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Child labour in agriculture in Lebanon

—
A guide
for practitioners



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A guide for practitioners

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Abbreviations

CRC	Convention on the Rights of the Child
FAO	Food and Agriculture Organization of the United Nations
ILO	International Labour Organization
IPEC	International Programme on the Elimination of Child Labour
NAP	National Action Plan
OSH	Occupational Safety and Health
PPP	PowerPoint Presentation
RNE	FAO Regional office for Near East and North Africa
PPE	Personal Protective Equipment

Foreword

Worldwide, almost 60 percent of working children aged 5–17 years can be found working in agriculture (including farming, fishing, aquaculture, forestry, and livestock). This amounts to more than 98 million girls and boys. In Arab countries such as Lebanon, child labour in agriculture has often occurred within the context of family farming, where participation in some agricultural activities is not considered “child labour.” However, this does not mean that children’s working conditions meet national or international labour standards, including standards on working age. Thus, it is important to distinguish between the kind of work involvement that is characterized by light duties and the kind of child labour that interferes with compulsory schooling and damages the health and personal development of children.

The agricultural sector in Lebanon has always depended on foreign labour. Syrian and Palestinian adult workers, among others, have been hired for harvesting, pruning, spraying pesticides and other agricultural practices in the fields. Since 2010 the complex Syrian refugee crisis and its socio-economic impact has led to an increase in child labour, especially in its most abusive forms and conditions, notably in the Beqaa valley and the North of Lebanon.

In order to plan programmes to address this problem, in 2015 the International Labour Organization and the Food and Agriculture Organization of the United Nations, through its Regional Initiative on Small-Scale Family Farming, joined with UNICEF, the Ministries of Labour and Agriculture, NGOs, Chambers of Commerce, Industry, and Agriculture, members of the National Steering Committee to Combat Child Labour, and other civil society stakeholders. Thus far, the main outputs are (a) capacity-building programmes and activities in the agricultural sector in the Beqaa and North Lebanon, (b) an assessment of the situation of children working in this sector in the Beqaa, and (c) the production of this guide in English and Arabic for practitioners working towards reducing child labour in agriculture, whether directly or indirectly. Such practitioners include agricultural extension workers, labour inspectors, occupational safety and health inspectors, municipal police, social workers, and NGOs working with child labourers in rural areas.

The contents of the guide were developed based on the instructional material in the ILO 2006 toolkit “Tackling hazardous child labour in agriculture: Guidance on policy and practice”. The Arabic version of this guide will serve as a significant tool for practitioners in Lebanon and the Arab countries who are attending to the issue of child labour in agriculture. Moreover, it represents a pillar for present and continuous collaborative efforts between two sister UN agencies (the ILO and FAO) and their national counterparts, the Ministry of Labour and the Ministry of Agriculture.

Introduction



Child labour in agriculture: A multi-faceted problem

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Child labour is work that, by its nature and/or the way it is carried out, harms, abuses or exploits a child or deprives that child of an education. It is considered a serious multi-faceted worldwide problem, with far-reaching detrimental consequences on the health and well-being of affected children and, more broadly, on their present and future quality of life, that of their families and other members of their communities, and of their nation as a whole.

Rooted in multiple social, cultural, economic and political causes, the problem of child labour may further be compounded by geopolitical contextual factors. In Lebanon, for example, the massive influx of up to 1.16 million refugees from neighbouring countries undergoing political unrest during the past decade (most notably Syria since 2011) has posed a tremendous economic burden on both refugee and host communities. Often such communities were already underprivileged and underserved, as evident in the regions of the Beqaa, the North, and the South. The resulting circumstances of displacement, deprivation and ongoing deterioration in living conditions have caused a large number of affected families to use children as a source of income to help sustain their livelihoods. These children are often missing the opportunity for basic education and skills acquisition, and are likely to remain trapped in a vicious cycle of poverty, unable to advance along the socioeconomic spectrum.

In the agricultural sector, child labour is especially common; around 70 per cent of all child workers worldwide are engaged in agriculture, often in conditions inappropriate to their age and which do not meet internationally approved health and safety standards. Being economically reliant on agriculture, as are other Arab states in the region, Lebanon is among those countries in which child labour in agriculture is prevalent. Agriculture is also the third most hazardous work sector, after mining and construction. In the case of children, agricultural work is comprised of activities and conditions that are considered “hazardous” due to frequency of harmful (or even deadly) consequences of such work.

Yet many children enter this field of work at a very young age, sometimes as young as 5 years, thus increasing the duration and extent of exposure to the hazards of such work over the course of their lifetime. Commonly, the reason for working this early in life is that in rural areas children are immersed in the culture and traditions of a “family farm” setting. Often they are considered as “helping hands”, even though they may be required to fulfil the workload of an adult. Such circumstances render child labour under-recognized and “invisible”, significantly augmenting the challenges of implementing national and international legislation designed to protect children from exploitation.

The ILO’s goal is the effective elimination of all forms of child labour worldwide in all occupational sectors, with an emphasis on prioritizing the abolishment of the “worst forms of child labour”, among which is “hazardous work of children”. The underlying policy frameworks and actions intended to achieve this goal have been based on the Minimum Age Convention, 1973 (No. 138) and the Worst Forms of Child Labour Convention, 1999 (No. 182). Regarding agricultural work specifically, Article 16 of the Convention on Safety and Health in Agriculture, 2001 (No. 184) applies, as does other international and national legislation (see *International legal framework* in Appendix II, and *Lebanese legislation and policy documents on child labour* in Appendix III).

At the forefront of this complex endeavour is the prevention and elimination of child participation in hazardous work. The key interventions in the ILO’s strategy are focused on three main principles: prevention, withdrawal, and protection of children from child labour. To achieve these, the ILO seeks to draw upon national policies aimed at promoting the rights, well-being and adequate development of children, and enabling children to become their own agents in the search for solutions

to the problem of child labour. In this process, the ILO also seeks to engage not only policy-makers, but other stakeholders. These include employers' organizations, trade unions, occupational safety and health agencies and institutions, agricultural agencies and so on. Activities aimed at sensitization, awareness-raising and education of stakeholders on the realities of child labour are crucial to their understanding and involvement in developing sustainable solutions. Essential components of such activities include defining and explaining the scope and significance of the problem, as well as building the capacity to make sound decisions and adopt safe practices. This is achieved by imparting stakeholders with the necessary knowledge and helping them develop their skills in risk assessment and the implementation of risk control measures in agricultural production, thus empowering them to take an active role in combating child labour.

It is within the framework of this strategy that this guide has been developed. Specifically, this guide aims at raising awareness among practitioners in the field of agricultural labour of the seriousness of the problem of child labour and its implications, and to sensitize all stakeholders involved in agricultural work to the various possibilities for limiting its severity. In particular, the guide was designed as a reference manual for trainers of trainers conducting workshops in the field of child labour in agriculture in Lebanon, but may also be used by all stakeholders and practitioners in the field of agriculture.

Key child labour terminology

The very concept of child labour is understood within a language that draws on a multitude of definitions embedded in legislative terms (e.g. the "worst form of child labour"), legal limits and ranges (e.g. the "minimum age for employment"; the question of who is considered a "child"), and other technical language (e.g. "hazardous work"). Unless used among experts in the field, some of these terms may be confounded with the vocabulary used in everyday spoken language (e.g. "child labour" may be considered synonymous with "work carried out by a child", whereas in technical terminology it carries the harsher implications of a serious socioeconomic and human rights issue). To gain a proper understanding of the concept of child labour and, moreover, child labour in agriculture, a list of key terms and their definitions has been included in the guide (Appendix I). These will help the reader to acquire a clearer understanding of the concept and, hopefully, a better awareness of the problem of child labour in agriculture.

Legal framework

The definition of child labour is closely linked to a number of international conventions, including ILO Conventions and Recommendations, national labour laws and other legislative documents, some of which have been cited in the chapters of the guide. In particular, Lebanon has endorsed and is committed to ILO child labour conventions No. 138 and No. 182, even though the Lebanese labour law is yet to be revised in accordance. While some degree of discrepancy still exists between the Lebanese legal framework and ILO conventions on child labour, future amendments in Lebanese legislation aimed at reducing such gaps will undoubtedly achieve further advancement in the child labour situation in Lebanon. A basic understanding of these legislative elements is crucial for empowering stakeholders to contribute actively in the effort to eliminate child labour. Relevant international and national legislative items and their related definitions can be found in Appendices II and III.

Chapter 1



Child Labour in Agriculture

Child Labour in Agriculture

Introduction and objectives

Child labour in agriculture is a serious issue worldwide, but has gained particular significance in Lebanon and the region over the past decade owing to the influx of displaced populations from neighbouring countries, especially into rural areas. Child labour in agriculture has grave social and economic implications not only for the children themselves, but also for their families and the larger society. The elimination of child labour falls under the mandate of certain international non-governmental organizations such as the ILO, but is also a principle under national Lebanese policy and laws.

However, such a huge endeavour necessitates the active participation of many stakeholders among the agricultural sector, especially those most directly involved in the engagement of children for labour. These include employers (farmers and agricultural producers), labour inspectors, extension workers and other practitioners in this sector, the families of children who work and, last but not least, the children themselves. Such active participation can only be founded on an awareness and a clear understanding of the definition, nature and magnitude of the problem of child labour in agriculture.

Objectives: This chapter introduces the concept of child labour in agriculture, presenting three criteria by which to determine whether a work activity or task that a child may be engaged in is considered child labour, namely: (1) the age of the child; (2) the nature and conditions of work; and (3) the impact on compulsory schooling. This determination is made with reference to international frameworks, as well as the national legislation on child labour in Lebanon. The characteristics and causes of child labour specific to the agricultural sector are elucidated.

Refer to PowerPoint Presentation **PPP 1, "What is Child labour in Agriculture?"** in accompanying CD-ROM, for sections 1.a, 1.b, and 1.c.

1a. What is child labour?

Defining child labour depends on three criteria:

- (1) the age of the child;
- (2) the nature and circumstances under which the work is carried out; and
- (3) its impact on compulsory education.

Examining the criteria for child labour in more detail

(1) Age of the child

In conformity with international legislation, the Lebanese Code of Labour fixes age limits for particular types of work:

- 14 years is the general minimum age for employment.
- 18 years is the minimum age for hazardous work.

(2) Nature and circumstances under which the task or activity is carried out

Some tasks or occupations are considered hazardous by nature because they are intrinsically dangerous regardless of the conditions of work. The conditions under which a task is carried out are equally important. A safe task can become dangerous when carried out under hazardous circumstances (e.g. at night, for extended periods of time without a break, or working in isolation).

(3) Impact on compulsory education

If the work carried out by the child interferes with their compulsory education, it is considered child labour. Child labour can:

- deprive children of the opportunity to attend school;
- oblige them to leave school prematurely; or
- require them to attempt to combine school attendance with long and heavy work.

Assessing what is and what is not child labour

In some cases it can be difficult to distinguish between child labour in agriculture, youth employment and children's participation in non-hazardous agricultural activities.

To be considered child labour, it is sufficient to respond "yes" to one of the following three criteria if the tasks required of the child:

- do not respect the minimum age for admission to employment (less than 14 years in Lebanon);
- may present a hazard, taking into account both the nature and circumstances of the work; or
- are likely to have a negative impact on compulsory schooling.

Some definitions

A child: A person aged less than 18 years.

Article 2 of the Worst Forms of Child Labour Convention, 1999 (No.182), states that "the term 'child' shall apply to all persons under the age of 18".

Child labour: Work which:

- engages children below the minimum age for employment for that type of work;
- presents mental, physical, spiritual, social or moral hazards for children;
- interferes with compulsory education;
- is hazardous (i.e. listed in the “hazardous work list” – in Lebanon, the list is compiled in Annex 2 of article 2 of Decree 8987).

Note: Not all activities undertaken by children should be considered child labour. Some activities, in fact, can be positive for children’s development, enabling them to learn valuable skills and contribute to their survival and food security.

Child labour is not:

- engaging children in tasks appropriate for their age and which do not hinder their education;
- helping out in family enterprises or light work that may, for example, serve children well with respect to the above.

Light work: Work that is not likely to be harmful to the child’s health or development and which does not interfere with compulsory school attendance, participation in vocational orientation or training programmes, or their capacity to benefit from the instruction received. The Minimum Age Convention, 1973 (No. 138) fixes the minimum age for light work at 13 years of age. National legislation needs to specify the conditions and age threshold for light work. In Lebanon, this has not yet been established, but is among national objectives that have been set for the near future.

1b. How does international legislation define child labour?

The international normative framework

Child labour terminology is defined by international labour legislation (Conventions and Recommendations). Basic terms include **minimum age for employment**, **worst forms of child labour**, **hazardous work**, **child labour**, and **light work**.

Minimum Age Convention, 1973 (No. 138)

- Fixes at 15 years the **general minimum age for admission to employment** (with some exceptions – **in Lebanon it is 14 years**). The minimum age for employment cannot be lower than the age of completion of compulsory schooling.
- Fixes at 18 years the minimum age for hazardous work.
- Fixes at 13 years the minimum age for light work.

Note: No minimum age for light work has yet been set by Lebanese legislation.

Worst Forms of Child Labour Convention, 1999 (No. 182)

- Defines the **worst forms of child labour**, which comprise **hazardous work**, and actions to eliminate them.

- Countries ratifying the Convention need to define a **hazardous work list**, in consultation with workers' and employers' organizations.
- *In Lebanon, the «Hazardous work list» is defined in Annex 2 of Article 2 of Decree 8987 on Worst Forms of Child Labour, 2012*

According to this Convention, the **worst forms of child labour** comprise:

- (a) all forms of slavery (e.g. the sale and trafficking of children, debt bondage and serfdom, or forced or compulsory labour, including forced or compulsory recruitment of children for use in armed conflict);
- (b) the use, procuring or offering of a child for prostitution or pornographic materials or performances;
- (c) engagement of children in illicit activities;
- (d) hazardous work (in accordance to the national list).

Hazardous work

Worst Forms of Child Labour Convention, 1999 (No. 182)

Definition: Hazardous work of children is defined as work which by its nature or by the circumstances in which it is carried out is likely to harm the health, safety or morals of children (Article 3(d) of Convention No. 182).

The minimum age for hazardous work is 18 years (Minimum Age Convention, 1973 (No. 138)).

The Worst Forms of Child Labour Recommendation, 1999 (No. 190)

Further guidance on hazardous work is provided by the Recommendation concerning the prohibition and immediate action for the elimination of the worst forms of child labour, 1999 (No. 190), which describes what hazardous work consists of **in practice**.

