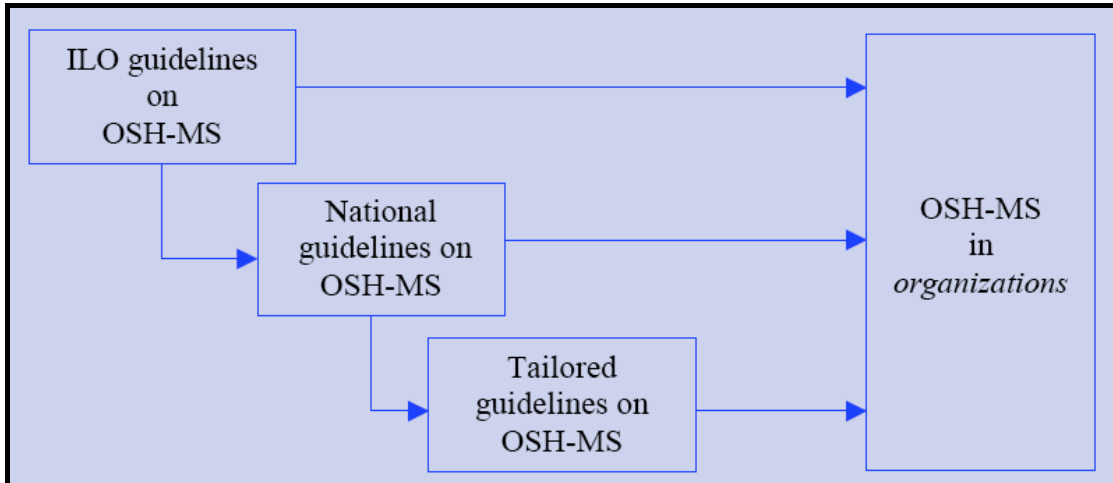


ILO CONSTRUCTION OS&H

A free, comprehensive, international digital training package in occupational safety and health for the construction industry

THEME SUMMARY 2: GENERAL DUTIES



Summary of content

1. Preface
2. ILO Convention C167, Recommendation R175 and the Code of Practice
3. Duties of authorities, employers, self-employed, and workers
4. Duties of construction clients and designers
5. Legal principles & legislation
6. Enforcement and audit
7. Continual improvement
8. Hazards and their prevention
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1. PREFACE

The Theme Summary “Fundamental Principles” summarised principles that have to be applied through a framework of specified duties, legal powers and enforcement. As stated in the Fundamental Principles, the aim is continual improvement to achieve ‘zero incidents’ and a healthy environment.

This Theme Summary is based on reviews of international agreements on the duties of governments, employers and workers, and begins with the relevant ILO documents. The duties of construction clients and their designers are then stated, followed by a review of legal principles and legislation in an international and national context. Enforcement and audit of these required duties is then explained. An important aspect of the work of the ILO and BWI is the aim of ‘continual improvement’, and this leads on to a discussion of hazards and their prevention, which is a development of that described in ‘Fundamental Principles’

The form of this Theme Summary is that some quite lengthy extracts from the above documents have been included in Section 2, but the main purpose of the Theme Summary is to provide a simplified guide to the main duties and responsibilities, as given in the subsequent Sections. Most of this Theme Summary is taken from the following ILO documents:

- C167 Safety and Health in Construction Convention, 1988
- R175 Safety and Health in Construction Recommendation, 1988
- “Safety and Health in Construction: A code of Practice” which was published in 1992 and provides guidance for the implementation of C167 & R175
- ILO report to XVIII World Congress on Safety and Health at Work, June 2008, Seoul, Korea, which is an update on progress

The details are given in the relevant elements of the Knowledge Base Section at the end of this Theme Summary.

2 ILO CONVENTION C167, RECOMMENDATION R175 AND THE CODE OF PRACTICE

C167 is fundamental to [Construction OS&H](#). It states an internationally agreed basis of legal requirements that should give effect to good OS&H practices and procedures. The fundamental requirements are reproduced below.

