Practical Health and Safety Road Map of Global Coalition as a Main Policy for Reduction of Accident Rate in Construction Industry of Uzbekistan

Takhirjon Sultanov¹, Ravshan Nurimbetov², Aziz Zikriyoev² and Nilufar Zokirova³

¹ Department of Theoretical and Constructional Mechanics, Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, 39, Kary-Niyaziy, Tashkent 100000, Uzbekistan
² Tashkent Architecture and Civil Engineering Institute, 13, Navoi, Tashkent, 100011, Uzbekistan
³ Tashkent Pharmaceutical Institute, Tashkent 100000, Uzbekistan

E-mail: tohir-zs@mail.ru, admin@tiame.uz

Abstract. Modern construction industry still remains high risky economic sector in the world. Human factor mainly conceded working at hazardous conditions which caused various disease and accidents. But age of modern science and technology it is proved globally can be solve in effective way. Main purpose of the article is clarifying international health and safety practice standards and its prospective effects and implementation in Uzbekistan construction industry. Main outcomes of the paper work can be presented as best solution for creating safety climate and environment in building industry and increasing professional management system for developing human factor in Uzbekistan. As a conclusion international cooperation on development program on safety regulation and enforcement is directed increasing on social and economic effectiveness of construction industry.

1. Introduction

Today, the construction industry is becoming one of the fastest growing sectors of the world economy. Due to the growing share of this sector in the global GDP, the volume of building materials and construction is high. The fact that 13% of the world's GDP is created in this sector, means that much attention is paid to sustainable development of the construction infrastructure. It is expected that the volume of work created in the global network will reach 4.8 trillion by 2020. US $ 7.2 trillion in seven years. It is expected that US $ 15% and world GDP will reach 15%. Demand for industrial sectors has been increasing over the past 20 years as the global average population grows. At present in our country a large-scale work in the construction industry is being carried out to modernize urban development, provide housing and further development of social infrastructure. At the same time, within these industries, the construction industry is becoming increasingly important for its health and safety [1].
Information regarding accidents at work is published by state institutions. This is mostly statistical data on accidents in various sectors of the economy. From these publications we can find out e.g. how many people were injured in accidents at work in the construction industry, how many people were injured at a construction site and other places, how many people at the time of the accident were using a machine and also how many people were electrocuted. On the basis of this data, however, any conclusions about the most probable course of accidents and situations on a construction site, which pose the greatest risk to workers, cannot be drawn. This is because the relations that exist between specific data sets are not known [2].

In recent years, organizational studies have marginalized the problems related to health and safety at work [3]. In this context, scholars have focused on studies related to psychological distress [4], burnout [5], bullying [6], and symbolic violence [7]. These interests marginalize the problems associated with lesions to the physical body. The explanations for this lack of interest are diverse, but do not justify the fact that the number of workplace accidents has been growing every year, even with the existence of a legal system that tries to prevent that. HSE is obliged to make certain that there are adequate risk controls with respect to health and safety of the workers (Health and Safety at Work Act 1974) [8]. According to the HSE, the effective management of OHS is important to the well-being of employees, and contributes towards the improvement of organizational reputation, which may lead to the achievement of high-performance teams and financial benefits for the organization.

1.1. Literature review
In construction industry accident occurrences could also be due to the lack of adherence to standard health and safety rules or lack of poor communication within the company. According to (Hinze, 2002; Vredenburgh, 2002) have shown that health and safety improvements will only be achieved if workers, contractors and the client change their behaviors and incentive schemes are implemented to motivate the workforce [9, 10].

Some of the challenges faced by organizations include organizational complexity, the pressure of performance target and production and budget and financial constraints (Shehu & Akintoye, 2010). However, (Wang, 2004), states there are certain powerful incentives available for organizations to strive towards improving OHS standards, such as economic, legal and moral considerations, which are normally covered under the aspect of corporate responsibility or corporate social responsibility [11].

