

# Status of Occupational Health and Safety in Nepal: Current Scenario and Strategies for Improvement

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**Abstract:** Occupational health is a vital aspect of public health that aims to ensure the well-being of workers in various occupations. It encompasses multiple academic fields, such as occupational medicine, nursing, ergonomics, psychology, hygiene, and safety. Despite global efforts to improve occupational health, access to occupational health and safety (OHS) services remains low in many countries, including South Africa, Zimbabwe, Zambia, Botswana, China, and Nepal. This review paper was conducted through an extensive literature review. Databases such as Science Direct, Springer, NepJol, PubMed, and Google Scholar were searched to access a wide range of scholarly articles, research papers, and reports. The findings reveal that occupational workers face various hazards, including exposure to infectious diseases, radiation, hazardous chemicals, noise, and psychosocial risks. In Nepal, workers in industries such as agriculture, construction, and brick manufacturing are particularly vulnerable to these hazards. Lack of proper safety measures, inadequate access to clean drinking water and sanitation, child labor, and physical strain contribute to the high incidence of work-related diseases and injuries among workers. The study also highlights the policies and initiatives undertaken by the government of Nepal to improve occupational health and safety, including the Labor Act of 1992, the Occupational Safety and Health Project, and the Nepal National Building Code. The study emphasizes the urgent need to improve occupational health and safety conditions in Nepal. It highlights the importance of implementing preventive measures, raising awareness, providing training and education, and establishing standards to protect the health and well-being of workers.

**Keywords:** *Developing economies, Nepal, Occupational health, Occupational safety, workplace hazards*

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## 1. Introduction

Occupational health is an area of work in public health that aims to promote and maintain the highest degree of physical, mental, and social well-being among workers in all occupations (Rantanen & Fedotov, 2005). According to the International Labour Organization (ILO), every year, around 2.3 million workers face life-threatening circumstances due to work related incidents and hence, occupational health and safety must be improved globally. In this context, numerous academic fields, including occupational medicine, nursing, ergonomics, psychology, hygiene, and safety, are involved in the science and practice of occupational health (Ahmad et al., 2016). ILO Convention on Occupational Safety and Health, 1981 (No.155), defines health in the context of work not only as the absence of disease or infirmity but also as the physical and mental elements affecting health that are directly related to safety and hygiene at work (Ales, 2018). The

World Health Assembly urges nations to create national policies and action plans, strengthen institutional capacities for occupational health, and increase coverage with crucial interventions for the prevention and control of occupational and work-related diseases and injuries. They ensure that occupational health services work in conjunction with other pertinent national health programs, such as those dealing with communicable and non-communicable diseases, injury prevention, health promotion, mental health, environmental health, and health systems development.

Workers' access to occupational health and safety (OHS) remains at extremely low levels worldwide. In this manner, the status of OHS in African countries like South Africa, Zimbabwe, Zambia, and Botswana is also no exception and continue to have suboptimal OHS structures and implementation. The improvement of worker access to such services in developing economies has been severely hindered by inadequate human resource capital, training, and education in the field of OHS (Moyo et al., 2015). South Africa, one of the technologically most developed nations in Africa, relies heavily on mining, farming, and industry as its primary economic sectors. Many workplaces in South Africa are hazardous, and occupational health and safety (OHS) has been a concern for the government, employers, and employees since the early stages of mine development (Hermanu, 2007). Although laws have improved in certain aspects, conditions often remain inadequate, and laws are not consistently enforced. The situation in Tanzania is also similar, where most Tanzanians do not utilize occupational health services, and they are not adequately protected by the nation's occupational health and safety regulations (Mrema et al., 2015). The condition of occupational workers is not significantly different in Asia. The study also emphasizes the need to adopt "best practices" from workplaces in China that view accidents as preventable, aiming to implement those practices throughout the country (Chen & Chan, 2010). Overall, the current status of OHS is not satisfactory worldwide which demands the immediate concern to further prevent the hazards related to poor OHS.