I. SCOPE AND DEFINITIONS

Article 1

1. *This Convention applies to all construction activities, namely building, civil engineering, and erection and dismantling work, including any process, operation or transport on a construction site, from the preparation of the site to the completion of the project.*

2. *A Member ratifying this Convention may, after consultation with the most representative organisations of employers and workers concerned, where they exist, exclude from the application of the Convention, or certain provisions thereof, particular branches of economic activity or particular undertakings in respect of which special problems of a substantial nature arise, on condition that a safe and healthy working environment is maintained.*

3. *This Convention also applies to such self-employed persons as may be specified by national laws or regulations.*

Article 2

For the purpose of this Convention:

(a) *The term **construction** covers:*

(i) *building, including excavation and the construction, structural alteration, renovation, repair, maintenance (including cleaning and painting) and demolition of all types of buildings or structures;*

(ii) *civil engineering, including excavation and the construction, structural alteration, repair, maintenance and demolition of, for example, airports, docks, harbours, inland waterways, dams, river and avalanche and sea defence works, roads and highways, railways, bridges, tunnels, viaducts and works related to the provision of services such as communications, drainage, sewerage, water and energy supplies;*

(iii) *the erection and dismantling of prefabricated buildings and structures, as well as the manufacturing of prefabricated elements on the construction site;*

(b) *the term **construction site** means any site at which any of the processes or operations described in subparagraph (a) above are carried on;*

(c) the term **workplace** means all places where workers need to be or to go by reason of their work and which are under the control of an employer as defined in subparagraph (e) below;

(d) the term **worker** means any person engaged in construction;

(e) the term **employer** means:

(i) any physical or legal person who employs one or more workers on a construction site; and

(ii) as the context requires, the principal contractor, the contractor or the subcontractor;

(f) the term **competent person** means a person possessing adequate qualifications, such as suitable training and sufficient knowledge, experience and skill for the safe performance of the specific work. The competent authorities may define appropriate criteria for the designation of such persons and may determine the duties to be assigned to them;

II. GENERAL PROVISIONS

Article 3

The most representative organisations of employers and workers concerned shall be consulted on the measures to be taken to give effect to the provisions of this Convention.

Article 4

Each Member which ratifies this Convention undertakes that it will, on the basis of an assessment of the safety and health hazards involved, adopt and maintain in force laws or regulations which ensure the application of the provisions of the Convention.

Article 5

1. The laws and regulations adopted in pursuance of Article 4 above may provide for their practical application through technical standards or codes of practice, or by other appropriate methods consistent with national conditions and practice.

2. In giving effect to Article 4 above and to paragraph 1 of this Article, each Member shall have due regard to the relevant standards adopted by recognised international organisations in the field of standardisation.

Article 6

Measures shall be taken to ensure that there is co-operation between employers and workers, in accordance with arrangements to be defined by national laws or regulations, in order to promote safety and health at construction sites.

Article 7

National laws or regulations shall require that employers and self-employed persons have a duty to comply with the prescribed safety and health measures at the workplace.

Article 8

1. Whenever two or more employers undertake activities simultaneously at one construction site:

(a) the principal contractor, or other person or body with actual control over or primary responsibility for overall construction site activities, shall be responsible for co-ordinating the prescribed safety and health measures and, in so far as is compatible with national laws and regulations, for ensuring compliance with such measures;

(b) in so far as is compatible with national laws and regulations, where the principal contractor, or other person or body with actual control over or primary responsibility for overall construction site activities, is not present at the site, he shall nominate a competent person or body at the site with the authority and means necessary to ensure on his behalf co-ordination and compliance with the measures, as foreseen in subparagraph (a) above;

(c) each employer shall remain responsible for the application of the prescribed measures in respect of the workers placed under his authority.

2. Whenever employers or self-employed persons undertake activities simultaneously at one construction site they shall have the duty to co-operate in the application of the prescribed safety and health measures, as may be specified by national laws or regulations.

Article 9

Those concerned with the design and planning of a construction project shall take into account the safety and health of the construction workers in accordance with national laws, regulations and practice.

Article 10

National laws or regulations shall provide that workers shall have the right and the duty at any workplace to participate in ensuring safe working conditions to the extent of their control over the equipment and methods of work and to express views on the working procedures adopted as they may affect safety and health.

Article 11

National laws or regulations shall provide that workers shall have the duty to:

(a) co-operate as closely as possible with their employer in the application of the prescribed safety and health measures;

(b) take reasonable care for their own safety and health and that of other persons who may be affected by their acts or omissions at work;

(c) use facilities placed at their disposal and not misuse anything provided for their own protection or the protection of others;

(d) report forthwith to their immediate supervisor, and to the workers' safety representative where one exists, any situation which they believe could present a risk, and which they cannot properly deal with themselves;

(e) comply with the prescribed safety and health measures.

