

CIB138

Occupational Health & Safety Challenges in Construction Sites in Tanzania

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ABSTRACT

The construction industry business in Tanzania like in other countries cannot be tackled effectively without harnessing of the Occupational Health and Safety (OHS), to safeguard the health of the workers and the entire community. Unfortunately in this Industry, assessment on the impacts of such developments to the workers, surrounding environment and the community are rarely considered. Outdated Labor legislations should be reviewed to cater for the current needs and realities in the construction Industry. Law enforcement from the relevant Government Institutions both at central and local level including provision of Personal Protective Equipment (PPE) Programs in construction sites should be strengthened. This paper concentrates on the status of safety and health for the workers at construction sites, efforts so far being done by the Government Institutions in shaping construction industry and challenges to be faced to meet the required standards. It is expected that this will open a fruitful discussion to a way forward.

1.0 INTRODUCTION

Naturally, the effect of construction on Safety, Occupational Health and the surrounding environment would vary from particular operations starting with extraction of building materials from quarries and methods by which the extraction is occurring, transportation, preparation of building materials at site and construction of works processes.

In the Civil and building construction works which involve excavation, and/or demolition, concrete work, painting, roofing, operation of machines, plant and equipment, use of hand tools and many other operations call for attention from relevant authorities, regulatory bodies, societies, scientists, professionals and businessmen to establish safety and health management programs and laws governing construction works activities.

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Unfortunately, there have been little efforts put into practice to ensure safety and health of workers and the entire community.

Inspection of the construction sites for the past five years and Base line study carried by the Contractors Registration Board (CRB) on conditions of Safety and Health in Tanzania revealed that amongst other short falls noted, the situation, provision and use of safety gear during construction works was appalling.

Further, key players that include clients, consultants and contractors ignore inclusion of safety provision during inception stage through tendering, in which all elements connected to safety measures are disregarded on the grounds of cutting cost.

In the process of carrying out its regulatory functions, the Board has learnt that majority of local and few foreign contractors are not taking the issue Health and Safety and provision of PPEs seriously.

For instance, inspection of construction sites by CRB during year 2001 and 2002 (table 1.3) revealed that, out of 83 sites inspected year 2001, 54 (66%) did not provide safety gear, while out of 308 sites inspected year 2002, 193 (63 %) sites did not provide safety gear to the workers.

Either, the 3% range between the two years shows that despite the Board's efforts to enforce the provision and use of PPE, the problem is still serious.

The snag is, even in some cases where contractors provide safety gear especially the helmets, not all workers do use them.

Not only that, the study conducted by CRB in collaboration with OSHA in 2001 revealed that at least about 50% of the company directors interviewed have knowledge of PPE in construction, while site supervisors, skilled, semi and unskilled workers have little knowledge and consider PPE issue less important.

This situation creates vacuum for the company directors to disregard the safety issue to workers all together, where by in some cases it has gone sour to the extent of not putting in place measures to prevent accidents, or reporting to relevant authorities in case of occurrence of fatal accidents.

It should be realized that implementation of safety and occupational health in construction works is not only for compliance purposes. Provision of H&S policies/programs such as workers welfare arrangements, clear and agreeable compensation plans, good working tools, conducive working environment and use of safety gear, has positive result in the productivity for the company, hence increase profit.

Long-term indicators have it that, lack of H& policies and programs not only will affect the company dividend but the worker, family and the community.

2.0 OCCUPATIONAL HEARTH AND SAFETY IN CONSTRUCTION SITES.

2.1 Occupational Health and Safety

Occupational Health is the promotion and maintenance of the higher degree of physical, mental and social well-being of workers in all occupations.

At the construction workplaces the workers are exposed to hazards of occupational diseases and injuries and the adverse effects of excessively long hours of work. Machines, plants and other sophisticated construction equipment posse danger to the operators, who in most cases do not have prior skills for operating such machines or plants.

Occupational health services should be concerning with the preventive measures laid down to guide the employers the workers and their representatives on the requirements for a safe healthy working environment.

A worker should be assigned duties in relation to his physical and mental health and skills.

Further, employers should have complete control over their employees and therefore ensure adherence to safety practices.

The company must comply with all provisions of safety and health regulations that pertain to the construction works itself.