Many studies for example (Hinze, 2002; Vredenburgh, 2002) have shown that health and safety improvements will only be achieved if workers change their behaviors and incentive schemes are implemented to motivate them [12].

Such a business case, according to Burke, Clarke and Cooper (2011) is based on the potential costs as a result of ineffective standards of OHS. According to Hughes and Ferrett (2012) due to the level of literacy among some of the workers involved in construction, the communication of OHS information may be difficult. According to Biddle (2005), Gilding (2002), Linhard (2005), firms are attention on occupational safety performance and it has greater potential for influencing the productivity of that organization. However, the greater challenge for employees is to meet occupancy load standards for the purpose of establishing and maintaining a safe working and learning environment in their workplace. Moreover, safety awareness concerns the need for conducting research that links occupational safety performance and productivity.

Thus, authors such as (Idoro 2001) state that there is no H&S legislation regulating construction practices, which contractors can adopt, and which could promote H&S practices, and thus they commit little or no resources in terms of sustaining a healthy and safe work environment [13].

2. Methodology
In this paper work it has been used secondary source data from international data set and local legislation context qualitative research approach. Some descriptive statistical information and theoretical point of views.
3. Results

Implementation of the latest achievements of the construction industry based on the experience of developed countries, achievement of quantitative and qualitative indicators is one of the main challenges facing the modern construction industry. In particular, high results are achieved in improving the basics of national legislation, creating favorable and safe working conditions through the proper scientific organization of business processes, as well as protecting the legal rights of every employee in this area. The goals of health and safety programs are to create a safe and healthy working environment. In this regard, the implementation of the International Labor Organization's "Protection Against Certain Hazards" program in our country is important for the safety of construction workers [14].

As for the Universal Declaration of Human Rights states clear on Article 23 “Everyone has the right to work, to free choice of employment, to just and favorable conditions of work and to protection against unemployment…” [15]. And according to the Millennium Development Goals (MDGs) by WHO presents combat malaria, and other diseases [16]; And the next factor as for UNDP Goal 3: Good Health and Well-being, Goal 6: Clean Water and Sanitation, Goal 8: Decent Work and Economic Growth directed for protection of employee in all economic sectors. Especially, in construction industry relevance of these programs are extremely important due to wellbeing of human factor [17].

According to the UN, today, 45 percent of the world's population - more than 3 billion people - are in the workforce. According to the ranking of able-bodied population in the world, Uzbekistan is on the 35th place (about 18 million people) [18]. According to the Article 37 of the Constitution of the Republic of Uzbekistan guarantees that every person has the right to work, to free choice of profession, to work in fair conditions and to be protected from unemployment [19].

3.1. Accident analysis of Uzbekistan

As of 2018, there were 554 accidents across the country during the year, of which 164 were fatal, 364 were fatal, and 26 were in group accidents. As a result of these accidents, 183 people were killed, 428 were seriously injured and 47 were injured. According to the results of the labor inspection conducted by the State Labor Inspectorate of the Ministry of Labor and Social Protection of the Republic of Uzbekistan for the past 5 months of 2019, there were identified 45,854 violations in 8275 enterprises. Among them 27176 violations of labor protection and safety regulations, 2555 - no labor contract, informal use of labor, 1920 - unpaid wages, 2016 - violation of labor records and other violations of labor legislation caused by circumstances. Over the first five months of this year, 228 accidents were reported in the country, 61 of which were fatal, 155 were fatal and 11 were accidental [20], [25-27].

As a result of these accidents, 183 employees were killed, 428 were seriously injured and 47 were injured. During the first five months of this year, 228 accidents were reported in the country, of which 61 were fatal, 155 were fatal and 11 were accidental. Analytical investigations often show that employers do not comply with occupational safety requirements in accidents; insufficient awareness of the labor protection legislation by employees and does not claim their rights accordingly; unofficial use of personnel; non-payment of labor protection measures; showed that there are factors such as the lack of referrals for occupational safety, training for occupational safety and knowledge-based employment.