Article 12

1. National laws or regulations shall provide that a worker shall have the right to remove himself from danger when he has good reason to believe that there is an imminent and serious danger to his safety or health, and the duty so to inform his supervisor immediately.

2. Where there is an imminent danger to the safety of workers the employer shall take immediate steps to stop the operation and evacuate workers as appropriate.

Article 13

SAFETY OF WORKPLACES

1. All appropriate precautions shall be taken to ensure that all workplaces are safe and without risk of injury to the safety and health of workers.

2. Safe means of access to and egress from all workplaces shall be provided and maintained, and indicated where appropriate.

3. All appropriate precautions shall be taken to protect persons present at or in the vicinity of a construction site from all risks which may arise from such a site.

R175 adds some important recommendations for further action, as given in the following extracts:

6. The measures to be taken to ensure that there is organised co-operation between employers and workers to promote safety and health at construction sites should be prescribed by national laws or regulations or by the competent authority. Such measures should include:

(a) the establishment of safety and health committees representative of employers and workers with such powers and duties as may be prescribed;

(b) the election or appointment of workers' safety delegates with such powers and duties as may be prescribed;

(c) the appointment by the employer of suitably qualified and experienced persons to promote safety and health;

(d) the training of safety delegates and safety committee members.

7. Those concerned with the design and planning of a construction project should take into account the safety and health of the construction workers in accordance with national laws, regulations and practice.

8. The design of construction equipment, tools, protective equipment and other similar equipment should take account of ergonomic principles.

9. *Construction work should be planned, prepared and undertaken in such a way that:*

(a) risks liable to arise at the workplace are prevented as soon as possible;

(b) excessively or unnecessarily strenuous work positions and movements are avoided;

(c) organisation of work takes into account the safety and health of workers;

(d) materials and products are used which are suitable from a safety and health point of view;

(e) working methods are employed which protect workers against the harmful effects of chemical, physical and biological agents.

10. *National laws or regulations should provide for the notification to the competent authority of construction sites of such size, duration or characteristics as may be prescribed.*

11. *Workers should have the right and the duty at any workplace to participate in ensuring safe working conditions to the extent of their control over the equipment and methods of work and to express views on the working procedures adopted as they may affect safety and health.*

Health Hazards

41.

(1) An information system should be set up by the competent authority, using the results of international scientific research, to provide information for architects, contractors, employers and workers' representatives on the health risks associated with hazardous substances used in the construction industry.

(2) Manufacturers and dealers in products used in the construction industry should provide with the products information on any health risks associated with them and on the precautions to be taken.

(3) In the use of materials that contain hazardous substances and in the removal and disposal of waste, the health of workers and of the public and the preservation of the environment should be safeguarded as prescribed by national laws and regulations.

(4) Dangerous substances should be clearly marked and provided with a label giving their relevant characteristics and instructions on their use. They should be handled under conditions prescribed by national laws and regulations or by the competent authority.

(5) The competent authority should determine which hazardous substances should be prohibited from use in the construction industry.

42. *The competent authority should keep records of monitoring of the working environment and assessment of workers' health for a period prescribed by national laws and regulations.*

43. The manual lifting of excessive weights which presents a safety and health risk to workers should be avoided by reducing the weight, by the use of mechanical devices or by other means.

44. Whenever new products, equipment and working methods are introduced, special attention should be paid to informing and training workers with respect to their implications for safety and health.

The Code of Practice (CoP)

This code [also] provides guidance in the implementation of the provisions of the Safety and Health in Construction Convention, 1988 (No. 167), and the Safety and Health in Construction Recommendation, 1988 (No. 175).

The objective of this code is to provide practical guidance on a legal, administrative, technical and educational framework for safety and health in construction with a view to:

(a) preventing accidents and diseases and harmful effects on the health of workers arising from employment in construction;

(b) ensuring appropriate design and implementation of construction projects;

(c) providing means of analysing from the point of view of safety, health and working conditions, construction processes, activities, technologies and operations, and of taking appropriate measures of planning, control and enforcement.

