

Current Situation of Occupational Safety and Health in Nepal

A Study Report

Prepared by

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Umesh Upadhyaya
General Secretary

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Executive Summary

The safety of workplace is an essential component of efficiency and productivity. In a working environment, one must be able to ensure that the worker have been provided with required safety equipment. Most often, it is the labor in developing countries that faces the brunt of the safety problems. At times their safety is ignored and even when safety tools are given, they can often be obsolete. Amongst other fields, the industrial sector is often the one that requires the most attention in this area.

This study hopes to raise and reinvigorate the debate and discussion on worker's health and safety. The study evaluates workplace environment, looks at frequently occurring safety issues in workplaces, measures the awareness of Occupational Safety and Health (OSH) within the labor body and lastly, try to suggest possible measures to improve the conditions. Through surveys conducted in different sectors and workplaces. The study is mainly based on the primary data, analyzes the issue to understand the core problems and suggested the key solutions.

The government, employer as well as the employee must closely observe the Occupational Safety and Health of workers. While a legal framework has been developed, the implementation of such legislation as well as evolved enhancement is a must to keep up with the changing times. The government must be collecting and updating statistics to have the required data to enact the legislations. The employer must understand that it is in his/her benefit to provide for a safe workplace and that they must aim to put prevention and protection measures in place. The employee must be aware of the safety requirements and directions as well as it should work with the employer to discuss such measures.

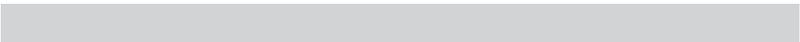
Illness or accident to a worker has far reaching consequences. While the employer loses out on a worker who is accustomed to his/her job. The employee also pays the price with multiple problems within and outside their family. There are employers who try to do better whereas many of them have not met the minimum standard. It is in such workplaces that government must intervene to ensure safety and standardize the safety measures across the board.

More than ever before, at a time when Nepal is staring down the aisles of future and looking at rapid economic development, the issue of worker health and safety has become of vital importance. Employers must be ready to invest in the technology, equipment and tools for OSH. The government must play its part to set forth the catalyst of change within this field. The government, employer and employee must raise awareness and delve in meaningful conversation and implementation strategy. Investing in the future of Nepal would mean investing in the safety of its workers.



CHAPTER I

Introduction



Background

The Nepalese economy is characterized by a dominant agricultural sector. But the proportion of employment provided by this sector is declining gradually. The position of service sector, construction, transportation is progressively increasing where role of industrial sector is not satisfactory. In this context, it is far to achieve economic development by this present industrial development trend. In such nascent economic development of the country, issue of occupational safety and health (OSH) of workers has not be given due importance.

Industrial development is undoubtedly the foundation of sustainable economic development as well as self dependent economy. It is proved from the experience of developed countries. Realising the fact the government of Nepal has been given emphasis since the beginning of the democratic era (since 1950) though the history of modern industries begins in 1936 during the Rana regime . The pace of industrialization was not satisfactory in the Panchayat period as well though government has placed emphasis on it. Despite the formulation and implementation of several industrial friendly policies by the democratic government even after 1990 to attract industrial investment (domestic and foreign) many industrial units were set up. At the same time, a large number of industrial units were closed down mainly because of unfavourable environment during the period of conflict and political uncertainty. Furthermore, the major constraints associated to industrial development reported by the critics are lack of far sighted industrial policy of the government, insecurity caused by conflict, supply side constraints, instable government, poor infrastructures, energy crisis, growing bank

interest rates on lending, weak law and order situation, labour problems and rapid liberalisation of Indian and Chinese economy.

Majority of the industries set up in the country are agro-processing. Only a few are producing basic construction material, import substitute and export oriented products. Whatever may be the existing industries, they are also characterised by a small unit, geographically highly scattered, low level of entrepreneurial skill and entrepreneurship, short life of the industries, etc (Dahal and Inoue, 1994). According to the Census of Manufacturing Establishments 2006/2007 (3446) and Survey of Small Manufacturing Establishments 2008/2009 (32326) conducted by Central Bureau of Statistics, the total number of industrial units are 35,772 all over the country. The share of manufacturing sector is less than 10 percent to the total industrial units. The contribution of overall industrial sector to the national economy (GDP) is low and declining gradually (MoF, 2011). The prevailing trend reflects that economic growth through industrial sector is not so bright in near future despite the efforts made by the state.

In addition to manufacturing sector, hotel and tourism, garbage cleaning, transportation and construction are the most important source of non-farm employment for the workers of different skill categories mainly because of rapid urbanization as well as construction of physical infrastructure in the country. The garbage cleaning profession has been traditionally limited to the people of certain caste. However, now this sector has also attracted people from different communities irrespective of caste and ethnicities. Employment generation from this sector is also increasing. Transportation sector is another major source

of employment and contributing a lot in the national economy. In recent days, a slowdown in the housing sector and hydropower construction, reluctance in moving forward for construction projects, due to high interest rate of banks, etc., have worsened the situation. Foreign investment is also open in the construction industry as well. But it is not inspiring to the industrial development. It is hoped that this sector will grow when Nepal government already permitted foreign investment in this sector.

Currently in Nepal 81.7 percent (11779 thousand) of the people aged 15 years and above and 34 percent (children aged 5-14) are working in one or the other sector for economic gain (CBS, 2008). Among them the share of women workers is very low and mostly involved in informal occupations.

Table: 1.1 Currently Employed Population aged 15 years and More by Industry

Industry	Total Population Employed (in '000)	% Female in the related industry	% of female employment in various industry
Agriculture, forestry & fishing	8704	60.6	84.3
Mining and quarrying	27	29.6	0.1
Manufacturing	773	39.5	4.9
Electricity, gas and water	109	64.2	1.1
Construction	367	11.2	0.7
Wholesale and retail trade	692	35.4	3.9
Hotels and restaurants	197	52.3	1.7
Transportation, storage & communication	198	4.0	0.1

Industry	Total Population Employed (in '000)	% Female in the related industry	% of female employment in various industry
Financial intermediation	32	31.3	0.2
Real state, renting and business	71	18.3	0.2
Public administration and defence	109	11.9	0.2
Education	285	33.7	1.5
Health and social work	77	40.3	0.5
Other Community and Social activities	99	23.2	0.4
Private household workers	33	57.6	0.3
Extraterritorial organisation	5	20.0	0.0

Source: CBS, *Nepal Labour Force Survey (NLFS) 2008*.

It is estimated that on an average 21 percent females are working in the food & beverage, textile garment, hotel and restaurants, garbage cleaning, transportation and construction on the basis of the NLFS 2008, where the proportion in the selected enterprises is 36 percent showing increasingly growing attraction of female in non-agricultural job.

In recent years major investment (both domestic and foreign) is concentrated in energy, manufacturing, agro-based, mineral, tourism and service sector industries. However, it is far below than that of the expectation and national needs.

Industrial development is not only the sign of economic development through increasing employment and production. The other side of this issue is that it is the source of diseases and accidents of the workers and

to some extent impacted on the community at large. In any country workers can improve their productivity quickly only when the workplace is safe and healthy.

Concept of Occupational Safety and Health (OSH)

OSH is the science of anticipation, recognition, evaluation and control of hazards arising in or from the workplace which could impair the health and well-being of workers, also impacts the surrounding communities and the environment. Though the International Labor Organization (ILO) has maintained and developed a system of international labor standards since 1919 which aimed at promoting opportunities for decent and productive work, in conditions of freedom, equity, security and dignity. It is relatively new and very few industries maintain occupational standards. OSH is a cross-disciplinary area concerned with the safety, health and welfare of the people at their workplace. Although various institutions and individuals have defined occupational safety and health differently but all of them agreed on the same meaning is that protecting and promoting the health and well-being of the workers as well as protecting the general environment through preventive actions in the workplace (Pun, 2011).

The concept of occupational safety and health is still new in Nepal. It has not been a hot agenda in industrial field where only about 7 percent of the labour force are involved (CBS, 2009) where this provision is insignificant in other sectors other than industry. The high illiteracy among the workers, lack of awareness, poor performance or inattention of the concerned government authorities in implementation of OSH

related policies and activities have shadowed these issues. To date, the OSH has not become the prior agenda for all the stakeholders of this sector.

Industrial sector has more risk of occupational hazards than other sectors. Industrial occupation may create unsafe work and work environment because of the inherent sources of hazards inherent in material, process, technologies or products. These sources of hazard may pose risk of occurring diseases and happening accidents to the employees within the industrial premises and the general public in the vicinity as well as to the general environment. Safe and hazard free work and work place are needed for higher productivity, efficiency, quality of any industrial process. Among the workplaces high risk for safety and health may occurred in the workplace: working with machine and equipments, use of electricity, construction works, transportation, use of chemicals, dusty worksites, congested and dark workplace (Upadhyay, 2005). Therefore establishing a safe and sound work place environment in any establishment based on the ergonomic principle is the important aspect to increase the productivity. Sound health and healthy working conditions are the prerequisites to promote development of society at all levels through increasing workers' overall quality of life (Joshi, & Dahal, 2009).

All types of hazards can be prevented or minimized through adequate hazard control interventions which not only protect workers from disease and accident but also limit the damage to the environment related with industrialization. Since occupational diseases, accident and injuries occur at the individual workplace, preventive and control

measures within the enterprise should plan and initiate jointly by the employer, manager and workers. The occupational health and safety policy represents the foundation from which occupational health and safety goals and objectives, performance measures, and other system components are developed. It is also important to know that the issue of OSH today is not related/concentrated with the blue colour workers but also important to the white colour as well though the degree and nature of hazards differs between them.

Status of OSH in Nepal

The concept of OSH in Nepal is in its initial stage. It is started to talk in industrial sector but its importance in other sectors is still needs to be justified. Despite various efforts, much still remain to be done to establish sound OSH systems in the world of work. The gravity of the issue is indicated that for more than three decades of multifarious needs assessment and prioritization still more than 80 percent of the global workforce live without adequate access to OSH (Rantanen, 2005). In this connection, ILO estimates that more than 250 million workers meet occupational accidents and 160 million are suffering from occupational diseases each year at the global level. Among them about 1.2 million workers die annually caused by occupational diseases and accidents (ILO, 2001).

OSH is one of the major issues directly related to the workers' rights. Almost all of the Nepali labour force involves in informal sector and they are still unaware of the concept and importance of OSH. As a result of continuous struggle of Nepali workers and trade unions as well as

solidarity from international centres of trade unions and supportive organizations this issue is gradually coming in the limelight among Nepali working masses (Rimal et al., 2003). Occupational safety is considered significant in mechanized industries while its importance in other sector is equally important. The scenario has been continuously changing since the last few years and gradually accepted as a business tools. In spite of that, there is a lot to improve. Presently, it is estimated that 11,779 thousand Nepali aged 15 year and more are engaged in one or the other occupation in Nepal. Among them 74 percent are engaged in agriculture and forestry sector where rest 26 percent are in non-agriculture sector (CBS, 2009). It is estimated that each year approximately 20,000 workers suffers from accidents at workplace which lead to about 200 lives lost in Nepal (Pun, 2011).