Recommendation No. 190 defines hazardous work as:

- (a) work which exposes children to physical, psychological or sexual abuse;
- (b) work underground, under water, at dangerous heights or in confined spaces;
- (c) work with dangerous machinery, equipment and tools, or which involves the manual handling or transport of heavy loads;
- (d) work in an unhealthy environment which may, for example, expose children to hazardous substances, agents or processes, or to temperatures, noise levels, or vibrations damaging to their health;
- (e) work under particularly difficult conditions such as work for long hours or during the night or work where the child is unreasonably confined to the premises of the employer.

Hazardous work list as defined by Lebanese legislation

Following the ratification of Convention No. 182, Lebanon issued Decree 8987 in 2012, which defined a hazardous work list under article 2, Annex 2 of the Decree. This list is subdivided into Lists A and B.

List A: Occupational hazards to which children should not be exposed through work.

This list includes:

- (a) chemical hazards (e.g. carcinogens such as asbestos and benzene), including dusts and fibres;

- (b) physical hazards (e.g. noise, ionic radiation, high and low temperatures);
- (c) biological hazards (e.g. viruses, bacteria, parasites);
- (d) ergonomic hazards (e.g. size of protective equipment not suited to worker);
- (e) psychological, mental and social hazards and general working conditions;
- (f) safety hazards (e.g. work at high elevation, near high voltage, or with explosives).

List B: Jobs and work-related activities in which the child should not be employed.

This list includes agricultural work, including work on family farms and specifies the following **agricultural activities** in which the child should not be employed:

- (a) driving or operating tractors and farming machines;
- (b) mixing, transporting or spraying agricultural pesticides or fertilizers;
- (c) harvesting or handling poisonous plants (like tobacco plants which secrete the toxin nicotine);
- (d) climbing on high trees or ladders;
- (e) using sharp tools such as steelheads to thread tobacco leaves;
- (f) working for more than four hours a day.

UN Convention on the Rights of the Child, 1989 (CRC)

Article 32 recognizes the right of children to **be protected from performing any work** that is likely to **interfere with their education**, or to damage their health or their mental, physical, spiritual, moral or social **development**.

Hazardous work: The difference between youth employment and child labour

- Children above 14 years are in **youth employment** if the work they do is acceptable for their age and not hazardous. They are in **child labour** if they are engaged in hazardous work.
- Children above 14 years need to be protected from hazardous work so that they can stay in youth employment. Therefore, improving **occupational safety and health (OSH)** can decrease the prevalence of child labour and increase youth employment.

Case study example of a child performing an agricultural task: Feeding small livestock

The following case study is an example of how to determine whether a task is considered acceptable given the child's age, or hazardous, or child labour.

Fairuz is 15 years old and helps with certain tasks on her family farm. One of the tasks she commonly performs is feeding the domestic animals. This task is not on the national hazardous work list for children. The animals are in a yard but she only has access to a safe area. In addition, Fairuz has been trained by her parents and understands the risks. Fairuz is not supervised during the feeding, and the feed lots are heavier than 15 kg each.

Explanation and discussion

Fairuz is 15 years old, and thus **above the minimum age for employment in Lebanon** (14 years). Whether this activity is considered acceptable, or hazardous, or child labour needs to be determined based on the **nature** of the task and the **circumstances** under which the task is performed, including any **safety measures** taken. In this case, Fairuz is **aware of the risks**, has been **trained for her task**, and has **access only to a safe area on the farm**.

However, she **carries heavy loads for her age** (maximum load for a girl aged 15–17 years is 10kg) and is **not supervised** (safety measure not taken).

Therefore, although her task is not on the hazardous works list, it is **hazardous** because of the circumstances under which it is carried out, and can be considered as being **child labour**. With the appropriate **safety measures** (adult supervision and ensuring that she carries appropriate loads for her age), Fairuz could continue taking care of the small livestock without being exposed to hazards. Her task would then be considered as acceptable.

1c. Child labour in the agricultural sector: Characteristics and causes

What is agriculture?

- Agriculture includes farming (horticulture and cereals), livestock rearing, forestry, fishing and aquaculture.
- It includes all kinds of enterprises, from family-based agriculture up to large commercial farms.

In Beqaa and Akkar, the main agricultural activities in which children are engaged include cultivating greenhouse crops, field crops (potatoes, onions, etc.), and vegetables (lettuce, squash, cucumber, etc.).

Characteristics specific to agriculture

Work in the agricultural sector has specific characteristics which may present additional challenges in controlling the way it is carried out, especially among children. Agricultural work is:

- **seasonal** – agricultural labour demand depends on production cycles and seasonal movements of animals;
- **informal** – many economic activities in agriculture are, by law or practice, not registered or insufficiently covered by formal regulations;
- **hazardous** – agricultural work often requires the use of hazardous tools or equipment, and toxic substances such as pesticides and other chemicals. Agricultural workers can also be exposed to extreme weather conditions, rough seas, biological hazards, or carrying heavy loads;
- **under-regulated** – agriculture is an under-regulated sector. Workplaces can be at a remote location or fragmented, making law enforcement difficult.

Definitional problems

Defining child labour in agriculture can be ambiguous because of:

- **cultural attitudes** and tradition (especially regarding children's engagement on family farms);
- **continuity between home and the workplace** in the rural context;
- **invisibility**, where work occurs in remote locations, private homes, informal settlements or farms;
- **unpaid work**, which often occurs when household chores are combined with economic activities;
- **national labour legislation**, which may provide exceptions for agriculture and/or family-based enterprises.

The magnitude of the problem of child labour in agriculture

It is estimated that:

- 168 million children are working globally.
- 70 per cent work in agriculture = more than 100 million children working in agriculture.
- 70 per cent of child labourers are unpaid family workers.

In Lebanon, the current crisis is aggravating the situation due to the emergence of child labourers among Syrian refugees.

Causes of child labour in agriculture

A complex combination of factors can exacerbate child labour, including:

- **Legal frameworks and enforcement.** Agriculture is an under-regulated sector. Workplaces are distant, difficult to access and fragmented, and labour inspection capacity is low in rural areas, making legislation more difficult to enforce.
- **Labour markets.** There is a shortage of decent work for youth and adults in rural areas. Inadequate technology and limited access to markets limit profitability. Child labour helps meet production quotas and income targets.
- **Agricultural production systems.** Low levels of productivity, poor infrastructure (such as irrigation) and inadequate technology make returns from agriculture low, which makes hiring adult labour or investments in technology unviable. Children complement adults in high season.
- **Social protection systems.** Rural populations, refugees and migrants are more vulnerable to shocks as they have limited access to social protection (e.g. insurance, workers' compensation, health services, and minimum income guarantees). Family income from child labour can be a means to coping with financial stress.
- **Education systems.** Children often lack access to quality schools.
- **Conflicts and migration.** Conflicts and crises lead to the displacement of families and communities. This can be a cause of child labour, as adults often lose their jobs and other income generating sources, and it may be easier for children to find work than for adults.

Supply and demand factors of child labour

At the level of the individual child or household, the following economic and social factors act as incentives for the supply and demand of child labour.

Supply factors of child labour

Supply factors (also referred to as **push factors**) concern those **household decisions** that make children available for work.

Main push factors:

1

The need to **supplement household income** and substitute for adult labour.

2

The **low value attributed to education**, often perceived as irrelevant.

3

Limited access to quality schools in rural areas.

4

Limited access to financial services and resorting to children's labour to repay debts.

5

The need for a **coping strategy** to deal with shocks such as a failed harvests, death of livestock, or the illness or loss of breadwinners.

6

The **way of life and a limited understanding of risk** – there is widespread cultural acceptance of children's work and a poor awareness of the associated hazards.

Demand factors of child labour

Demand factors (also referred to as **pull factors**) contribute to the creation of employment opportunities for children.

Main pull factors:

- 1** **Cheap labour:** Children are often unpaid or their wages are lower than those of adults.
- 2** **Insufficient adult and young workers:** There is a shortage of labour, especially at peak times.
- 3** **Quotas or piece-rate remuneration:** This form of payment, based on family work units, puts pressure on parents to involve children.
- 4** **Low productivity:** Small farms operate at very small margins and may be tempted to employ low-cost labour, rather than invest in new technology.
- 5** **Homelessness:** Children who don't have a place to stay may be tempted to work for employers who provide a roof to sleep under.
- 6** **Nimble fingers:** There is a perception that children's fingers are dexterous and ideal for some agricultural tasks (e.g. horticulture).
- 7** **Docile workers:** Children are perceived as docile workers, especially girls.

Chapter 2



Hazardous Work of Children in Agriculture

Hazardous Work of Children in Agriculture

Introduction and objectives

Having familiarized oneself with the legislative definitions of hazardous work of children, it is now important to understand how hazardous work manifests among children who work in agricultural settings. This requires a detailed exploration of what constitutes an occupational hazard in agriculture and includes understanding the hazards that are commonly found in agriculture, how children are exposed to these hazards, how hazards differ from risks, and how it is possible to make agricultural work safer for all workers by controlling hazards and risks. This knowledge can be applied by agricultural practitioners to mitigate, or even eliminate, the hazards associated with such work.

Objectives: This chapter aims to elaborate on the definition of hazardous work, introduced in Chapter 1. Various aspects of hazardous work will be examined by presenting the broader consequences of hazardous work, explaining the difference between hazards and risks, outlining common occupational hazards in agriculture, describing how children are exposed to these hazards, and introducing and explaining the importance of providing occupational safety and health (OSH) in young (14–17) and adult (18 and above) workers in agriculture.

Refer to PowerPoint Presentation **PPP 2, “Hazardous Work of Children in Agriculture”** in accompanying CD-ROM for sections 2.a and 2.b

2a. Hazardous work of children in agriculture

Review: What is hazardous work?

- Hazardous work of children (also referred to as hazardous work) is work which, by its nature or by the circumstances in which it is carried out, is likely to harm the health, safety or morals of children (Article 3(d) of ILO Convention No. 182).
- Whether the nature of work is hazardous for children is determined nationally by a government-led process of tripartite consultation to develop a hazardous work list (Decree 8987).
- Whether the circumstances of work is hazardous to children (with unacceptable levels of risk) is determined on an individual workplace or farm basis.

Review: In practice, what can be considered hazardous work?

According to ILO Recommendation No. 190, hazardous work includes:

- (a) work which exposes children to physical, psychological or sexual abuse;
- (b) work underground, underwater, at dangerous heights or in confined spaces;
- (c) work with dangerous machinery, equipment and tools, or which involves the manual handling or transport of heavy loads;
- (d) work in an unhealthy environment which may, for example, expose children to hazardous substances, agents or processes, or to temperatures, noise levels, or vibrations damaging to their health;
- (e) work under particularly difficult conditions, such as work for long hours or during the night or work where the child is unreasonably confined to the premises of the employer.

Review: Decree 8987 on the worst forms of child labour, 2012

Article 2, Annex 2, List B, paragraph 1 states that **the child should not be employed in agricultural activities (including family farms)** which require:

- (a) driving or operating tractors and farming machines;
- (b) mixing, transporting or spraying agricultural pesticides or fertilizers;
- (c) harvesting or handling poisonous plants (like tobacco plants which secrete the toxin nicotine);
- (d) climbing on high trees or ladders;
- (e) using sharp tools such as steelheads to thread tobacco leaves;
- (f) working for more than four hours a day.

In addition, List B of the decree provides guidelines for sectors and activities other than agriculture (see Appendix III).

Some data on the global situation of hazardous work of children

- Some 59 percent of all hazardous labour of children is found in agriculture, and occurs in both developing and industrialized countries.
- Agriculture is one of the top three most hazardous occupations, and children are more vulnerable than adults to health and safety risks.
- Hazardous work of children is often invisible – informal contracts and illegality mean that work injuries and diseases suffered by child labourers often go unrecorded and unreported.

Data on the situation in Lebanon

- In Lebanon, a rapid assessment concluded that many children are in hazardous work.
- In the North about 52.0 % of children carried heavy weights and 20.4 % operated heavy machinery. In the Beqaa Valley it was 30.6 % and 10.4 % respectively (ILO & St. Joseph University, 2012).
- Many Syrian refugee children work in agriculture without any access to education or social services and little family support. They are more vulnerable to exploitation and may be at greater risk of work-related injury and/or disease.

OSH makes a big difference in child labour

Classifying whether a child's work is hazardous or acceptably safe (non-hazardous) for their age depends on the provision of occupational safety and health measures:

- Children of minimum legal working age for full-time employment (14–17 years, in Lebanon), are considered in **youth employment** if the work they do is non-hazardous.
- However, if the **work is hazardous** (by nature or circumstances), these children will be considered in **hazardous work** (one of the worst forms of child labour), which is prohibited for children under 18.
- Children below the age of 14 years (minimum age for employment) commonly engage in **"helping out"** activities in family farming, enabling them to learn valuable skills. While this can bring benefits, such activities must be age-appropriate and low-risk in terms of health and safety. Even in these family circumstances, if a child undertakes work that is likely to harm their health and/or safety, it is considered hazardous work.
- Therefore, to eliminate child labour, especially in agriculture, **promoting OSH and eliminating hazardous work is the key entry point.**
- **OSH** is an area concerned with **the safety, health and welfare** of people engaged in work or employment. **OSH has three main objectives:**
 - (1) the maintenance and promotion of workers' health and working capacity;
 - (2) improving working environments in terms of safety and health; and
 - (3) the development of work organizations and cultures in directions that support health and safety at work.

Understanding hazards and risks

In order to eliminate hazardous work (and hence child labour) and thus promote youth employment instead, it is important to first understand what a **hazard** is, and how the **risks** to children can be assessed and controlled. Only then can adequate **occupational safety and health measures** be applied to settings where children work. This will be covered in the following section.

2b. Hazards and risks

Definition of **hazard**:

- A **hazard** is anything that can cause harm (injury or disease) or is a source of harm.
- Examples of hazards include work materials, substances, equipment, and practices that have the potential to harm.

There are different types of hazards, classified according to their nature:

- **Physical** – extremes of heat, cold, damp, noise, excessive sun exposure, etc.;
- **Ergonomic** – factors affecting worker comfort and health, such as lighting and temperature, noise and vibration, adequacy of machinery and tools, workstation design, adequacy of protective equipment and work organization, repetitive movements, lifting heavy and/or awkward loads or carrying them for long distances, etc.;
- **Chemical** – pesticides, fertilizers and other chemicals used in agriculture;
- **Biological** – exposure to diseases from birds and animals, biologically contaminated dusts;
- **Psychosocial** – violence and harassment, discrimination, exposure to unhealthy behaviours (e.g. drug use), sexual abuse, isolation, etc.;
- **Safety** (also known as welfare-hygiene-safety hazards) – hazards that cause slipping or tripping, inappropriate guarding of machines, sharp tools, equipment malfunction or breakdown, etc.