Figure 1. Construction can be safe occupation when workers are aware of the hazards, and an effective safety and health program is used.

2.2. Occupational Health and Safety Programs

Safety program on a project is set by the prime contractor's project manager who maps out a program of safety measures commensurate with the size of the project and the conditions and hazards peculiar to it.

Programs for construction safety include:

- Adequate first aid facilities and trained personnel and Safety committee comprising of key personnel –supervisors, safety personnel and company doctor.
- Disaster control programs, which should be maintained by the in-charge who is a qualified personnel.
- Crew leaders who hold brief meetings with workers under their supervisor at least once a week to discuss the safety operation of their crew and workers, and specific problems (held after the safety committee meeting)
- Safety instructions given to all new workers as part their introduction
- Special mass safety meetings called by the project engineer (all workers attend this meeting)
- Safety devices designed to prevent injury and accidents during building and road construction works.
- Management and supervisors visit the workers and inspect the works and participate in the safety programs periodically.
- Evaluation and review of programs as required by changing conditions to address new problems that may arise.

2.3. Accident Reporting and Investigations

Reporting/records: On day -to-day works procedures, an accident register book should be kept at the site, in which all types of minor injury such as bruises, to major accidents like imputing disability and fatal should be recorded.

Death, or dangerous occurrences must be reported by quickest possible means (normally telephone) and confirmed in writing as soon as possible with the “responsible person”. Reporting include; date and time, full name and occupation of injured person and the nature of the injuries or condition, place where it occurred and brief description of the circumstances as shown in table1.1

Injuries: A report must be made on any injury, arising from or in connection with work, which result in, death, a specified major injuries or condition, incapacity for work and subsequent death.

Any specified type of dangerous occurrence whether causing injury or not must be reported through.

Diseases: A disease need to be reported only when a written diagnosis of a scheduled disease is received from a doctor and where the person suffering currently has a job in which that disease is known as a risk for instance Lung cancer as a result of working with asbestos, poisons from cutting, burning, welding and respiratory complications from painting and sprays, demolition etc.

2.3. Accident Investigation

An accident is an unplanned and unexpected occurrence, which upsets a planned sequence of work, resulting on loss of production, injury to personnel and/or damage to plant and equipment.

The rationale for investigating accidents is to determine the cause(s) with a view to preventing a recurrence, gather information for use in any criminal or civil proceedings, to enable confirm or refuse a claim or industrial injuries benefit and prepare notification to be made to enforcing agency.

During investigation of an accident the following questions should get answers; what caused the accident, who was involved, when did it occur, whether the person involved had put on safety gear, how could it have been prevented and how could recurrence be prevented.

3.0 STATUTORY REQUIREMENTS GOVERNING OHS IN CONSTRUCTION SITES IN TANZANIA.

There are several statutory requirements governing Safety & Occupational Health in Tanzania, which are implemented by various bodies as follows: -

3.1. The Contractors Registration Act No. 17 of 1997

Section 4 (m) of the Contractors Registration Act empowers the Board to ensure that all construction sites are hoarded and labour laws occupational health and safety regulations in the construction industry are adhered to.

3.2. The Contractors Registration By-laws 1999

These By-laws administered by Contractors Registration Board govern the conduct of contractors as follows:-

- By law 14 (I): every contractor is required to maintain and provide to every person at site appropriate PPE's
- Section 20 (3) a Contractor shall maintain at every construction site a register in which all accidents and causes there from are recorded and such accidents shall include all major and minor injuries sustained on the construction site, as shown in table 1
- Section 20 (4) Non compliance of the provision of paragraph (3), shall be punishable by fine of 0.1% of the contract sum or one hundred thousand shillings, whichever is higher; table 2
- Section 20 (9) All Building construction sites shall be hoarded and failure to do so constitutes an offence punishable by fine equal to 0.5% of the contract sum or two hundred thousand shillings, whichever is higher.
- Section 20 (11): every contractor shall provide every person on site with the appropriate PPE's and failure to do so shall constitute an offence punishable by a fine of twenty thousand shillings per person.
- Section 20 (12): every contractor shall ensure that there is fire-fighting equipment and hygienic facilities on site, and failure to do so shall constitute an offence punishable by a fine of fifty thousand shillings.