In the context of Nepal, industries, manufacturing units, hospitals, and infrastructure are all on the verge of development. Therefore, the safety and health of workers must be emphasized for sustainable development. In the present study, it was attempted to assess the status of occupational health and safety in Nepal, analyze the existing policies, and propose future strategies for the betterment of occupational workers. This study provides a comprehensive assessment of the current status of occupational health and safety in Nepal, covering various industries and sectors. We aim to highlight the status of OHS in Nepal in comparison to the global scenario, which have not been published anywhere to the best of our knowledge. This review paper aims to fill the knowledge gap by analyzing existing policies and proposing future strategies for the betterment of occupational workers in Nepal.

## **2. Materials and methods**

The main objective of this review paper was to enlighten the status of occupational health and safety in various professions in Nepal, including the available policies, and recommendations for further improvement. This review paper was based on a systematic research methodology. This review paper on occupational health and safety in Nepal was conducted by a team of authors collaborating through a research network formed by the Global Research Institute and Training Center. The systematic approach undertaken in this study ensured the thorough exploration and analysis of the occupational health and safety in Nepal.

The research methodology involved a systematic and rigorous literature search with an extensive review of 58 online research papers including journals, books, and reports using keywords such as "occupational health and safety," "occupational health Nepal," "challenges of occupational health," "global status of occupational health," "improving occupational health," "policy of occupational health in Nepal," and "government plans for occupational health." The authors conducted searches in well-known databases such as ScienceDirect, Springer, NepJol, PubMed, and Google Scholar to access a wide range of scholarly articles, research papers, and reports. These databases were chosen due to their reputation, and comprehensive coverage of scientific literature across multiple disciplines, including occupational health. The literature review served as the foundation for understanding the current state, challenges, and efforts related to occupational health and safety in Nepal.

## **3. Results and discussion**

### **3.1. Hazards related to occupational workers**

Occupational workers face various hazards that can lead to occupational diseases. For instance, the most common diseases among workers in the health sector include HIV/AIDS, respiratory infections, and tuberculosis, which can be contracted through occupational exposure to infected patients or contaminated equipment (WHO, 2010). Exposure to both ionizing and non-ionizing radiation, such as X-rays and UV radiation, is another significant occupational hazard in the health sector (Green et al., 2017). Workers may be exposed to radiation during medical procedures or while operating equipment. This exposure can have detrimental effects on health, including damage to the skin and blood, infertility, cataracts, birth defects, and an increased risk of cancer.

Occupational workers may also face hazards from exposure to hazardous chemicals. These chemicals include toxic drugs, pesticides, sterilizers, cleaning agents, mercury, latex, and laboratory chemicals and reagents. (Davies & Lowe, 1999; Virji et al., 2022) Prolonged exposure to these substances can lead to various health issues. For example, inhaling or coming in contact with dangerous substances in poorly ventilated areas can cause bronchitis, asthma, and lung cancer. (Witschi & Last, 2001) Implementing proper ventilation systems can help reduce the risk of contamination and remove airborne bacteria and viruses.

Noise exposure is another occupational hazard faced by workers. Exposure to noise levels above 85 decibels can lead to permanent and temporary hearing damage, while lower noise levels can cause annoyance, lack of sleep, and stress. (Jariwala et al., 2017) Inadequate access to clean drinking water and proper sanitation, as well as poor hygiene practices, can contribute to work-related diseases and injuries among workers (On'gonge & Ng'eno, 2022). Additionally, climate-related risks and improper handling of hazardous waste can further exacerbate these issues.

Psychosocial hazards also pose a significant risk to the mental health and well-being of workers. These hazards include workplace violence, stress, and sexual harassment. These factors can have adverse effects on the mental health of employees. Occupational health and safety issues are a major concern for employers. Unsafe working practices and illnesses that contribute to injuries are among the challenges faced in ensuring a safe working environment. The level of risk associated with these hazards varies based on the adverse health effects they may cause and the frequency of exposure. For instance, a single radiation exposure may result in different types of diseases compared to regular exposures.

