worker health services, medical examinations, accident and disease prevention, treatment, and rehabilitation.	DEPNAKER	1
1983	Fire Safety	Department of Manpower and Transmigration Decree PER/02/MEN/1983 sets forth automatic fire protection systems — fire alarm and detection installations at workplace	DEPNAKER	1
1984	National Council for Workplace Health and Safety.	The Department of Manpower and Transmigration Decree KEP-155/MEN/1984 established National Council for Workplace Health and Safety.	DEPNAKER	1
1985	Hazardous chemicals	Department of Manpower and Transmigration Decree No 124/M/SK/4/1985 on handling, processing, transport, and storage of hazardous chemicals.	DEPNAKER	1
1985	Asbestos	Department of Manpower and Transmigration Decree No PER/03/MEN/1985 on safety and health in the use of asbestos. Employer duties: monitor and control asbestos dust/fibres in the working environment, including ventilation and filter techniques; personal protective equipment for workers; health and safety promotion; and medical examinations for workers. Worker duties: wear personal protective equipment and change clothes and keep the working clothes and personal protective equipment in a special place.	DEPNAKER	1,2
1985	Power and production engines	Regulation No. 4, 1985 on general technical provisions for work safety for power and production engines.	DEPNAKER	1

Year	Area/subject/ sector	Name	Agency	Information source
1985	Lifting and transportation equipment	Regulation No. 5, 1985 on lifting and transportation engines and equipment.	DEPNAKER	1
1986	Pesticides	Department of Manpower and Transmigration Decree No PER/03/MEN/1986 about pesticide use at workplace. Employer duties: Monitor and control, including ensure proper labels and warning signs in the work places, good house keeping, ventilation, lighting and appropriate packaging; service and sanitation facilities, fire protection equipments; provide workers pre-employment and periodical medical examinations as well as training for the application, manage of the pesticides and first-aid. Worker duties: more than 18 yrs old; use PPE.		2
1986	Construction	Joint Decision No. 174 of the Minister of Manpower and Public Works on work safety and health at construction work.	DEPNAKER and Department of Public Works	1
1987	OSH committees and experts	Department of Manpower and Transmigration Decree No PER/04/MEN/1987 on OSH committees and procedures for appointing OSH experts.	DEPNAKER	1, 2
1988	Steam engine operators	Department of Manpower and Transmigration Decree No PER/01/MEN/1988 on qualification and conditions for operators of steam engines.	DEPNAKER	1, 2
1988	Enforcement of standards	Regulation No. 4, 1988, on enforcing the Indonesian National Standards.	DEPNAKER	1
1989	Occupational diseases: diagnosis and reporting	Department of Manpower and Transmigration Decree No 333/MEN/1989 about diagnoses and reporting of work related diseases. The diagnoses to be established through comprehensive inspections of working conditions, physical examination, to determine exposure-disease relationship. After the diagnosis, reporting must be made within 48 hours to authorized institution.	DEPNAKER	3
1989	Electric power	Government Regulation No. 10, 1989, on supply and utilisation of electric power.	DEPNAKER	1
1989	Lifting crane operators	Regulation No. 01, 1989, on qualification and conditions for operators of lifting cranes.	DEPNAKER	1, 2
1989	Lightning conductors	Regulation No.02, 1989, on control of lightning conductors installations.	DEPNAKER	1