From 1994 trade union confederations particularly General Federation of Nepalese Trade Unions (GEFONT) has started awareness campaign on OSH taking the issue seriously. Still the issue is one of the major agenda of GEFONT and have conducted several OSH training at the workplace covering all 10 zones by the well trained personnel from different national and international training institutions. Other confederations also have incorporated the issue in their programme and activities. Government has also been working on the issue through the OSH Project under Ministry of Labour and Transportation Management with the establishment of OSH Centre under the financial and technical cooperation of ILO and Danida. The main aim of the project is to provide training, review legal frameworks and assist in creating primary information on occupational health conditions. National Productivity and Economic Development Centre under the Ministry of Industry

has also initiated to improve the OSH condition at workplace. The Environment Sector Programme Support Project (ESPS) has contributed a lot in this sector giving high priority. Likewise, the project known by SEAM-Nepal based on eastern Nepal initiated some interventions on this issue focusing awareness campaign. The employers' organisations are also involved from policy level to awareness raising programmes. Despite such efforts from different section achievement in this sector is very poor mainly because all the efforts by various institutions including government suffer from lack of appropriate amount of budget, trained and experienced human resources, weak commitment of concerned institutions/individuals and lack of coordination among the concerned government institutions on the one and inside the stakeholders on the other. All the three social partners in the industrial sector have their own interest thus the issue is often overlooked and many workers are suffering from occupational diseases and accidents. As a result employers are spending huge amount of money for medical treatment and compensation to the victimised workers on the one and on the other their production has hampered caused by illness and accidents of the workers. Similarly, victimised workers' family also suffers badly from psychological, physical and monetarily losses.

Today the issue of OSH has been becoming a hotcake of the trade union movement. Despite that demands of collective bargaining for the safety of workers are not paid due emphasis. While analysing the demands submitted to the concerned management regarding the OSH issue, it is not their priority. Among the few OSH related demands, safe drinking water and modern toilet facilities occupy the highest number where demands for protection of workers from chemical hazards, management

of dust and smoke pollution and sewage and sanitation are in low priority. Lack of protection measures from the possible risk has been a threatening challenge to the safety of the workers.

Many incidents have been reported in manufacturing industries where large numbers of workers were injured due to the lack of safety provisions. In some cases, the victims have been provided the treatment costs and in some others they are deprived of it. Generally, industrial workers suffers from the occupational diseases related to brain, mouth and teeth, neck, back, chest, lungs, hand and wrist, abdomen, lever, kidney, urine bladder, orthopaedic, eye, ear, nose, throat, heart, blood, skin, nerve system, mussels, leg and knee, sole and ankle and reproductive health due to work in particular industries. Nepali workers are suffering from one or more problems as listed above.

An occupational accident in the establishment is quite a common phenomenon. Most of the accidents are related to finger, hand, head, and eye, palm and leg injuries. Occupational accidents seem to be nominal in the government record (Table 1.2) but this cannot be taken as the actual situation as many accidents are not reported in the labour officers while solved at the workplace. However, reporting of any type of accident which caused man-day-loss is mandatory by law. The major cause of under-reporting of such accidents is also attributed to very low awareness on legal provisions concerning OSH among the workers, their union leaders and management.

Table: 1.2 Trends of Industrial Injuries by Type in Nepal

Description	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
No. of Establishments	4014	4195	4292	4284	4274	4296	3617	3630	3473	3514	3425	3578	NA	3599
No. of Workers	374860	382845	385960	387200	392421	394541	359373	307536	306430	310900	310145	311069	NA	313190
No. of Accidents	42	37	39	42	55	37	46	36	39	38	33	50	NA	68
Fatal	5	2	21	7	15	6	6	6	6	10	6	13	NA	13
Serious	17	12	2	18	23	17	23	16	17	12	12	18	NA	12
Minor	20	23	16	17	17	1	17	14	16	16	15	19	NA	43
Man-days loss	345	191	190	632	613	282	623	976	991					

Source: Department of Labour, different years records

The causes of accidents are varied but the major causes are – unsafe working environment; congested workplace; lack of supervision, monitoring and training; negligence in the government inspection, monitoring and supervision system; ignorance as well as carelessness of the workers and employers; use of old or out-dated machine or equipment; lack of regular repair and maintenance of tools, machine and equipments; bad house-keeping practices; lack of safety equipments of standard quality; violation of safety rules and unsuitable conditions. Similarly, in practice, there is no any incentive and disincentive for installing safety and healthy devices to replace worn out and unsafe machinery or to provide occupational health diagnosis and treatment

facilities in the industries also contributes to be reluctant to the concerned stakeholders.

Objectives of the Study

- To evaluate the workplace environment;
- To highlight the occupational diseases and accidents occurred in the work place especially related to women workers;
- To know the status of knowledge on OSH among the women workers and the Trade union activists, and
- To suggest the measures to improve the working environment and minimize the health hazards.

Methodology

Sources of Data

This study is based on both the primary and secondary information. Secondary information is obtained from the web site of Department of Labour along with the articles and reports. Likewise, various books, research reports published and unpublished are also consulted while preparing this report. Primary information is obtained from the selected establishment and discussions held with various stakeholders related to the OSH issues.

Selection of the Enterprises

All the six sectors covered by the '3F Project' were selected (one to three enterprises were selected from each of the sectors) purposively

considering representation from Kathmandu Valley and outside and also represented from small to large enterprises. The sectors covered and selected enterprises are:

Table: 1.3 Selected Enterprises, their Sector and Location

Sectors Covered	Selected Enterprises	Location
Food and Beverage	Rijal Tashi Industries Pvt. Ltd.	Itahari, Sunsari
	Himalayan Snax and Noodles Pvt. Ltd.	Banepa, Kavre
Textile Garment	Arihanta Multifiber Pvt. Ltd.	Sonapur, Sunsari
	Momento Appreals Pvt. Ltd.	Chandragadhi, Jhapa
	Nepal Pashmina Industries	Satungal, Kathmandu
Hotel and Tourism	Hotel Summit	Kupondol, Lalitpur
Garbage Cleaning	B. P. Koirala Institute of Medical Science	Dharan, Sunsari
	Kathmandu Metropolitan City	Kathmandu, Kathmandu
Transportation	Women involved in booking and administration	Birtamod, Jhapa
	Women involved in Safa Tempo	Kathmandu, Kathmandu
Construction	Women involved in building Construction as labourers	Dharan, Sunsari
	Women involved in Marble and Chiefs	Bhaktapur, Bhaktapur

Sample and Population

In all the selected work place, group discussion was held on OSH issues with the women workers based on the well structured checklist by the researcher themselves. The group comprised of 5-10 women covering different activities/units within the enterprises. Altogether 119 women workers of different age groups and having diverse experiences from

the 12 workplace have participated in the discussions. The age group and experience of the workers selected for discussion is presented in table 1.4 and table 1.5 respectively. The information obtained from the discussion is analyzed descriptively in chapter IV and V.

Table: 1.4 Age-group of the Participants in the Group Discussion

Age Group	Number of Participants	Percentage
<20	2	1.7
20-29	18	15.1
30-39	49	41.2
40-49	41	34.5
50+	9	7.6
Total	119	100.1

Table: 1.5 Experiences of the Participants Involved in the Group Discussion

Duration of work (in Year)	Percent
<1	3.4
1 to 3	5.9
4 to 6	10.9
7 to 9	21.8
10 to 15	32.8
16 to 20	13.4
21-25	8.4
> 25	3.4

Besides workers, discussions were also held on the same issue with the management of the concerned establishment to cross check the information obtained from the workers. Likewise, the opinion of the medical personnel involved regularly or occasionally in the health and safety issue in the enterprises also captured by this study. Information was also collected by the trade union leaders at enterprise, district, zonal levels and national federations affiliated with GEFONT. To know the overall situation of OSH in the enterprises, status of intervention by the government and the implementation of the acts and policies related to OSH, the research team had discussed with the head of the concerned labour office, factory inspectors and trainer of OSH Centre, Bhaisepati, Lalitpur, as well.

Limitations of the Study

The study only covered twelve enterprises from six different sectors and covered very limited persons from three districts in Kathmandu valley, one adjoining with the valley district and two districts from eastern Nepal. Within the ambit of this research, one cannot claim that this study is represented the holistic situation of OSH in Nepal. However, the study definitely revealed the existing status and pattern of OSH in the sampled establishments.

The overall occupational safety and health situation vastly vary in formal and informal sector enterprises on the one and on the other it also differs within the sector. The sector wise analysis could not be feasible with a small sample. Thus the findings are analysed in general framework.



CHAPTER II

Legal Provisions Relating to OSH

National and International Legal Provisions

Appropriate legislation and regulations, together with adequate means of enforcement are essential for the protection of health and safety of workers in any sector. The law directly regulates certain components of working conditions and the work environment including occupational safety and health. Like many other countries in the world, Nepal is facing serious problems on enactment and enforcement of legislation related to workers in general and OSH in particular in practice. To make sure of the legal provisions concerning occupational safety and health, the working environment should be secured by an adequate and appropriate system of labour inspection. But in Nepal, the inspection system is adopted only in large manufacturing sector as factory inspection. The inspection system has further suffered much due to lack of commitment of the government on the one and shortcoming of human and material resources in the concerned labour offices to shoulder the given responsibility on the other. From the information of Department of Labour it is known that on an average one inspector has to cover more than 300 manufacturing enterprises along with the regular administration of his/her office, which is impossible. Thus the Labour Office has only fulfilled inspection system as ritual where in other sectors provision of inspection, supervision and monitoring is non-existence. Hence the government has to take necessary steps to establish the effective labour inspection system in the country with full commitment.

Only after the restoration of multiparty democracy, government of Nepal has taken more attention to working condition and environment in industrial sector. Enactment of Labour Act 1992 and its regulation (1993)

is only the legal document that covers safety and health provisions of workers in industrial sector that confined to the industries employing 10 or more workers where the provision is applied to all establishments within the Industrial Estates whatever may be the employment size. Chapter V, section 27-36 of the Labour Act 1992 explains the health and safety of workers in the establishment. The Act has prescribe arrangements for garbage management; provision of modern toilets; supply of adequate safe drinking water; provision of appropriate volume of ventilation, condition of light, temperature and sound; protection from dust; smoke, fumes and other impurities; avoidance of overcrowding in any room of the establishment and provision of extinguishing fire. The Act also includes the provision of medical check-up for the workers at least once a year in the establishment which are hazard prone. But the Act is silent which establishment is hazardous and which one is safe. It also suggests a number of preventive measures such as – protection of eyes, protection against chemical hazards and fire, guarding against dangerous machinery, prohibition on lifting heavy load and safety measures for pressure plants.