Note also:

The provisions of this code should be considered as the basic requirements for protecting workers' safety and health.

And

The provisions of this code should be applied to self-employed persons as may be specified by national laws or regulations.

2.2.5. Employers should arrange for regular safety inspections by competent persons at suitable intervals of all buildings, plant, equipment, tools, machinery, workplaces and systems of work under the control of the employer at construction sites in accordance with national laws, regulations, standards or codes of practice. As appropriate, the competent person should examine and test by type or individually to ascertain the safety of construction machinery and equipment.

3 DUTIES OF AUTHORITIES, EMPLOYERS, SELF-EMPLOYED, AND WORKERS

General duties

Note that C167 & R175 apply to ‘all construction work’.

‘General duties’ have to be considered for the project as a whole, from start to finish, taking into account all those involved. As explained in Section 6 (the need for a holistic culture and systems) of the Summary for Theme 1 “Fundamental principles”, a construction project may be viewed as a matrix of time-based ‘stages’ as the project progresses from its inception to completion and commissioning, and at each of these stages a number of organisations and people are involved, each to a varying extent according to the activities of each stage.

A simplified, general matrix, based on a traditional form of contract in which design and construction are separate activities, is shown below. The density of the shading in the boxes gives an indication of the amount of engagement in the project at each stage.

This matrix depicts the complexity of the organisation of a construction project and indicates how difficult it is to ensure that the safety and health of all those involved is not impaired in any way.

THOSE INVOLVED	PROJECT STAGES				
	Briefing	Design	Procurement	Construction	Commission
Client	Dark	Dark	Dark	Medium	Dark
Authorities	Medium	Dark	Light	Medium	Medium
Project managers	Dark	Dark	Dark	Dark	Dark
Local residents	Medium	Medium	Light	Medium	Medium
Designers	Medium	Dark	Light	Medium	Dark
Contractors	Light	Light	Dark	Dark	Dark
Other consultants	Medium	Medium	Medium	Medium	Medium
Sub-contractors	Light	Medium	Dark	Dark	Medium
Suppliers	Light	Medium	Medium	Dark	Medium
Workers	Light	Light	Light	Dark	Dark
Users	Medium	Medium	Light	Medium	Dark

Authorities

The international agreements C176 & R175 stated above require that the relevant national authorities:

- Acknowledge their responsibilities under these agreements
- Consult with employers and workers
- Put in place national laws, regulations, standards and codes to implement them
- Put in place comprehensive inspection regimes

Employers

Employers must note that on projects with multiple ‘employers’, one of them shall be deemed to be the ‘principal contractor’ and will have overall responsibility for OS&H, but each employer remains responsible for their own OS&H.

Employers must:

- Co-operate with each other
- Evacuate immediately all employees from imminent danger
- Ensure that all workplaces are safe and that there are safe means to get to and from them
- Establish OS&H committees with employer and worker representatives
- Employ qualified OS&H persons to ensure compliance
- Offer appropriate training to all relevant persons
- Ensure that all workers are suited (by age, physique, health and skill) to the tasks they undertake and are made aware of all relevant OS&H provisions
- Take effective measures to protect all those in the community in which the construction project is based.

Self-employed

- Employers must co-operate with self-employed persons
- Self-employed persons have the same OS&H rights as all others employed on the project

Workers

All workers:

- Have the right to participate in the process of ensuring OS&H
- Have the right to remove themselves from danger
- Must co-operate with their employers and comply with all OS&H measures
- Must take care of their own safety and the facilities provided
- Must report risks outside their control

4 DUTIES OF CONSTRUCTION CLIENTS AND DESIGNERS

The client

The project matrix shown in Section 3 begins with the client, with whom ultimate responsibility must lie because this is the person or organisation that created the project and will pay for it. Without the client, there would be no project, so no person would be at risk.

In order to ensure that the whole project – from start to finish - is managed with the safety and health of all as a principal performance criterion, the client must appoint a project manager for the whole of its duration. Only in this way can the duties described below be enforced.

The role of the project manager and the management of projects is explained in more detail in the Theme Summary 5: Principles of safe project management.

