

# Overview of Building Construction Safety and Legislations in Nigeria

Akanbi Toyin Ibrahim<sup>1</sup>, Abdulrashid Sirajo<sup>1</sup>  
and Aliyu Hassan Ibrahim<sup>2\*</sup>

<sup>1</sup>Principal Lecturer, Department of Building

<sup>2</sup>Department of Environmental Science, College of Environmental Studies  
Kaduna Polytechnic, Kaduna, Nigeria

\*Corresponding author details: Aliyu Hassan Ibrahim;  
[aliyuibrahim@kadunapolytechnic.edu.ng](mailto:aliyuibrahim@kadunapolytechnic.edu.ng)

## ABSTRACT

The building construction sector in Nigeria lacks formal safety management systems, effective safety regulations are also lacking. The research methodology adopted was a comprehensive literature review undertaken on topics related to safety in order to have a sound knowledge of the topic. Research journals, academic thesis and conference papers were the main sources of the secondary data gathered. The research showed that Though this sector is a vital contributor to economic growth of the nation, virtually all available labour laws in Nigeria do not apply to this sector. The lack of such laws makes enforcement of safety norms and procedures on Nigerian building sites difficult, the workers as a result of this unfortunate scenario are left vulnerable and unprotected. No comprehensive law as regards to Occupational Health and Safety exists in Nigeria. Virtually all existing regulations in Nigeria today which relate to health and safety emanated from foreign countries, hence we need to domesticate our legislation to reflect our peculiarities.

**Keywords:** safety; building construction; legislation; Nigeria

## INTRODUCTION

This paper presents a review of literature about the Nigerian construction industry and the legislation that is supposed to guide the entire construction process in general and the building construction sector in particular.

## CONSTRUCTION SAFETY

Safety is the condition of being free from harm or danger. It is the condition of being free from danger (legal point of view). It could also be seen as a state of being secured from accidents, injury or death as a result of some measures put in place. The safety issues experienced these days are enormous if compared to those of past years (Folawiyo, 1995). From the above definitions, safety at work place primarily focuses on measures geared towards mitigating occurrence of hazards at the work place. Construction site safety could therefore be seen as the measures aimed at mitigating hazards at construction sites.

## THE ROLE OF CONSTRUCTION ACTORS IN CONSTRUCTION

### The Client

The client is the most important figure in the team, he/she is responsible for financing and initiating all the activities involved to be performed on the construction site. The major contribution of the client is in specifying his/her needs to the designers before the designs are prepared (Smart, 2012). Clients also ensure that adequate financial reimbursements are made before the commencement of projects stating their limits in spending.

### The Consultant

Consultants mainly deal with quality and cost considerations; they ensure that the projects are executed within the financial limits set by the clients and

too the desired standards set. Cost analysis is crucial to the success of every project, thus clients require adequate cost analysis from the consultants (Okeola, 2019).

## The Workers

Workers role in the construction industry is primarily to carry out the work allocated to them on site, they utilise the materials and equipment for the success of the project in order to achieve completion in good time and cost (Okeola, 2019). The workers literarily are responsible for the physical erection of the structures on site.

## UNSAFE ACTS AND UNSAFE CONDITIONS

Any act engaged in by a person without due consideration to his or her own safety or safety of others around is regarded as an unsafe act (Adebayo, 2014). About 80% of accidents in construction sites result from unsafe acts and unsafe conditions. Adebayo (2014) listed some unsafe and unsafe conditions to include: improper use of tools, use of equipment and tools for works they were not designed to perform, working with electrical equipment without switching them off etc.

Reem *et. al.*, (2013) also viewed unsafe acts as "departure from an accepted normal correct procedure, practice or unnecessary exposure to hazards". He further suggested that these construction hazards continually build up unknowingly in construction sites. If these hazards are left uncorrected and unattended to, they may result in the following:

- (a) Fire hazards.
- (b) Improper illumination (Poor lightning).
- (c) Building site itself e.g. the floors may not be levelled, slippery floors etc.

Not every unsafe act or procedure on sites causes accidents, it is however the responsibility of a supervisor to correct such unsafe acts before it results in an accident. Anthony (2010) was of the opinion that proactive safety performance is achieved by providing plants and equipment fit for reducing risk recognized from identified hazards, employing people who are competent to manage the activities and equipment. Other safety measures include the provision of a comprehensive safety policy statement, review of constructability of projects, pre-construction meetings, a transparent contractor screening, inspections and an efficient housekeeping.