The Act further mentions provision for compulsory notice of any kind of accident or disease to the concerned labour office. In spite of such provisions in practice, as of the officials of the concerned labour office, only few accident cases which could not solved in the enterprises are reported in labour office even after the period that the law has provisioned. The Act has given authority to the concerned inspector to collect samples of any finished and semi-finished products as well as any material being used that may cause harm to the workers or damage their health. The concerned labour office has also right to close down

the whole establishment or unsecured parts, plant or machinery of it. Inspectors have been assigned responsibility to ensure that the building, machinery and manufacturing processes are safe for workers. Violations of these provisions are punishable with fines (Nepal Government, 1992). Based on the legal framework related to OSH the management of the enterprises shall have to make following arrangements (GEFONT, 2007).

- To keep each enterprise clean and tidy by cleaning daily with germicidal medicines also if so required necessary and arrangements of proper drainage and painting or white-washing from time to time and preventing from bad odour.
- To make arrangements for adequate supply of fresh air and light as well as proper temperature in the workplace.
- To make arrangement for removal and disposal of solid waste and sewage out coming from production process.
- To make arrangement for prevention of accumulation of dust, smoke, vapour and other impure materials in working place which might adversely affect the health of the workers.
- To make arrangement for necessary preventive personal devices for protection of health from adverse effects of noise coming during work process or from any other source and make provisions which would produce less noise in accordance with the nature of the work process.
- To make arrangement for avoiding any congestion in the workplace leading to injurious to the health of workers or employees and to make available the working space to each worker or employee considering the nature of work. Generally, fifteen cubic meters per person and however, the height above

four meters from the floor surface shall not be considered for such purposes.

- To make arrangement for sufficient supply of pure potable water during the working hours and to make arrangement for sufficient water in the enterprises where chemical substances are used or produced which may cause hazards to the health for the purpose of extinguishing fire or washing and cleansing during emergency situations.
- To make arrangement for separate modern type of toilets for male and female workers at convenient place.
- To declare non-smoking zone in all or some parts of the enterprise according to the nature of its work.
- To conduct compulsory health check-up of the workers or employees at least once a year in the enterprises where the nature of works is likely to affect the health adversely.
- Necessary protective measures shall have to be arranged for the protection of eyes of the workers and employees from possible injuries likely to be caused by dust or pieces exhausted from production process while working in the enterprise where glass, lead, mercury, magnet, plates, iron, concrete, cement, lime, stone and explosive substances are used.
- The establishment shall have to make arrangement for necessary modern equipment for safety against fire in each enterprise.
- Strong fence shall have to be placed around every part of hazardous machines, instruments and equipment to be operated by energy. In case it is required to do inspecting, lubricating or adjusting any part of hazardous machines during

its operation, only experienced and well trained adult worker or employee shall have to be engaged to perform such works.

- No worker or employee shall be engaged in the works of lifting, loading or transporting any load likely to cause physical injury or harm to the health.

Looking at the available human resources, especially inspector in the labour offices and the content of the form developed for inspection of the enterprises, no single labour office in Nepal is inspecting the establishments in real terms. On the other the management has to submit inspection certificate before the concerned authority of Department of Industry to renew the establishment. Given the present condition, the real inspection report could not be generated.

The Three Year Interim Plan (2007/08-2009/10) has set some strategic programmes and visions to make workplace safe, healthy and productive by promoting and developing occupational safety and health as an integral part of all the industrial enterprises and workplace. Government of Nepal has endorsed Occupational Safety and Health Project and allocated annual budget for it. The project sets following programmes to be implemented as the integral part of the project (NPC, 2007).

- Training programme on OSH for social partners.
- Capacity enhancement
- Training programme for officers affiliated with OSH.
- Orientation programme for employers.
- Awareness enhancement programmes on industrial accidents.
- Awareness programme on HIV/AIDS and STDs at workplaces.

- Labour education programmes and
- Factory inspection, monitoring and evaluation strengthening programmes.

The Three Year Plan (2010/11-2012/13) Approach Paper 2010 has set an objective to create healthy, safe and decent working environment through development of cordial labour relations. This can be achieved through the revision of the existing labour laws and developing scientific labour inspection system and model labour offices (NPC, 2010).

ILO is an international UN organization working for the welfare of working mass. This institution has adopted several conventions and recommendations related to the health and safety of the workers. It has currently adopted 17 conventions fully or partly related to safety and health issues. From its establishment half of the ILO Conventions and Recommendations have directly or indirectly deal with the matters associated with the safety and health agendas. The Occupational Safety and Health Convention No. 155 and its accompanying Recommendation No. 164 prescribes the progressive application of comprehensive preventive measures and the adoption of a coherent national policy on OSH to all workers in the economic activity including public services.

ILO Occupational Health Services Convention No. 161 and its Recommendation No 171 explains that in line with the national conditions and practices, the member states can formulate, implement and review a coherent national policy in occupational health services for the workers of all enterprises. Work done by the ILO under the resolution on the improvement of working conditions and environment concerning

the evaluation of the international Programme for the Improvement of Working Conditions and Environment (PIACT) has contributed positively in this connection.

These conventions and recommendations also establish the responsibility of employers for making work place and equipment safe without risk to health as well as the duties and rights of workers. Some of the most hazardous sectors are covered by specific conventions and recommendations. For example, Convention No. 184 and its accompanying Recommendation No 192 cover Safety and Health in Agriculture sector. Likewise, the List of Occupational Diseases Recommendation No. 194 are relevant on OSH issues of the workers at workplace.

Prevention of industrial Accidents Recommendation No 31, Protection of Workers' Health Recommendation No 97, Prevention of Major Industrial Accidents Convention No 174 and Recommendation No 181 are other major conventions and Recommendations developed by ILO for the welfare of the workers. Besides these a series of conventions and recommendations specifically covers the health, safety and welfare of seafarers from its establishment. Other ILO conventions and Recommendations concerning specific risks and substances are: Anthrax Prevention Recommendation No 3, Lead Poisoning (Women and Children) Recommendation No 4, White Lead (Painting) Convention No 13, Radiation Protection Convention No 115 and its Recommendation No 114, Guarding of Machinery Convention No 119 and its Recommendation No , 118, Maximum Weight Convention No 127 and accompanying Recommendation No 128, Benzene Convention No 136

and its Recommendation No 144, Occupational Cancer Convention No 139 and Recommendation No 147, Working Environment (Air Pollution, Noise and Vibration) Convention No 148 and Recommendation No 156, Asbestos Convention No 162 and Recommendation No 172, and Chemicals Convention No 170 and Recommendation No 177.

Likewise, Cooperation in Accident Prevention (Building) Recommendation No 55, Vocational Education (Building) Recommendation No 56, Hygiene (Commerce and Offices) Convention No 120, and Recommendation No 120, Occupational Safety and Health (Dock Work) Convention No 152 and Recommendation No 160, Safety and Health in Construction Convention No 167 and Recommendation No 175 and Safety and Health in Mines Convention No 176 and Recommendation No 183 are the instruments concerning health and safety in specific branches of economic activity.

To avoid the discrimination between workers on the basis of the nature of work (permanent, temporary, contract, home based, part time) countries have to introduce the provisions related to the ILO conventions (Home Work Convention, No 177, Part-Time Work Convention No 175) in their legislation. Generally vehicle accident is considered as traffic accident rather than work-related accident thus needs to cover by the national legislation. Nepal has not yet ratified the core convention as well supplementary conventions related to OSH showing government has not given emphasis to this issue.

The right to safety and health at work is protected in the United Nations Universal Declaration of Human Rights, 1948 and UN International Covenant on Economic, Social and Cultural rights, 1976. Likewise, ILO's new safe work programme of Safety Health Environment is dealing with security and productivity through health and safety at work place (ILO, 2001).

Labour force is considered as a most important segment of the social structure. The national legislative measures could not cover all important sectors of establishments that pose serious hazards in the formal sector. Establishments employing less than 10 workers are mostly outside the domain of the laws where the laws are mainly silent on the OSH situation in informal sector where more than 90 percent workers are involved and the sector creates serious health hazards.

In the case of Nepal, there is no separate department or section for safety and health in the ministry where Department of Labour is responsible for occupational safety, health and working conditions at the workplace. There is no systematic labour inspection system. Consequently, the safety and health provisions at the workplace are enforced by the Factory Inspectors but their number is very low (only 11) in comparison to the number of establishments in the country. As a result the number and manner of inspection at establishments has been extremely inadequate.

Large number of establishments operating has not been recorded in the inspection register. According to the factory inspection statistics supplied by the Department of Labour in total 26.8 percent to 43.7 percent (on an average one third) establishments were inspected in a year from the

beginning of the 21st century showing strong need of improvement in the inspection mechanism. On the other the factory inspectors have no adequate updated training and orientation for surveillance. Here it is also important to note that the Bagmati Zonal Labour Office involved to create healthy and safe work environment through its policy and programmes itself is situated at unhealthy site showing no seriousness on this issue to the government and its concerned employee.

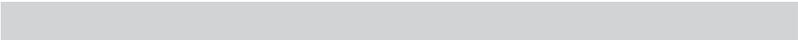
Joint Safety Committee can play a vital role in taking steps to prevent industrial accident and injuries. That can promote occupational safety and health in the establishment. But in the legislation there is no provision for such committee in the establishment. There are a lot of rooms to improve the Labour Act on OSH issues and an urgent need for coordination and cooperation among the concerned line ministries as well as between stakeholders to implement the current OSH provisions effectively and to enactment of separate OSH Act.

Lastly, it can be conclude that, the current occupational safety and health is largely guided by the Labour Act, which stipulates the provision of medical facilities, compensation, factory and labour inspection mechanism. The legal requirements alone is not the constraint of OSH but effective implementation, successful enforcement and periodic amendment of legal system as per the change in the national situation is more important.

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CHAPTER III

Analysis of Work Place Environment

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Introduction

While discussing the work place environment it is necessary to know the factors associated with the occupational diseases and accidents. At the same time it is essential to identify the condition of methods adopted to control the possible hazard and risk in the concerned enterprises. Generally, such factors are involve in identification and assessment of environmental factors such as occupational hygiene and sanitation, organization of work, availability and use of personal protection equipments (PPEs) and workers' exposure to hazardous substances, accident and prevention, ergonomics, occupational hygiene, psychological factors, etc., that may affect workers' mental as well as physical health negatively.

Type of Work

The work not only varies one establishment to another but differs widely in the same establishment. For example, in construction industry workers are involved in different activities (construction of building, road, bridges, power house, irrigation system, and sewage, etc). Further, in a building construction workers involve as their specialization in different works - technician, mason, carpenter, labour, scaffolding, rod binder, RCC work, electrician, plaster, plumber, laying chips, marble and tiles, brick making, stone quarrying, etc. Likewise, in the manufacturing sector people are involved in different activities from purchase of raw materials to marketing of final products. In garbage cleaning workers are involving toilet, office compound to street cleaning and its management. In hotel sector workers are involving as receptionist, front office, house- keeping,

cooking, servicing, bellboy, administration, account, maintenance, driving and helper, etc. In the surveyed establishments workers are involved in one specialised work to more than one work depending on the size of establishment and nature of product.