Designers

Designers and planners must:

- Include careful consideration of OS&H in all their designs, plans and working methods
- Endeavour to 'design out' hazards
- Give careful consideration to the design of all equipment and tools, including consideration of ergonomics

5 LEGAL PRINCIPLES & LEGISLATION

The provisions of the international agreements outlined above have to be implemented through national laws. Although it is difficult to generalize internationally, legal requirements can be considered under two distinct headings: national or criminal law, and contract law.

National or criminal law

Almost all countries have national legislation to ensure that employees are protected from injury at work. A range of more specific regulations and schedules usually supports these general laws. National laws or regulations should provide for general duties of clients, designers, engineers and architects to take into consideration the safety and health aspects when designing buildings, structures or construction projects generally.

Infringement of these laws is a criminal offence, but it is often the case that the penalties for, say, causing the death of a worker by negligent OS&H provision are considerably less than for a case of homicide. This attitude that somehow deaths on construction sites are just a fact of life, compared to homicide which is considered to be intentional, is one of the prime causes of the appalling accident performance of the construction industry.

Good examples of national laws and regulations can be found on the web site of the USA Occupational Safety and Health Administration: www.osha.gov.

Contract law

Within the framework of national law, more specific provision for effective OS&H must be made through the contract for the construction project. This is especially important when the national OS&H law is weak.

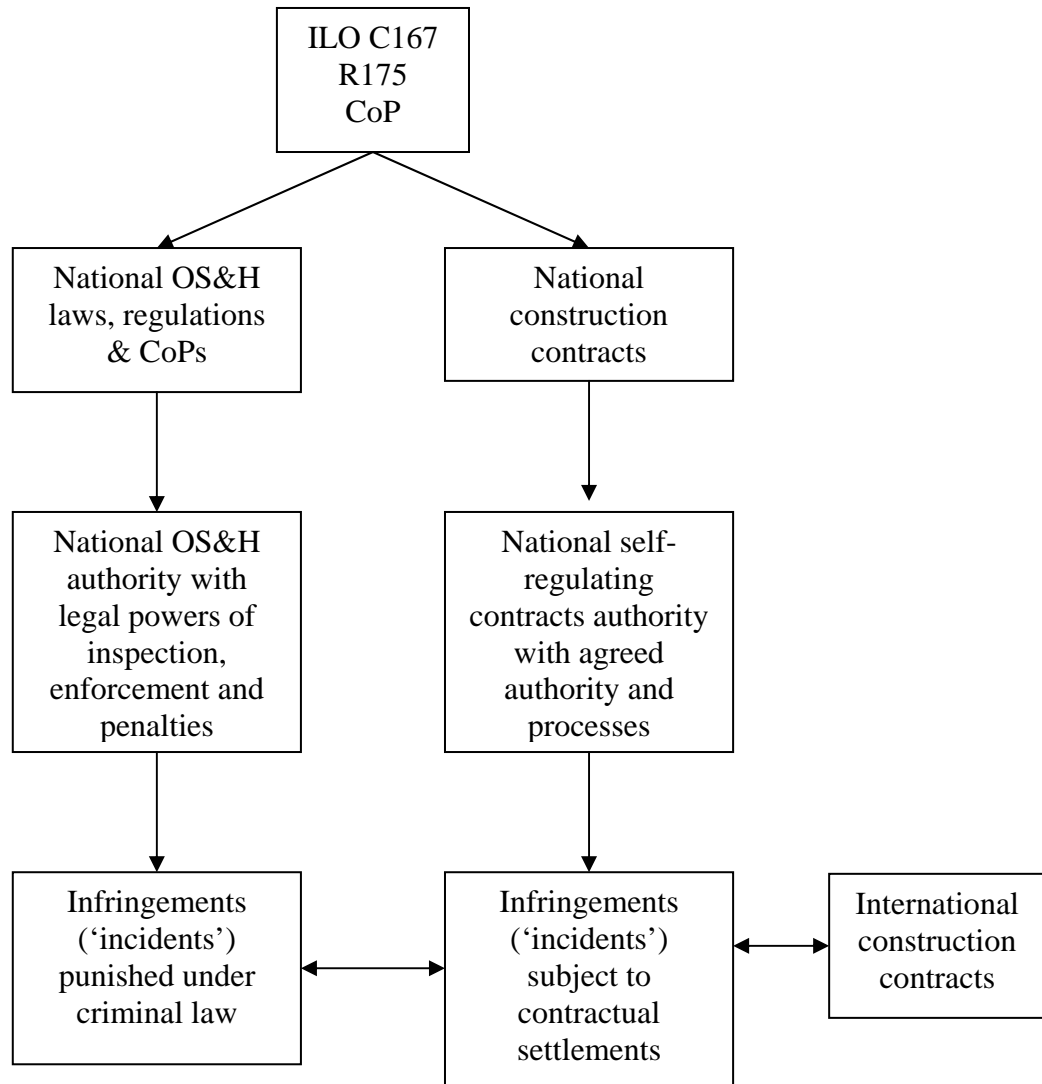
As stated in Section 4 above, the ultimate responsibility lies with the client¹, who must require those submitting tenders to make provision for the cost of safety and health