Year	Area/subject/ sector	Name	Agency	Information source
1989	Materials safety data sheets (MSDS)	Department of Manpower and Transmigration Decree KEP/612/MEN/1989 on the requirements for material safety data sheets for hazardous chemicals.	DEPNAKER	3
1990		Regulation No 01, 1990 on installation of electric power.	Minister of Mining and Energy.	1
1992	OSH experts	Department of Manpower and Transmigration Decree PER-02/MEN/1992 on rights and obligations of an OSH specialist. Procedures for assigning OSH experts with requirements related to education, experience, occupation, passing selection.	DEPNAKER	1, 2
1992	Occupational Health	Health Law, No. 23, 1992	DEPKES	2, 4
1992	Workers compensation	Presidential degree Number 3 (1992) sets forth the requirements for compensation to workers for industrial injuries and illnesses.	Department of Finance/ JAMSOSTEK	1, 2
1993	Mining	Decision No. 2555/K/MPE/93 on Mine Inspection for General Mines.	Department of Energy and Mines	1
1993	Reporting of industrial accidents	Department of Manpower and Transmigration Decree PER-04/MEN/1993 stipulates requirement for employer on reporting industrial accidents.	DEPNAKER	1
1993	Mining	Decision No. 1245/K/26/DJP/93 on inspection, safety, health, and environment in mining.	Department of Energy and Mines	1
1993	Environmental impact analysis	Government Regulation No: 51/1993 on environmental impact analysis. To analyse effects of work and activities that may have adverse effects on the natural environment or social-cultural environment including: exploiting or damaging natural resources, technology implementation that predicted to have a big potential effect to the environment. According to the impact analysis the authority will decide whether to reject or accept the work activity.	The Department of Environment	2
1995	Mining	Decision No. 555/K/26MPE/93 on safety and health in the area of general mining.	Department of Energy and Mines	1
1995	OSH service companies	Regulation No. 04, 1995, on Service companies/institutes on OSH	DEPNAKER	1
1996	Occupational safety and health management system	Government Regulation No. 05, 1996, objectives and targets of OSH management system and employer self-audits.	DEPNAKER	1

Year	Area/subject/ sector	Name	Agency	Information source
1997	General OSH	Department of Manpower and Transmigration Decree KEP-19/M/BW/1997 on updated requirements for plant safety audits as required by the Government Act Number 25 (1975).	DEPNAKER	3
1998	Accident reporting and inspection	Regulation No. 03, 1998, procedures for reporting and inspecting accidents.	DEPNAKER	1
1998	Medical doctors	Regulation No. 04, 1998, on appointment, termination, and work procedures for medical doctors/advisors.	DEPNAKER	1
1999	Lifts	Regulation No. 03, 1999, OSH requirements on lifts for transportation of persons and goods.	DEPNAKER	1
1999	Diseases	Decision No. 333, 1989, Diagnosis and report of diseases caused by work.	DEPNAKER	1
1999	Hazardous materials	Department of Manpower and Transmigration Decree, PER/187/MEN/1999, to protect workers against chemical hazards. States the requirements for chemicals container labelling, provision of material safety datasheets, and for the number of chemical safety officers at the enterprises.	DEPNAKER	2
1999	Threshold limit values for physical hazards	Decision No. 51, 1999, on the threshold values for temperature, noise (85 dBA), vibration (4 m/s^2), radio frequency (0.1 micro W/cm^2). Measurement conducted by the OSH Development Centre (HIPERPES).	DEPNAKER	1,2
2003	The Manpower Act	The Government Act No.13, also called Indonesian Labour Law. Articles 86-87 stating that every worker has a right to receive OSH. Every enterprise is under an obligation to apply an occupational safety and health management system that shall be integrated into the enterprise's management system. Rulings concerning the application of the occupational safety and health management system shall be determined and specified with a Government Regulation.	DEPNAKER	5

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Appendix III: Professional OSH associations in Indonesia