Example: Classification of hazards

Consider the following mechanical and electrical hazards:

- Unguarded machinery;
- Poorly maintained electrical installations, wiring or equipment

What is the nature of these hazards? How would you classify them?

- They are of a physical nature (mechanical and electrical), therefore these are **physical** hazards.
- But they are also considered **safety** hazards, because they are unattended and can, therefore, cause accidents such as electrocution by unguarded electrical installations or tripping with unguarded wires.

Definition of **harm**:

- **Harm** is the outcome or result of an uncontrolled hazard.
- For example, injury or disease to people, or damage to the environment, property, plant or equipment.

Definition of **risk**:

- **Risk** is the chance, or probability (likelihood), that a hazard will result in injury or illness to people, or damage to the environment, property, plant or equipment.
- It is a combination of the **probability** that a particular negative outcome will occur and the **severity** of the harm involved (including long-term health consequences).

$$\text{Risk} = (\text{probability of harm}) \times (\text{severity of harm})$$

Difference between hazard and risk

- While **hazards are intrinsic to a given process**, risks are not: they vary depending on the levels of risk control measures.
- If hazard exposure is properly controlled, risks can be reduced to acceptable levels.

In session exercise: Example of hazards and risks

Refer to the risk formula: Risk = (probability of harm) x (severity of harm).

Read the following text:

Fire is a **hazard** intrinsic to the **process** of operating wood stoves. It can cause **harm** in the form of burns. The closer the distance between the fire and the worker operating the stove, the **more likely the worker will be harmed** (burnt) by the fire and the **more severe** the burn. The fire hazard can be **controlled by taking measures** such as increasing the distance between the fire and the worker, thus **decreasing the probability** that a burn injury will occur, or **decreasing the severity** of the burn. This will result in **reducing the risk** (risk of a burn injury).

- (1) Notice some the key terms (in bold text) related to hazard and risks.
- (2) Was the risk formula of practical use in the "fire" example?
- (3) Answer the following questions:
 - (a) What/where is the workplace/workplace environment?
 - (b) What is the activity/job?
 - (c) What is the hazard?
 - (d) What is the harm?
 - (e) Is there a risk associated with this activity?
 - (f) Are there any other risks?
 - (g) Who is at risk?
 - (h) How can the risk be reduced?
 - (i) What are some of the risk control measures?
- (4) Please give another example of a hazard and its associated risk.

Case study: Hazards and risks of pesticides

“My name is Ahmad; I am 15 years old. I work in a vegetable farm where I do different tasks. I am not responsible for spraying pesticides but I am often close to where these have been sprayed, or have to pass through contaminated fields. In the farm we are not aware of the period of time we need to wait before re-entering a sprayed field. We also all take our breaks together, and I can smell the chemicals on the clothes of other workers. It gives me headache and I feel sick.”

Question: In this situation, what are the **hazards**, the **risk** and the **harm**?

Explanation and discussion:

- Pesticides are **hazardous** by nature as their toxic properties are designed to kill or control unwanted organisms.
- Spraying pesticides can pose serious **harm** both to those applying them and to others working or living nearby due to spray drift. Headache and feeling sick are some of the immediate symptoms.
- The **risk** varies depending on the **exposure**. Important factors are the risk reduction measures implemented by the farmer, who is exposed (children, adults, pregnant women), and for how long/how often.

In this case, Ahmad seems to be at a significantly high risk as he is regularly exposed to pesticide residues when sitting with others whose clothing is contaminated. He is also exposed to spray drift or the spray content of the soil in the fields that have been sprayed as there are no instructions for him to follow regarding time of re-entry into the fields.

Common hazards in agriculture

Hazards are specific to each sector or activity. However common hazards in agriculture are:

- long working hours;
- carrying heavy loads;
- exposure to extreme temperatures;
- chemicals (e.g. pesticides);
- dangerous equipment and machines, sharp tools;
- abuse and violence;
- repetitive movements.

Activities in agriculture and their associated hazards and health consequences (farming and livestock rearing)

Table 1. Tasks and hazards in farming and rearing of livestock

Activities and hazards in farming and livestock rearing			
Sector	Task	Hazard	Health Consequences
Farming	Preparation of seedings	Carrying heavy loads over long distances, prolonged contact with moist soils and water	Musculoskeletal injuries, fungal infections
	Spraying pesticides	Exposure to chemicals	Poisoning, with long term health effect
	Harvesting	Exposure to extreme temperatures, carrying heavy loads, use of sharp tools	Sunstroke, dehydration, frostbite, musculoskeletal injuries, cuts
	On-farm processing of produce	Inhaling dust, exposure to smoke	Allergies, eye injuries, asthma
Livestock rearing	Handling livestock	Exposure to biological hazards through direct contact with animals, derived substances, or contaminated environments. In stables: exposure to crop dusts and contaminated plant material, water or soil	Zoonoses; allergies, respiratory infections
	Activities involving direct animal contact	Exposure to large or dangerous animals.	Being bitten, butted, jostled, stamped on, gored or trampled
	Herding livestock	Isolation;	Being susceptible to abuse, psychosocial stress
		Exposure to extreme temperatures, e.g. cold in mountain areas	Frostbite
	Slaughtering	Sharp objects, dangerous tools or machinery, forceful repetitive movements, exposure to carcasses	Cuts and amputations, musculoskeletal injuries
Use of disinfectants and other chemical products	Exposure to dangerous substances	Poisoning and allergies	

Source: Termine, P., 2015. *ToT training on child labour in agriculture*, Draft Report, American University of Beirut, Agricultural School in Beqaa (AREC), Lebanon, 18–20 August 2015. (Adapted from Hurst, 2008; ILO-IPEC, 2011)

Case study: Hazardous work or not?

“My name is Noor; I am 17 years old. I work full time on a potato farm. I do not use pesticides myself, and do not work close to where these have been applied. We work very long hours, from 6am to 6pm, but we are allowed a two-hour break in the middle of the day when we can eat and rest. To get to and from the farm I travel on a truck that picks us up at 5am. In the evening I get back home when it is already dark. We have been given gloves, but it's too hot to use them. The supervisors explained some safety procedures, but we do not apply them because they are not practical, and in any case no one monitors.”

Question: Can you identify what the circumstances are that make this work either **low** or **high** risk for a child?

Explanation and discussion:

Growing vegetables can be considered:

- **low risk** if the child:
 - receives an explanation on the proper use of tools;
 - does not use pesticides and does not work close to where these have been applied;
 - does not work in the heat of the middle of the day;
- **high risk** if the child:
 - travels long distances alone at night to get to work;
 - does not have access to drinkable water;
 - is not allowed to take breaks and works under scorching sun.

OSH considerations for boys and girls

- Boys and girls engage in different occupations and tasks.
- Conditions of work, risks and hazards of boys and girls can be different.
- There is a need to consider the **division of labour** and exposure to **specific hazards** for boys and girls in the **specific agricultural activity** or **type of crop**.

For example, in farming:

- boys are often responsible for operating machinery, using sharp tools, or spraying chemicals, where there is a risk of amputation, cuts and burns, or poisoning;
- girls are often responsible for carrying water, collecting and carrying wood, and the double burden of performing domestic chores and agricultural work. Girls are thus at greater risk of musculoskeletal injuries, fatigue, and sexual abuse.

Hazardous work also has negative impacts on agricultural production and rural development

Injuries and illness have a negative impact not only directly on those workers who suffer injuries, but also indirectly on rural economies, agricultural production and food security. Thus:

- Poor health can reduce labour productivity, and the ability to get and keep a job.
- Injuries to working children may damage the reputation of a business.
- Lost days at work and reduced productivity can lead to reduced income, resulting in the sale of productive assets or borrowing to make up the shortfall.
- Losses can occur for both farm owners and labourers when injuries or illness occur. In the long-term, this may worsen the level of poverty and lead to food insecurity.

Key messages

- The **nature** of hazardous tasks and activities can be tackled by substituting materials and processes with less hazardous ones (not always possible).
- The **circumstances** under which hazardous work is carried out can be improved by helping agricultural producers provide adequate health and safety conditions for all young and adult workers in their enterprises.
- There is a need to pay special attention to the **protection of children**.
- Improving OSH and eliminating children's exposure to hazardous work allows agricultural producers to **legally employ 14–17 year-olds** as young workers.

Chapter 3



Harm in Child Labour: Vulnerability, Exposure, and Harmful Effects

Harm in Child Labour: Vulnerability, Exposure, and Harmful Effects

Introduction and objectives

Agriculture is among the three most hazardous work sectors, ranking immediately after mining and construction. This applies to children and adult agricultural workers alike. Children, however, are more vulnerable than adults to agricultural occupational hazards. This is for many reasons, some directly related to children's intrinsic physiological characteristics, such as their stage of growth and development, while others are extrinsic, such as social and environmental factors. Harm in children is manifested in a significantly exaggerated fashion when compared to adults, both in the magnitude of the injury or disease and along the time spectrum, as delayed effects may appear in adulthood, years after children have been exposed to a hazard. Children are also less knowledgeable regarding the existence of specific hazards, and of safety and health measures that may protect them from such hazards and are hence less capable of assessing risk in the workplace, resulting in increased frequency and duration of exposure to hazards. They are also often unaware of their rights to be protected from exposure. The harmful effects of unprotected exposure can manifest both physically and psychologically, and in either the short or long term.

It is imperative that practitioners and stakeholders in the agricultural work sector, especially the children themselves, be aware of children's increased vulnerability, the various modes of exposure, and the consequences of exposure to occupational hazards in agriculture. Heightened awareness regarding these matters serves to empower children to take charge of their own safety by demanding their rights to refuse hazardous work, and to their entitlement to precautionary training and protection measures when performing agricultural tasks, especially young workers engaged in hazardous tasks. It is just as important for employers to acquire knowledge and a degree of empathy that will enable them to provide adequate safety and health precautions where children work, as well as to participate more effectively and actively in combatting hazardous labour of children.

Objectives:

This chapter focuses on issues that impact the health and well-being of children who work in the agricultural sector. It describes why and in which ways children are more vulnerable than adults to the harmful effects of agricultural hazards. Various modes of exposure to hazards are then presented. Finally, the consequences of exposure – physical and psychosocial, short and long term (direct and indirect) – are explained.

3a. Why are children at greater risk of harm than adults?

Refer to PowerPoint Presentation **PPP 3a, "Why are children at greater risk of harm than adults?"** in accompanying CD-ROM, for section 3.a.

Why are children at greater risk of harm than adults?

Children are both more susceptible and more at risk than adults to harm for several important reasons, which include:

- Children differ from adults in a multitude of ways that may compound the harmful effects of agricultural work hazards.
- Children who work and live on farms are more exposed.
- Children's work in agriculture is invisible.
- Maltreatment of working children can lead to longstanding physical and psychological consequences.
- Childhood is a critical period for growth and development, during which they are particularly sensitive to the injurious effects of hazard exposure.

Children differ from adults in a multitude of ways that may compound the harmful effects of agricultural work

- Exposure to the hazards of labour in agriculture may lead to **direct harm** such as accident-related injuries and acute poisoning, or to **indirect harm** such as psychiatric illnesses, chronic asthma, and various forms of cancer.
- Exposure applies to labourers in agriculture regardless of their age. However children are at greater risk than adults from the hazards of agricultural work due to a range of **physiological, environmental** and **social** factors.
- The **multiplicity of factors** that increase their vulnerability compounds the harmful effects on children in comparison to adults.

Children who work and live on farms are more exposed

The extent of harmful effects on children who work in agriculture is exacerbated when children both work and live on farms, as this increases the duration of their exposure to work hazards.

Children's work in agriculture is invisible

Children's work in agriculture is often invisible and goes unrecognized, as they are considered as "helpers" by their parents or other adults, even though they perform tasks that are just as strenuous and time-consuming as those of adults. Therefore, any work-related injuries or other forms of harm tend to be invisible.

Implications of invisible work

Children's work in agriculture, when considered as "help" rather than being recognized officially as "work", leads to important consequences:

- Accidents and ill-health that result from exposure to work-related hazards remain unrecorded and unreported.
- Some work-related physical disabilities and health problems only manifest later in adult life, and are, therefore, not causally linked to the hazards of their childhood work.
- Relatively little is known on the actual work conditions of child labourers in agriculture, and on the subsequent impacts on their safety and health, as the issue has been principally dealt with from political, economic and sociological perspectives. Examples of reliable evidence-based interventions to protect children's safety and health are also scarce.
- The agricultural sector is not subject to sufficiently stringent labour regulations to contain the high rates of hazard exposure in the agricultural workplace. Subsequently, both child and adult labourers in this sector suffer from higher rates of fatal injuries and accidents than in other work sectors.

Maltreatment of working children has physical and psychological consequences

Children working in agriculture may be subject to the authority and domination of older children and adults in the workplace. In that context they may be exposed to various forms of violence and harassment such as physical, sexual, or emotional abuse. Such maltreatment may, in turn, result in the children suffering significant physical and/or psychological harm, in both the short and long term.

Childhood is a critical period for growth and development

Children have special characteristics and needs that must be taken into consideration when determining workplace hazards and the risks associated with them. Special developmental characteristics encompass the following broad aspects:

- (a) physical development;
- (b) cognitive development (thought/learning);
- (c) behavioural development;
- (d) emotional growth.

These are discussed below in more detail.

Characteristics and needs related to (a) physical development

1. General

When comparing children and adults, **per kilogram of body weight**, children:

- breathe 2 times as much air;
- drink 2.5 times as much water;
- eat 3–4 times as much food;
- use more energy than adults.

These higher rates of consumption place them at higher risk of exposure and harm from various diseases, pathogens, toxic substances and pollutants. Their smaller physical size means that being asked to do tasks beyond their physical strength and capacity may pose additional risks.

2. The skin

When comparing children and adults, **per kilogram of body weight**, children:

- have a 2.5 times larger skin surface area;
- have thinner skin;
- their skin structure and function is not fully developed until after puberty (e.g. sweat glands).

These characteristics result in greater absorption of toxic substances through the skin, thus increasing the harm from exposure to these substances.

3. The respiratory system

Children breathe **deeper** and **at a faster rate** than adults. A child has twice the volume of air circulating through the lungs compared to an adult (at rest, per unit of body weight) over the same period of time.

These characteristics allow for the entry of proportionally larger amounts of toxic fumes and gases and other inhalants into the lungs during breathing.

4. The brain

Brain development is certainly not complete before age 21, and may well occur much later. Any exposure to toxic substances before that age may cause impairments in brain structure maturation and associated functional development. Metals are retained in the brain more readily in childhood and absorption is greater (e.g. lead and methyl mercury). These characteristics place the child at higher risk of inappropriate brain maturation and development relative to adults.

