

OCCUPATIONAL HEALTH AND SAFETY OF THE INFORMAL MINING, TRANSPORT AND AGRICULTURE SECTORS IN THE PHILIPPINES

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Abstract. The informal sectors of the mining, transport, and agriculture groups are primarily exposed to severe working conditions. The lack of or limited access to Occupational Health and Safety (OHS) information, resources, and services further compounds the risks to these sectors. The Department of Health (DOH), in consultation with the Occupational Health (OH) sector task force of the Inter-Agency Committee on Environmental Health (IACEH), developed Administrative Order (AO) No. 2013-0018 for the OH program in these sectors. This study was done to conduct a situational analysis of the OHS in these sectors to be the basis of the implementing guidelines for the abovementioned AO. Data were gathered through a series of consultative meetings with key stakeholders from government and non-government organizations and a review of local and international best practices, applicable regulatory instruments, statistics and researches. Results showed that the major challenge for the government is identifying and reaching out to the informal sectors to implement OHS programs and services. Gaps include inadequacies in the following areas: knowledge and awareness on OHS among government leaders and their constituents, information dissemination from national offices to regional units, research for data on location and specific OHS needs of the informal workers, sustainability and consistency of OHS programs, and a monitoring and evaluation system. There is a need for reinforcement of relevant agencies' mandates and an increased awareness on OHS among the country's leaders and stakeholders to promote and protect the well-being of the workers in the informal mining, transport and agriculture sectors.

Keywords: occupational health and safety, mining, transport, agriculture

INTRODUCTION

Occupational hazards are common in all workplaces, especially in the informal

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mining, transport, and agriculture sectors, whose workers are primarily exposed to severe working conditions. Despite its growing contribution to employment and national productivity, inadequate OHS standards and programs are particularly evident among the informal sector. Sub-standard working conditions, low social protection coverage, and general lack of awareness on occupational health and safety place informal sector workers in a

more vulnerable situation. Occupational diseases associated with exposures to physical, chemical, biological, ergonomic and psychological health hazards; and occupational injuries arising from safety hazards such as working in confined spaces, improper materials handling and storage and machine guarding concerns, are significant problems in these highly hazardous industries.

As defined in Administrative Order No. 2013-0018, the informal sector refers to the *...sector consisting of units engaged in the production of goods and services with the preliminary objective of generating employment and incomes to the people concerned, particularly unincorporated household enterprises that are market and non-market producers of goods as well as market producers of services* (DOH, 2013).

Unlike the formal economy, these informal workers in mining, agriculture, and transport sectors are particularly vulnerable to a variety of hazards due to the nature of their work and the lack of support structures found in the formal workplaces. They also have limited access to risk management services and have lesser probability of obtaining permanent jobs.

In developing countries, nearly half or more of the total non-agricultural employment are represented by the informal sectors. In North Africa, the percentage of the informal sector, excluding those in the agricultural sector, is 48%. While in Latin America, Asia, and sub-Saharan Africa, informal employment ranges from 51%, 65%, and 72%, respectively. In India, 86% of women who are in the non-agriculture sector are in the informal economy. These workers are under non-standard arrangements and have limited benefits and social protection coverage. This also holds true for the developed countries such as Europe, Japan, Korea, and the United States.

Non-standard arrangements such as part time employment, temporary work, and self-employment have also been significantly growing in the developed countries with the expansion of standardized mass production (ILO, 2002).

In the January 2013 Labor Force Survey (LFS) done by the Philippine Statistics Authority, the estimated Employment Rate in the Philippines was at 92.9%. Approximately 37.94 million persons were employed. Among the regions, Cagayan Valley and Zamboanga Peninsula had the highest employment rate with 96.7% and 96.6%, respectively, while the National Capital Region had the lowest employment rate at 90.5%. Employed workers were categorized as full time or part-time workers. Those working 40 hours or more are considered full time, lesser than that are classified as part-time. Of the total employed persons, 65.1% were full-time and 33.9% were part-time workers. The unemployment rate was estimated at 7.1%. It was highest in NCR (9.5%) and lowest in Cagayan Valley (3.3%). Forty-nine point three percent of those unemployed were aged 15 to 24 years. One-third were high school graduates (33.7%), 13.1% were college undergraduates, and 16.9% were college graduates (PSA, 2013).

While the formal mining, agriculture, and transport industries are recorded in the national data, statistics on the informal economy occupied by each respective industry is relatively unknown.