Name	Acronym	Indonesian name
1. Association of Training Institutions for Occupational Safety and Health	ALPK3	Asosiasi Lembaga Pelatihan Keselamata dan Kesehatan Kerja
2. Association of Indonesian Occupational Health Doctors	IDKI	Ikatan Dokter Kesehatan Kerja Indonesia
3. Institute for Certification of Competencies in Occupational Safety and Health	LSK-K3	Lembaga Sertifikasi Kompetensi Keselamatan dan Kesehatan Kerja
4. The Labour Information Center	LIPS	Lembaga Informasi Perburuhan Semarak
5. The National Commission for OSH	KNK3	Komisi Nasional Keseeelamatan dan Kesehatan Kerja
6. Society for Occupational Safety, Health, Work Environment	MPK2LK	Masyarakat Peduli Keselamatan Kesehatan & Lingkungan Kerja
7. Association of Occupational Specialist Doctors of Indonesia	PERDOKI	Perhimpunan Dokter Spesialis Okupasi Indonesia
8. Association of Occupational Safety Professionals	IAKKI	Ikata Ahli Keselamatan Kerja
9. Association of OSH Construction Experts	A2K3K	Asosiasi Ahli K3 di bidang Konstruksi
10. Indonesian Ergonomics Association	PEI	Perhimpunan Ergonomi Indonesia
11. Association of Maritime Specialist Doctors	PERDOKLA	Perhimpunan Dokter Spesialis Laut
12. The Hyperbaric Medical Association of Indonesia	PKHI	Persatuan Kedokteran Hiperbarik Indonesia

Sources: (i) Topobroto, 2002; (ii) ASEAN OSHNET website; and (iii) Maquilladora Safety and Health Support Network Newsletter; 11 April 2003; Vol. VII, No. 7

Appendix IV: Recommendations of the ILO OSH advisory mission in 1995

Recommendation 1: With the aim of upgrading inspection, DEPNAKER, in close collaboration with other ministries, should develop a comprehensive national labour inspection enforcement policy, including training of inspectors and an emphasis on inspection of organizational aspects of safety and health management in enterprises.

Recommendation 2: The Ministry of Mines and Energy should improve enforcement of OSH legislation for mines and strengthen the capacity of its inspection system generally, with particular emphasis on small mines.

Recommendation 3: DEPNAKER should carefully review the existing system for setting priorities in targeting enterprises for inspection, to optimise the effectiveness of inspectors' enforcement activities for safety and health by ensuring that they are directed to the industries, and particular enterprises within those industries, which pose the most serious risks to workers' safety and health, and those which employ the most vulnerable workers.

Recommendation 4. DEPNAKER should review and operationalize legislation, particularly to provide for the tripartite formulation, implementation and periodical review of a national policy on occupational safety and health, to ensure the assignment of employers' responsibilities for taking preventive action and to require training of safety and health committee members and other key personnel.

Recommendation 5: PNK3 should, in collaboration with employers' and workers' organizations and other ministries as well as relevant NGOs, expand promotion and information activities.

Recommendation 6: With the aim of ensuring the availability and quality of training institutions all over the country, DEPNAKER, in close collaboration with other relevant ministries, should develop a nationwide training mechanism for various kinds of training with the active participation of educational and training institutions in different sectors.

Recommendation 7: DEPNAKER should strengthen the research and advisory services of HIPERKES and other institutions for providing practical advice on improvements based on technical evaluation of the working environment.

Recommendation 8: DEPNAKER and ASTEK, in collaboration with other ministries concerned, should conduct a joint study at both national and industry levels for improving the data collection system, analysing the trends in occupational accidents and identifying the priority areas for action.

Recommendation 9: DEPNAKER, Ministry of Health and ASTEK should jointly improve systems for identification of work-related diseases and for promoting preventive measures.

Recommendation 10: Employers' and workers' organizations should strengthen their capacity to support and assist their members in increasing safety and health at work and

improving working conditions, especially through development of guidelines and training and information packages relevant to the needs of the industry.

Recommendation 11: With the aim of improving protection for women workers, DEPNAKER in collaboration with other relevant ministries, employers' and workers' organizations and NGOs, should strengthen enforcement of women workers' rights and develop special action programmes for women workers aimed at improving the working environment, occupational health and safety, working conditions and welfare facilities.

Recommendation 12: DEPNAKER should revise legislation concerning minimum age for work and the protection of working children so as to give effective and enforceable protection to children, supported by a national campaign, in collaboration with other agencies and organizations, to raise public awareness and mobilize community support for keeping children out of the workplace and in school.

Source: *Strategy for the Improvement of OSH and Working Conditions*; Report of an ILO Advisory Mission and Proceedings of a National Workshop, Jakarta, 16-17 May 1995