ILO leader: Labor legislation of Uzbekistan strives for international standards. The Ministry of Employment and Labor reported that appropriate measures were being taken to address these violations. In particular, 6,118 written instructions and 298 submissions were issued to eliminate violations during the same period of the current year were imposed. An administrative fine of 395543 thousand sums was imposed against 207 officials for allowing violations during special investigation of accidents. In addition, for the first five months of 2019, the State Labor Inspectorate reviewed 7,152 complaints, of which 4168 appeals were revoked and 2,449 citizens were violated labor rights [21].

If we analyze current status of the cause of accidents in Uzbekistan negative results have been recorded currently. Employees of the State Inspection on Occupational Safety and Health under the
Department of Employment of Navoi Region regularly conduct field meetings (seminars) on construction of labor legislation and labor protection in construction organizations.

The administration of the construction company has also been given practical assistance in meeting the requirements set out in the labor legislation. It was also noted that the Ministry of Employment and Labor Relations should use the site “work.mehnat.uz” in the organization of joint work to attract workers to vacancies in the organization [22].

According to the analytical studies following factors are mainly responsible for causing accidents in Uzbekistan construction sector currently:

- non-observance by the employer of labor protection requirements;
- insufficient awareness of the labor protection legislation by the employees and, accordingly, does not claim their rights;
- lack of organization of occupational safety training, occupational safety training and knowledge testing;
- employees are not provided with special workwear, personal protective equipment in accordance with established norms;
- non-certification of work places by working conditions;
- employers do not create safe and healthy working conditions for employees;
- insufficient supervision by the employer of the labor protection of employees.

Figure 1 states regulation of health and safety policy in Uzbekistan. As an integrity into international community of health and safety standards country is also provided rights and working conditions of the population in Constitution of the Uzbekistan, Civil code, Labor Code and etc.

![Figure 1. Health and Safety Regulation System of Uzbekistan](image)

It is true that the Ministry of Labor and Employment is taking appropriate measures against these violations. In particular, 6,118 written instructions and 298 submissions were issued to eliminate violations during the same period of the current year. Administrative fines were imposed. In the course
of the special investigation of accidents, 228 written instructions were issued for 2512 violations, and administrative fines were imposed for 207 officials for the total amount of 395543 thousand sums. In addition, for the first 5 months of 2019, the State Labor Inspectorate reviewed 7,152 complaints from citizens, of which 4,668 were satisfied, and 2,449 were restored to work rights. billion more than UZS 3,000 were collected in due course [23].

In spite of these measures, the issue of drastically reducing the number of accidents caused by non-observance of labor protection, their prevention, elimination and creation of safe working conditions for citizens remains urgent. Therefore, the following measures should be taken to achieve effective results in occupational safety and more efficient organization of efforts in this regard:

First, increase the administrative penalties for violation of labor protection. By law, the penalty is now two to five times the minimum monthly wage. However, these fines are not legally responsible, and are likely to result in negligence and self-sufficiency in complying with labor protection requirements. Given the threat posed to human life, the amount of the fine may be small.

Secondly, it is necessary to strengthen occupational outreach and prevention activities.

Third, carry out regular inspections on occupational safety at high risk organizations, including construction sites.

4. Discussion

Nowadays in total, 14 ILO Conventions (including 8 major Conventions) have been ratified by the ILO in Uzbekistan. The ILO Convention No. 81, the application of the Labor Inspection System in the workplace, covers all workplaces provided by labor inspectors and the rules on the protection of workers in the workplace. But C167 - Safety and Health in Construction Convention related in total economic sectors, 1988 (No. 167) and C155 - Occupational Safety and Health Convention, which related in Construction industry 1981 (No. 155) is not ratified by Uzbekistan yet. Furthermore, concept of Health and Safety in construction sector implemented in different forms like labor protection, life safety, life activity safety, technical safety, fire safety, etc. But Accreditation for ISO 45001 Occupational Health and Safety Management Systems is also is not implemented in the country.