5. Gastro-intestinal, renal, reproductive and endocrine systems

All these systems are immature at birth and mature during childhood and adolescence. The filtration and elimination from the bloodstream of toxic substances are functions of the liver and kidneys. These organs function less efficiently in children and adolescents, as they depend on the enzyme system (not yet fully developed) to detoxify and eliminate hazardous substances. As a result, most hazardous substances and toxic **chemicals remain longer** in the body.

The endocrine and reproductive systems may be especially vulnerable to disruption by chemicals during childhood and adolescence, resulting in a hormonal imbalance. As a result, this then **interferes with normal physical and metabolic growth and development** and in the maturation of the reproductive system during childhood and adolescence.

6. Fluid requirements (water)

Children are more likely to dehydrate because they **lose more water per kilogram of body weight** through the greater passage of air through their lungs, the larger surface area of their skin, and their inability to concentrate urine in their kidneys.

7. Energy requirements

Children require greater energy consumption per kilogram body weight because they are growing, and this can result in increased susceptibility to toxins. This is because the detoxification process itself requires energy, and the energy is channelled towards the child's growth and development, leaving less energy for the detoxification processes.

8. Sleep requirements

Children need to get an adequate amount of sleep every day. Children ages 10–18 years require an average of 9.5 hours per day. Sleep deprivation may lead to moodiness, impaired brain activity, cognitive dysfunction, memory loss, weakened immunity, accident proneness, and accidental death. In the long term, sleep-deprived children may develop stunted growth due the suppression of growth hormone secretion.

9. Temperature sensitivity

Children have increased sensitivity to heat and cold, as their sweat glands and thermo-regulatory systems are not fully developed. Children are more prone to heat stress and hypothermia during extremes of high and low temperature.

10. Physical strain or repetitive movements

Recurrent physical strain, especially when combined with repetitive movements can interfere with healthy development of growing musculoskeletal tissues, and may cause stunting, spinal injury and other life-long bone and joint deformations and disabilities.

Characteristics and needs related to (b) cognitive and (c) behavioural development

Children have a limited capacity to recognize and assess potential safety and health risks at work and to make decisions about them compared with adults. This is especially true for younger children. The ability to generate options, to look at a situation from a variety of perspectives, to anticipate consequences and to evaluate the credibility of sources increases throughout adolescence, such that by mid-adolescence (15-16 years), most children make decisions in similar ways to adults. This ability is further developed as children mature and accumulate lessons learned through work experience.

Characteristics and needs related to (d) emotional development

Emotional development depends not only on whether children's needs are met with regard to receiving adequate love, support and nurturing, but also on whether they are protected from being subjected to physical, cognitive and behavioural stressors such as those mentioned above. Emotional deprivation results in abnormal emotional development and can affect other developmental aspects (physical, cognitive and behavioural), resulting in severe negative social consequences.

3b. How are children exposed to the common hazards of work in agriculture?

Refer to PowerPoint Presentation **PPP 3b, "How are children exposed to the common hazards of work in agriculture?"** in accompanying CD-ROM, for section 3.b.

A review of the important aspects of child labour

Identifying child labour requires a consideration of:

- the age of the child;
- the nature and circumstances of the task/activity; and
- its impact on compulsory education.

Child labourers are at a greater risk of harm because:

- their minds and bodies are still developing;
- they lack work experience;
- they are unaware of the hazards and risks.

Agriculture, construction and mining are considered the three most dangerous industries for adult and child workers. In agriculture, common hazards include:

- pesticides;
- dangerous machinery and tools;
- harsh weather conditions;
- long working hours;
- poor living conditions.

Children working in agriculture are exposed to a wide range of hazards. These may be classified according to their **nature** as:

- biological, physical, chemical, ergonomic, psychosocial and safety hazards.
- In this chapter, reference is also made to welfare-hygiene-safety hazards, a term used interchangeably with safety hazards. Please refer to the note in the box below for an explanation of this particular type of hazard.

Note: Welfare-hygiene-safety hazards (or safety hazards) belong to a special category of hazardous elements or situations related to the work environment (e.g. excessive temperature, poor ventilation), welfare facilities (e.g. lack of access to clean drinking water and toilets) and workplace safety (e.g. poorly maintained equipment and machinery, wet floors, falls and falling objects).

They comprise hazards of various natures and some may, therefore, overlap with other types of hazards in the above classification.

Examples:

1. Working in conditions of **excessive heat** (which leads to rapid fatigue and exhaustion) is considered a welfare-hygiene-safety hazard because it relates to the work environment. But it may also be considered a physical hazard because of the physical nature of the harmful agent (the high temperature).

2. The presence of **electrical cables** that have not been maintained (creating a risk of electrocution) is a welfare-hygiene-safety hazard. But it may also be considered a physical hazard because of the physical nature of electrical shocks.

Examples of hazardous work of children

Many of these are encountered in the setting of agricultural work:

- work at dangerous heights, or in confined spaces;
- work in abattoirs or involving incineration or butchery;
- work with and maintenance of dangerous machinery, equipment and tools;
- agricultural work which exposes children to dangerous conditions, pesticides, and insecticides;
- work that involves the use of dangerous chemicals, or substances or mixtures of substances which are classified as toxic, corrosive, or explosive ;
- work that involves the manual handling or transport of heavy loads;
- deep sea and offshore fishing.

Agricultural activities in which children are commonly exposed to various types of hazards

Children engaged in certain agricultural activities are commonly exposed to a range of particular hazards. The following are among these agricultural activities, and their associated hazards:

(a) Children working in fields

Physical hazards include:

- excessive sun exposure or extreme temperatures (hot, cold, or damp);
- sharp tools and dangerous equipment including digging and cutting tools such as machetes, knives, scythes, sickles, spades and forks;
- loud noise (e.g. continuous exposure to excessively noisy machinery);
- objects that may fall, collapse or overturn on the worker (e.g. fruit bunches or pods, branches, bales and crates);
- working on elevated structures (e.g. trees or ladders).

Ergonomic hazards include:

- repetitive movements/bending;
- lifting heavy and/or awkward loads and carrying them long distances.

Psychosocial hazards include:

- long working hours;
- stress;
- violence and harsh treatment;
- abuse or harassment;
- sexual exploitation.

Welfare-hygiene-safety hazards (also referred to as safety hazards or sometimes, as hygiene and welfare hazards) include:

- lack of access to clean drinking water;
- lack of access to sanitation facilities such as:
 - clean toilets;
 - handwashing;
- unattended equipment:
 - unguarded or poorly guarded heavy machinery (e.g. tractor, harvester or forklift truck)- these are also considered mechanical (physical) hazards;
 - electrical installations; wiring or other equipment- these are also considered electrical (physical) hazards.

Biological hazards include:

- contact with soil (exposure to soil-borne organisms that cause diseases such as tetanus, and lung disease from breathing in fungal spores);
- insect bites.

Chemical hazards (pesticides and fertilizers) include exposure to toxic pesticides via:

- direct involvement in spraying;
- working in a recently pesticide-treated field;
- breathing in pesticide "drift" from a nearby field;
- working in a pesticide-treated field without appropriate personal protective equipment (PPE);
- eating with hands contaminated with pesticides;

- eating pesticide-contaminated fruits and vegetables;
- eating in a pesticide-contaminated field;
- using contaminated water (e.g. by pesticides or sewage) for drinking, bathing or laundry.

(b) Children working in livestock raising

In addition to fieldwork hazards, children working with livestock are exposed to an even wider range of biological, physical, and psychosocial hazards.

Biological hazards may cause diseases transmitted to humans from domestic and wild animals through contact with skin, wool, hair, blood, saliva, urine and faecal products (e.g. anthrax, avian flu, swine fever, brucellosis).

Physical hazards arise from working with farm animals, and include being bitten, butted, gored, stamped on, trampled or knocked down.

Psychosocial hazards can result when children are isolated far from home for prolonged periods of time.

(c) Children working in fisheries and aquaculture

The following types of hazards are associated with fisheries and aquaculture:

Chemical hazards:

- exposure to pesticides and other chemicals;

Welfare-hygiene-safety hazards:

- lack of safety equipment such as flotation devices, safety lines or life-jackets (risk of drowning after falling into water);
- poor work and living conditions;

Psychosocial hazards:

- isolation and abuse;
- long working hours.

Linking agricultural hazards to their health effects and specificity to agriculture

Table 2. Agricultural health hazards

Occupational Health Hazards of Agricultural Work in Developing Countries		
Exposure	Health Effect	Specificity to Agriculture
Weather, climate	Dehydration, heat cramps, heat exhaustion, heat stroke, skin cancer	Most agricultural operations are performed outdoors
Snakes, insects	Fatal or injurious bites and stings	Close proximity results in high incidence
Sharp tools, farm equipment	Injuries ranging from cuts to fatalities; hearing impairment from loud machinery	Most farm situations require a wide variety of skill levels for which workers have little formal training, and there are few hazard controls on tools and equipment
Physical labor, carrying loads	Numerous types of (largely unreported) musculoskeletal disorders, particularly soft-tissue disorders, e.g., back pain	Agricultural work involves awkward and uncomfortable conditions and sustained carrying of excessive loads
Pesticides	Acute poisonings, chronic effects such as neurotoxicity, reproductive effects, and cancer	More hazardous products are used in developing countries with minimal personal protective equipment (PPE)
Dusts, fumes, gases, particulates	Irritation of the eyes and respiratory tract, allergic reactions, respiratory diseases such as asthma, chronic obstructive pulmonary disease, and hypersensitivity pneumonitis	Agricultural workers are exposed to a wide range of dusts and gases from decomposition of organic materials in environments with few exposure controls and limited use of PPE use in hot climates.
Biological agents and vectors of disease	<ul style="list-style-type: none"> • Skin diseases such as fungal infections, allergic reactions, and dermatoses 	<ul style="list-style-type: none"> • Workers are in direct contact with environmental pathogens, fungi, infected animals, and allergenic plants
	<ul style="list-style-type: none"> • Parasitic diseases such as schistosomiasis, malaria, sleeping sickness, leishmaniasis, ascariasis, and hookworm 	<ul style="list-style-type: none"> • Workers have intimate contact with parasites in soil, wastewater/sewage, dirty tools, and rudimentary housing
	<ul style="list-style-type: none"> • Animal-related diseases or zoonoses such as anthrax, bovine tuberculosis, and rabies (at least 40 of the 250 zoonoses are occupational diseases in agriculture) 	<ul style="list-style-type: none"> • Workers have ongoing, close contact with animals through raising, sheltering, and slaughtering
	<ul style="list-style-type: none"> • Cancers, such as bladder cancer caused by urinary bilharzia contracted through working in flooded areas in North and Sub-Saharan Africa 	<ul style="list-style-type: none"> • Agricultural workers are exposed to a mix of biological agents, pesticides, and diesel fumes, all linked with cancer

Source: Cole, D. 2006. *Understanding the links between agriculture and health: Occupational health hazards of agriculture*. Focus 13, Brief 8 of 16, May 2006 (International Food Policy Research Institute). Available at: <http://www.mtnforum.org/sites/default/files/publication/files/4397.pdf>

Summary and take-home message on exposure to workplace hazards in agriculture:

Machinery, tools and equipment, pesticides and other chemicals, dust, disease vectors, noise, vibration, transport, poor workplace layout, work systems, methods, practices or attitudes all have the potential to cause harm to children. Even low levels of exposure or low-risk activities, when repeated over a long period of time, can become highly hazardous.

3c. Harmful effects of child labour in agriculture

Refer to PowerPoint Presentation **PPP 3c, "Harmful effects of child labour in agriculture: Direct, indirect, physical, and psychosocial"** in accompanying CD-ROM, for section 3.c.

Harmful effects on children working in agriculture in Lebanon

As seen in the previous chapter, agricultural work ranks among the most hazardous work sectors, and it involves a large number of occupational hazards. In Lebanon, some of the most common hazards encountered by children working in agriculture include pesticides, dangerous machinery and tools, and harsh weather conditions in addition to stress, violence, harassment and other common welfare-hygiene-safety hazards of working in open fields.

Classification of harm/harmful effects:

- Child labourers in agriculture are prone to suffer from a wide range of harmful effects resulting from their exposure to uncontrolled hazards.
- The many different types of harm that result from such exposure may be classified in various ways.

Note: "Harm" and "harmful effects" are often used interchangeably in this guide; both relate to the negative health consequences of exposure to hazards of agricultural work.

Classification of harm

Harm may be classified according to how it manifests in the body:

- in relation to its time of appearance after exposure to the hazard (direct/indirect);
- in relation to the anatomical part of the body affected by the harm (e.g. brain, arms, eyes, etc.);
- in relation to the effect on the physiological function of the specific organ or system (e.g. heart, neurological system, etc.);
- in terms of the nature of the harm (physical, psychological, or social);
- in terms of the scope of the harm – localized (e.g. laceration to the finger), generalized (e.g. a disease or condition), or death.

More ways to classify harm

Many more classifications exist for harm or harmful effects depending on whether they are:

- preventable or non-preventable;
- leading to disability or not;
- common or rare;
- acute or chronic;
- mild, moderate, or severe.

It is important to know that these classifications exist because they might be encountered in the course of further readings and research on the topic of harm, hazards and risk in occupational health. However, it is not necessary to use all classifications, but rather to be familiar with one or two. Such classifications can be of practical use when applied to occupational safety and health management.

What is the importance of having a classification system of harm in the context of child labour?

(1) To provide those responsible for the safety and well-being of working children an operational classification so that they may be better prepared for limiting both the chances of occurrence of harm (**probability**) and the magnitude of harm (**severity**), should it occur. This is also called **limiting the risk of harm**.

(2) Knowledge of the potential ways in which harm may manifest is especially important in child labour because **children are at a sensitive stage** of growth and development, which makes them **more vulnerable to harm**. In order to **monitor their health** by screening for, or determining the scope of, or treating any existing harm and minimizing its negative consequences, it is important **to be able to determine the nature of the harm** in question (physical/psychological/social).

(3) There is also the possibility that harm may **manifest at various time intervals** after exposure. It may appear immediately after exposure to the hazard (direct), or later in life when the child is an adult or is no longer in the same occupation (indirect). This makes it difficult to trace the harmful effects back to their initial occupational source. It is important to be aware of this temporal variation for harm to manifest following exposure to hazards. This is so that children can be **monitored** for possible delayed effects and, more importantly, **be provided with adequate protection** against both short- and long-term harms.