Moreover, high workloads, long working hours, and physical strain can lead to musculoskeletal disorders (MSDs) among workers (Abebe et al., 2019). The use of hazardous chemicals, such as disinfectants and medications, further adds to the occupational risks (Carayon et al., 2006). Hence, these issues emphasize the need for effective strategies to manage and mitigate occupational health and safety risks, including implementing ergonomic measures, providing adequate personal protective equipment, and fostering a culture of safety.

### **3.2. Status of Occupational Health and Safety in Nepal**

Occupational injury, illness, and workplace facilities are important factors for public health concerns. Occupational Safety and Health (OSH) is a cross-disciplinary area concerned with protecting the safety, health, and welfare of people engaged in work or employment (Junevičius & Gelžinytė, 2009). According to the International Labor Organization (ILO), more than 2.3 million deaths per year occur because of occupational accidents or work-related diseases (ILO, 2015). In the context of Nepal, which is seeking rapid economic development, the health and safety of workers must be taken care of.

According to a study conducted on safety measures and hazards of pesticides used in agriculture and their effect on human health in rural areas of Nepal, it was found that exposure to pesticides leads to problems like headaches, muscle twitching/pain, chapped hands, excessive sweating, eye irritation, skin irritation/burn, weakness, respiratory depression, chest pain, and throat discomfort (Sharma et al., 2013). On a positive note, it was also found that most pesticide users followed protective measures such as wearing sleeved shirts and long pants while spraying. However, 15% of pesticide users did not use protective measures while spraying, which might have further aggravated the hazards (Atreya, 2008).

Moreover, many workers are exposed to respirable crystalline silica in different types of industries such as construction, mining, oil and gas extraction, stone countertop fabrication, foundries, and other manufacturing industries (Doney et al., 2020). Workers at risk of silica dust exposure may experience serious problems like lung cancer, chronic obstructive pulmonary disease (COPD), and autoimmune and other diseases. A study on exposure to respirable silica among clay brick workers in the Kathmandu Valley, Nepal, the mean worker exposures were highest for red brick loading/carrying (331 mg/m<sup>3</sup>), followed by green brick stacking (223 mg/m<sup>3</sup>), fireman (102 mg/m<sup>3</sup>), coal crushing/carrying (92 mg/m<sup>3</sup>), and green brick molding (71 mg/m<sup>3</sup>) (Sanjel et al., 2018).

The implementation of occupational health and safety practices in small-scale industries in Kathmandu has not been satisfactory. Child labor is found to be a major problem in those industries. A study among total 545 workers in ten industries under study, 135 (24.8%) were child workers (Joshi & Dahal, 2008). The majority of child workers (97%) were illiterate compared to 3% with primary-level education. Among the child workers, 23 (17%) were girls. The majority of child laborers were suffering from conditions such as otitis externa, otitis media, scabies, anemia, upper respiratory diseases, nasal problems, and abdominal pain (Joshi & Dahal, 2008).

Likewise, a study conducted by the International Labor Organization assessed the health status of children in the brick industries of Bhaktapur & Sarlahi and found the prevalence of diseases like musculoskeletal, respiratory, dermatological, stress, low self-esteem, and impaired social relationships (ILO, 2020). In this study, a higher percentage of child workers in Sarlahi (100%) had musculoskeletal problems compared to child workers in Bhaktapur (70%). Moreover, there was a high prevalence of anemia (43.7%) among girls in Sarlahi compared to those in Bhaktapur (26.6%) due to inadequate nutrition and high workload. Debilitating physical environments, difficult working conditions, and psychosocial stresses create a favorable ground for a high incidence of work-related diseases (Sundstrup & Andersen, 2021). Therefore, measures should be taken to improve the occupational health and safety conditions in Nepal.