On the basis of the decision of the agency "Uzstandard" on creation of the system of occupational safety management at the enterprise GOST R 12.0.006.-2000 “SSBT. General Requirements for Occupational Safety Management”.

There few labor protection organizations in Uzbekistan.
1. Ministry of Labor and Social Protection of the Republic of Uzbekistan;
2. Agency for Industrial and Technical Supervision;
3. State Sanitary control;
4. State Fire Control;
5. State Energy Control.

The amount of compensation to the family members of the deceased in the event of an employee's accident at work.

According to Article 187 of the Labor Code of the Republic of Uzbekistan, in the event of death of an employee in connection with his job duties, any damages (including moral damage) inflicted on his family members shall be fully paid by the employer, unless otherwise stated. That is, the employer pays the family members of the deceased employee:

- moral damage;
- damage caused by the breadwinner's death;
- lump-sum benefit in connection with his death.

Moral harm (physical or mental suffering) shall be compensated in monetary or other material form, in accordance with the agreement between the employer and family members of the deceased employee. In the event of a dispute for moral damages, the matter shall be considered in court. Article 192 of the Labor Code establishes the obligation of the employer to pay damages in connection with the breadwinner's death.
According to him, in case of death of an employee as a result of work injury, occupational disease or other damage to health related to work, the employer shall be entitled to his or her dependency on the deceased person under the age of sixteen or until his death, legal persons, the child born after the deceased’s death, as well as one of the parents, spouse or other family member, unless the child is under three years of age without work. Compensation for damages if they are busy with the care of their nieces, nephews, or grandchildren.

The amount of damages to the disabled dependents who are dependent on the deceased breadwinner and who is entitled to damages in connection with his death is determined by the average monthly salary of the deceased, with the deduction of the share of the deceased dependents.

According to Article 194 of the Labor Code, the lump-sum allowance paid by the employer in connection with the death of an employee is determined by a collective agreement, in the absence of such an agreement, between the employer and the trade union committee or other representative body. At the same time, the lump sum allowance in connection with the death of the employee may not be less than the average salary of the deceased for six years.

This procedure is described in detail in the "Rules for compensation of injuries inflicted to employees as a result of their job duties, occupational diseases or other health disorders", approved by the Cabinet of Ministers of the Republic of Uzbekistan on February 11, 2005 № 60.

If the deceased has worked less than twelve months at the time of the injury, the average monthly salary is calculated by dividing the total salary actually worked. For example, the salary of an employee is 1.5 million sums and he worked for one month. The average salary is 1.5 million. The average salary of an employee for six years is 1.5 million * 72 months (6 years) = 108,000,000 (one hundred eight million).

So, if we assume the average salary of the deceased is 1.5 million sums, then the deceased master A. The lump sum allowance in case of death should be not less than one hundred and eight million sums. This amount can be further increased by agreement between the employer and the trade union committee or other representative body of employees [24].

In addition, in the event of death of an employee in the course of labor, the employer shall pay the additional expenses for burial to the person who incurred these expenses. The cost of burial is not included in the cost of compensation.

Article 191 of the Labor Code does not apply to additional types of damages to be paid for, liability for lump sum payments, as well as cases of loss of the breadwinner. That is, the employer is not exempt from paying damages even if an employee dies from a multi-story apartment due to his gross negligence at work.

In summary, the employer is required by law to pay the family members of the deceased employee at least the following:
- moral damage + loss in connection with the death of the breadwinner + lump-sum allowance + funeral expenses.

The National Agency of Project Management must review the classification of the categories of complex objects for design and construction by January 1, 2019; and by May 1, 2019, submit to the Administration of the President of the Republic of Uzbekistan a draft of the Town-Planning Code in a new edition. Generally, the review of the legislative base of technical regulation in the construction sector was divided into three stages: 2019-2021 – Preparation period, 2022-2026 – Transition period, 2027-2028 – Finishing period.