¹ In some forms of contract, the 'client' is referred to as the 'employer', but in the context of OS&H this terminology is confusing so it is not used in [Construction OS&H](#).

measures during the construction process. This provision must include the requirement that it is taken forward in all subcontracts and employment arrangements.

Contracts are explained in more detail in the Theme Summary 5 “Principles of safe project management”.

In outline, the structure of legal requirements for OS&H is as shown in the diagram below.



(This process and diagram was formulated by Richard Neale from an analysis of documents in the Knowledge Base, together with his own understanding developed from years of practical and academic experience)

6 ENFORCEMENT AND AUDIT

This topic will, be covered in more detail in Theme Summary 7: Processes and systems, so only a brief introduction will be given here.

The ILO report to XVIII World Congress on Safety and Health at Work, June 2008, Seoul, Korea, offers the following outline of a national system.

ESSENTIAL ELEMENTS OF A NATIONAL OSH SYSTEM	
<ul style="list-style-type: none"> • Legislation, and any other relevant OSH instruments; • One or more authorities or bodies responsible for OSH; • Regulatory compliance mechanisms, including systems of inspection; • A national tripartite advisory mechanism addressing OSH issues; • Arrangements to promote at the enterprise level, cooperation between employers and workers; • OSH information and advisory services; • Systems for the provision of OSH training; 	<ul style="list-style-type: none"> • Occupational health services; • Research on OSH; • A mechanism for the collection and analysis of data on occupational injuries and diseases; • Provisions for collaboration with relevant insurance or social security schemes covering occupational injuries and diseases; and • Support mechanisms for a progressive improvement of OSH conditions in micro, small and medium-sized enterprises, and in the informal economy.

Such a system sets up a national basis for enforcement and audit, but the same conference report contains the following statement (page 11):

“Good governance in the workplace requires competent and well-resourced labour inspection systems, with modern inspection practices that focus on prevention. However, there are still substantial concerns about the lack of resources allocated to labour inspectorates in many countries, weakening the impact of national OSH policies and programmes at the enterprise level.”

So, where resources for inspection, enforcement and audit are inadequate, more responsibility is placed on the employers, who have a duty to enforce their stated commitments to OS&H by:

- Arranging regular safety inspections by competent persons, including testing where necessary
- Scheduling these inspections purposefully and at regular and appropriate intervals
- Including all parts of the facilities, workplaces, equipment and systems of work in the inspections

This inspection regime must apply to the whole project and everyone and everything within it, regardless of employment contracts or ownership.






7 CONTINUAL IMPROVEMENT

Good management is a relentless process. Setting objectives and making and implanting plans is not a ‘one-off’ activity at the start of a project, but an on-going, every day task. A simple way of looking at this is that all actions require to be followed up and appropriate further actions taken if required. Thus all actions should have a ‘feedback loop’, which informs the manager whether the action intended is proceeding or whether further action is required in order to achieve the required outcome.

The OS&H statistics of the worldwide construction industry are so poor that only by adopting an attitude of striving for continual improvement can real progress be made. The diagram below is taken from ILO-OSH 2001 and gives an indication of how such a process may be envisaged.



Therefore, all those involved in a construction project have a ‘general duty’ to strive towards continual improvement and a ‘zero incident’ OS&H record, in all five stages of the project, as shown in the diagram below.

OS&H PROCESSES & PROCEDURES	PROJECT STAGES				
	Briefing	Design	Procurement	Construction	Commission
Policy					
Organizing					
Planning & implementation					
Evaluation					
Action for improvement					

8 HAZARDS AND THEIR PREVENTION

Hazard: The inherent potential to cause injury or damage to people's health.
It is an inherent feature of a project.