### **3.3. Policies on occupational health and Safety**

Occupational health and safety have been issues of serious concern worldwide. Provisions and laws have been enacted to improve worker well-being and ensure employee safety and health (Shrestha, 2023). The Government of Nepal began prioritizing workers' health and safety after the establishment of multiparty democracy in 1990 (Adhikari & Maskay, 2004). The Labor Act of 1992 (2048 B.S.) was implemented to protect the rights, interests, and safety of employees working in industries. Sections 27 to 36 of Chapter V of the Labor Act of 1992 outline the Health and Safety Provisions for Businesses and Employees. These provisions cover areas such as modern hygiene toilets, regular access to fresh and clean drinking water, ventilated working rooms, appropriate light, temperature, and sound conditions, protection from dust, smoke, and fumes, the spacious establishment of rooms, and fire extinguisher facilities. The act also emphasizes the importance of regular medical checkups for workers in hazardous areas.

Special provisions for preventive measures are also in place, such as protecting workers' eyes from chemical hazards and fires, safeguarding them against dangerous equipment and large machinery, prohibiting heavy lifting, and enforcing precautionary measures when working with boilers and pressure plants. Providing a healthy and safe working environment for the informal and industrial sectors is one of the primary goals of the Department of Labor.

The labor act also includes provisions for reporting incidents such as diseases and accidents that affect workers' health and well-being, granting authorities the power to inspect and test samples of finished and semi-finished products or materials that may harm workers' health. Furthermore, the labor office has the authority to shut down a work site in case of hazards. Chapter VII of the Labor Act of 1992 includes special safety provisions for specific businesses, such as tea estates, construction, hotels, transportation, travel, adventure, rafting, and jungle safari, considering the risks to employee health and safety.

"The Occupation Safety and Health Project," established in 1996 under the Ministry of Labor and Employment (MoLE), has undertaken various efforts to promote safe, healthy, and productive work sectors. The project has initiated ongoing programs related to occupational health and safety (OHS), including awareness campaigns, training, monitoring, interventions, and coordination with relevant stakeholders. Nepal's Three-Year Interim Plan (2007/08 - 2009/10) outlined strategic plans and visions for ensuring OHS in workplaces, including regular monitoring of businesses and the establishment of standards as integral components. The plan emphasized creating programs for raising awareness, providing orientation, training, education, capacity building, inspection, monitoring, and evaluation for various stakeholders. The policy plan was also revised to develop a safe, healthy, and productive work environment by promoting and developing occupational health and safety as essential components in workplaces and businesses. The Long-Term Plan Approach (2010/11 - 2012/13) aimed to establish decent and protected workplaces by fostering harmonious work relations, implementing work review frameworks, and creating model workplaces nationwide. Additionally, the General Federation of Nepalese Trade Unions (GEFONT), established in 1989, works to address issues related to security and well-being through collaborations with industry partners to ensure clean drinking water, hygienic restrooms, and proper safety gear arrangements.

Occupational safety issues are also being addressed in Nepal, including through the Nepal National Building Code (NBC) created in 1993 by the Department of Urban Development and Building Construction (DUDBC), under the Ministry of Physical Planning and Works (MPPW). The NBC policy, published in the Nepal Gazette, requires all municipalities in Nepal to implement Construction Safety requirements, ensuring the well-being and safety of laborers involved in building construction and demolition works through proper agreements between businesses and project workers. Despite the enforcement of rules and safety precautions in Nepal, incidents at construction sites remain widespread, indicating an insufficient emphasis on enhancing training and educational initiatives and inadequate regulatory supervision (Bajracharya et al., 2023).

Looking at the broader South Asian perspective, workers in Pakistan have also shown serious concern for occupational health and safety issues. With the increasing use of chemicals, exposure to physical and biological agents, indiscriminate use of agrochemicals like pesticides, agricultural machinery and equipment, computer-controlled technologies, and the impact of workplace stress in modern jobs, unknown potential hazards and safety risks have become significant (Millington & Wilson, 2016). These issues have led to the implementation of various legislations. The Factories Act was enacted in Khyber Pakhtunkhwa in 2013 and in Sindh in 2016 (Ilyas Khan et al., 2021). Another relevant legislation is the Hazardous Occupations Rules, 1963, which specifies hazardous occupations and allows the Chief Inspector of Factories to label and circulate any process as dangerous. The Factories Act of 1934, Chapter 3, is the primary law that provides general health and safety guidelines for workplaces. The federal and provincial governments have policies to appoint qualified inspectors who have the authority to enter and examine any working environment and gather evidence for their duties.