The most practical way to classify harm for this purpose is:

- (1) in terms of the nature of the harm (physical/psychological/social);
- (2) in relation to the time of appearance after exposure to the hazard (direct/indirect).

Case study: How manifestations of harm can be classified in different ways

Jamila is an 8 year old girl who works picking vegetables in the field. Recurrent exposure to crop dust while picking vegetables during harvest season has led her to develop **"occupational asthma"**.

Asthma is a **chronic medical condition** which affects the **respiratory system**, and interferes with the structure and function of **lung airways**. This results in recurrent **acute attacks** of **wheezing** and **difficulty in breathing** whenever the affected person is exposed to particles in the air that trigger the attack. Failure to treat this medical condition may lead to further deterioration of the condition, and in some cases may even lead to **death**. In the case of Jamila, the triggering factor is crop dust containing organic particles that are allergenic. When Jamila gets her attacks of **shortness of breath** she feels **tired** and **anxious**. This year she has often missed out on school, play and work activities, and is becoming more and more **isolated** from her family and friends.

Question: How many classifications have been used to describe harm in this case study?

Explanation and discussion:

In the text, harm has been described using at least 5 different classifications:

(1) time of appearance of harm after exposure to the hazard:

- **direct** – wheezing and difficulty breathing (acute asthmatic attack) occur immediately after exposure to the crop dust;
- **indirect** – occupational asthma (a chronic condition), anxiety, absence from school, lack of participation in physical activities, isolation;

(2) anatomical part of the body – the affected organs of the body are the lungs (respiratory airways of the lungs);

(3) physiological system affected – the respiratory system;

(4) the nature of the harm:

- **physical** – difficulty breathing, decreased tolerance to exercise;
- **psychological** – anxiety;
- **social** – isolation;

(5) the scope of harm – asthma is a chronic medical condition and is potentially fatal if severe attacks are not treated.

Harmful effects of common hazards of child labour in agriculture in the Lebanese setting: Direct and indirect, physical and psychosocial effects

The following two classifications of harm/harmful effects will be used in this presentation:

(1) **the nature of the harm** (physical/psychological/social);

(2) **the time of appearance after exposure to the hazard** (direct/indirect).

Harmful effects will be presented with a focus on **direct** and **indirect, physical** and **psychosocial effects**.

Common hazards in agriculture (such as pesticides, machinery and tools, and harsh weather) often cause harm of a **physical** nature, but equally important are the harms of a **psychosocial nature** such as those caused by stress, violence, and harassment (although psychological harm may also be caused by other types of hazards). Both physical and psychosocial harm may appear **directly** following hazard exposure, or **indirectly** after a period of time has elapsed since exposure.

The common hazards of child labour in agriculture in the Lebanese setting include:

- **pesticides** and other chemical substances;
- dangerous **machinery and tools**;
- **harsh weather** conditions;
- **stress, violence, and harassment**;
- common **welfare-hygiene-safety** hazards in the open field.

Remember:

Children are more vulnerable to work hazards than adults because they are undergoing a phase of rapid growth and development, and because many of their organs, systems and body functions have not yet matured completely. Therefore, harmful effects due to hazard exposure in children are compounded in terms of rapidity of onset and in severity.

Pesticides and other chemical substances

- Pesticides are **widely** used in agriculture.
- Pesticides are toxic chemical compounds. They pose the **main health and safety hazard** to child labourers in agriculture.
- Harmful effects arise mainly from **poisoning or contamination (chemical hazard)** and may manifest either as physical or psychological effects, which may be direct or indirect.

The effects of pesticides

Direct physical effects

Acute poisoning from pesticides may occur. Depending on the type of pesticide and the degree of exposure, symptoms of poisoning may vary from mild to severe. Generally, cases of acute poisoning recover following medical treatment, but some cases can be fatal.

Symptoms of acute pesticide poisoning include:

- skin, lung, eye irritation;
- breathing difficulties;
- nausea, vomiting, diarrhoea;
- dizziness, confusion, loss of consciousness;
- sensory deficits;
- cardiac symptoms.

Indirect physical effects

Health problems from pesticide exposure often appear **later in life**, and are therefore **invisible** as they develop during the years of exposure. These delayed **silent** effects are **irreversible** and affect a **very wide range** of body systems, such as the following:

- **Reproductive system.** Birth defects, spontaneous abortions, stillbirths, lower birth weights and early neonatal deaths.
- **Cancers**
 - in children – leukaemia, sarcomas, lymphoma, and brain cancer;
 - in adults – there is an increased susceptibility to developing cancers in general because of earlier exposure to the carcinogens found in pesticides during childhood.
- **Neurotoxic and neuro-behavioural effects.** Impaired development of the nervous system can cause decreased intelligence and nonspecific behavioural abnormalities.
- **Immunological effects.** A weakened immune system, especially in growing children can result in increased susceptibility to infections and cancer.
- **Blood disorders.**
- **Liver and kidney function abnormalities.**
- **Endocrine system disruption.** A well balanced endocrine system is crucial for adequate growth and development, especially in sexual differentiation. Pesticides are thought to disrupt the delicate balance of the endocrine system, causing hormone secretion abnormalities and disturbances in growth and development both in children and in utero (inside the womb).

The psychosocial effects of pesticides

Most of the psychosocial harmful effects of pesticides are indirect psychological effects.

Indirect psychological effects include:

- headaches;
- sleep disturbances;
- anxiety;
- memory problems;
- chronic fatigue;
- chronic urticaria.

The effects of chemical substances other than pesticides

Other poisonous chemicals that are known to be hazardous to child labourers in the agricultural setting are **fertilizers, veterinary products and commodity chemicals**, such as disinfectants and detergents.

Direct effects include:

- skin burns;
- irritation of the mouth, nose and eyes;
- damage to the respiratory and neurological system due to the liberation of toxic fumes, especially when products are mixed in a closed space.

Dangerous machinery and tools

Agricultural work is reliant on heavy machinery and tools. Operating such agricultural equipment requires a wide range of skills, for which workers, especially younger workers and children, have often received little or no **training**. In field work, farm machinery, such as harvesters and tractors, is very powerful and often operated at high speed. **Accidents** that result from **uncontrolled exposure** are, therefore, **very sudden** and may cause **very severe injuries**.

Note: Work involving operating machinery or close contact or proximity to machinery (e.g. while maintaining, repairing, cleaning), is usually assigned to boys rather than girls. Therefore **machinery-related injuries are more common among boys**, especially mid-adolescent or older boys, and in the absence of adequate supervision.

The physical effects of dangerous machinery

Most of the harmful effects of exposure to agricultural machinery and tools are physical in nature. They may be direct or indirect.

Direct effects include:

- **amputation injuries** from accidentally being sucked into harvesters (e.g. forage or potato harvesters);
- **cuts and tears** to the skin and soft tissues from jagged metal edges and protrusions from the body of the machine;
- **crush injuries** from the machines toppling over or overturning, leading to irreversible tissue damage;
- **traumatic injuries to the internal organs** (e.g. internal bleeding from splenic or liver fractures, and other serious complications);
- **acute back pain** from whole body vibration and sudden jolts and shocks, awkward sitting positions, or driving over grossly uneven terrain;
- **fractures and sprains** from falls and slips while climbing up or down the tractor, as a result of loose or muddy steps;
- **fatigue** from awkward positioning and long working hours, making the operator more accident-prone (this stressful condition is also considered as psychological harm);
- **rapid deterioration** of a medical condition because of a delayed emergency response after calling for assistance, or initiating first aid or resuscitation measures;
- **death** following severe trauma.

Indirect effects include:

- **permanent disabilities** from crushed or amputated limbs;
- **noise-induced hearing loss** from repeated exposure to loud noise generated by machines;
- **psychological ill-health** from irritability and sleeping difficulties secondary to fatigue and daily exposure to noise generated by machines;
- **long-term musculoskeletal ailments** such as **chronic back pain** due to repeated exposure without allowing time for damaged tissues to recover;
- **causing injury to others** (innocent bystanders, or extra riders) as a result of reduced visibility, improper training, a lack of compliance with safety regulations while operating machinery, or as a result of fatigue or psychological ill-health.

The physical effects of dangerous tools

Where manual labour prevails, child workers regularly use **cutting tools** – machetes, knives, scythes, sickles, etc. – to cut crops, hay, weeds, brushwood, and to split open fruit pods. **Sharp and pointed tools** are also used for cutting tobacco stems, and for spearing them together. The harmful effects of cutting tools and other sharp or pointed tools may be direct or indirect.

Direct effects include:

- **cutting injuries**, which range from minor cuts to serious injuries such as the severing of body parts (amputation);
- **puncture injuries** from pointed tools, which may be very serious if the affected site is a vital structure such as an internal organ (liver, spleen, kidney, or lung) or an external structure such as the eye;
- **death** secondary to profuse bleeding from deep cuts to large blood vessels.

Indirect effects include:

- **musculoskeletal developmental injuries** arising from the repetitive and forceful actions associated with cutting actions;
- **disabilities** from loss of vision or amputated fingers and limbs.

Harsh weather conditions

Agricultural work involves exposure to extremes of temperature and climatic conditions. **Hot** and/or **humid** environments, as well as **cold** and **wet** conditions constitute **physical hazards** to children working under such conditions. The resulting harmful effects are of a **physical nature**, and may be direct or indirect.

The physical effects of excessive heat and sun

Direct effects include:

Excessive sun exposure is one of the reasons for developing **heat stress**, but also leads to **burns** of various degrees of severity, from redness of the skin to **death from sunstroke**. Excessive heat (even in absence of sun exposure) leads to dilatation of superficial blood vessels, and if prolonged, can lead to **heat stress**.

Symptoms of heat stress include:

- profuse perspiration;
- dehydration;
- leg oedema;
- muscle cramps, nausea, weakness, and exhaustion (loss of salt from the body);
- decreased blood pressure, rapid heart rate, and fainting;
- irritability, headache, dizziness;
- concentrated dark urine;
- increased susceptibility to poisoning by pesticides through enhanced cutaneous absorption of chemical toxins.

Remember:

Children, especially younger children, are more susceptible to heat stress than adults because, in children:

- sweat glands are still not fully developed;
 - kidney function in concentrating urine to maximum capacity is still not fully developed;
 - a relatively greater oxygen consumption occurs with increases in temperature.
- This leads to more rapid and more severe decompensation, resulting in greater harm.

Indirect effects

Long term sun-induced damage to the skin may lead to:

- **dryness** of the skin;
- **premature ageing**;
- **skin changes** (atrophic or hypertrophic) such as actinic keratosis;
- various types of **skin cancers**, some of which are very malignant and deadly;
- **increased risk of accidents** because of generalized discomfort that leads to a loss of focused attention;
- **heat stroke**, which develops as an exacerbation of untreated heat stress, in which body temperature rises to higher than 40 degrees Celsius. The skin becomes dry and the urine turns very dark and may stop. Deep unconsciousness and death may ensue.

The physical effects of excessive cold

Extremely low temperature is potentially just as dangerous to child labourers as extremes of heat, especially if appropriate protective clothing is not available. The effects are mainly physical, and can be direct or indirect.

Direct effects are mostly due to severe constriction of the peripheral vessels, causing decreased blood flow to the skin and peripheral areas (hands and feet).

These include:

- Frostbite. This is injury to body tissues caused by exposure to extreme cold, typically affecting the nose, fingers or toes, sometimes resulting in gangrene and amputation.
- Chilblains. These are painful, itchy swellings on the skin, typically on a hand or foot, caused by poor circulation in the skin when exposed to cold.

Indirect effects include:

- respiratory infections, such as pneumonia;
- hypothermia;
- chronic fatigue;
- depression (psychological);
- death.

The physical effects of excessive humidity

High levels of humidity in the work environment pose a physical hazard that may cause direct or indirect harm.

Direct effects include:

- an increased susceptibility to fungal infections;
- a decreased ability to lose body heat through sweating, thus increasing susceptibility to heat stress;
- slippery skin surfaces and sweaty palms, which decreases the ability to grip firmly, increasing susceptibility to accidents while manipulating hand tools.

Indirect effects include:

- increased absorption of nicotine and other poisonous substances through the skin;
- irritability and difficulty breathing, thus increasing susceptibility to accidents.

Stress, Violence, and Harassment

Among the common hazards in agricultural work presented so far, the majority are tangible sources of (mainly physical) harm, and can be easily identified in the workplace environment, namely pesticides, machinery and tools, and harsh weather. However, the most severe psychological and social hazards – **stress, violence and harassment, including sexual harassment** – are almost invariably hidden. Hence careful consideration in the overall management of OSH among children working in agriculture is warranted.

Special Note:

Working children are under a great amount of stress, and are often obliged to work in order to contribute to their families' livelihoods; thus they carry a heavy burden of responsibility.

Children's reactions to challenges in the workplace differ from that of adults; they try to prove that they are capable of carrying out assigned duties, even at the cost of tremendous physical and mental duress. Moreover, they are more vulnerable to psychological stressors than are adults.

The harmful effects of stress

Stress is a state of arousal in response to environmental stressors. Physiologically, stress manifests as an increase in the level of the hormone cortisol. Stress also manifests in the behavioural pattern of the individual under stress. Dealing with stress is part of everyday life for most people. However exposure to unhealthy levels of stress, especially in children, has many **direct and indirect harmful effects, both physical and psychosocial**.

Direct effects include:

- chronic fatigue;
- depression;
- insomnia;
- anxiety;
- migraines;
- headaches;
- emotional problems;
- allergies.

Indirect effects from chronic exposure include:

- abuse of alcohol, drugs and tobacco;
- hypertension, and cardiovascular disease;
- peptic ulcers, inflammatory bowel disease;
- musculoskeletal problems;
- altered immune function;
- cancer;
- low self-esteem, low self-efficacy and feelings of helplessness.

The harmful effects of violence and harassment

- Violence in the workplace is a hazard that should be controlled very rigorously.
- The term **violence** can apply to several forms – for example, physical, mental, or sexual harassment.
- Violence may be manifested as systematic harassment by managers and supervisors, harsh supervision, bullying by fellow workers, or violence against workers by clients and members of the public.
- Sexual harassment has life-long detrimental effects on victims.

Note: All forms of violence can lead to harmful **psychosocial** effects similar to those caused by stress, in addition to the **physical consequences** of violence.

Common welfare-hygiene-safety hazards in the open field

Poor hygiene and sanitation

The agricultural field environment often lacks adequate standards of hygiene and sanitation, such as clean drinking water, toilets and hand washing facilities, thus exposing child labourers to several hazards. For example:

- Lack of clean drinking water leads to dehydration.
- Lack of toilets leads to prolonged urine retention, which can lead to urinary tract infections.
- Lack of hand washing facilities can lead to infections of the eyes, ear, nose and throat, and lungs, as well as parasitic infections.