Risk: A combination of the likelihood of an occurrence of a hazardous event and the severity of injury or damage to the health of people caused by this event.
It is therefore a statistical concept of whether a potential hazard will actually be allowed to have an effect.

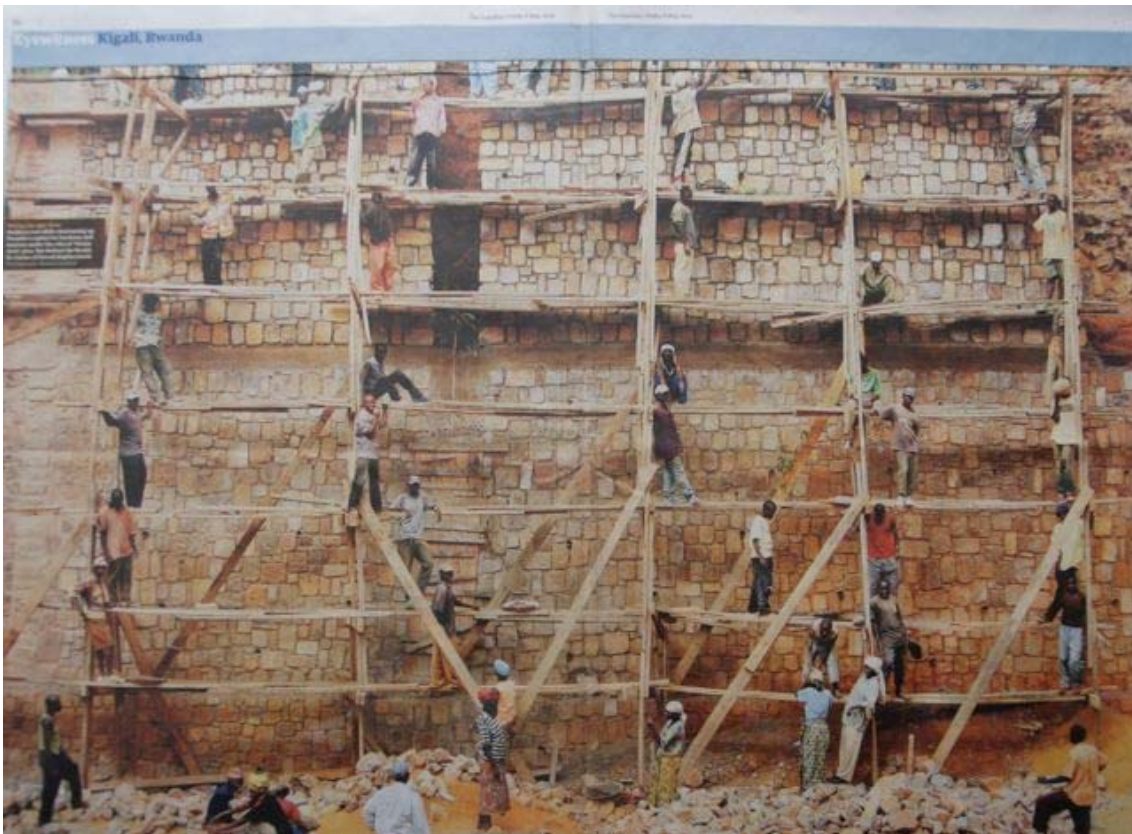
In terms of the General Duties of all concerned in a construction project:

- Clients, designers and planners, contractors and subcontractors all have a duty to eliminate hazards as far as possible - for example by changing an aspect of a design
- Workers have a duty to contribute their own expertise and point of view
- Workers have the right to avoid exposing themselves to risks

These simple concepts are fundamental to **Construction OS&H** and will be explained further in other Themes.

FINALLY!

Everyone has a duty to improve OS&H – we must be able to do better than this!