By the end of the Preparation period, within three years, it is planned that Uzbekistan will be included in the list of top-50 countries in the “Dealing with Construction Permits” ranking in the Doing Business Report of the World Bank Group. Currently, Uzbekistan is ranked 134th in this category. “Execution of the License Agreement with the indication of specific, exhaustive list of requirements and conditions, as well as effective mechanisms of checking the candidates on their compliance with the licensing requirements and conditions” was abolished.

Modern labor conditions in construction industry promotes highly standardized insurance policy application. Workers insured against accidents are entitled to receive compensation from the insurance
company within 15 days in case of unforeseen emergency, temporary, permanent disability or death according to Law of Insurance of Uzbekistan.

To date, there are 27 insurance companies operating in Uzbekistan, which provide more than 100 insurance services. More than a dozen of the most popular services, such as transportation insurance, health insurance, property insurance, are available online too.

For improvement of Health and Safety Regulation Policy in Uzbekistan there few recommendations according to Peyton and Rubio (1991) outlined ten basic elements of an effective safety program. These are as follows:

- The safety program should reflect the size of the business;
- Management should be committed fully to safety above all else;
- Safety responsibilities should be clearly defined;
- Adequate funds should be budgeted for safety programs;
- Management should lead by example in implementing safety programs;
- Open communication should exist between management and employees;
- Hazard identification and assessment through inspections must take place;
- Safety should be planned from the bid process until workers leave the job site;
- Safety training and orientation needs to be incorporated; and
- Periodic safety performance reviews must be undertaken (including accident statistics, reports of injuries and results of safety inspections).

As for the Bluff’s report (2003) outlines seven preliminary goals to assist in the establishment of a safety framework on rising economic effectiveness construction sector. These are as follows:

- Enhancing consideration of OHS matters in the design and planning of a wide range of construction works, and improving OHS for a range of persons who could be affected by these works;
- Promoting the engagement of all parties with real control or influence in the design and/or planning of construction works in OHS risk management;
- Providing regulations in order to ensure acceptable OHS knowledge and capability on the part of those involved in design/planning decisions;
- Verifying that key information is transferred from the design/planning phase to the principal contractor and other contractors engaged in the construction phase, and those engaged in subsequent work in, on or about the structure;
Figure 2. National OSH system modelled from provisions in ILO OSH instruments

Source: Benjamin O. ALLI, Fundamental principles of occupational health and safety. National system for occupational safety and health, International Labour Office, 2008, Page 39.

- Ensuring that regulatory requirements are readily enforceable by timely identification of construction works in the design/planning phase;
- Promoting a regulatory regime that will be nationally consistent.

According to the Figure 2 detailed road map of Global Coalition practice about implementation Health and Safety regulation in Uzbekistan. Accident can be found in the accident-investigation
protocol drawn up by the labor inspector after its occurrence as distributed in the figure. Based on this safety system national policy should be integrated ILO and ISO conventions and standards. However, hazard prevention of a single accident is not enough to draw conclusions about the sustainable features of the phenomenon of the accident rate.

5. Conclusion
Such conclusions can be drawn on the basis of results obtained from research on an appropriately numerous global coalitions for reduction of accidents in construction industry. Above indicated conventions and recommendations for emerging countries like Uzbekistan has already started intention of collaboration of ILO and ISO standards. Based on preliminary research and analysis of accident protocols the following assumptions were made:

- The accident rate is a mass phenomenon and the state of safety in specific sectors of the economy is not determined by a single accident but by the set of accidents that occurred within a specified period of time, and also information which resulted from insufficient safety management system.
- Accidents at work happen at certain moments of time and create a chain of events that can be analyzed as a complex discreet process by international coalition.
- Social and economical cost of the construction industry can be optimized by implementing 167 and 155 conventions by ILO.
- Safety climate and safety culture can be improved by organizing safety management system in Uzbekistan.

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