The accumulation of dirt and irritating substances such as pesticides and fertilizers on the skin and clothes predisposes a person to allergies and infections. Constantly feeling dirty and fatigued may lead to long-term psychological problems such as depression.

Living on the farm

For children who live and work on farms, this often means housing **conditions** characterised by:

- over-crowding;
- inadequate heating and ventilation;
- deficient sanitary facilities;
- lack of potable drinking water.

This increases the chances of acquiring **communicable diseases** such as upper respiratory tract infections, influenza and tuberculosis.

Disease or injury from livestock

Herd-rearing poses risks of being jostled, butted, or stamped on by farm animals, especially as many child labourers work barefoot. This further exposes them to cuts, bruises, thorn injuries, and skin disorders.

Wild and poisonous animals

Children working in open fields are also vulnerable to:

- snake bites;
- insect bites and stings (e.g. spiders, scorpions, wasps, bees, moths and mosquitos);
- attacks by wild animals (e.g. dogs, and wolves), which may also carry diseases (vectors).

Chapter 4

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Eliminating Child Labour in Agriculture

Eliminating Child Labour in Agriculture

Introduction and objectives

Eliminating child labour is a complex task that requires comprehensive, targeted and coordinated efforts by all stakeholders involved, from the level of policy-makers and institutions, right down to the level of employers and workers, whether adults or children, including families and communities. The ILO, through the International Programme on the Elimination of Child Labour (IPEC), has developed a hierarchy of three main strategies for action against child labour: prevention, withdrawal and protection. These target the wide spectrum of the determinants of child labour across three different modalities related to the engagement of children in hazardous employment: namely, (1) before children enter into work; (2) children under the minimum age who are actually engaged in child labour; and (3) children above the minimum age for employment who need to be protected from hazardous work. In this approach, it is proposed that protective measures should be action-oriented and adapted to national needs, covering four main areas of intervention: (1) legislation; (2) occupational safety and health; (3) policy action; and (4) capacity building. Operational frameworks and tools should be established concomitantly in order to fulfil these actions, such as those required for adequate workplace risk assessment and management.

Objectives:

The first part of this chapter (4a) provides an explanation of the importance of eliminating child labour in agriculture, and an introduction of the ILO's three basic approaches to child labour elimination: **prevention, withdrawal and protection**. This is followed by a delineation of the four broad principal areas of action for eliminating child labour through protection measures: (1) **enforcing legislation**; (2) **improving OSH at the farm level**; (3) **applying policy action to reduce hazardous exposure**; and (4) **building capacity on OSH and child labour**.

The second part of the chapter (4b) introduces a **general framework for improving OSH at the farm level**, in which the roles of different stakeholders from policy-makers and ministerial employees to farm managers and agricultural workers are highlighted. **Methods and tools for assessing and managing risk** are provided. The chapter concludes with an overview on **the application of personal safety measures for agricultural workers**.

4a. Approaches to the elimination of child labour in agriculture

Refer to PowerPoint Presentation **PPP 4a, "Approaches to the elimination of child labour in agriculture"** in accompanying CD-ROM, for section 4.a.

Why is it important to eliminate child labour in agriculture?

- Child labour in agriculture is a major problem especially in rural areas. Agriculture is the sector where the majority of child labourers (boys and girls) work.
- Engaging children in child labour is a violation of their human rights.

- Child labour in agriculture represents an enormous economic and social cost for children themselves, their families, and society at large.
- Child labour perpetuates the cycle of poverty by hindering the development of skills and undermines decent work for adults.

Approaches to the elimination of child labour

The general approach to child labour elimination includes three types of strategy for action, as set by the ILO:

- (1) **prevention** – addressing the root causes of child labour;
- (2) **withdrawal** – removing children from child labour, while offering alternatives; and
- (3) **protection** – ensuring children above the minimum age for employment are not exposed to work hazards.

Prevention

This strategy targets children and their communities to prevent them from entering into child labour. It addresses the economic, social, political, institutional, and cultural causes of child labour. Examples of preventive measures include:

- offering relevant training opportunities (e.g. through agricultural extension programmes);
- improving contractual arrangements for adults;
- extending access to social protection to all agricultural producers;
- sensitizing rural families and communities to child labour and its negative consequences.

Withdrawal

This strategy targets both children below the minimum age who are engaged in child labour and children engaged in the worst forms of child labour. It removes the child from the child labour situation and provides links with social services, schools and rehabilitation. Examples of withdrawal measures include:

- linking children up with social services for rehabilitation or reinserting them into vocational training.
- In agriculture, where the majority of children work with their parents, “withdrawing” children may not be possible, so the best approach is to work with parents and communities to help them find solutions to eliminate child labour.

Protection

This strategy targets children in their workplaces who are above the minimum legal age for employment. It aims to protect children from hazardous work (keeping them in safe employment) by enhancing OSH measures and improving working conditions. Examples of protection measures include:

- mitigating risks in the workplace (e.g. through substitution of hazardous technologies, practices and substances with safer ones);
- providing OSH training for all workers;
- carefully monitoring children’s tasks so that they are not exposed to certain hazards that cannot be eliminated.

What measures can be taken?

The number of children engaged in the worst forms of child labour can be reduced through **protection** measures for children who are above the minimum age for employment in agriculture (i.e. those aged 14–17 years). Such measures can target working **children in this specific age group** in the workplace while also aiming to improve health and safety for **all** workers. This can be achieved by:

- enforcing the hazardous work list (Decree 8987);
- improving OSH at the farm level;
- policy action that reduces children’s exposure to hazardous work;
- capacity building on OSH and child labour.

Enforcing the hazardous work list (Decree 8987)

Challenges here include applying and enforcing the national hazardous work list (Decree 8987), which clarifies tasks that are prohibited for children and sets limits. However, labour inspection services are often understaffed or without a clear mandate on agriculture. Hence, only a small proportion of farms are inspected, especially where employment is informal.

Proposed actions include:

- increasing the capacity of labour inspection systems in the rural informal economy, as well as across supply chains;
- exploring the role and potential of agricultural extension officers to join forces in this area, including at the local level.

Improving OSH at the farm level

Agricultural producers can improve health and safety conditions for both young and adult workers. For example, while the application of pesticides is clearly banned for children, a serious risk remains in spray drift contamination. Such exposure can be minimized by:

- better organization of pesticide applications and keeping family members and other workers away from spraying;
- using properly calibrated and maintained spray equipment with trained operators.

Small-scale farmers can also undertake risk assessments and implement low-cost measures to reduce the risk of children’s exposure to work hazard:

- Producers’ organizations, cooperatives, labour inspectors and agricultural extension agents can help implement such improvements.
- Farmers can carry out their own workplace health and safety risk assessments as a self-help tool, and implement the risk control measures identified.
- The role of agricultural extension officers can be explored to identify and communicate safer practices.

Policy actions to reduce children's exposure to hazardous work

- Regulate and monitor workplaces in farming, fishing, livestock and forestry, in accordance with national laws and ILO Conventions (in particular Nos. 138, 182, 129 and 184).
- Facilitate complaints and settlement mechanisms to help employers comply with regulations, especially on crops/areas where many children are in hazardous work.
- Promote safer technologies and practices or those that reduce the demand for children in hazardous work.
- Adapt strategies to the various production systems and sizes. A technology used in large-scale production may not be viable in small-scale or marginal agriculture.

Capacity-building on OSH and child labour

- Create awareness on the provisions contained in Decree 8987 and explore how they can be taken up by sectoral regulations (agriculture).
- Integrate child labour and health and safety concerns in training curricula for:
 - extension agents;
 - teachers and students in vocational training;
 - facilitators and participants of farmer field schools.

4b. Occupational safety and health measures in agricultural settings

4b (i). Workplace risk assessment methodology

Refer to PowerPoint Presentation **PPP 4b (i), "Risk Assessment Methodology in Agriculture"** in accompanying CD-ROM, for section 4.b (i).

A review of hazards and risks

A **hazard** is anything with the potential to do harm.

Risk is the probability that a person will be harmed if exposed to a certain hazard (or that damage will occur to the environment or property or plant or equipment):

- Risk = (probability of harm) x (severity of harm).
- While **hazards are intrinsic to a given process**, risks are not – they vary depending on the levels of risk control measures.
- If exposure to a hazard is properly controlled, **risks can be reduced** to acceptable levels.

Types of hazards in agriculture (according to the nature of the hazard) include:

- **physical** – long hours of work, strenuous labour, repetitive movements, heavy loads;
- **ergonomic** – factors affecting worker comfort and health such as lighting and temperature, noise and vibration, tool design, adequacy of machinery and workstation design to height, shape, adequacy of protective equipment, and work organization;
- **chemical** – pesticides, fertilizers and other chemicals used in agriculture;
- **biological** – exposure to diseases from birds and animals, biologically contaminated dusts;
- **psychosocial** – violence and harassment, discrimination, exposure to unhealthy behaviours, drug use, sexual abuse, and isolation;
- **safety** (also known as **welfare-hygiene-safety**) – hazards that cause slipping/tripping, inappropriate guarding of machines, sharp tools, equipment malfunction or breakdown, etc.

Risk control

While hazards are inherent in technology and practice and cannot be changed, risk can be mitigated through risk control measures. For example:

- Pesticides are **hazardous** by nature as their toxic properties are designed to kill or control unwanted organisms.
- Spraying pesticides can pose serious **health risks** both to those applying them and to others working or living nearby, due to spray drift.
- **Risk varies** depending on the risk reduction measures implemented by the farmer.

What is a risk assessment?

A **risk assessment** is simply:

- a careful examination of **hazards** (what could cause harm in the workplace);
- assessing the level of **risk** (very low, low, medium, high, or very high). This is determined from the **probability** (likelihood) that someone will be harmed by the hazard (very unlikely, unlikely, likely, very likely); as well as the degree of **severity** of the harm (mild, moderate, severe);
- deciding what **precautions/controls** should be taken to prevent harm;
- determining the **actions** necessary to reduce risk.

There are **5 steps** in the methodology of risk assessment:

- (1) identify the hazards and those at risk;
- (2) evaluate and prioritize risks;
- (3) identify and decide on risk control measures;
- (4) take action – implement the risk control measures;
- (5) record your findings, monitor and review, and update when necessary (use a standard risk assessment form).

More specifically, **a standard risk assessment form** should contain the following information:

- (1) identification of the specific hazards and the persons at risk;
- (2) an evaluation of the risk level according to the risk level assessment table (see table 3b), and prioritization of risks if multiple risks exist;
- (3) a. identification of existing risk control measures;
b. identification of further necessary risk **control** measures (1-6):
 - **control 1** – elimination and substitution;
 - **control 2** – tools, technology, equipment, engineering;
 - **control 3** – safe work organization and practices, information and training;
 - **control 4** – hygiene and welfare;
 - **control 5** – health surveillance;
 - **control 6** – personal protective equipment;
- (4) for each of the above control measures, identify:
 - a. who should take the action;
 - b. when the action should be taken;
- (5) an indication of whether the action has been completed, and when it was completed.

Example of a template for a risk assessment form

Table 3a. Risk assessment form template

Risk assessment form template			
<p>STEP 1. Identify the hazards & the persons at risk HAZARD: _____ PERSON/GROUP OF PERSONS AT RISK: _____</p> <p>STEP 2: Evaluate and prioritize risks Person/Group of persons: _____ Risk: Very High/High/ Medium/Low/Very Low Person/Group of persons: _____ Risk: Very High/High/ Medium/Low/Very Low</p> <p>STEP 3: Identify existing risk control measures and further necessary risk control measures STEP 3a. What are you already doing in terms of safety and health risk controls? _____ _____</p>			
STEP 3b. What further safety and health risk controls are necessary?	STEP 4a: Action to be taken, by whom?	STEP 4b: Action to be taken, by when?	STEP 5: Completed? When?
Control 1. Elimination & Substitution			
Control 2. Tools, technology, equipment, engineering			
Control 3. Safe work organization and practices, information and training			
Control 4. Hygiene & welfare			
Control 5. Health surveillance			
Control 6. Personal protective equipment			

Source: Adapted from Hurst, P. (2013). *Training package on workplace risk assessment & risk management for small & medium-sized enterprises*. Produced as supplementary material for the ILO SAFEWORK. Published by ILO, 2013.

Looking at each step of the risk assessment in more detail

Step 1. Identify the main hazards and who is at risk.

- Hazards can include bad weather, machinery, tools, transport, processes, and substances (e.g. chemicals, dust, noise and disease).
- The aim is to spot hazards that could result in harm to the safety or health of those working. What are the dangerous work activities and processes, and how many workers are at risk for each hazardous activity? Include details of their age and gender.
- Hazards and risks can be an issue for an individual worker or an entire category/group. Consider the division of labour and different exposure to specific hazards for specific groups, such as boys and girls, men and women, nationals and migrants, for specific agricultural activities.

Step 2. Evaluate the level of risk for each hazard identified.

- Risk is a function of both the likelihood of harm and the severity of its consequences. Therefore, risk should be assessed as a function of both these parameters.
- The guiding questions are:
 - What is the likelihood of the hazard resulting in injury or harm?
 - How severe is the injury likely to be?
 - How many people are likely to be harmed?
- Risk can be prioritized by categorizing it from “**very high**” to “**medium**” to “**very low**”, according to Table 3 below.

Table 3b. Risk level assessment table

Risk level assessment table		Severity of harm		
		Slight harm	Moderate harm	Extreme harm
Probability of harm (Likelihood)	Very unlikely	Very low risk	Very low risk	High risk
	Unlikely	Very low risk	Medium risk	Very high risk
	Likely	Low risk	High risk	Very high risk
	Very Likely	Low risk	Very high risk	Very high risk

Source: Adapted from Hurst, P. (2013). *Training package on workplace risk assessment & risk management for small & medium-sized enterprises*. Produced as supplementary material for the ILO SAFEWORK. Published by ILO, 2013.

Step 3. Identify and decide on risk control measures.

When deciding on risk control measures, the following list of actions should be followed in this order:

- (1) elimination or substitution of hazards;
- (2) tools, technology, equipment, engineering;
- (3) safe work organization and practices, information and training;
- (4) hygiene and welfare;
- (5) health surveillance;
- (6) personal protective equipment (as a last resort).

Once identified, the farmer should then **implement** the risk control measures for each of the hazards identified, documenting the actions taken on the risk assessment form.

The following measures should be **applied in the order listed**, moving onto the next measure only when the previous measure is either impracticable or insufficient:

- (1) Eliminate or substitute the hazard:
 - (i) Eliminate the risk. This is always the best solution (e.g. do not allow fishing in certain kinds of weather).
 - (ii) Substitute with a technology of lower risk. This is the next best risk-reduction option (e.g. substitute a toxic chemical used in pest control with a less toxic one).