Similarly, India has made efforts to strengthen occupational health and safety (OHS) by implementing laws that establish safety standards to protect workers' basic needs and welfare (Pingle, 2012). The Indian constitution and directive principles of state policy have laid the foundation for legislation on occupational health and safety. The main objectives of these legislations include providing incentives to employers and employees to achieve higher health and safety standards, establishing research and development capabilities in emerging areas of risk and effective control measures, and reducing the incidence of work-related injuries, fatalities, and diseases. The relevant legislation in India for occupational health and safety includes the Factories Act of 1948, which aims to protect workers from industrial and

occupational hazards, ensuring safety and sound working conditions. It also provides precautionary measures to be taken by employees during working hours and for accident prevention. The Mines Act of 1952 includes the formation of safety committees in every mine, notification and information requirements during incidents and accidents, and the appointment of a workman inspector. Workers under the age of 15 are strictly prohibited from operating and entering mining operations. Additionally, the Workmen's Compensation Act provides for the payment of compensation for work-related injuries and death to workers and their dependents. Lastly, the Employee State Insurance Act describes social welfare legislation aimed at providing benefits to employees in cases of sickness, maternity, and employment injury.

Therefore, occupational health and safety standards vary across different regions in South Asia. However, compared to India and Pakistan, Nepal lacks strict actions and efforts in the field of Occupational Health and Safety. The relevant agencies should address these challenges and issues through new rules and policy reforms, continuous training and awareness programs for both employers and employees and worker protection by enforcing compliance and generating extensive regulatory frameworks to maintain a healthy and safe work environment in organizations.

### **3.4. Strategies for improving occupational health and Safety**

For the protection and well-being of employees, occupational health and safety (OHS) are crucial in the workplace. To guarantee that health and safety requirements are followed, several measures can be implemented. Training is one efficient strategy. Employers can offer training courses that introduce staff to potential risks, explain safety procedures and practices, and guide how to use tools properly. Such training can help create a safer workplace by making employees aware of potential risks and teaching them how to manage them.

Implementing actions to avoid and mitigate potential dangers is another technique for maintaining workplace health and safety. Personal protective equipment (PPE) must be available, machinery must be properly maintained and inspected, and a clean and organized workspace must be maintained (Niwas et al., 2023). Employers can also conduct routine safety audits to identify potential risks and take appropriate action to resolve them. By prioritizing occupational health and safety and continuously implementing preventive measures, employers can ensure a safe and healthy workplace for their employees.

Some measures that can be taken to improve occupational health and safety are described in detail below:

**Employee Training:** Investing heavily in employee health and safety training is essential for building a safe and healthy workplace. All employees with jobs that involve potential workplace hazards should receive proper training. Written instructions should be available for employees to verify anything they are unsure of or may have forgotten from training. Measures should also be in place to ensure the proper implementation of training in their respective duties.

**Performing a Hazard Assessment:** Conducting a hazard assessment is a necessary safety step to reduce the likelihood of workplace accidents. A hazard assessment team with expertise in risk analysis can create a strategy to minimize risk within a company by reviewing past incidents and injuries. The strategy should include organizational controls such as engineering controls, administrative controls, and manufacturing unit controls. Implementing controls and monitoring the effectiveness of the plan is key to reviewing hazard reduction and risk mitigation.

**Workplace Inspection:** Workplace inspections involve walk-throughs, accident reports, training logs, and documentation of safety policies and procedures. Trained and qualified health and safety experts or management representatives should conduct workplace inspections to identify potential hazards and evaluate the effectiveness of existing safety measures. Occupational health and safety specialists are responsible for creating and implementing safety rules and procedures, educating others on safe behavior, and inspecting the workplace for any risks. Conducting regular inspections and implementing plans to improve the quality of the workspace provided by the organization can give employees a sense of assurance and contribute to their best performance, ultimately benefiting the organization's growth.