### NEED FOR SITE SAFETY PRACTICES

Accidents that result in disabilities or high fatalities have a negative effect on operations on sites. Accidents cost money and affect the morale of the workers. Many dangers exist in construction due to the nature of works performed, this makes the issue of safety to be of mutual interest to both the workers and the general public. The importance of ensuring safety and protecting lives is understood by all parties concerned (Occupational Safety and Health hearing, 1998).

The factors that motivate the enforcement of safe practices on sites include the following:

- (1) Humanitarian concerns.
- (2) Economic costs and benefits.
- (3) Legal and regulatory considerations. (NIOB, 2013)

Litigations often arise as a result of accidents which occur on sites, the courts of law over the years have established the principle of employer liability for cases of deaths and injury (Occupational Safety and Health hearing, 1998). The courts charged the employers with some responsibilities, they include:

- They are responsible for providing a reasonable work place.
- Responsible for the provision of reasonably safe appliances, tools and equipment.
- Reasonable care in selecting employees/workers.
- Enforce reasonable safety rules.
- Inform workers on the dangers associated with the work.

### HAZARDOUS SITE WORKER PRACTICES IN NIGERIA

Hazards on construction sites are all real or likely situations which can lead to death or injuries to the workers, damage/loss of items or belongings (Sule, 2017). Typical workers on Nigerian building sites pay little or no attention to their personal Safety; they neglect their personal safety while working on sites. They engage in practices that eventually pose danger to them. Okoye (2012), outlined some unsafe practices among workers on Nigerian construction sites to include: working bare footed, use of bamboo as scaffolds, mixing concrete with bare hands without protection. Some unskilled labourers are in the practice of carrying bags of cement on their bare heads, they do this because wheelbarrows are not provided on site. Some cases however exist where wheelbarrows are available but these unskilled labourers still prefer carrying them on their heads. These practices are seen as normal norms in the Nigerian construction industry, this is however not the case in most developed nations construction industries. Nigeria lacks a Construction industry training board (CITB), this board if established will provide training and advisory services to the Nigerian construction industry workforce as a whole.

### CAUSES OF ACCIDENTS ON BUILDING CONSTRUCTION SITES

Accidents don't just happen, they are caused. For every accident that occurs there exists a remote reason why it happened. Various researches have been done pertaining this topic with various conclusions reached.

A variety of causes exist for accidents which occur on building construction sites, as such it becomes the responsibility of the personnel in charge of the site to recognize the cause when it occurs and proffer effective ways to tackle them (Siriwardena *et al.*, 2006). Natural phenomenon's referred to in Nigerian construction industry as "Acts of God" also play some role in causing construction accidents, the researchers listed rains, earthquakes, flooding and landslides as some of the "Acts of God" which exist and are capable of disrupting construction activities and causing accidents. Man has no control over the occurrence of these natural phenomenon's, in the event of their occurrence construction activities are automatically suspended. During the rainy season, workers engaged at height could lose balance as a result of the slippery scaffolds from the rains, hence Adeniye (2020) suggested that it is much easier to work on construction sites during the dry season than the rainy season.

Workers accidents on construction sites can be attributed to two aspects, unsafe acts and unsafe conditions (Toolboxtopics.com). Unsafe acts are controlled by the construction worker e.g using faulty equipments to work, disregarding posted warning signs on site unsafe conditions (mostly found across all construction sites) include insufficient lightning on site, poor ventilation etc (Toolboxtopics.com). Aniekwe (2007) in his research concluded that the factors leading to accidents on construction sites include:

- Use of faulty tools.
- Noncompliance to standard safety rules and regulations.
- Improperly maintained and inadequate scaffolding.
- Lack of experience.
- Improper handling and storage of flammables.
- Poor handling of tools and equipment.
- Worker fatigue and boredom.
- Improper Supervision.
- Management attitude.
- Workers Operating environment.
- Natural causes.
- Inadequate management of work environment.
- Faults in design details and specifications.
- Faulty construction techniques.
- Workers physical condition.
- Lack of Job satisfaction.
- Monotony (exposure to a particular job constantly).