- (2) Tools, technology, equipment, engineering:
 - Introduce a new or additional technology. This is potentially effective if elimination and substitution are not feasible.
- (3) Safe work organization and practices, information and training:
 - Employ safe work practices, procedures and methods. These should be linked to appropriate information and training (i.e. appropriate for the specific activity or task to be carried out in a safe, or safer, manner).
- (4) Hygiene and welfare:
 - Providing a safe and comfortable workplace environment. Hygiene and welfare should be made available, such as access to drinking water and clean toilets, adequate ventilation, and sufficient rest periods.
- (5) Health surveillance:
 - Provide preventive health measures. Protect workers' health by detecting potential harm through monitoring early warning signals.
- (6) Personal protective equipment:
 - Promote the use of personal protective equipment (PPE). This should never be considered as the first way to protect workers, but the last resort. Using PPE to protect workers from hazardous substances (such as pesticides) does not guarantee the safe use of such chemicals, so does not actually change the hazardous nature of the work. However, many types of PPE, such as specific items of clothing, can drastically reduce risk (e.g. wearing boots protects from snake bites).

Remember:

Collective protective measures take priority over individual protective measures.

Step 4. Take action – put the risk assessment into practice, and make it accessible.

- The farm manager needs to decide and record **who** was responsible for implementing the further actions and **when** they should be done.
- After each action is completed, it needs to be **ticked off** on the assessment form, with the **date** recorded.
- The risk assessment record must be made **accessible** to staff.

Step 5. Record the findings, monitor, review, and update.

- The risk assessment findings should be recorded and the main copy kept in the farm office for ease of accessibility and reference.
- The manager should discuss the findings with the workers.
- The risk assessment should be reviewed and updated regularly (e.g. every year), or immediately in the case of changes to technology or practices.

4b (ii). Introduction to improving OSH at the farm level

Refer to PowerPoint Presentation **PPP 4.b (ii), "Introduction to Improving OSH at the Farm Level"** in accompanying CD-ROM, for section 4.b(ii).

This section provides an overview of OSH at the farm level, with a **focus on risk control** and suggests **control measures** for reducing risks. Further, emphasis is placed on the following points:

- Eliminating hazardous work of children within agriculture and other sectors must become a central component of national health and safety policies.

- National OSH programmes for agriculture should also be a **practical** way of implementing national policy on safety and health in the sector, as required by the Safety and Health in Agriculture Convention, 2001 (No. 184).
- At the farm level, maintaining OSH standards in accord with national programmes requires the adoption of an adequate methodology for assessing and managing risk.
- OSH provisions need to be implemented **in parallel** with periodic, comprehensive and thorough risk assessments.
- A risk assessment can be carried out in **enterprises of all sizes**, even in small family operations.

Review: What are risk assessments?

Risk assessments are a **self-help tool** for producers and employers, in cooperation with their workers, to:

- identify workplace hazards;
- determine practical, cost-effective ways to reduce the risks, **including specifically to protect children** from identified work hazards;
- prevent and reduce fatal accidents, injuries and ill health in the workplace.

Review: Classifying risk control measures

These include:

- (1) elimination or substitution of hazards;
- (2) tools, technology, equipment, engineering;
- (3) safe work organization and practices, information and training;
- (4) hygiene and welfare;
- (5) health surveillance;
- (6) personal protective equipment (as last resort).

Examples of some risk control measures

Elimination/substitution of hazard (risk control measure 1)

Whenever possible, every effort should be made to eliminate the hazard altogether, such as:

- fencing off all water sources such as dams, ponds, septic tanks, sheep dips, pools and creeks;
- making sure that hazardous areas are locked and inaccessible;
- locking up chemicals and guns;
- ensuring that electrical equipment and other dangerous materials are out of reach of children;
- not allowing children to ride on farm machinery, such as tractors.

Safe work organization and practices, information and training (risk control measure 3)

The following are general safety suggestions that improve safe work organization, practices, information, and training on:

- (a) safety rules;
- (b) agricultural machinery, equipment and tools;
- (c) stored energy and other energy sources.

These are discussed below in more detail.

(a) Information on safety rules

- Teach children about both the positive and dangerous aspects of livestock and farm animals.
- Teach safety rules that apply to the different areas of the farm.
- Make sure they understand that certain areas are out-of-bounds for them – for example silos, grain loading areas and farm machinery.
- Reinforce discipline by explaining the hazards and consequences of ignoring safety rules.
- Use clearly recognizable safety signs where necessary and teach children what each one means.

(b) Agricultural machinery, equipment and tools

Agricultural workers use a wide variety of **equipment and tools** for performing tasks like:

- tilling the soil;
- sowing seeds;
- applying agricultural chemicals;
- harvesting and storing crops;
- cutting;
- baling hay;
- grinding feed;
- hauling manure.

In order to ensure the safety of **machinery and working equipment**, workers need to be:

- trained on safe operation;
- supervised;
- aware of the safety of other workers and people around;
- not allowed to leave the machine while it is operating.

Children under the minimum age for this type of work must not be allowed to operate or ride on tractors or ATVs.

(c) Stored energy and other energy sources

- All sources of power can cause injury to the operator if not properly guarded.
- These include **stored energy and other energy sources**.
- Employers should assess and apply strict procedures for the control of hazardous energy sources, including preparation for shutdown and actual shutdown.

Hygiene and welfare (risk control measure 4)

To reduce risks arising from hygiene and welfare hazards, there is a need to address factors related both to the **work environment** and to the **workers**. The **work environment** should be provided with:

- hygiene facilities (e.g. adequate washing facilities);
- decontamination facilities (e.g. changing and storing facilities);
- contingency and emergency preparedness;
- fire extinguishers;
- easy access to an adequate first aid kit.

Workers must:

- be provided with culturally and linguistically sensitive information;
- be provided with alternative tools and machine technology that eliminates exposure to:
 - noise;
 - emissions (including heat);
 - vibration;
- have rest periods;
- avoid peak hours of sun exposure in summer;
- allow job/task rotation (especially among children). Some jobs/tasks, such as strenuous or repetitive tasks, place a high physical demand on the worker and can become extremely tedious mentally and physically. Workers may be periodically removed from these tasks and assigned to less demanding tasks in order to alleviate this strain.

Personal protective equipment (risk control measure 6)

Remember:

PPE is the last resort among all other risk control measures.

“PPE provides supplementary protection against exposure to hazardous conditions in agricultural production **where the safety of workers cannot be ensured by other means**, such as eliminating the hazard, controlling the risk at source or minimizing the risk.” (ILO, 2010. *Code of practice on safety and health in agriculture*).

Employers bear a responsibility towards the personal safety of their workers in that:

- they must provide PPE:
 - in sufficient numbers (every worker should be protected);
 - of the right kind;
- they must provide at the field or workplace, for all PPE:
 - spare parts;
 - maintenance facilities;
 - quick replacement of worn-out parts;
 - clean and safe on-site storage;
- PPE should :
 - be assessed regularly;
 - be personal to the wearer;
 - not contain hazardous substances;
 - be of adequate design and fit;
 - have material resistant to penetration by chemicals, heat stress, dust, catching fire and static electricity;
 - be properly handled/cleaned after use.

Examples of commonly required PPE in agriculture include:

- helmets;
- clothing;
- face and eye protection;
- protective gloves;
- protective footwear;
- respiratory protective equipment (RPE);
- hearing protectors.

Who can influence agricultural safety and health?

Groups of stakeholders who can influence OSH in agriculture include:

- extension advisors;
- employers;
- farm workers and their families;
- contractors;
- inspectors;
- financial and insurance groups;
- commodity purchasers.

Recommendations regarding adequate provision of OSH at the farm level are hence directed at all these stakeholders, and are provided below.

Recommendations

(1) Emphasize the role of trainers, extension workers, and supervisors in ensuring that training of workers is designed to:

- raise awareness;
- teach children how to improve job or task-related skills;
- provide protection from musculoskeletal injuries and diseases.

(2) Address the need for:

- an agreed-upon strategy that is evidence-based;
- developing appropriate interventions to reduce agricultural injury and risks of diseases;
- addressing the key injuries and health risks.

(3) Design Interventions that are:

- educational;
- multifaceted;
- inclusive of relevant policies, work place organization and regulations where applicable;
- tailored to overcome implementation barriers.

(4) Disseminate occupational health information to:

- farmers;
- farm workers;
- workers' families.

4b (iii). Risk management in farm settings

Refer to PowerPoint Presentation **PPP 4.b (iii), "Risk Management in Farm settings"** in accompanying CD-ROM, for section 4.b (iii).

Worker safety in farm settings is closely linked to well-implemented risk assessments. However, many more parameters of safety also need to be assessed on the farm.

Farm owners/producers/managers are responsible for maintaining a reliable systematic method for adequate management of OSH issues that is effective and sustainable.

Several frameworks and tools have been designed to help facilitate the challenging task of assessing different aspects of safety and health in farm settings:

- The tools consist of specialized forms that contain checklists for a set of evidence-based standards for safety at the workplace.
- The checklists serve as self-audit tools to guide farm managers and supervisors in maintaining adequate standards of safety and health on their premises.

Risk assessment forms

Remember:

- Risk assessment forms contain a series of guiding questions, which are arranged in a series of 5 steps (see *Risk assessment form*, slide 5 in PPP 4b(iii)).
- The form is to be completed in accordance with the hazards and risks that exist in particular agricultural workplace settings.

For example, the following illustrates a completed risk assessment form for poultry production (see slide 6 in PPP4b(iii)).

Figure 1. Risk assessment form for poultry production

Example of Risk Assessment in Poultry Production					
STEP 1		STEP 2	STEP 3A	STEP 3B	STEP 4
What are the hazards?	Who is at risk and how?	Degree of risk, prioritisation of risks for action?	Existing risk control measures?	What further risk control measures are necessary?	Action by who in the enterprise? By when? Completed?
Safety/health risks? Dust - from feathers, droppings, feed, including milling operations Risk of Asthma	All workers in the poultry sheds	High risk	Basic ventilation in the sheds is provided	1. Milling machine - fit dust extraction equipment to that machine 2. Ventilation: All shed doors are kept open when putting down or cleaning up litter 3. Good quality disposable dust masks are provided for workers who are instructed to use them when working in dusty conditions, cleaning up et.	1. Poultry farm supervisor - immediate action 2 and 3. Poultry farm owner - action within one week.
Occupational diseases caught from the poultry - including avian flu (Zoonoses)	All workers in and around the poultry sheds	Medium risk	Regular cleaning of the poultry sheds, and safe disposal of dead poultry	1. Training on prevention of occupational diseases 2. Workers are to be trained in using rat poison (pesticide) and the safe removal of dead rats, and safe disposal of baits (leptospirosis) 3. Workers are provided with, and instructed to use, personal protective clothing, e.g. gloves, overalls in sheds, disposable dusts masks when putting down or cleaning up litter 4. Hot/ cold water, soap and paper towels available in facilities near the sheds. Workers are strictly instructed to wash hands after contact with animals, and especially before eating, drinking or smoking.	1. Poultry farm owner - and supervisor - immediate action 2. Supervisor - within two weeks 3. Supervisor - immediate action
Slips and trips - physical injuries, cuts	All workers in and around the poultry sheds	Medium risk	Basic cleaning procedures in place	1. Floors are to be kept level 2. Poultry carcasses, debris etc. to be cleaned up more regularly	1. Poultry farm owner - immediate action 2. Supervisor - immediate action
STEP 5. Record your findings, monitor and review your risk assessment, and update when necessary: The risk assessment should state the intended review date.					

Source: Hurst, P. Produced as supplementary material for the ILO SAFEWORK (2013) Training Package on Workplace Risk Assessment & Risk Management for Small & Medium-Sized Enterprises.

Risk assessment forms may vary slightly in their layout but, content wise, there are always questions about:

- the people at risk;
- the level of the risk; and
- what risk reduction measures are required.

For example, see *Risk assessment form for a farm tractor*, slide 8 in PPP 4.b (iii).

Safety assessment forms

- Safety assessment forms are self-audit forms that farm managers use to track whether precautionary measures related to specific hazards have been established and implemented.
- Depending on existing hazard sources in the workplace, safety assessment forms are filled in accordingly.
- The form consist of checklists related to two aspects of the hazard source:
 - (a) physical conditions; and
 - (b) work practices.
- Three steps are required to complete the form:
 - (1) step 1 – a yes/no checklist against each of the safety items;
 - (2) step 2 – decide whether the safety measure constitutes a priority for action;
 - (3) step 3 – state what priority action is required.
- Below is an example of a safety assessment form for a commonly existing source of hazard in agriculture – **general machinery** (see Figure 2).

Assessment forms for emergency preparedness and response

Assessment forms can also be used as a guiding tool for managers in their safety preparation for emergency events. These are:

- (a) the Emergency Preparedness Assessment Form; and
- (b) the Emergency Response Assessment Form.

See slides 12 and 13 in PPP4.b (iii) for Forms (a) and (b) respectively.

Assessment form for safety and health policies and procedures

When national policies and procedures for safety and health exist, corresponding checklists can be developed. These can be used by employers and workers to guide management of local OSH systems at the workplace (see Assessment Form for Safety and Health Policies and Procedures in slides 15, 16, and 17 in PPP4.b (iii)).

Figure 2. Safety assessment form for general machinery

General machinery		Self-audit		
Checklist	Date	Step 1	Step 2	Step 3
		N/A	Yes	No
Physical conditions			Priority for action	What action is required
<ol style="list-style-type: none"> 1. Are key warning signs/signals on machinery readable? (Replacement signs/signals are available from most dealers.) 2. Are all shields and guards in place? (PTO and other.) 3. Are all machines free of jagged metal or protrusions? 4. Have you developed a policy and ensured compliance of when PPE should be worn or used? 5. Is any equipment that is likely to be towed on roadways equipped with safety chains and safety hitch pins? Are they attached properly according to regulations? 6. Are SMV signs clean and reflective? Are they mounted on the rearmost piece of equipment before roadway travel? 				
Work practices		N/A	Yes	No
<ol style="list-style-type: none"> 1. Are defective and worn parts replaced as soon as possible (including tyres)? 2. Are children and bystanders kept away from operating equipment? 3. Is the power turned off before adjusting or servicing machinery or lockouts used if required? 4. Are moveable components properly blocked before repair or adjustment? Are they locked out? 5. Do workers always observe the “No riders” rule on machines or drawbars? 6. When implements are parked, are they out of the transport position, blocked or left in down position? 			Priority for action	What action is required

Source: ILO, 2010. Code of practice on safety and health in agriculture. Meeting of experts to adopt a code of practice on safety and health in agriculture (Geneva, 29–25 October 2010).