Work Place Environment

The work environment (light, temperature, ventilation, sound, etc.) differs as of the nature of product produced by the establishment. But no single establishment in Nepal are meeting necessary standard of the work place though some of the management claimed their work place is international standard. Whatever the work place environment no single establishment is found riskless. All have one or the other type of risk associated with raw material, production process, transportation, etc. Most of the workers claim that on an average their work place is poor while majority of the employers also accepted that they could not improve the work place as needed. Some of the workplaces especially related to construction, transportation, etc., are open where workers are compelled to work in natural environment in all the weather adjusting with sun, rain, sound and wind. The selected workplaces have not the same type of risk that differs as the nature of the establishments. Labour officers of concerned zone opined that normally the large sized establishment have tried to manage their workplace better as per the provisions of Labour Act though there is a lot to improve to reach in necessary standard. But in small enterprises OSH provisions is not duly considered. Whatever may be the condition of workplace in Nepal, no single workplace is constructed keeping in view of the concept of ergonomics.

Every employer wants to get the most production possible from his employees. In order to achieve this goal most effectively, there are modifications that can be made within the workplace setting to enhance productivity through better organization of environment such as light, temperature, color, furnishings and other things that involves the health, safety, and comfort of the employees.

Light

Lighting is very important in the job setting. It needs to be adequate so that the workers can see what they are doing without undue eye strain and without risking any kind of accident due to an inability to see properly. The provision of light in the workplace varies one establishment to another. Light is not properly distributed at the workplace as needed. Depending upon the nature of products and works, some workers have to work on natural light while others should depend on electric light all the time. The workers and union activists have mixed version (lighting condition is very poor and the workers are facing a lot of problem while working on the one and on the other in all the workplaces lighting system is sufficient) on this issue. Some management officials accepted the poor condition of lighting in all or some units of production. They also express that, serious load shading all over the year hampers good management of light in the establishments. Workers involved in night shift have suffered more from light problem. The workers involved in works at open space (mostly construction, garbage cleaning, transportation, etc.) in natural light also suffer especially from sun, rain, cold, fog and wind. The workers involved in street cleaning have to start their work from early morning but due to absence of street light they are facing

many problems (including personal security) mainly in winter season. Some of the establishments have tried to manage the light system that is essential for the production of the factory as well as health of the workers. Generally, large sized industries managed both side windows and some transparent roofing sheets for natural light where they also managed electric light as necessary for the better work performance even installing generator.

Temperature

Temperature is another key concern. Temperature at workplace needs to be comfortable as well. Extremes of either (too hot nor too cold) can reduce alertness and productivity. But most of the selected workplace is very hot in the summer and cold in winter. There is no any mechanism to stabilize the temperature except in very few industries where the products itself demands constant temperature. On the whole, the workplace is constructed fully using corrugated sheet or roofed by it which creates heat in summer and cold in winter. Those who involved in the boiling/ fire work, naturally have to face higher temperature in comparison to the workers in packing and others. Management themselves accept that workplace temperature is always high from five to ten degree than outside during working hour due to operation of machine. Such problem cannot control easily though they have installed some exhaust as well as industrial fans to minimise the temperature at work place where workers feels excess heat. There is no alternate mechanism to stabilise the temperature in the work place where workers have to involve at open space. Thus they have to adjust themselves with natural temperature. Especially garbage cleaners and construction workers working at open

sky are suffering more from it where transport workers involved in driving occupation have to face double heat produced by engine along with the natural heat. Whatever may be the situation, the workers, trade union activists and the employers have not taken the issue seriously till date.

Ventilation

Ventilation is essential element at each work place but the workers and their union leaders feel very lightly of its necessity in many places. While looking at the workplace there is no proper ventilation system is provisioned in many establishments where it is good in few and management of these enterprises claim as of international standard. In some places provision is made around the factory building including roof top ventilation but not utilized it properly due to ignorance as well as carelessness from the part of all the stakeholders. In some factories both workers and management expressed the same level of satisfaction on the condition of ventilation where in others the workers expressed their dissatisfaction saying, exhaust fans are installed in the workplace but they are as show piece. The management has denied to accept it and said they have provisioned ventilation system though there is room for improvement. Some establishments are still running without minimum provision of ventilation in workplaces.

Sound

Sound created by the machine and equipments differs from one sector to another as well as one unit to another in the same establishment. Generally, the workers working with heavy machine face a bit high level

of noise. Among the surveyed sector textile garment (especially textile) creates more sound followed by food and beverage sector whereas in other sector sound level is not alarming. Transport workers suffer from unnecessarily blowing horn by other vehicles along with the sound created by the vehicles itself in the heavy trafficked road especially during traffic jam. Likewise, garbage cleaners working at road during day time also suffers from noise created by the vehicles on the road. Though construction works use light machine in many types of work but suffers from sound created by them because that creates unusual sound. But sound created by the machine/equipment in the workplace is found major problem to the workers regularly and additional sound created by generator during load shading in many factories where heavy machines are installed. None of the respondents (workers, union leaders and management) reported the issue of sound pollution in the hotel and tourism sector. It is known that no single establishments have introduced the mechanisms that minimize the sound created by either source. Female workers are gradually suffering from social problem caused by losing their hearing capacity by heavy sound. But management is not serious on this issue because they did not accept it. Whatever may be the problems faced, no workers and union leaders are serious on this issue.

Working Space, Cleanliness

Safe and healthy working environment is the right of workers. Some of the surveyed workplace were found congested and dirty so that workers fell down frequently and sometime suffered from fracture their hand or leg. On the other during any inevitable circumstances workers have no chance to escape out from their working area being overcrowded.

Generally, the work place is found clean but in many sites there was very dirty outside the factory building that may creates health hazards to the workers working in the enterprises.

Garbage Management

In all the establishments there is a system of garbage management (though the system differs) but in many places it is not managed properly mainly because of the negligence of the workers themselves. Most of them had accepted it. But researchers found that the garbage management is less systematic especially bottle, metal and other unused materials scattered behind the factory premises. Management of various establishments claimed that the industry possessed wide area, so garbage management is not a problem and also it is not produced toxic materials which are hazardous to the health of the workers. The workers involved to the management of garbage produced from the hospital claim that they are the garbage cleaner, but hospital, clinic, medical store and people do not separate the garbage as infected and non-infected categories as well as degradable and non-degradable carefully. Theoretically they should be separate in the source. In such circumstances workers have to handle all garbage at a time without thinking all the garbage is mixed. Thus there is a high risk to their safety and security from the occupational safety and health (OSH) point of view.

Colour and Furnishing

Colour of the workplace is another element that needs to be considered because it helps to increase the productivity addressing psychological effect of the workers. It affects lighting and temperature within an

area and is also considered an important factor in the workplace but in the selected enterprises it is not considered as an issue by all the stakeholders. Many places were not coloured in the factories selected. Those where it is coloured not considered the psychological effect of the workers. Similarly, the furniture in a work place should be comfortable and conducive to good work posture. Chairs and desks need to be the right height and computers need to be the correct distance from the user as of ergonomic point of view. But all these are not taken into account while setting such necessities in the workplace.

Provision of Drinking Water

Workers are compelled to drink tap water or boring water with or without treatment in many places while in some places workers have the provision of safe drinking water. Some of the workers complained that they are compelled to drink poor quality water while for the management personnel working with them have safe drinking water showing highly discrimination between two groups of workers. It is also found that many workers themselves are not serious or conscious on drinking water due to their ignorance on the problems that creates from the poor quality water. In the same establishment the views of the workers as well as union activists have not uniform regarding the quality of water. Majority of the management and the medical personnel working in the establishment claimed that they are providing safe drinking water to their worker which is used by the management. As a result no worker till date suffered from water borne diseases. According to the construction workers neither the owner nor the contractor took the responsibility of providing drinking water to the workers. Mostly, workers have to manage drinking water

by themselves. Likewise, transportation workers also have to manage drinking water themselves showing availability of drinking water to the workers depends on the sector of work and nature of job. For example, the garbage cleaners working in the institution premises have access on drinking water provided by the employer where those working outside have to manage it themselves.

Canteen

Provision of a canteen serving safe and healthy food at reasonable cost during the working hours helps to prevent workers from tension of tiffin/lunch/dinner that ultimately helps to increase their productivity. In some places there is a canteen within the establishment with the view to provide safe and healthy food at cheap price compared to outside for the workers. But in practice most of them are not clean and satisfactory to the workers and their union activists. However, they are compelled to use it having no any alternatives. In many work places there is no provision of canteen and in some establishments it has closed down due to the indisciplined behavior of some of the workers. Mainly workers working in night shift suffers much from the lack of canteen. Most of the workers come from the nearby places, bring their food and keep it in a place allocated by the management though the places are not safe and clean as needed from the health point of view.

Toilet Facility

Separate toilet for male and female is constructed in many workplaces where number of workers is high but their quality is poor in some places. Even workers acknowledged that they themselves are responsible to make

the toilet dirty where in some cases management is also accountable to it. Cultural factor play a vital role in using toilet. Culturally, some groups of people prefer to defecate at open place and normally use the space outside the toilet building. But some other groups of people have been already adopted the use of it. On an average one toilet is available for 20 workers. The women workers working in garbage cleaning (especially in the field), construction and transportation are suffering much from non-availability of toilet at their work sites which caused a number of health problems. This indicates that a woman workers working within the premises of the establishment toilet are not a big problem but it is a big problem to the workers working at open space and are using open place for defecation knowing or without knowing hazards from it. In some work sites even in formal sector the location of toilet is not easily accessible and safe especially during night shift.

Resting Time and Rest Room

There is no specific provision of break between the works that depends on the nature of job. However, workers of the selected enterprises were managing the break either for lunch or tiffin or rest whatever they can. Normally, there is no separate provision of resting time and rest room. Those who have time spare they pass their time chatting each other sitting on the open air or at the working area or at the areas where they are taking lunch or tiffin. Workers, their leaders and management agreed that in some places there is a provision of resting place but not systematic except hotel sector.

Provision of Child Care Center

According to Labour Act 1992, there should be a well managed/equipped, clean and healthy child care centre in the cost of employer where 50 or more women are working. But in practice no single enterprises have such facility at present. Targeting to the garbage cleaning women workers, Kathmandu Metropolitan City once established the child care centre. However, nobody was interested to send their children because the center was located at garbage dumping site which was totally unhygienic. After that another child care centre was established to run on pay basis. The parents considered that it was better to send their children in the private school rather than the government established child care centre where care of children is not as par with the private sector. The view expressed by the workers also somehow corroborated by trade union leader and management. At present workers did not demand the child care centre in the collective bargaining agreement (CBA), as they considered other issues more important than child care centre. This indicates that, workers are not much bothering child care centre because only insignificant proportion of workers has the problem of take care of their small children. In some work place management is providing limited time for breast feeding to the lactating women, those are residing near the workplace to have this facility.