Table: 1.1 An example of accident recording

S/N	Full Name	Occupation	Nature of injury/condition	Place of occurrence	Date and time	Brief description of circumstances	Action taken
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Table: 1.2 Summary of specified offences and penalties related to PPEs

S/N	Nature of offence	Penalty
Rule 20(3)(4)	Failure to maintain an accident Register book at site	0.1% of contract sum or Tsh. 100,000/
Rule 20 (9)	Failure to provide hoarding at site	0.5% of contract sum or Tsh. 200,000/=
Rule 20 (11)	Failure to provide appropriate PPE's	Tsh 20,000/= per person
Rule 20(12)	Failure to provide fire fighting equipment and hygienic facilities such as washroom, WC, clean eating-place, drinking water.	Tsh. 50,000/=

3.3 The Factories Ordinance Cap. 297 (1950)

The Factories Ordinance, 1950, which makes provisions for the safety, health and welfare of persons at work in factories and other places of work; and for matter incidental thereto and connected therewith.

This instrument is now outdated and the process of repealing it is ready. It will come out as Occupational Health and Safety Act with a broader scope of application in order to provide protection to more workers and address more hazards

3.3 The Factories (Building Operations and works of Engineering Construction) Rules 1985

The Factories Ordinance is the main legislation making provision for safety, health and welfare of person employed in factories and other places and for matters incidental to, and connected with it.

The Ordinance was enacted after the government recognized the need to provide safe working conditions for workers in the construction industry.

These rules give safety provision on: Excavation, shafts & tunnels, Cofferdams and caissons, Operations and works on/or adjacent to water, Road works, scaffolding and other, Lifting operations, Demolition

3.3. Security of Employment Act

Security of Employment Act, 1964, makes provisions to restrict the powers of employers to dismiss employee summarily or otherwise in payment of additional compensation on the occasion of termination of employment except in specific circumstances to amend the law relating to employment and severance allowance and for matters connected therewith and incidental hereto.

In the ongoing reform of labour laws, this legislation is also going to be reviewed in order to match with the labour market changes happening today.

3.4. The Workmen's Compensation Ordinance

Workmen's Compensation Ordinance, 1949 makes provisions for compensation or benefits due to injuries or diseases or death arising in the course of employment. This instrument is also one of the outdated labour laws, which are currently under reform.

The updating of this piece of legislation has a vital role to play in the workplace accident mitigation.

The updated legislation is expected to make provision for a compensation system that encourage prevention of accidents as opposed to the current situation where compensation is cheaper than prevention, and as a result most employers do not bother to prevent accidents.

The social security system in Tanzania is also fragmented in that there are several institutions that provide social security in the country. As a result of that, compensation system is also not functioning well.

The repeal of Workmen's Compensation Ordinance is intended to address a number of shortfalls in the current legislation.

3.7 Accidents and Occupational Diseases (Notification) ordinance 1953.

4.0. COMPLIANCE STATUS ON OHS IN CONSTRUCTION SITES

The working conditions for most workers in construction sites are generally poor. The study conducted by OSHA in year 2001, shows that out of 63 sites of building works visited, 3 accidents were fatal.

The survey result shows that cut by sharp edges, nails puncture, hits by hammer, bruises and other small accidents have highest rate (33 site), while fall of objects, tools, piece of work like a wall ranked second (27 sites) and handling of tools and equipment the third (23 sites)

Since establishment of the Enforcement Department year 2001, the Board has been making regular site inspection to monitor and assess compliance to the Contractors Registration Act No. 17, 1997 and its By-laws 1999. Safety and Health status among other shortfalls ranks highest.

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From the two illustrations below (table 1.3 and figure 1.1) it is obvious that safety issue need be addressed seriously.

In both two years, lack of safety is above 50% of total sites inspected, indicating the seriousness of the problem.

Further, the range between year 2001 and 2002 is very small showing that there is almost no improvement from year 2001 to 2002.

Apart from lack of provision of PPE it was noted during site inspection that many local and some foreign contractors do not provide and /or keep accident register book, safe drinking water, washing place and Toilet, proper eating-place, general site cleanliness and shed in case of bad weather.