In the 2008 LFS, 44.6% of the total number of employed persons in the Philippines was in the informal sectors. It has been increasing over the years at an average of 2.3 % from 2002-2007, the bulk of which are in the agriculture, forestry and fishing with 54.6%. Thirty-nine point one percent are in the services sector, and 6.3% are in the industry sector (BLES, 2008).

Filipino workers in the informal economy were estimated to be at 40% to 80%, and due to this increasing informality, the International Labour Organization (ILO) has carried out research and programs to better understand informal work (ILO, nd).

The 2008 Informal Sector Survey (2008 ISS) of the Philippines that was conducted by the National Statistics Office, and funded by the United Nations Economic and Social Commission for Asia and the Pacific (UN ESCAP), identified about 10.5 million informal sector operators (PSA, 2008).

The establishment and growth of the informal sector can be attributed to the recent boom in urbanization globally. The lack of opportunities in the formal sector tends to concentrate a large share of the urban population in the informal sector.

According to the Occupational Safety and Health Center (OSHC), in 2006, out of the 33.0 million workers in the Philippines, 11.8 million belonged to the agriculture, fisheries and forestry sector, 4.9 million to the industrial sector, and 15.7 million to the services sector. Seven hundred fifty thousand out of 800,000 establishments have less than 10 workers with skills working under substandard working conditions. Most micro-enterprises qualify as livelihood activities of the informal sector, of which comprises 90% of the Philippine workforce. Only the other 10%, which is under the formal sector of medium and large enterprises have the privilege of enjoying good working conditions and effective OHS protection and services (OSHC, 2006).

Informal mining sector

In July 2006, about 0.4% or 134,000 of the total employed in the Philippines are in the mining and quarrying sector. In this

industry, miners from formal and informal groups continue to experience hazards and risks, the latter being more vulnerable as OHS services are generally non-existent. This is further supported by several studies done by the Occupational Safety and Health Center (OSHC, 2006). Mine workers face several workplace hazards due to constantly changing workplace circumstances such as lack of natural light and inadequate ventilation from working long hours in confined spaces. Exposure to toxic chemicals such as mercury and cyanide are widespread in small-scale gold mining communities where women and children are also involved in the mining activities. With all the biological, physical, chemical, ergonomic hazards present, and with the high risk of having injuries and accidents that may cause permanent disability or even death, mining remains the most hazardous occupation when the number of people exposed to risk is considered.

Informal transport sector

Compared to other infrastructure sectors, the transport industry are most diverse in terms of the products and markets. Road transport, air transport, rail transport, mass rapid transport and many other kinds of informal transport are the several products of the transport industry. Workers in the transport sector face several health hazards: physical hazards such as long exposure to increased ambient temperature, noise, and whole body vibration; chemical hazards such as dust and smoke from vehicle emissions. ergonomic hazards such as prolonged sitting, repetitive movement of hands and arms, and awkward position for *jeepney* drivers are to name a few. Aside from these evident hazards in this industry, psychosocial hazards have also been a growing health and safety concern. Road accidents and fatalities each year in the

road sector are attributed to fatigue on workers (Beaulieu, 2005). Legal and social protection of workers in this sector brings about new challenges as road and rail traffic increases.

Informal agriculture sector

Agriculture is one of the most hazardous industries. Fatal and non-fatal injuries, work-related lung diseases, noise-induced hearing loss due to machines and equipment used, skin diseases from safety, biological, chemical, and physical hazards, and certain cancer due to prolonged exposure to the sun and chemicals are only a few of the hazards that farmers and workers in the agricultural sector are at high risk for. The families, who often share the work and live in the vicinity of the workplace, are also exposed to the same hazards and should have equal protection and coverage as well.

With the growing number of these informal workers exposed in highly hazardous working conditions, the government agencies responsible for these sectors have critical roles to play in the occupational health and safety and are particularly instrumental in addressing the concerns of underserved worker populations. The development of the implementing rules and guidelines for DOH AO 2013-0018 is essential in pursuing the highest possible occupational health and safety services to these specific sectors.

MATERIALS AND METHODS

The project team, through consultations with the OHS subsector of the IACEH, identified stakeholders from the various government and non-government agencies, trade unions, and workers in the informal mining, transport, and agriculture as sources of data for the situational analysis for the development of imple-

menting guidelines on the OH program for these specific sectors. Key Informant Interview (KII) was done at the supervisory level personnel. Interviews were also conducted with regional stakeholders recommended by the Technical Working Group (TWG). Focus Group Discussions (FGD) were conducted among the workers for each sector. Consultative workshops with stakeholders were done in finalizing the draft implementing guidelines.