**Strengthening National and International Policies for Workplace Health:** Global policies are necessary for occupational health to be prioritized on national and worldwide societal agendas. The World Health Organization (WHO) seeks to ensure the sharing of effective and robust occupational health policies and programs internationally, particularly to help developing and recently industrialized countries and economies in transition. Various international labor acts and organizations like the Occupational Safety and Health Administration (OSHA) in the United States play a role in ensuring workplace safety. OSHA's purpose is to ensure that businesses provide a workplace free of identified threats to workers' safety and health, such as exposure to harmful chemicals, high noise levels, mechanical hazards, heat or cold stress, or unhygienic conditions.

**Installation of Alarm, Safety, and Rescue Devices, as well as Instruction Manuals:** Workplaces that require it should be equipped with an essential alarm, fire safety, life-saving, and rescue systems and equipment in accessible locations. Additionally, employees should be provided with essential instructions on the proper use of equipment in the event of foreseen accidents. Clear illustrations of fire alarms, carbon monoxide detectors, emergency lighting, and eyewash stations should be in place.

**Workstation, Work Postures, and Motion Ergonomics:** Workstations and tools used at job sites must be selected, developed, and arranged in an ergonomically sound manner, considering the nature of the task and the employee's capabilities. The structures should be movable to the greatest extent possible and designed to allow tasks to be performed without endangering the worker's health. It should be ensured that employees have an adequate workspace and the option

to switch up their working postures. Auxiliary equipment should be used when needed to facilitate the job, and hazardous manual lifting and moving tasks should be made as safe as possible. The risk posed by repeated strain on employees should be eliminated or mitigated if elimination is not feasible.

**Collaboration with Occupational Healthcare Facilities:** Occupational medicine clinics and occupational healthcare centers can provide insights into workplace injuries and ways to prevent them. Doctors can assist employers by examining the workplace and identifying locations where employees are at a high risk of sustaining injuries. This collaboration can help reduce the likelihood of workplace injuries and improve overall occupational health and safety.

**Garbage and Wastage Management:** Effective waste management is crucial for sustainable and environmentally friendly workplaces. Workplace waste management practices should be designed to reduce pollution and address climate change. Implementing recycling programs, composting biodegradable waste, reducing the use of disposable items, and encouraging employees to use reusable alternatives are effective waste management strategies that contribute to environmental sustainability (Khanal, 2022). The lack of proper separation at the source and an inefficient collection system in Nepal have resulted in a significant amount of waste ending up at the landfill site (Khanal et al., 2023). Despite the regulations and measures concerning the handling of solid waste in Nepal, there is a lack of effective enforcement by both governmental bodies and waste management companies in the nation (Subedi et al., 2023).

**Usage of PPE and Appropriate Work Attire:** Personal Protective Equipment (PPE) plays a critical role in ensuring occupational safety and health. PPE includes gloves, safety glasses, respiratory protection, hard hats, and hearing protection, among others (Khanal et al., 2021). Industries such as construction, manufacturing, and healthcare, where workers are exposed to various hazards, should prioritize the use of appropriate PPE. It helps in protecting workers from occupational hazards, including infectious diseases, chemical exposures, and physical injuries (Giri et al., 2023).

**Considering Steps to Lessen Fatigue:** Workplace fatigue can have detrimental effects on occupational health and safety. Employers should consider and implement suitable fatigue management measures to ensure the well-being of their workers. This can include designing reasonable work schedules, promoting employee well-being through healthy lifestyles, and providing fatigue-management training.

Overall, implementing these measures can contribute to a safer and healthier workplace, protecting the well-being of employees and enhancing overall productivity.