Safety Provisions in the Workplace

Generally, safety standards are based on the model of a male worker. Tasks and equipment are designed for male body size and shape. This can lead to discrimination in a number of areas. Information obtained from all the stakeholders and observation during field visit conformed that

workplace in Nepal are constructed without considering the principle of ergonomics. In its absence, in many enterprises several accidents are occurring due to old machine operating without regular maintenance and the absence of machine guard. Normally, most of factories visited have no machine guard and proper maintenance system due to negligence of the management, ignorance of the workers and lack of legal enforcement by the government. There is a provision of factory inspection in formal sector from the factory inspector of the Zonal Labour Office. The inspection form covers various 18 issues that take a lot of time to find out the situation of all these issues. Considering this situation, in practice it is not possible to inspect more than two dozen factories by an inspector in a year, because s/he has also responsible for general administrative works as being chief of the zonal office. Thus the legal provision of compulsory factory inspection especially boiler before renewal become a ritual work rather than the improvement of the workplace as reported by the management and workers. It is also disclosed that there is no coordination and cooperation among the employees in the labour office itself on power sharing issue.

In most of the workplaces there is a provision of emergency door to exit the workers during emergency but the management of the enterprises did not educate their workers about the importance of the emergency door. Likewise, many establishments have installed fire-extinguisher and emergency siren. Mostly women workers involved in discussion programme were not known the provisions made by the enterprises to save the workers and the enterprise from any type emergency. It is also disclosed that mass workers are not aware how to use such equipments

during emergency. It indicated high demand of training to all employees on the issue.

The SEAM-N project has been started a study and a data base system in collaboration with some of the factories in Morang-Sunsari corridor, that would provide the information based decision to find out causes and how to provide safe working environment in future.

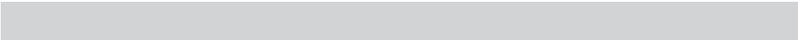
Suggestion to Improve Workplace

Lastly, it can be concluded that all these elements are not only responsible for the comfort of the employees but also for their health and safety as well. Proper management of light, sound, ventilation, temperature, space, regular maintenance of the machine and equipments, provision of safe drinking water, emergency exit are the major suggestions of the workers to improve the workplace. Some of the employers accepted that they themselves know their workplace could not maintain as needed because their business is not secured where government policy and practice is not industry friendly. If the government is ready to promote national industry they are ready to improve the work place investing more. Some of the management personnel with whom the researchers discussed found highly sensitive and cooperative on OSH issue where workers are also aware on this but are not hazard free because of the nature of work.

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CHAPTER IV

**Status of Occupational Health and
Safety at the Workplace**

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Background

Problem of occupational health and accident arise to a great extent from the hazardous factors in the working environment. The occurrence of accidents and work-related diseases and injuries in most sectors is still regrettable high. Therefore, it is an urgent need to implement both the preventive and curative measures at workplaces in order to guarantee the safety and health of workers. But it is better to focus on preventive one. Occupational hazards can prevent by eliminating or reducing the source of potential risks and the causes that trigger hazards. It can be achieved in a number of ways: engineering control, design of safe work systems to minimise risks, substituting safer materials for hazardous substances, administrative or organizational methods and use of personal protective equipments (PPEs).

A healthy, motivated and happy workforce is fundamental to the future socio-economic well being of any nation. To achieve such a workforce, it is not enough to prevent occupational hazards or to protect workers against them. It is also necessary to take positive measures to improve current health status along with the promotion of a health and safety oriented culture. Such measures include health promotion, education and training. By promoting sound health of the workers, enterprises could increase benefits in the form of reduction in sickness-related costs and increases productivity. The promotion of OSH at workplace is regarded a modern corporate strategy and responsibility of the employers in the developed countries. But in Nepal most of the entrepreneurs consider it as a major factor to increase the cost of the enterprises.

In any workplace either in formal sector or informal sector, workers are facing one or the other problems related to their work. Millions of workers die or are injured or fall sick regularly as a result of workplace hazards. The nature and magnitude of the problem varies one enterprise to another as well as one job to another. It is known that the incidence among countries varies greatly. Developing countries experienced all types of risks very high than that of developed countries. ILO has introduced international labour standards, codes of practice, the provision of technical advice and the dissemination of information with the view to increase the capacity of member countries to prevent from occupational diseases and accidents by improving working conditions.

In Nepal, all the stakeholders are not much conscious on this issue and have not given priority to the OSH in every workplace, though the cost associated on preventive method of diseases and accidents will be lower than the treatment caused by it. No single workplace is especially constructed considering the speciality of women workers. But there are some provisions to adjust the workers whatever may be the sex, age, height and weight. Similarly, no factory is designed and coloured considering worker's psychology. Successful health and safety practices are based on collaboration and good will of the stakeholders but facing a lot of problems on it. This section tries to deal on the occupational diseases, type and frequency of accidents occurred, methods addressed to resolve the OSH issues in the workplace focusing on women workers.

Occupational Diseases

Large numbers of women workers are suffering from one or the other disease caused by the work they performed in each work place. It is hard to identify the diseases caused by the involvement in certain occupation. But the particular occupations cause or aggravate the diseases. The type of disease differs in one sector to another and by type of job in the same enterprise. Some workers are compelled to work throughout their working period by standing or by sitting or walking from one place to another where several have to involve in many type of work in the factory/workplace. The root cause of occupational diseases is due to closeness with specific poisons, chemicals, mechanical irritants, stress (physical and mental) and bad working environment.

Several studies are carried out on occupational disease in developed countries but such studies are not initiated in Nepal till date. Majority women workers of all sectors under study irrespective of age have suffered from common disease like: cold and cough, skin diseases, ear, nose and throat problem, eye problem, joint pain, back pain, upper and lower arm pain, knee pain, chest pain, respiratory problem, allergy, headache, asthma, high blood pressure caused by stress, tetanus, rheumatoid arthritis, repetitive stress, water born diseases, tuberculosis, problem of bone degeneration, swelling of feet, etc. Beside these common problem faced by many workers in the workplace, prolapsed and chest pain are reported by the workers working in food and beverage sector, construction, transportation as well as by textile garment workers.

The workers of textile garment sector have further reported gastrointestinal disease, deafness, chest infection, senselessness of finger, infertility, miscarriage in addition to the common diseases. The health personnel involved to check the health of the workers in this sector informed that diarrheal diseases, ENT problem, chest infection joint pain and back pain are the common diseases appeared in the factory workers. They also informed that the work of women in these enterprises is not the cause of prolapsed; however, the heavy work aggravates the situation. Beside the diseases reported above, construction workers added gallstone, cancer and heart problem experienced by them. Female workers working in transportation sector further suffered from urine and uterus infection caused by low intake of water due to toilet problem at and around their work place/area. They could not change sanitary towels during whole day of menstruation period that may be the cause of uterus cancer as well. Headache and indigestion are at the top among various complains in the clinic reported by the female workers.

A study by Joshi et al. (2003) reported the exposed workers (agriculture, construction, transportation, and manufacturing) suffer much from lung cancer but no single respondent of this study report cancer as occupational disease. It is also known that despite the health personnel's suggestion and advice, workers demanded pain killer whenever they experienced pain in any part of the body without knowing the reason behind it. It is mainly due to the low level of awareness of the workers on the side effects of the medicine. Similarly, no females are found bother about the effect of heavy work on their reproductive health during menstruation period. Large number of workers is not aware on

Sad and Funny Incident of Rachila Tamang

I am from Charikot, married with two daughters and I am now 42 year. I worked at Safa Tempo since 1999. My husband is also a driver, he worked in Nepal for long time and presently he is working in a Gulf country. We have two daughters, the first is 28 and the second one is 26 years. I have grandchildren from both of my daughters. After I got two daughters I used to use temporary family planning device. About ten years ago I stopped using the family planning device and then un-expectedly I became pregnant. I continued driving for family livelihood. Near to the delivery month, I got severe problem and went to Maternity Hospital Thapathali. The case was complicated but the doctor did a successful operation. Unfortunately, my uterus burst and after some hours the newly born child also died.

Following that incident, I rested for some months and again continued to work as Safa Tempo driver. My driving profession did not allow me to take food in time and as well could not maintain required bodily nutrition or balance diet. I could not care take my health because no women friendly working environment existed in this type of work. All these contributed to deteriorate my health. I got headache, high blood pressure, my body started to swell and then I have got trouble of sever body aching. Then I quit the driving job.

After resting two years, I started working, but my health condition could not improve. These days, I work as substitute of my colleague those who are in trouble. Doctor told me, because of my profession my health conditions got worsen.

During my active driving life, I have two unforgettable (sorrowful and funny moments) incidents. It was the time of emergency under then king Gyanendra regime. The general instruction was that none of the vehicle should stop in front of the army headquarters. One day a passenger asked me to stop in front of army headquarter, I did not stop the vehicle. Immediately he slapped. Up to sometime, I could not control myself thinking what wrong I committed by following the State general rule. I could not figure out and furious, I slapped him back. Police took me to the Baneshwor Police and beat me. I also informed to the union and the union rescued me from there. I came to know that the passenger was police sub-inspector I was expecting that police will parse me because of respecting the State law and order. Unfortunately, the In-Charge of that police beat was his brother. They kept me in the police custody three hours and police showed their tyranny instead praising me. Anyway, with the pressure of Union I was released after three hours.

Another incident was funny to tell you. I used to wear shirt, trousers and cap. In other words, I looked like a man by my getup. It was a cold morning, when a woman passerby came towards my vehicle. I called her in Nepali Janeho Baina (would you like to go). I was really calling my passenger. But one can interpret that (Janeho Baina by a driver) differently. It can be a very humiliating to a sober woman. As being a woman, my pure intention was seeking only passenger, but because of my getup, she slapped me with her slipper, thinking that male driver rudely tease her. I told truth. All the passengers laughed at the incident all the way from Kalanki to Sundhara. It was really a funny incident in my life.

the precaution needed during menstruation time, pre and post delivery period. As a result the issue of reproductive health is not found seriously taken even by the female workers themselves. It is also known that many females hesitate to disclose their disease due to ignorance or fear of losing their jobs. However, they treat confidentially.

Type and Frequency of Accident in the Workplace

No single workplace is free from accident though the type and rate of accident varies greatly by sector of employment, the nature of work and workplace environment. The rate of accident also differs by the nature of production, management efficiency and accountability, awareness of the workers, etc. The lack of coordinated efforts has led to serious occupational hazards. The most common hazards in the workplace are industrial injuries, accidents, mechanical and chemical hazards and psychological hazards.