Review of related literature including best practices on OHS, existing laws and regulations from various government agencies relevant to DOH AO 2013-0018 was conducted prior to the interviews.

RESULTS

Global efforts for OHS for the informal sectors

In Africa, the WHO-ILO conducted a series of meetings to address the need to refocus, revise, and strengthen the OHS services and supporting legislation in informal sectors last October 2000. It addressed three aspects of a new "African Initiative" in OH which are: (1) local demonstration projects, (2) planning and implementation framework for the African initiative on occupational safety and health, and (3) a review of "occupational health in small-scale enterprises in the informal sector: A document for decision-makers." (WHO and ILO, 2001).

In Asia, efforts in promoting OH services have also been geared towards the informal economy, such as Thailand, wherein informal economy workers, such as home workers, street vendors, workers in small construction sites or self-sustained farmers, account for a large proportion of workers. The approach of the Ministry of Public Health of the Royal Thai Government was strengthening the

primary care units (PCU) to effectively promote occupational health services for the workers mentioned above. The ministry retained district level PCU staff in basic occupational and health issues to improve their competency in providing practical OHS services. The PCU staff was deployed in the community to identify the immediate needs of local workers and to provide sustained OHS services to reduce the risks and promote a culture of health and safety in the workplace. This has provided a good model for many other countries that needs an established workplace OHS in place for the informal economy (ILO, 2009).

Review of existing local OHS programs in informal mining, transport, and agriculture sectors

The objectives of the Administrative Order 2013-0018 is to provide a relevant and comprehensive policy direction in the development of an occupational health and safety program for the informal mining, transport, and agricultural groups. It also aims to create an enabling environment to strengthen the health systems through collaboration with key partners who will support delivery of appropriate health services. Lastly, is to ensure enrollment of informal workers to the National Health Insurance system by developing a sound mechanism. The occupational health program's thrust is to prevent injuries and illnesses among the workers through identification, assessment, evaluation and control of hazards that the workers are exposed to. Promotion of physical and psychological wellbeing, including social and mental components, is another important aspect of this program (DOH, 2013).

Programs on general safety and health are existent and are being implemented by different agencies, particularly

Department of Environment and Natural Resources (DENR), Land Transportation Franchising & Regulatory Board (LTFRB), and the Department of Agriculture (DA), in their jurisdictions. Trainings on safety and health practices and capability building in these sectors are provided upon request of Local Government Units (LGUs). There is readiness and capability in specific government agencies to provide the necessary assistance such as training on basic OHS, and social and health insurance coverage.

The ILO's Decent Work Country Program in the Philippines (DWCP) has been established to support the priorities recognized by the tripartite partners that are reflected in the Decent Work Common Agenda. With the primary goal of obtaining decent work in terms of freedom, equity, security, and human dignity, DWCP aims to promote and protect worker's rights, generate adequate income, and provide sufficient social protection which will bring about benefit not only the workers but to their families and communities as well. Increased productivity through decent work also increases the income of the working population thereby addressing the societal problems in hunger and extreme poverty. It also promotes gender equality and empowerment of women thereby contributing to the country's attainment of the Millennium Developmental Goals (ILO, nd.).

For the public utility bus transport sector, the Department Order No. 118-12 that was issued by the DOLE in 2012 included provisions for the implementation of a fixed and performance-based compensation scheme (DOLE, 2012).

According to a study done by Josef *et al* (2011), vital components for health assessment and monitoring of the informal mining, transport and agricultural sectors

include: (1) a comprehensive health program relevant to workers in the informal sector, (2) specific guidelines for the establishment of appropriate health services for workers in the informal sector, and (3) mechanism for the full coverage of health and social insurance integrated through the National Health Insurance System and the Social Security System. The study incorporates in the first component the provision of medical services, hazard evaluation and control procedures, and other health promotion activities such as healthy lifestyle programs and psychosocial support. The establishment of the guidelines, on the other hand, recommends appropriate networking strategies with government agencies, LGUs and the strengthening of workers' associations or cooperatives. Lastly, the study detailed the mechanism for compensation for these workers to include local compensation agencies such as Philhealth and SSS (Josef *et al*, 2011). With this initial step, current mechanisms on provision of health and safety services in general, key agencies involved with these sectors, and the gaps and issues in the implementation of the current programs were determined.

Another program developed by DOLE that was promising in terms of improving the working conditions of workers in micro-enterprises was the Work Improvement in Small Enterprises (WISE). It is an enterprise-based action program cost-shared by the United Nations Development Program (UNDP) and the Philippine government, and with the technical support from ILO. It targets owners and managers of small-scale enterprises geared towards the promotion and improvement of working conditions through simple, low-cost solutions to improve productivity (DOLE, nd.).