9 RELEVANT ELEMENTS OF THE KNOWLEDGE BASE

Title	ILO Code of Practice: Safety & health in construction
Type of source	Code of practice, 174 pages
Publication or other source details	ILO Publications http://www.ilo.org/global/Publications
Date & ISBN/ISSN	1992. 92-2-107104-9
Summary of contents	<p><i>"It goes a long way in mapping out the agenda for health and safety professionals in this most dangerous and populous industry."</i></p> <p>Content:</p> <ol style="list-style-type: none"> 1. General provisions 2. General duties 3. Safety of workplaces 4. Scaffolds and ladders 5. Lifting appliances and gear 6. Transport, earth-moving and materials-handling equipment 7. Plant, machinery, equipment and hand tools 8. Work at heights including roof work 9. Excavations, shafts, earthworks, underground works and tunnels 10. Cofferdams and caissons and work in compressed air 11. Structural frames, formwork and concrete work 12. Pile-driving 13. Work over water 14. Demolition 15. Electricity 16. Explosives 17. Health hazards, first aid and occupational health services 18. Personal protective equipment and protective clothing 19. Welfare
Comments on relevance	This Code of Practice is fundamental to this training package. It has influenced the structure and informed the content.
Other information	Downloaded as "ILO Code of Practice"

Title	C167 Safety and Health in Construction Convention, 1988
Author(s)	The General Conference of the International Labour Organisation
Type of source	ILO Convention concerning Safety and Health in Construction
Publication or other source details	Convention: C167 Place: Geneva Session of the Conference: 75
Date & ISBN/ISSN	Date of adoption: 20:06:1988 Date of coming into force: 11:01:1991
Summary of contents	<ol style="list-style-type: none"> I. Scope and definitions II. General provisions III. Preventive and protective measures IV. Implementation V. Final provisions <p>There are also some useful cross-references at the end.</p>
Comments on relevance	The core document for Construction OS&H , containing fundamental general provisions and much detailed guidance.
Other information	This Convention has very similar detailed content to the ILO's Code of Practice, 1992, which is also summarised in this Knowledge Base.

Title	R175 Safety and Health in Construction Recommendation, 1988
Author(s)	The General Conference of the International Labour Organisation
Type of source	ILO recommendation concerning safety and health in construction
Publication or other source details	Recommendation: R175 Place: Geneva Session of the Conference: 75
Date & ISBN/ISSN	Date of adoption: 21:06:1988
Summary of contents	<ul style="list-style-type: none"> I. Scope and Definitions II. General Provisions III. Preventive and Protective Measures IV. Effect on Earlier Recommendations <p>There are also some useful cross-references at the end.</p>
Comments on relevance	A very useful supplementary document for Construction OS&H, relates to C167 and the ILO Code of Practice
Other information	C167 and the Code of Practice are also summarised in the Knowledge Base.

Title	Introductory report: Beyond death and injuries: The ILO's role in promoting safe and healthy jobs
Type of source	Report to a conference
Publication or other source details	XVIII World Congress on Safety and Health at Work, June 2008, Seoul, Korea Author: Al Tuwaijri, Sameera et al http://www.ilo.org/public/english/protection/safework/wdcongrs18/safework_report.pdf
Date & ISBN/ISSN	International Labour Office, Geneva: ILO, 2008. ISBN: 978-92-2-121332-1 (print) ISBN: 978-92-2-121333-8 (web pdf)
Summary of contents	<p>Introduction</p> <p>I – Overview</p> <p>Work-related fatalities, accidents and diseases A promotional framework for OSH OSH and safety culture OSH and management systems National OSH policy National OSH systems National OSH programmes National OSH profiles</p> <p>II – ILO action on OSH, 2005-2008</p> <p>Promotion, awareness raising and advocacy The World Days for Safety and Health at Work Development of specific OSH standards and instruments Technical assistance Promotion of ILO OSH standards Labour inspection Knowledge development, management and dissemination International collaboration Silicosis Asbestos HIV/AIDS and the workplace Chemical safety, GHS and SAICM Other areas of collaboration</p> <p>III – Looking to the future</p> <p>Foresight and OSH Emerging risks Physical risks Biological risks Chemical risks Risks related to nanotechnologies Workers well-being Changing patterns in the workforce The informal economy Migrant workers The gender dimension Ageing of workers</p> <p>Conclusions</p> <p>Annexes</p>
Comments on relevance	This is a most useful and relevant report, bringing much general thinking and documents up to date. Essential reading for all trainers in OS&H.
Other information	Full report is in the Downloads ILO folder as 'ILO report to XVIII World Congress on Safety and Health at Work, June 2008, Seoul, Korea', downloaded 3 February 2009