### Worker Safety Legislations in Nigeria

In Nigeria, virtually all legal requirements and legislations associated with the construction sector were received from the British legal system with little or no changes made. Some provisions from these laws do not necessarily meet the conditions experienced in Nigeria. Most professionals in Nigeria lack awareness of their legal responsibilities while the government rarely shows determination in enforcing these laws (Samuel, 2016). Okojie (2016) was of the opinion that after his close interaction with the Director of Inspectorate of Factories in the federal ministry of labour Abuja, he was intimated that shutting down defaulting construction companies rarely occurs because these companies are mostly owned by influential members of the society, the politicians or their close associates. An attempt to shut them down might result in losing their jobs too, hence they allow them operate.

In Nigeria before the colonial era, the main occupation then was un-mechanized agriculture and Animal husbandry with the workforce then comprising of mainly women and children. After the world war several industries began to come up in Nigeria, the rail lines and coal mining companies were some of them.

They employed many workers on 12-14 hours shift each day for the 7 days in a week in poor working conditions, little or no attention was paid to prevention of hazardous conditions in work places. Salaries were very small compared to the works performed with frequent dismissals being the order of the day as there were too many people seeking for employment. The reaction of workers to the poor working conditions in Enugu coal mines led to the death of miners. This formed the basis for the celebration and commemoration of the Nigerian workers day, the deaths led to the formation of some safety legislations in Nigeria regarding worker safety. Some early legislations in Nigeria include the Workmen Compensation Act and the Factory Act (1987). The Workmen Compensation Act primarily dealt with provisions to ensure compensation payment to workers for injuries they sustain on site while the factories act dealt with ventilation, lightning, drainage of floors and ensuring all equipment and machinery (hoist, cranes, prime movers etc.) are in good working condition.

The Workmen Compensation Act of 1987 was modified into the Workmen Compensation Act of 2004, it was further updated into the Employees Compensation Act of 2011. The Safety, Health and Welfare Bill of 2012 was also passed by the National assembly in 2012. Adeogun and Okafor (2013) however stated that these available legislations are not being enforced in Nigeria because despite the existence of these laws there are reports of unhealthy exposure of workers to risks in various organizations.

The ILO's code of practice of construction enumerates guidelines needed for the smooth implementation of Health and Safety of all workers on site, it shows the necessary guidelines in ensuring the provision of adequate welfare facilities, protective personal equipment (PPE) and ultimately a safe working environment for workers on site. Some aspects of the code which are useful to this research have been briefly explained below:

**Personal Protective Equipment** Under the ILO codes of practice, employers were to provide personal protective equipment (PPE) and protective clothing suitable for the nature of work to be performed, the PPE and Protective clothing should comply with the standards set by Authorities. These PPEs should however fit perfectly and be convenient because if they aren't comfortable the workers would refuse using them.

#### Types of PPE and Protective Clothing

The law binds employers to provide the following PPE & protective clothing for workers on site:

- Waterproof clothing and head coverings when engaged on sites with adverse weather conditions.
- Gloves, Overalls, respirators, impermeable foot wears to guard against hazards in workplaces exposed to harms like radioactive threats.
- Foot wears when exposed to sites liable to adverse weather conditions or sharp.
- Clear or coloured goggles, a screen face, a face shield or other suitable devices when workers are faced with threats of potential eye injury.

#### Welfare Facilities

The ILO code states thus: "at or within reasonable access of every construction site, the following facilities should, depending on the number of workers and the duration of the work be provided, kept clean and maintained:

- Sanitary and washing facilities.
- Facilities for changing & for storage and drying of clothing.
- Accommodation for taking meals and for taking shelter during interruption of work due to adverse weather conditions.

#### National Building Code of Nigeria

The Nigerian Building Code came into existence in August 2006, its purpose was to regulate the conduct and operations of professionals and stakeholders in the construction industry. According to the National Building Code drafting committee, the need for developing a building code for the country was because of some peculiar deficiencies noticed in Nigerian building industry, some of which include:

- (a) Lack of town planning in Nigerian cities,
- (b) frequent cases of collapse of buildings,
- (c) dearth of standards for regulating building designs, (Afifi, 2015)
- (d) incessant involvement of quacks in the industry,
- (e) use of substandard materials and the poor maintenance culture in the industry.