Table 1.3 Short falls noted (CRB site inspection reports year 2001 & 2002)

S/N	Description	2001		2002		Variance
		Sites inspected 83		Sites inspected 308		
		No.	%	No.	%	
1.	No registered contractors	21	26	65	21	5
2.	No signboard at site	24	29	82	26	3
3.	No safety gear (PPE) to workmen	54	66	193	63	8
4	No hoarding at site	11	13	14	5	-2.6 (problem on increased)
5	Abuse of business name	2	2.4	16	5	0.3
6	Working above class limit	1	1.2	3	0.9	Problem not experienced 2002
7	Obstruction of Board staff	3	4	0	-	5

5.0 CRB STRATEGIES TO IMPROVE SAFETY

In order to address the appalling situation on safety the Board has initiated a number of strategies aimed at ensuring compliance to Occupational Health & safety on Construction Sites.

5.1 Establishment of Enforcement Department and Zonal Offices

The establishment of the department and its zonal offices was to bring services near to the stakeholders efficiently and timely.

The department comprises of three Zonal Offices; Eastern Zone which covers Dar Es Salaam, Coast, Morogoro, Dodoma, Mtwara, Lindi, Manyara, Arusha, Kilimanjaro and Tanga Regions, with its office at the CRB Head Office.

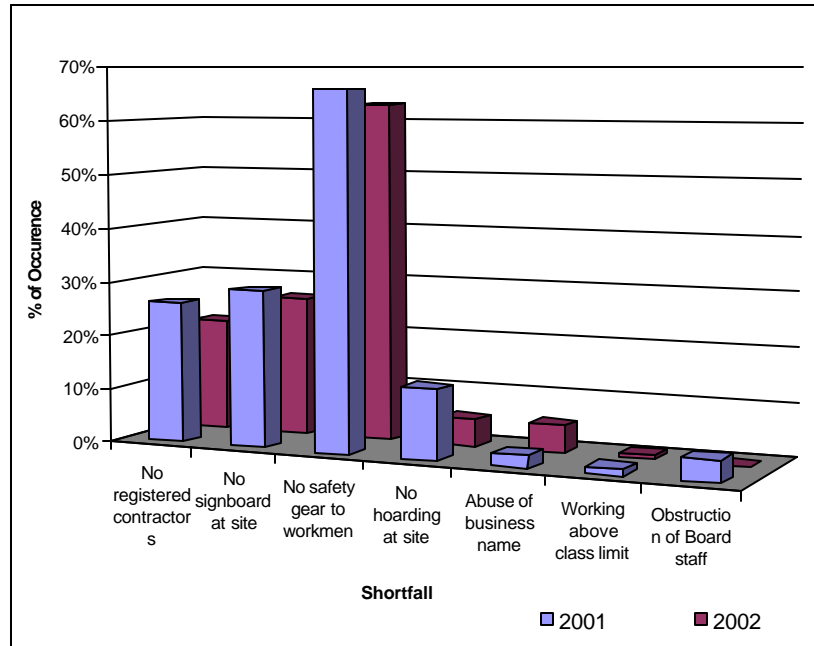


Figure 1.2. Comparison between shortfalls for year 2001 and 2002

Northern Zone which include Mwanza, Kagera, Mara, Shinyanga, Tabora, Singida and Kigoma with its Zonal Offices in Mwanza. Southern Zone covering Mbeya, Iringa, Rukwa and Ruvuma with its Zonal Offices in (Mbeya).

The department implements the following activities:

5.2 Site inspection to establish status of occupation Health and Safety at Construction site.

Site inspection is carried out randomly and in most cases without prior notification.

During inspection we establish whether the contractors carrying out the works are registered by CRB (main, and sub contractors for specialized works).

The client, the consultants, compliance to safety and health measures, erection of signboards and class limits are established. In case of short falls, a show cause notice is issued or are fined on the spot or both depending on the magnitude of the shortfalls or offences.

Further, key staff supervising the works is noted as well as equipment and plants being used for the on going works to establish supervision compliance.

5.1. Awareness campaigns.

The Board has several programs aimed at educating the contractors, workers, clients and general public through workshops, short courses, TV and Radio programs and News papers on safety observation, to prevent occurrence of diseases and accidents, and to make sure all people on construction sites visitors and passers-by are protected.

5.4. Research on Occupation Health and Safety.

The Board is carrying out studies of OHS in construction industry in Tanzania. The study carried out recently by OSHA revealed that:-The majority of injuries are due to simple causes; for instance, falling, stepping on objects, being stuck against or trapped by objects, poor handling of hand tools etc.