**Table 1:** Recommended PPE by Occupation

Occupation	Recommended PPE
Construction	Hard hat, safety goggles, high-visibility clothing, gloves, safety boots
Healthcare	Gloves, face masks, goggles, protective gowns, respiratory protection (if required)
Manufacturing	Ear protection, safety glasses, gloves, safety shoes, respiratory protection (if required)
Agriculture	Sun hats, gloves, goggles, masks, sturdy footwear, respiratory protection (if required)
Mining	Hard hat, safety goggles, ear protection, respiratory protection, safety boots
Hospitality	Non-slip shoes, cut-resistant gloves, aprons

**Table 2:** Key Steps for Conducting Workplace Safety Inspections

Inspection Step	Description
Identify Hazards	Identify potential hazards in the workplace
Evaluate Risks	Assess the level of risk associated with identified hazards
Control Measures	Develop and implement control measures to mitigate risks
Training and Communication	Provide training to employees on safety procedures
Regular Inspections	Conduct regular inspections to ensure ongoing compliance
Incident Reporting	Establish a reporting system for incidents and near-misses
Review and Improvement	Review inspection findings and make necessary improvements

**Table 3:** Progress made in Nepal regarding occupational health and safety with further suggestions for improvement

Progress and Measures Taken	Challenges and Areas for Improvement
Implementation of the Labor Act of 1992, which outlines health and safety provisions for businesses and employees	Inadequate enforcement of existing laws and regulations
Creation of the Occupational Safety and Health Project to promote safe, healthy, and productive work sectors	Strengthening monitoring and inspection mechanisms to ensure compliance
Inclusion of special safety provisions for specific	Enhancing awareness and training programs for workers

businesses in Chapter VII of the Labor Act	and employers
Development of strategic plans and policies, such as the Three-Year Interim Plan (2007/08 - 2009/10) and the Long-Term Plan Approach (2010/11 - 2012/13)	Enhancing capacity building and education initiatives for occupational health and safety
Establishment of the General Federation of Nepalese Trade Unions (GEFONT) to address workers' security and well-being	Strengthening collaboration between government, trade unions, and industry stakeholders
Implementation of the Nepal National Building Code (NBC) to ensure construction safety	Improving the implementation and enforcement of construction safety regulations
Efforts to address the hazards of pesticides in agriculture and exposure to respirable crystalline silica in industries	Developing comprehensive occupational health and safety guidelines for specific industries
Recognition of the need for preventive measures and regular medical checkups for workers in hazardous areas	Expanding access to occupational health services and promoting preventive measures in all sectors
Collaboration with international organizations and research networks for knowledge-sharing and training	Strengthening research and data collection on occupational health and safety to inform evidence-based policies

## 4. Conclusion

Prioritizing occupational health and safety is crucial for creating safe and healthy workplaces. The measures discussed, including employee training, hazard assessments, workplace inspections, collaboration with occupational healthcare facilities, and proper waste management, all contribute to improving workplace safety and well-being. Strengthening national and international policies, promoting the use of personal protective equipment, considering ergonomic factors, and addressing fatigue also play significant roles in enhancing occupational health and safety.

In the context of Nepal, the implementation of the Workplace Health and Safety Act has brought notable improvements. However, there is still room for further enhancement. Collaboration between the government and related bodies is essential to ensure that workers are properly trained, provided with necessary safety equipment, and have their rights protected. Nepal should actively promote and enforce occupational health and safety standards to safeguard the lives and well-being of its citizens. Continued education and training for workers and management, along with more effective monitoring of workplace environments, are necessary. By committing to occupational health and safety, Nepal can gain a competitive edge in the global market and experience increased productivity and reduced healthcare costs for both employers and employees.

To further enhance occupational health and safety in Nepal, several recommendations can be implemented. Firstly, the government should strengthen the regulatory framework by regularly reviewing and updating the Workplace Health and Safety Act to align with international standards. Secondly, enforcement mechanisms need to be improved through regular inspections and investigations to ensure compliance. Additionally, promoting worker participation through safety committees or representatives can empower employees to contribute to a safer work environment. Expanding training programs for employers and employees, fostering collaboration and information sharing among stakeholders, and investing in research and data collection are vital steps to drive continuous improvement. Public awareness campaigns should be launched to educate stakeholders about their rights and responsibilities. Incentives for compliance can also incentivize businesses to prioritize occupational health and safety. Lastly, ensuring the availability of occupational healthcare facilities will provide the necessary support to injured workers. By implementing these recommendations, Nepal can create a safer work environment, protect the well-being of its workforce, and promote sustainable economic development.

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