The workers of the selected workplace for the study have reported minor accident (cut hand by knife, pricked by needle) to major accidents (fracture, burn, injury at different parts of body by various reasons, death). Cut and wounds, fall down, fracture, electric shock, press and cut by machine, press by heavy load of goods, etc. are some of the accidents frequently occurred at the workplace. Major accidents happened occasionally in the risky workplace. A few cases of death have been reported. Burn, eye and skin damage while handling acid are other types of accidents experienced by the women involved with chemical handling. In general opinion garbage cleaning sector is considered safe and low risky work place from the point of view of accident but the workers of this sector

working in the street (known women's works) are suffering from frequent accident by vehicles in the morning time (especially during winter) where fall down from the tree (while trimming it) is another problem reported by cleaning workers. Fall down from the construction site, electric shock is the specific accident faced by construction workers. Besides these females involved in marble and chips are normally compelled to carry heavy machine and become the victim of reproductive health - from excess bleeding to prolapse. Usually, transport workers suffer from road accident due to break fail where indirectly they are facing a lot of reproductive health problems caused by road condition. Compared with other sectors, Hotel and Tourism sector is comparatively safe work place, though they are not free from risk of accidents. In this context it is said that hazards associated with technology (equipment, substances and process) at the worksite must be identified and effective measures taken to eliminate/control them.

On the basis of the cases reported by the health clinic of the enterprises it is known that the OSH situation in the factory is poor. For example - Arihanta Multi Fiber Industry (Jute Industry) is a large (with more than 3000 workers) and heavily equipped in Nepalese context where 31 cases of accident (Minor 16 and 15 referral case such as fractured and cut accidents) were reported in a month just before the field work.

Major Causes Responsible for Diseases and Accidents

One or more factors aggravate the incidence of disease and accidents in the workplace. The causes differ in one sector to another and one job to another. The major causes are the ignorance of workers and employers

and the negligent efforts of the government. The major causes responsible for diseases and accident reported by the participants of the discussions were: violation of safety rules, congested workplace, unsecured workplace, carrying heavy load, lack of awareness among workers, carelessness both the workers and management, unsecured/old machine or equipments, poor layout, unavailability of the safety equipments/tools as necessary, low standard tools, unsuitable working condition and use of low quality raw materials. Likewise, lack of training, lack of inspection, supervision and monitoring, resource constraint (human and financial), oversight of facilities (joshi, & dahal, 2009, Carter, 2010) are also the important factors responsible for high incidence of disease and accident in Nepal. According to the transportation workers, one of the major causes of road accident is the issuing of license by the concerned authority without fulfilling the required norms. On the other causes of road accidents reported by the concerned workers were: lack of traffic discipline, congested and low quality road, public carelessness, free movement of livestock and birds, grain drying (especially wheat) in the road are some of the causes of road accident. Different stakeholders reported that the OSH issue has given less priority by all where the occupational diseases are given further less emphasis in the trainings but needs to be given preference to the OSH training to all workers.

Effects of Occupational Diseases and Accidents

Occupational accidents and diseases not only cause great pain, suffering or death to victims, their family members and dependents but also threaten the lives of co-workers. The victims and his/her family suffer from social problem along with the economic trouble. Social problem

arises mainly caused by hearing problem, practice of speaking loudly, deafness and other disability. The social cost of the accidents and sickness caused by work no longer is tolerated as the inevitable price of progress. Reducing to toll of occupational accidents and diseases has obvious implications in terms of the alleviation of human suffering. On the other the economic costs place a considerable burden on the competitiveness of enterprises. It is estimated that the annual losses resulting from work related diseases and injuries, in terms of compensation, lost man-days, interruptions of production, training and retraining, medical expenses and so on usually amount to over 4 percent of the total gross national product (GNP) of all the countries in the world (Ali, 2001). This amount is very high and can be saved while focusing on preventive method by both the workers and management. Therefore it needs to be given high priority to control diseases and accidents to reduce the cost. The investor always needs to think on the economic benefits of a safe and healthy working environment. To reduce the human suffering and financial loss associated with these risks, there is a need for increased and sustained action to improve the OSH situation and the working environment. The suffering in terms of human life is huge, while the economic costs of the failure to ensure OSH are so great that they may undermine national aspirations for sustainable socio-economic development. But in Nepal no study is undertaken considering the direct and indirect cost associated with diseases and accidents.

Cost of Ignorance to Bina Magar

I am Bina, born in Dhading and married with a Gorkha lad at the early teen age (15 year). When I was 18 year, I got my first child. My daughter is now 13 and son is 8 year. They are studying in grade 8 and 4 respectively at the private boarding school. Both of my children are born naturally. Now, I am 30 years of age.

After some year of the first child, I started to work in the Pasmina factory near Pashupati area. There, I was involved in Phurka Batne (twisting the shawl frill). I worked there for three years. At the time I was staying at Balambhu and the working place was far away and it cost me a lot for bus fare. One day, I was sharing my problem with one of the didi (sister) who also worked at the same factory. Luckily, her younger brother was working in this factory which is closer to my home. I made contact to the didi's younger brother. He introduced me with the Manager. Management gave the same job what has been done in the first Pasmina factory. I was really happy at that moment because of saving time and money.

In this Pasmina factory, I continued the same job for three years. Then I got very bad allergy in hands due to my job. I told my problem to the Manager, and the management shifted me in the washing department. For more than 7 years I have been working at the same department. I and one of my friend worked hard and lifting a very heavy load of washed Pasmina to finish the given job quickly. Being a woman, we did not care of lifting heavy load during pregnancy, even at the time of pregnancy and the menstruation period. We were not aware of the consequence of lifting the heavy load in such critical time because of our ignorance. I don't remember the exact time, but after some years of working in the washing department, I got mild lower-abdominal pain. When I felt pain, I used to take pain killer medicine. But such medicine usually works for some time.

I used to consult a doctor at Maternity Hospital-Thapathali, the doctor used to give me some medicine when I visited there. The doctor never said anything; neither had I asked the cause of my pain. Gradually, the pain became greater than before, thus I visited doctor at OM Hospital-Chabahill about three month ago. She checked thoroughly, and asked what I was doing. I explained my job of lifting a heavy load. She told me that there is some wound in the uterus and my uterus is also dislocated which caused my abdominal pain. She did all the checking and prescribed some treatment. I visited three times for the treatment. The doctor strongly suggested me not to lift the heavy load. I shared all this with my friend and the management as well. But my friend told me that I should not lift the heavy load. Since then, I am working at the washing department. The doctor consoled me that the problem was not at the very alarming level, but need a good care and serious precaution. She further suggested me that if I continue lifting heavy load, the problem would certainly be aggravated. I am planning to visit the doctor in the next month and I will certainly follow her suggestions strictly for the improvement of my health. I never asked for treatment expenses with the factory.

Provision of Medical Facilities and Compensation

There are different practices regarding the medical expenses and compensation to the workers for the occupational diseases and accident. All the formal sector establishments claimed that they are providing medical expenses and compensation as per the Labour Act where some said, they are providing more than that of the Act. In few formal sector workplace management is providing round the clock medical services by employing Para-medical staff. In majority of the establishments management has provisioned first aid treatment facility to the minor diseases and accidents where they bear 50-100 percent medical expenses against the bill provided by the prescribed hospitals in major cases. Management also complained that workers are normally

used to visit pharmacies and paramedical staff and took the medicine on their advice even though the institute has managed medical facility to their workers in the hospital.

In case of major diseases and accident the victim rushed to the nearby hospital or pharmacy by the management themselves and bears the total hospital expenses. Some of the workplace at organized sector kept either ambulance or other vehicle for emergency to fetch the patient to the hospital. Some of the workers claim that the prescribed hospital is far from their workplace and could not visit there immediately where it will be dearer to visit the hospital while calculating transportation cost and time. Thus workers have demanded to prescribe hospitals or clinics nearer to the workplace for their welfare. It is also found that in some of the workplace regular medical check-up facilities are available within the establishments by specialized medical personnel. The facility is not enjoyed by all the workers because of fear of disclose the disease with their coworkers or fear of losing their jobs. Some establishments have practiced to refer their workers to visit in the hospital that they have agreement where they can get medical facilities at discount rate. Mostly, medical expenses and compensation is covered by the insurance which is compulsorily done by management to the permanent workers in some of the establishments where causal and temporary workers are deprived from such facilities. But in the informal sector there is neither provision of medical expenses nor compensation. All the costs should bear by the workers themselves including first aid.

In formal sector employment, there is a provision of 52 days maternity leave (two times in service period). Likewise, lactating women are

getting half hour time for breast feeding to their children during work time for one year. This facility is enjoying only by the women residing near the workplace. Likewise, women during their pregnancy have shifted to the light work as they inform to the management. But there is no any concession during menstruation period where female workers themselves do not take it seriously.

It is also known that workers involved in the same type of work in the enterprises under direct administration or under contractor have heavily discriminated. For example, B. P. Koirala Institute of Health Science, Dharan is providing medical facilities and compensation as per the rules of the institute to its directly appointed garbage cleaning employees whereas in the same institute workers employed by the contractor for the same are deprived from the facilities. Construction workers being informal sector employees are fully deprived from such facilities. Neither the contractor nor the owners of the construction sector provide medical treatment, compensation and leave facility. Recently, few cases were addressed only by the strong pressure of the trade union but not mandatory in the absence of law. However, females of this sector are found optimistic and have courage to establish the facilities in this sector though it takes time.

The transport workers can get medical facility when she encountered accident. But if they suffer from other diseases and illness, owner or the management expel them from the job instead of providing the medical facility and services. Among the workplaces under survey hotel and trekking sector is better providing medical facilities and compensation to address OSH in the establishment.

In the formal sector establishments where the provision of insurance is not available they are providing cash compensation in case of death of their permanent workers. In those sectors covered by the Labour Act management is also providing salary to the workers victimized by the occupational diseases or accident during work only attending or doing work that is suitable for them up to reasonable period. They have also the provision of employment to one of the dependents of the victims as per the qualification and skill in case of worker's death or disability due to work injury. Provision of paid leave for the reasonable period as per the act is also provided by the management in the formal sector.

It is also learnt that in some of the workplace concerned trade unions and management have organized health camp but the participation of the workers is not encouraging while in many places it is found positive. Thus the nature of the workers and workplace is also determines the use of available facilities.

Knowledge of OSH and its Status

Awareness of workers about occupational safety and health depends on the nature of workplace. In all the workplace under study the workers had some knowledge of OSH though it varied greatly from one establishment to another. Informal sector workers have little knowledge compared to the formal sector. On an average only about 10 percent women have slight knowledge on OSH in Kathmandu valley where such knowledge is insignificant outside the valley despite various efforts made by the government, trade unions and employers. Among them majority have got the knowledge from training conducted by government, GEFONT as

well as NTUC (I)/ GEFONT Board while others have got it from replication from the co-workers. This shows, replication part is very weak in all the workplace in Kathmandu Valley while it is almost nil in outside valley. The major cause having no knowledge regarding OSH is lack of interest of the workers themselves which is accepted by the workers, union activists and their management. The key concern of the workers is only on the immediate monetary benefits. Almost all employers have also only little knowledge on this issue and are not much cooperative to replicate the knowledge to the workers on the one hand and on the other women workers could not manage time to replicate the knowledge gained from the OSH training due to work burden in the house and outside. The situation demands intensive training and awareness campaign covering both the workers and management in each workplace. Taking in confidence to both the stakeholders (employees and employer) provision of replication should make mandatory to the workers who benefited from it. At the same time environment for replication should be created to all.