For the agricultural industry, an

action-oriented participatory program called Work Improvement in Neighborhood Development (WIND) has been designed after the ILO WISE program's principles and methodology. It is designed to address the situation, concerns and living conditions of the families of farmers who live at their workplace who are also exposed to the various hazards, which put their health and safety also at risk, especially the children. It has been modified and specialized to fit the inter-related nature of rural life and work and promote their welfare. It also addresses issues of child labor, improvement of maternal welfare, and boosting entrepreneurial activities. The principles of the WIND program are to empower participants to take action to improve their own living and working conditions, adopt low-cost approaches, and to support a step-by-step progress to implement and maintain improvements. The WIND program has also been successfully implemented in twenty-three countries across four continents, including Cambodia (ILO, 2011).

The Kapatiran-WISE-TAV (Work Improvement in Small Enterprises-Training and Advisory Visits) program conceptualized by the DOLE-BWC with support from other agencies such as the DOLE-Regional Offices, the Local Government Units (LGU's), the Department of Trade and Industry (DTI) and other stakeholders, is a big brother-small brother partnership project between the government and the private sectors. The program was anchored on ILO's Work Improvement in Small Enterprises (WISE), wherein the large companies (big brother) who are practicing corporate social responsibility and are already fully compliant with OHS labor standards share their expertise and resources and provide assistance to the small enterprises (small brother). The

program aims to enable micro enterprises to comply with labor standards through improvement of their work conditions (DOLE, nd).

Although the abovementioned programs have had a good start, with intentions of improving working conditions in these specific sectors, several issues have been identified during the course of their implementation. These are inadequate communication and information dissemination from national agencies to the local units, limited coverage, lack and/or inefficient use of resources, and lack of monitoring and evaluation mechanisms to support and sustain these OHS programs.

OHS issues and challenges in the informal sector

In the informal sectors, employers and employees often have a lack of knowledge and awareness on the concept of OHS, much more on the significance of recognizing, assessing, preventing, and controlling the existing hazards and risks in their workplaces. This is reflected in the responses in the KIIs and FGDs conducted. Without the knowledge and awareness on the prime relevance of OHS, respondents in these informal sectors also revealed lack of appreciation and interest for adapting OHS in their workplaces.

With the economy's rapid growth and development, it was thought that these sectors would disappear which in turn limited the efforts on OHS protection, services, and coverage to be much more focused in the formal sector's workforce.

The Department of Labor and Employment, through the joint efforts exerted by the Bureau of Working Conditions, the International Labour Organization (ILO) Manila Office, and the tripartite sectors, developed a body of Occupational Safety

and Health Standards in 1989 for the private sector to address the hazards in the workplace. This includes policies, hazard-specific laws, guidelines, requirements, and programs together with provisions on their enforcement, monitoring and evaluation. Unfortunately its effectiveness is still questionable since there are still gaps in communication and coordination among agencies and units. Also some standards are no longer up to date to current practice in industries. The informal sectors are also not covered in this set of standards.

Provision of company clinics, health insurance benefits, compensation, personal protective equipment (PPE), accident prevention and control programs, awareness on the significance of formation of Health and Safety Committees, rehabilitation and treatment programs for making it workplace-acquired diseases and disability are some of the OHS services that ideally should also be provided to the informal workers.

Moreover, there is an identified lack of or limited access to occupational health and safety information, resources, and services, which consequently further compounds the health risks to these sectors. This is further complicated by the absence of support structures and benefits present in the formal sector such as: training, health benefits, vacation and sick leaves, and health and safety programs. These risks are not only confined to the workers per se but it can also adversely affect the surrounding communities and the environment where the urban and rural informal activities occur.

Implementation of current OHS programs and services of different agencies are fragmented and do not address the specific needs of the informal sectors. KII

results also showed an inadequate data on location of the informal workers, hazards they are exposed to, and their other specific OHS needs. Health and safety programs and activities are not evidence-based resulting in challenges in sustaining the programs.

Role of Local Government Units (LGUs) in the implementation of OHS programs

The Local Government Unit (LGU) capacity in implementing occupational health and safety is rudimentary. However, during the course of key informant interviews with relevant LGU representatives, there is an evident lack of OHS specific programs, projects, policies, and general OHS awareness in the local setting. This is further aggravated by the fragmented nature of government agencies which results in ineffective OHS program planning and implementation. In line with this, some local units plan to implement measures to include OHS in the various ongoing and future training programs. However, the need for guidelines, in the form of an OHS template or manual for the local urban and rural setting, is necessary. Concerns in the rural setting need a different approach compared to similar concerns in an urban setting due to difference in population size, conditions and culture.