All these factors were highlighted by the National Council on Housing and Urban Development as the main reason for developing a National Building Code for the country. The provisions made by the code in section 7.49.1 says that the general public and construction workers should be protected whenever a building is to be erected, demolished or repaired. It has the following provisions to ensure safety implementation during works on site:

- Fences: Every site located 1.5m from the streets plot line should be enclosed with a 2.4m high fence to prevent and restrict entry of unwanted persons.
- Lightning: All parts of a building undergoing construction or demolition should be adequately lighted when workers are working on site.
- House Keeping: All rubbish and trash shall not be allowed to accumulate on site, they shall be removed as fast as possible.
- Protective Equipment: All protective equipment shall be kept in closed containers.
- Ladders: Temporary ladders for working on site should extend at least 1.0 meters above the ground level.
- Concrete Forms: Highly combustible materials should not be stored on a building site under construction, unless all combustible concrete forms are removed.
- Signs: All signs on site should be at least 100mm in height with a conspicuous color.
- Hoist: All hoist materials should be protected effectively, especially when erected outside buildings higher than 26 meters or Seven (7) floors. The hoist structure should be built on fire-retardant materials exempting the loading platform. (National Building Code of Nigeria, 2006; Afifi, 2015).
- Scaffolds: Scaffolds and their components should be able of carrying without failure at least four (4) times the maximum intended load. Their platforms should be able of supporting minimum live loads in kilograms per meter square of the platform.

#### CONCLUSION

The importance attached to the safety of workers on building construction sites can never be overemphasized. This work has explored the safety aspect of building construction practice in Nigeria pointing out issues faced by the workers on site, the shortcomings on the part of the construction companies in providing some basic safety materials and facilities was exposed. It also indicated that the responsible governmental agencies and ministerial departments that will make and enforce legislations in the construction industry are seriously lacking in carrying out their roles and services. The review also shows legislations in Nigerian construction sector revealed that virtually all the laws are obsolete and outdated. These regulations urgently need to be updated and domesticated for Nigerian construction industry peculiarities.

## REFERENCES

- [1] Adebayo M. A. (2014). Application of Strategic Management among Construction Firms in Nigeria construction. Journal of the federation of construction Industry.
- [2] Adeniyee A. A. (2020). Health and Safety on Construction Site. Journal of Nigeria Institute of Building.
- [3] Adeogun B. K & Okafor C.C. (2013). Occupational Health and safety and Environment (HSE). Trend in Nigeria. Journal of environmental science management and Engineering research. 24-29.
- [4] Afifi T. (2015). The poor in the Egyptian labor market during an adjustment period: For better or Worse? Economic research forum, 12-13.
- [5] Anthony Nkem Ede. (2010). Building collapse in Nigeria: The trends of casualties the last decade (200-2010). 97 Bruce Ratner. (2000). The Correlation Coefficient: Its value range between plus/minus 1 or Do they?
- [6] Folawiyo AFA. (1995). Safety and disaster education.
- [7] National Bureau of Statistics. (2007). Federal Republic of Nigeria 2006 Population Census. Official gazette (FGP 71/52007/2, 2500L24). [www.nigeriastat.gov.ng](http://www.nigeriastat.gov.ng)
- [8] National Bureau of statistics. (2010) GDP Report for Q1.
- [9] Nigeria Institute of building. (2013), Communiqué issued at the 43rd annual general meeting 25th -30th august, Abuja. [www.niob.org](http://www.niob.org) (Assessed 19th July, 2021).
- [10] Okojie O. (2016). Systems for reporting Occupational diseases in Nigeria. Africa newsletter on occupational health and safety.
- [11] Occupational Safety and Health Act hearing. (1998). Washington, DC.
- [12] Reem Abbas Abbas, Marwa Mohamed Zalat & Nanees Salah Elden ghareeb. (2013). Non-fatal occupation injuries and safety climate: A cross-sectional study of construction building workers in Mit-Ghamr, Dakahhila Governorate, Egypt.
- [13] Samuel Laryea. (2016). Health and safety on construction sites in Ghana.
- [14] Sule Usman Smart. (2017). An essential aspect in reducing overrun cost in construction organization in Nigeria. B.Eng thesis Federal university of Technology Minna, Nigeria.