For many years now, there have been almost no studies addressing safety and health problems in construction sites in Tanzania.

The study was carried out to quantify, recommend and come up with strategies on measures to be carried out to improve this situation.

5.5. Monitoring of construction works

The Contractors Registration Board has been and will continue to make follow up by inspecting construction sites regularly to check inter-alia provision of PPE and Occupational Health programs.

5.6. Review of registered contractors

Currently the Board is preparing a crack down program where by the registered contractors will be reviewed from time to time by inspecting the sites followed by visiting the offices to ascertain on the staff employed, plants and equipment and maintenance of office premises as one of registration criteria.

The Board has learn that some registered contractors after registration they do not keep key staff and others do not even maintain their offices, plant and equipment as prerequisites for being a registered contractor.

6.0 CONCLUSIVE REMARK

The investment in safety and occupational health programs is a sound business strategy, for any company regardless of size, and will lead to having a positive impact on the financial bottom line.

This should not be regarded only as a requirement under the law, but should become and remain a core business strategy.

Solid safety and health management plans with senior management commitment will improve productivity and employees moral hence should be encouraged.

7.0. RECOMMENDATIONS

Registered contractors have the obligations to develop and maintain Occupational Health and Safety Management programs.

The baseline study carried out by CRB in collaboration with OSHA has shown that most contractors have no safety and health programs despite the fact that, the majority claim to understand its importance.

Therefore contractors should do the following: Planning for accident prevention and occupation health should be in a way to fit needs of the concerned construction site or particular on-going works.

Contractors should make provision for safety and health when preparing bids. The provision for safety and health must be made competitive with the aim to compete with other bidders and to avoid a monetary loss.

Workers should be assigned to work with plants after being trained to acquire necessary skills. Most accidents happen because jobs requiring the use of plants are assigned to workers with insufficient skills to operate them.

Inspection of plants and scaffolding at least once a week should be carried out.

Site supervisors should be conversant with OHS and should share that knowledge with co-workers.

Contractors should keep accident Registers at sites, and make record of all kind of accidents from minor bruises to major and fatal accidents, and submit reports to relevant Authorities; failure to report is an offence.

Contractors should ensure that work environment is improved and work places should be kept well for employee's comfort and convenience. Accommodation in case of bad weather, safe drinking water, washing facilities including toilets and accommodation for meals should be provided and properly maintained.

Plans related to cases of death or serious injury of the Works to be transparent to workers, thus any occurrence of either of the two should be taken as violation and the employee could be prosecuted under criminal laws if found deliberately exposed him/her self to injury and vice versa.

Costs for PPE's measures should be explored and explicitly be part of tendering and Costing for the project implementation.

8.0 CHALLENGE

Since establishment of CRB 6 year ago, contractors' adherence to safety and occupational health in construction sites is a far cry.

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The challenge during the next 5 years to Contractors and workers and CRB is to put into practice the above-mentioned recommendations thus, the 63% rate of non-adherence to Health and Safety is reduced to zero %.

9.0 REFERENCES

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- TANROADS, Roads rehabilitation/upgrading Project, Environmental impact analysis (EIA), proposed rehabilitation of eight Regional roads with emphasis on *Environmental Management Monitoring Plan (EMP) and compensation plan*, United Republic of Tanzania, November, 2002

Tanzania has a number of laws and regulations that govern occupational safety and health (OSH) protections for workers. The International Labour Organization reports that due to insufficient statistics and consistent reporting, it is impossible to determine the number of workplace accidents that occur in the country. The first law in Tanzania that related to workers health and safety was the Factories Ordinances Cap. 297 of 1950, that provided for occupational health and safety standards for workers Safety and Health in Construction (Third Level Students of Construction and Related Disciplines). 1. Safety and Health in Construction (Third Level Students of Construction and Related Disciplines). 2. Lesson 1: Construction Safety and Health Management and Key Requirements.Â Webinar: Safety and health in the construction sector - Overcoming the challenges Training package in occupational safety and health for the construction industry Action checklist: Work improvement in small construction sites (WISCON) Safety, health and welfare on construction sites: A training manual Good practices Good practices and challenges in promoting Decent Work in construction and infrastructure projects Prevention through pictures in construction: Safety and.