Workers has blame that their management is not cooperating to disseminate their knowledge obtained from training at the workplace but management had denied to accept the blame regarding workplace situation and OSH though they accept there is a lot to improve to reach the ISO standard. Some of them committed to provide logistics in the factory to organise training without hampering the work but denied to provide allowance to the trainee workers.

The situation of OSH in Nepal has been improving over the time because government as well as trade unions has been conducting OSH related

training programs to make the workers more aware on the issue. In a few sector some of the international project have also started intervention to improve the OSH situation.

Availability and Use of Personal Protection Equipments (PPE)

To save the workers from the occupational diseases and accident proper use of personal protection equipments are recommended. But in the workplace neither the workers or their union activists nor the management are serious on this issue. This research revealed that most of the women workers have little knowledge about the safety equipments which can prevent from diseases and accidents at the workplace.

In some workplace management has provided some of the equipments (mask, eye glass, gloves, boot, safety belt, helmet, head cap, air plug/mask/mug, apron, etc.) but mostly workers disliked to use them or misused pretending differently. Nonetheless, workers have an obligation to use and take care properly the PPE provided by the management. As a result administration did not provide such PPEs later on. Employers also accepted that they could not compel to their workers to use necessary safety equipments due to various reasons. In some of the establishment management had given cash to the workers to purchase certain protective tools that needed for their safety. Despite the managements' encouragement, workers did not use and not interested to use them. Lack of awareness and felt-inconvenience by the workers are the major causes not using them as reported by the workers themselves. The PPEs should comply with the standards set by the competent authority and ergonomic principle into account. But as of the workers and trade union

activists, most of the equipments provided to the workers are of low quality without any quality check and management is providing the same for all workers which are not practicable. This is partially accepted by the concerned management.

In some of the enterprises workers said that they have demanded verbally for the necessary safety equipment with the management, but they get mixed response. In this connection while analysing the 261 written demands submitted to the management by trade unions, only 9 percent are related directly or indirectly on OSH showing less preference on this issue. Workers of some enterprises said that they have no specific OSH related demand (medical treatment, ambulance facility, first aid, regular health check up, sick leave, etc) in their demand sheet but frequently they are verbally demanding (individually or in group) with concerned authorities in the establishment. Likewise, some of their demands are related to workplace improvement but the management did not fulfil, despite their assurance time and again. In some of the establishment workers union have demanded mainly preventive method where management has taken it positively and improving gradually. This situation indicates that OSH issue is not in the priority of the workers and their union where management is also not taking it seriously.

The workers working under the contractor are not receiving any such equipment and compelled to manage themselves when needed. As of the workers under such provision did not use the PPE because they could not afford them.

Normally, construction workers working individually in the private household or with contractor have to manage the needed PPEs themselves while those working in standard construction companies the company provide such equipments to some extent. Only very few transport workers use mask, eye glass, etc., purchasing by themselves. Most of the young transport workers do not care about OSH related issues which may cause long term negative impact on their health. When they become old all OSH related complication appeared. In some enterprise management said they are providing PPE to the workers as suited to their job nature where workers and trade union activists accepted it.

In majority of the enterprises, trade unionist, workers, health personnel and management have expressed more or less same view regarding the availability and use of such equipments/tools. In some workplace workers blamed that the given PPE were sub-standard, it created a lot of problems rather than save them. So they were not interested to use them.

The workers are also facing the problem of organised place to store the PPE as well as the tools that the workers are using regularly in most of the establishments. In many workplaces it is found that works themselves were carrying small equipments with them or keeping one or the other place in the factory. This is another example that the management and workers are not bothering on the OSH issues.

Knowledge of Government Policy and International Provisions

Only a few women workers were found aware on the provisions related to OSH incorporated in the Labour Act, Constitution, development plans, etc. Trade union leaders were also not fully aware on it. But no women workers know the ILO Convention 155 concerning occupational safety and health. Even the management are also not aware about all the provisions relating to OSH in the national laws and acts as well as international commitments. In a limited workplace in formal sector have formed Joint Security Committee to resolve the problems associated with OSH issues but they are functionless due to frequent change of the concerned authorities of the establishments. Although no single institutions have such committee in informal sector. This also clearly reflects that no or less importance is placed to the OSH issues by both the workers and employers.

Suggestions for Future Improvement of OSH Situation

Establishing effective OSH policies by coordinating with all the stakeholders for both the preventive and protective measures are equally important. All the stakeholders have to bear their responsibility honestly and effectively. The responsibility of governments, employers and workers should be seen as complementary and mutually reinforcing to promote occupational health and safety to the greatest extent possible within the constraints of national conditions and practices.

Majority of the workers accepted that there is some improvement in the OSH situation due to frequent pressure of the workers. However,

some have argued the working environment as well as OSH situation has further deteriorated over the years. It is understood that the issue can not improve taking interest only by one among the concerned stakeholders. All the works and their unions, management of the enterprises and government have to initiate positively. In addition to it, the role of public is also felt important in some cases. In this context, the workers participated in the discussion as well as management team have suggested following responsibility to be taken by the concerned stakeholders.

Workers

In order to take care of their health and safety workers themselves need to understand the direct and indirect cost of diseases and accidents occurred due to work. To prevent from such hazards they need to carry their work more safely. To make the workplace more safe and healthy workers have to cooperate to the employers/management and they also fully participate in the programs that help to prevent or minimise the risk. The responsibilities of the workers are listed as:

- Need to take precaution knowing the preventive method well regarding their safety and health.
- Seek awareness programs on the issue through the unions, respective management and government.
- Use the PPEs whatever provided by the management properly and demand collectively such items as necessary.
- Cooperate to the management to make the workplace more clean and healthy.

- Inform the management for the necessary improvement of the workplace, work environment, maintenance of the machine and equipment regularly.
- Actively participate in the OSH training conducted from any institution and use the knowledge to improve health and safety on the one and try to replicate the knowledge among the co-workers in the enterprises/workplace.
- Give high importance to OSH issues and pressed the trade union activists to incorporate OSH related demands (safety tools as well as improvement of the workplace environment including reproductive health) in their demand sheets.
- In order to gain facilities from the employer, workers need to be aware on their rights mentioned in the Labour Act. But never forget the duties while demanding rights.

Trade Union

Labour unions in Nepal are largely guided by political interests and act accordingly to their political organisations that hamper their effective coordinating efforts to the cause of work related problems. As a consequence the concept of OSH also remains in less priority to the trade unionists. In this context the respondents of this study suggested that

trade union activists have to cooperate to the employers/management to implement the programmes that help to prevent or minimise the risk at each workplace. According to them trade unions have to focus on:

- Extend solidarity to the workers movement related to OSH issues.
- Conduct awareness program related to OSH issues and make the workers aware on the possible diseases and accidents as well as suggest precautionary measure to be taken.
- Conduct/manage awareness raising and training programmes frequently on OSH to both the workers and management focusing on their rights and duties, because these are the two side of a single coin for healthy working environment.
- Persuade the management for properly implementation of OSH issues at least provisioned by the national laws.
- Coordinate between workers and management to conduct OSH training and lobby for better facilities.
- Motivate workers on the importance of PPEs and their proper use and pressure to the management to provide quality equipments as the necessity of the workers.
- Lobby strongly for the implementation of existing Labour Laws.
- Launch campaign and advocate for better working environment at all workplaces.
- Advocate for specialist health services conducting health camp and ask with management to set for regular health check up system at the workplace.
- Urged OSH training participants to replicate that for their fellows.
- Persuade the owner and or contractor to provide PPEs or pay some extra money for the provision of them.

Management

It is the responsibility of the employers to ensure the safe and healthy working environment that prevent and protect from occupational hazards. At the same time they have to involve to aware the workers on health and safety issues including the measures of protection in the respective organization. Normally it is blamed to the employers that they are profit oriented and the obligation of providing safe working conditions is often overlooked making workplace and working conditions hazardous. In this context the major responsibilities of the management has to improve workplace as healthy and secure to make the blame invalid by taking following suggestions positively.

- Employers should scientifically manage the waste produced from the enterprise.
- Make aware on OSH issues and educate on importance of using the PPEs to the entire workers at pre and post recruitment in the establishment.
- Carry out regular maintenance of workplace, machine and structures.
- Reduce risk by providing quality tools as well as fixing modern equipments at the workplace.
- Spare reasonable space for the plant as the nature of work and improve working environment to prevent workers from occupational diseases and accident.
- Manage properly electric wiring in order to prevent electric shock or leakage.

- Provide non-hazardous work to the pregnant women worker as well as maternity leave and benefit at least mentioned in the Labour Act.
- Provide standard PPEs as the nature of the work and make it mandatory if the workers are not using them voluntarily.
- Conduct OSH training programs regularly by coordinating with concerned stakeholders/agencies to make sound work environment and focus on replication of the knowledge gained from such training.
- Improve the first aid treatment facilities, manage regular health check up facilities at workplace from the specialized health workers.
- Necessary provision should made for medical treatment at nearby hospitals and introduce health/medical and accident insurance of reasonable amount to cover all risks without any discrimination.
- Introduce reasonable and scientific mechanisms of compensation.
- Provide pure drinking water as and when necessary at the workplace. Make provision of more clean and comfortable toilet facilities.
- Provide dressing room to change dress, rest room to take lunch and tiffin as well as to take rest in resting time and dove pigeon-hole to keep safety equipment and uniform/apron.
- Management has to provide opportunity of promotion for women workers those who deserve it.
- Respect the existing Labour Law.

- Introduce record keeping system related to OSH in the establishment effectively.

Government

Normally government is responsible for formulation and implementation of OSH policies. Such policies needs to reflect in the national legislation and that must be effectively enforced. For this purpose the government has to do as:

- Provide resource support to conduct the OSH training and awareness programs to the workers' union and management of the establishments.
- Instruct to all the establishments to conduct awareness campaign compulsorily and provide OSH training to the workers, trade unions and management combining together or separately so as to create better workplace environment focusing on the importance of PPEs to all workers as well as the provisions of OSH in the Labour Act.
- Introduce appropriate OSH provisions in the constitution and laws as a fundamental right of the workers.
- Introduce frequent and effective monitoring and supervision mechanism by improving present inspection system covering both formal and informal sectors and provide suggestions for further improvement.
- Implement the existing provisions of Labour Law's on OSH and amend/improve policy, law and act according to the changing context and force the concerned partners to implement them.

- Ratify ILO Convention 155 relating to Occupational Safety and Health and introduce its provisions in the workplace effectively.
- Provide discount on medical treatment to the workers at least in government hospitals and reserve some beds for workers in the hospitals.
- Act positively to establish separate hospital or section to the workers as for the military, police and government employees.
- Provide priority to OSH issue establishing a separate OSH department under the concerned government ministries.
- Instruct to introduce systematic record keeping system on OSH related issues in all establishments.
- Prepare a list of standard OSH tools and compel to the management to provide such tools to their workers as required for different workplace and nature of job or nature of work and hazards.
- Make sure for medical as well as accident insurance of all workers in all the establishments.
- Enforce the management to form Joint Security Committee in the establishment.
- Start registration of the workers at the local bodies and provide identity card to the workers.
- Introduce OSH promotional activities and launching programs for reward and punishment system.