According to a representative of LGUs, there is no specific committee that handles OHS concerns. The local unit has designated safety engineer/officer but no dedicated OHS officer to check compliance of the companies in terms of health and safety of workers and the workplace; this lack of a dedicated officer also limits their ability to incorporate the OHS in the local unit. In the event of work incidents, a field officer from DOLE visits in the event to assess the situation.

LGU usually has limited capacity in implementing OHS but can be strengthened. This lack of capacity was further elaborated by the lack of OHS specific policies, programs, and projects in the locality of concern. KII results showed that LGUs are receptive to OHS concepts and are willing to develop programs geared towards it, with budget being a major factor in its implementation.

DISCUSSION

Further review of the current laws on OHS can be done to determine what works and what should be improved. With this, more relevant and sound policies on OHS can be formulated and effectively implemented.

The development of one main OHS framework that covers both private and public sectors, and informal workers is ideal in order to give direction to all of these sectors on how to be efficient in fulfilling their responsibilities to the working population of the country.

Since the Department of the Interior and Local Government (DILG) is the executive department in charge of capacitating the local government, they should coordinate with the DOLE in initiating OHS endeavors in the local level by capacitating the LGUs to be advocates in promoting OHS in their localities. A lack in awareness on OHS concepts is also evident in these sectors, and the LGUs have their own fragmented OHS agendas depending on the demands of their constituents and what is in their own agenda. Increasing the awareness of the LGU leaders is necessary for them to initiate the adoption of OHS down to the local level. An increase in awareness on OHS is the first step for them to know that such rights to these services exist.

OHS could also be incorporated as one of the requirements to companies that engage informal workers in their operations, before getting accredited or issued a permit to operate. An incentive program for the LGUs who diligently submit reports to DOLE regional offices may motivate industries and may ensure regular and accurate reporting from these units. Primary health care facilities and its personnel should be capacitated with basic OHS knowledge and skills to cater to the informal sectors particularly in the rural areas where most of the informal work sites are situated. Free training on BOSH to increase awareness of these sectors can be provided by the OSHC of DOLE. Tapping professional organizations such as Philippine College of Occupational Medicine (PCOM), Occupational Health Nurses Association of the Philippines (OHNAP), and Safety Organization of the Philippines (SOPI), may aid these sectors to equip and capacitate them into having a regular compliance monitoring system in place. DOLE may provide technical assistance and management of hazards present in their workplace. Implementation and integration of other OH programs and services which are not yet being applied in these sectors should be promoted. Financial assistance in programs related to OHS may be initially provided by the government. Researches for baseline data on the informal sectors is recommended to further support policies and programs and to identify and address specific problems and hazards identified in each sector.

A strong inter-agency collaboration among government agencies that are involved in these specific sectors such as the Department of Agriculture (DA), Mines and Geosciences Bureau (MGB) of the Department of Environment and Natural Resources (DENR), and the Department

of Transportation and Communications (DOTC) is essential and would facilitate the ease of implementation, and monitoring and evaluation of the OHS policies and programs. Partnership with other institutions that are specifically working with these groups such as the Federation of Jeepney Operators and Drivers Association of the Philippines (FEJODAP) and the Cooperative Development Authority (CDA) can also aid the LGUs to facilitate implementation of OHS programs and achieve their OHS goals.

For training in the informal agriculture sector, the Agricultural Training Institute (ATI) of the DA can be tapped. The jurisdiction, roles and responsibilities of each agency concerned with ensuring health and safety to the workforce in each of these sectors should be identified. Accountability of these agencies should be clearly specified. Roles should not be overlapping to avoid confusion among agencies about what agency should be doing the policy making, implementation, and the monitoring and evaluation of the OHS programs.

Further strengthening of the information management and reportorial systems for OHS among our country's agencies for the above-mentioned sectors is recommended to ensure that policies and programs are well implemented. Data gathered from these could provide research opportunities that would support evidence-based policies, guidelines, and programs.

In conclusion, the provision of basic OHS services to the informal sector is a temporary solution to the health and safety needs of the workers in these industries. Formalization of these workers should be the ultimate goal of the government to ensure that the overall wellbeing of these individuals is being prioritized.

Overall, it all boils down to the need for an increased awareness on OHS among the country's leaders and the reinforcement of the agencies' mandates to promote the wellbeing of the workers in the informal sectors.

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