Institutions/General Public

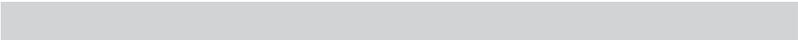
- Separate infected and non-infected, degradable and non-degradable garbage and put them accordingly.

- Honor the workers as a core element of development being an important factor of production.
- Mandatorily mention the role and responsibility of contractor and owner in relation to the provision of OSH while granting permission to build house/big building complex by the concern authority.
- Have a sign contract between contractor and owner to delineate the responsibility on the use of PPEs and concerning the use of health and accident insurance.

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CHAPTER V

**Summary, Conclusions and
Recommendations**

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Summary

Nepali economy is still characterized by dominant agricultural sector though employment is declining gradually. Industrial sector is not gaining momentum despite various efforts since the Rana regime. The position of service sector, construction, transportation is progressively increasing even though the role of industrial sector is not satisfactory. In addition to manufacturing sector, hotel and tourism, garbage cleaning, transportation and construction are the most important source of non-farm employment for the workers of different skill categories because of rapid urbanization as well as construction of physical infrastructure in the country. The garbage cleaning profession has traditionally been limited to certain caste but now this sector has also attracted people from different communities.

No workplace is free from risk. It can be prevented or minimized through necessary control interventions which not only protect workers from disease and accident but also limit the damage to the environment related with industrialization. The theory related to health and safety of workers is widely known as OSH where this concept is still new in Nepal. Today, the issue of OSH is talked in all types of works and enterprises though the degree and nature of risk, danger and hazards differs greatly. This study is based on both the primary and secondary information. Primary information is collected from six sectors covered by the '3F Project' i.e., food and beverage, textile and garment, hotel and tourism, garbage cleaning, transport and construction. The study is based on 12 establishments six from Kathmandu Valley and the rest from outside Kathmandu Valley. Secondary information is obtained from the web

sites along with the articles and published and unpublished reports, books and other relevant sources.

Appropriate legislation and regulations, together with adequate means of enforcement are essential for the protection and promotion of health and safety of workers in any sector. The law directly regulates certain components of working conditions and the work environment including occupational safety and health. Labour Act has incorporated some provisions related to the workplace environment, provisions to make the workplace safe and healthy, occupational diseases and accidents and the facilities to be provided to address the illness and accidents caused by work in particular enterprise. But on the one its coverage is limited and on the other implementation part is very weak.

To make sure of the legal provisions concerning OSH, the working environment should be secured by an adequate and appropriate system of inspection. In Nepal, the inspection system has suffered much due to lack of strong commitment of the government. According to the Department of Labour on an average one inspector has to cover more than 300 manufacturing enterprises along with the regular administration of his/her office, which is impossible. Large numbers of establishments operating have not been recorded in the inspection register. Thus the Labour Office has only fulfilled inspection work as ritual. Hence the government has to take necessary steps to reform its organizational structure.

Recently, Nepal government has also incorporated the OSH issue in its plan documents and set some strategic programmes and visions to make

workplace safe, healthy and productive by promoting and developing occupational safety and health as an integral part of all the industrial enterprises and workplace where progress is not satisfactory.

ILO Convention 155 on occupational safety and health and other Conventions together with their recommendations have mentioned elaborately the workers safety and health where Nepal government has not ratified the core convention and other supplementary conventions related to OSH. This indicates that government is not serious on this issue.

In order to minimise the occupational disease, health hazards and accidents a sound workplace is a prerequisite that can be maintained through proper management of light, sound, ventilation, temperature, space, regular maintenance of the machine and equipments, emergency exit, provision of safe drinking water, etc,. The status of availability and use of personal protection equipments (PPEs) and workers' exposure to hazardous substances also play significant role. Enforcement of existing policy found weak due to its less priority to make the structure robust. Employers and employees accepted that they themselves know their workplace could not maintain as needed because government policy and practice is not OSH friendly. Some of the management personnel were expressed their high sensitivity and cooperation to improve OSH issue whereas mostly workers are not fully aware on the issue.

Conclusions

The issue pertaining to occupational safety and health are in infant stage. Department of Labour under the Ministry of Labour and Transport Management is the apex body in the labour administration and mainly function in policy level. The safety and health provision under the Labour Act 1992 are enforced by the limited number of Factory Inspector of labour office that they are unable to inspect regularly. Thus, the inspection and regulation is not being sufficiently able for establishing a sound OSH condition.

It is estimated that each year approximately 20,000 workers suffers from accidents at workplace which lead to about 200 lives lost in Nepal. The inspection, record and monitoring of OSH related activities and the policy formulation and implementation are very poor in industrial sector where informal sector is not covered by the provision. Therefore, sufficient research, development and recording of OSH issues and their proper management is the current need of the country for establishing safe, environment friendly and hazard free work and workplace in order to increase labour productivity, efficiency and overall development of the country.

The major obstacle to instilling the concept of OSH in Nepal lies inability of stakeholder to grasp the utility and importance of OSH. Occupational safety and health procedures require adequate surveillance of the work environment and risk assessment both of which are missing completely for most enterprises in Nepal even in those claimed international standard by themselves. Industrial enterprises have failed to develop

the infrastructure necessary for effective implementation of OSH and no effort have been made from the side of establishment to provide education and training on the issue to its workers (where women workers suffers much) and managers. It is noteworthy that initiatives to delivery OSH have remained limited and replication practice is almost nil. At the same time inadequate legal system, poor implementation and resource constraint are also the major constraint for the effectiveness. It is not possible to develop the workplace safe and healthy without strong commitment and coordination of all the stakeholders.

Recommendations

The task of providing OSH and maintaining a safe and healthy work environment is not easy. It requires a sincere and coordinated effort of all stakeholders. Workers need to be empowered to advocate for improved working conditions. They should be informed and educated on occupational grounds for an effective occupational response through their meaningful participation. Workers should also be informed of their rights concerning their working conditions. They should be informed and educated on occupational hazards along with their rights through their meaningful participation. A mechanism is required for their holistic transformation so that they are able to participate in planning and decision-making concerning OSH in addition to other aspects of their work. Employers should be made to understand their responsibility for workers' safety and health and they should honour this obligation. It is also necessary to make them understand hat OSH is an investment that is likely to result in motivation, job satisfaction, a good ambience and increased responsibility on the job. This chain of events will ultimately

trigger qualitative and quantitative product increments, solidarity and a sense of ownership among all.

Government agencies also need to be encouraged to develop a special national framework, policy and programmes for occupational health, including actions for providing OSH for all people at work. It has to be understood that occupational health and safety, socio-economic development and the quality of life and well-being of working people are intricately woven, interlinked fabrics. Specifically, based on the discussion with the female workers, trade union activists, employers, health personnel and related government authorities the OSH situation in the workplace can improve adopting the following recommendations.

- A detailed national level study covering more sectors, establishments and geographical areas is needed to find out the real situation. In this context, sector- wise study is more appropriate because the risk vastly differ one sector to another. The government has to initiate such work seeking cooperation from other stakeholders through independent scholars.
- Awareness and education campaign as well as effective training programmes on OSH issues and their role and responsibility should conduct for the workers and management covering all the workplaces in all sectors that helps to reduce the risk. Without educating both the workers and management on the importance of OSH issues, it is very difficult to improve the workplace. At the same time, the policy makers and decision makers also needs to be educate suitably on this issue. Focus

should be given to women workers while selecting the target group of training and education programmes realising their additional health problems. In this context, all the three partners of industrial relations should initiate and co-operate each other to make the workplace healthy and safe. It helps to the workers to prevent from probable hazards and increase productivity.

- Along with the campaign or support to the awareness, education and training to their workers the management needs to provide necessary PPEs and maintain safe workplace by adopting the appropriate measures to minimize the health hazards.
- It is necessary to develop effective inspection mechanisms by following official process involving all the stakeholders and experts and supervise the establishments regularly at least twice a year through changing the current organisational set up of the labour offices and employing appropriate labour inspector as per the number of establishment. Their knowledge should updated providing training and retraining facilities and chances of promotion as their incentive. Also develop a high level control mechanism through regular supervision and monitoring the task of the labour office. The Zonal Labour Office has also to oversee the informal sector as well.
- The provisions of OSH should be developed as a working culture and prerequisite for work rather than fear of punishment and penalization under the law. A separate OSH Act should introduce discussing with concerned stakeholders and experts

or there should add more provisions amending current Labour Act.

- In order to minimize the health hazards the role of the Joint Security Committee is important. Thus government has to make mandatory provision of formation of such committees in all workplaces with effective mobilization.
- The management/employer is the sole responsible for the treatment and compensation against occupational diseases and accidents. Thus government should compel the employers to medical and accident insurance of reasonable amount to the entire establishment covering all workers whatever may be their status.
- Generation and release of harmful agents in the work environment as well as all types of hazards can be prevented or eliminated applying adequate hazard control interventions which not only protect workers' health but also limit the damage the environment associated with the industrialization. Thus educate or pressure the employers to adopt such interventions.
- There should be a strong cooperation between employer and trade unions to ensure good OSH performance that will be benefited to both the stakeholders (to maintain the health to the works and increase productivity to the employers).

- While sending the participants to the OSH training programmes conducted by any institution, the trade unions and establishments should not be sent the same participants repeatedly. And there should be a compulsory provision of training replication at their workplace by the beneficiary of the programme. While selecting the participant priority should be given to women workers because they suffer more from occupational diseases (including reproductive health) and accidents rather than men.
- Trade unions should be a pressuring body to formulation and implementation of OSH provisions effectively in the workplace maintaining good relation with the management in all sectors and workplaces.
- It is necessary to develop an effective mechanism of regular health check up system through specialized health personnel to all workers working in any sector and places. The government also starts to think to construct a separate hospital to the workers as for the civil servant, military, police or make a provision of reservation and discount in any government hospitals from district to national level.
- In order to improve the reproductive health condition of workers minimization of stress, adequate rest and nutritional food are essential. Thus the management has to create sound working environment prior, during and post pregnancy.

- The study reveals that there is no coordination between the government institutions and other organizations concerned with the labour issues. Therefore, there should be a strong coordination and cooperation among the institutions (government and non-government) directly or indirectly associated with the OSH of the workers.
- A mechanism of compulsory registration of worker at the local bodies should introduce immediately and provide identity card to the workers that helps to provide benefits related to OSH.
- While granting permission to construct any infrastructure, the concerned institutions should compulsorily mentioned the role and responsibility of contractor and owner in relation to manage and use of personal protection equipments, medical and accident expenses and compensation in a written form in the informal sector as well.

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