How to address the challenges of OSH in agriculture

Establishing adequate standards of occupational safety and health is particularly challenging in the agricultural sector, especially where the safety of children is involved. National systems are important and efforts need to be channelled into the following:

- Competent authorities should establish a national policy on OSH and develop legislation that takes into account the available ILO instruments.
- Within national policy, a national framework for OSH in agriculture should be developed (as well as frameworks for other sectors) and be comprehensive of all agricultural businesses and enterprises, large and small.
- Employers and workers must be aware of their duties and rights in the area of OSH in agriculture and take specific action to manage and control OSH risks, and protect workers against occupational accidents.

Local systems for OSH in agriculture

In addition to national policies and frameworks, including a framework specific to the agricultural sector, local authorities should establish local systems for OSH in agriculture. Their scope of action should encompass the following criteria:

- ensure compliance with national laws and regulations, including inspection systems;
- disseminate information about addressing hazards and risks in agriculture and make available related advisory services;
- provide training on occupational safety and health for employers and workers;
- establish mechanisms for regular collection and analysis of data on occupational injuries and diseases;
- ensure that relevant insurance or social security schemes cover occupational injuries and diseases;
- establish mechanisms for the progressive improvement of OSH, even in very small agricultural enterprises.

Characteristics of OSH management systems at the workplace level

These should include:

- a prevention-oriented approach;
- risk assessment measures;
- workers' health surveillance measures;
- occupational health services;
- health promotion and well-being measures;
- welfare facilities and other social services;
- preventive and protective measures;
- environmental protection measures;
- record-keeping and notification of injuries and diseases;
- training and advice;
- monitoring of the work environment and of its impact on the general environment;
- participation of employers and workers.

Who has a role in the management of OSH systems?

The management of OSH systems requires the involvement of many groups and institutions, some of which are listed below:

- Ministry of Labour;
- Ministry of Health;
- Ministry of Agriculture extension agents;
- social security institutions;
- Ministry of Environment;
- rural employers' organizations;
- rural trade unions;
- farmers' associations;
- rural NGOs;
- Chambers of Commerce, Industry and Agriculture;
- employers and workers.

Role of employers

Employers should:

- provide and maintain safe and healthy workplaces, tools and other working equipment;
- set out OSH policies specific to their enterprises and appropriate to the size and nature of activities;
- regularly monitor and review OSH arrangements;
- continuously improve the performance of the OSH management system;
- provide continuous information and appropriate training of all workers and their representatives;
- ensure that workers receive and understand the relevant safety and health information provided;
- support the establishment and efficient functioning of OSH committees.

Role of workers

Workers and their representatives should:

- encourage and support young workers to develop safe work habits and to fully comply with safe working procedures;
- seek information from the employer regarding any hazards or risks to safety and health arising from agricultural production, including information from suppliers;
- take adequate preventive measures to protect themselves and other workers against hazards or risks to safety and health from agricultural production;
- take steps to eliminate or control hazards or prevent new hazards from arising during agricultural production, including the proper care and use of protective clothing.

4b (iv). Personal safety in agricultural work

Refer to PowerPoint Presentation **PPP 4.b (iv), "Personal safety in agricultural work"** in accompanying CD-ROM, for section 4.b (iv).

Personal safety and agricultural hazards

Agriculture is considered one of the most hazardous work sectors. Of the total number of annual accident-related occupational deaths (around 350,000 cases per year) among all occupations worldwide, half occurred among workers in agriculture (ILO & FAO, 2013).

Hazard-induced harm (injuries or accidents) in agriculture are caused mainly by two hazards: pesticides and machinery.

Pesticides

Significant improvements in agricultural production have been witnessed by farmers with the use of agrochemicals, especially pesticides in agriculture. Consequently, pesticide use has increased and, in parallel, so has the occurrence of pesticide-induced toxicity among all living organisms.

Proposed solution:

Correct use of pesticides and adherence to personal safety instructions.

Routes of exposure in pesticide toxicity:

Pesticides may enter the body through 3 routes:

- (1) the respiratory system (inhalation through the lungs);
- (2) the digestive system (ingestion through the mouth);
- (3) the skin (absorption through the skin and eyes).

Basic supportive treatment for acute pesticide toxicity

Depending on the route of entry of the pesticide, commonly-used basic treatments for acute pesticide toxicity include:

- for the respiratory system – supply with clean oxygen-rich air;
- for the digestive system – induced vomiting, drinking milk;
- for the skin - repeated handwashing, drinking stimulant beverages such as tea or coffee.

Preventing pesticide poisoning

The best approach to prevent pesticide poisoning is to minimize exposure. This may be done through raising awareness of the modes of pesticide toxicity and the appropriate protective measures for ensuring the safe and correct use of pesticides.

Protective measures against pesticide toxicity

Storage of agrochemicals (including pesticides):

- Place all dangerous agrochemicals in a safe place, locked up and out of reach of other people.
- Keep pesticides in their original containers.

Follow the label instructions:

- Read the instructions on the label of the pesticide container before using the pesticide (use amounts as indicated, respect safe re-entry period, animal toxicity, wear personal protective equipment during application, and wash hands after application). It is necessary to recognize the level of toxicity from the colour of the labels:

- green = low toxicity;
- blue = medium toxicity;
- yellow = high toxicity;
- red = very high toxicity.

It is necessary to recognise the meaning of various symbols found on container labels:

- E.g. lock up pesticide and keep safely out of reach of children.

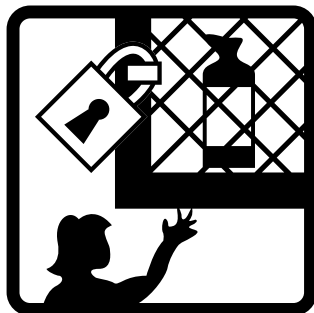


Fig 3. Warning symbol on pesticide label

- See other examples in slide 10 of PPP 4.b (iv).

Wearing the appropriate personal protective equipment:

- Appropriate PPE includes special coveralls, long rubber gloves to prevent contamination of the hands, protective goggles, a respirator, a waterproof hat, a face shield, and long pants over rubber boots.

Adopting correct procedures when applying pesticides:

- Never apply pesticides outdoors on a windy day, so as to prevent drift of the pesticide or expose the farmers and others nearby to pesticide mist.
- Make sure there are no people in close proximity to any spraying activity.

Focusing pesticide application only on required areas:

- This can be done by adjusting the size of nozzle aperture to suit the jet power required to reach branches at a certain distance.

Disposing of pesticide residues and left overs:

- Never use empty pesticide containers. Dispose of them with the threefold repetitive washing technique.
- Wash the spraying tools and equipment.
- Wash hands thoroughly with soap and water after completing work with pesticide.
- Do not allow residue to be washed into stormwater or other water streams.

When using pesticides of a high toxicity level, warning signs must be placed in the sprayed field where they can be clearly seen.

Agricultural machinery

- Misuse of agricultural machinery may result in fatal accidents.
- Absence of supervision of heavy agricultural machinery and tools exposes children to potentially fatal errors.

Proposed solution:

Raise awareness of warning signs and instructions. These should be read, understood and applied by all.

Machinery booklet instructions

Instruction booklets for correct and safe operation of machinery and tools contain useful information regarding the precautionary measures that workers should take before operating the machinery, in addition to special warnings and other recommendations for use.

Among precautionary measures are those that should be taken to guard against noise-induced harm. Noise intensity is measured in decibels (dB). Machinery and tools are usually accompanied by information on the intensity of sound/noise generated when the machine is in operation, and the permissible duration of exposure by the worker to the sound emitted by the machine. The limit for safe exposure to sound is an intensity of 90 dB for 8 hours. Beyond these limits, hearing has to be protected with special protective gear for the ears.

Because of the highly hazardous nature of pesticides and agricultural machinery, wearing appropriate clothing and using protective equipment is often necessary during work exposure to these two hazards, even after having applied the preceding risk control measures.

Chapter 5



Field Exercises

Field Exercises

The following 2 exercises are designed as application exercises during agricultural field trips. Both can be done in the same field trip.

Instructions:

- Make a planned visit to an agricultural field or farm.
- Identify a specific agricultural activity.
- Observe the surroundings, people and the activity.
- Document any hazards identified, and who is exposed to the hazard/s.
- For each of the hazards identified, fill in the *body map* (figure 4) in field exercise 1 “Body mapping of harmful effects”.
- For each of the hazards identified, fill in the *risk assessment form template* (table 4) in field exercise 2 “Risk assessment”.

Field exercise 1: Body mapping of harmful effects

On the body map provided (figure 4), illustrate, using symbolic drawings, the harmful effects that may result from the hazards associated with the agricultural activity identified during the field visit. Use the list of harmful effects and their symbols (figure 5) to help you identify the types of harm and how to represent them on the body map.

Figure 4. Body Map

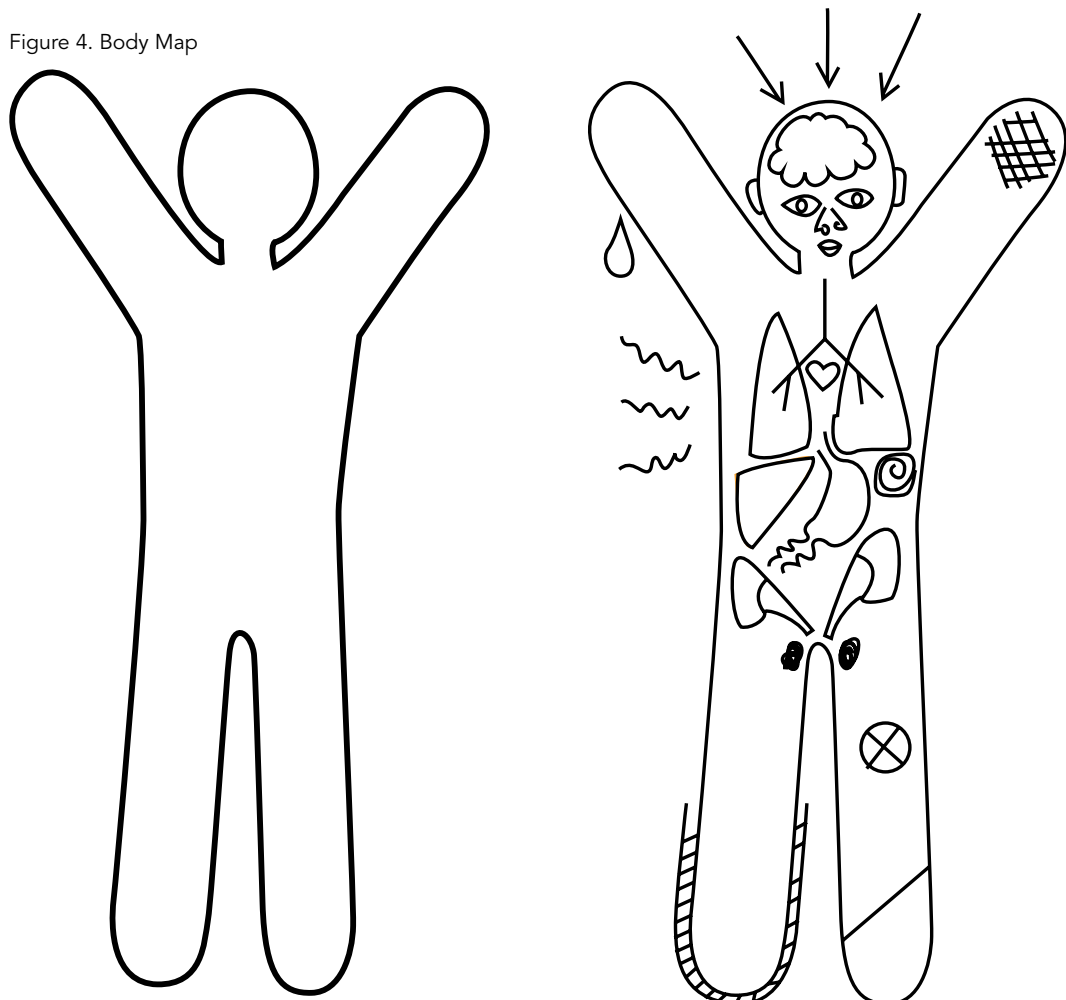
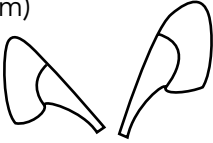
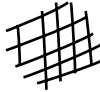










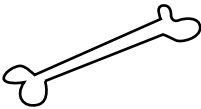


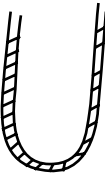

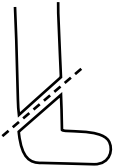
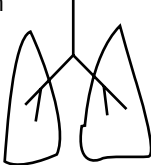







Figure 5. List of harmful effects and their symbols

List of some injuries to organs and potential types of harm

<p>Kidneys (Urinary System)</p> 	<p>Crush injuries</p> 	<p>Reproductive System</p> 
<p>Liver</p> 	<p>Extremities (arms and legs)</p> 	<p>Endocrine System</p> 
<p>Spleen and Immune System</p> 	<p>Brain (Neurological Sytem)</p> 	<p>Blood</p> 
<p>Muscles</p> 	<p>Eyes</p> 	<p>Dehydration</p> 
<p>Bones</p> 	<p>Nose</p> 	<p>Depression</p> 
<p>Skin</p> 	<p>Mouth</p> 	<p>Amputation Injury</p> 
<p>Other Harmful Effects</p>	<p>Respiratory System</p> 	<p>Stress</p> 
	<p>Heart</p> 	<p>Pain</p> 
	<p>Stomach and Intestines (Digestive System)</p> 	<p>Ear</p> 

Field exercise 2: Risk Assessment

Fill in the risk assessment form template (table 4) below. Use the risk level assessment table (table 5) to evaluate the level of risk observed in the agricultural activity. An example of a filled-in risk assessment form for “tractor use” is provided below (table 6).

Example of a template for a risk assessment form

Table 4. Risk assessment form template

Risk assessment form template			
STEP 1. Identify the hazards & the persons at risk			
HAZARD: _____			
PERSON/GROUP OF PERSONS AT RISK: _____			
STEP 2: Evaluate and prioritize risks			
Person/Group of persons: _____		Risk: Very High/High/ Medium/Low/Very Low	
Person/Group of persons: _____		Risk: Very High/High/ Medium/Low/Very Low	
STEP 3: Identify existing risk control measures and further necessary risk control measures			
STEP 3a. What are you already doing in terms of safety and health risk controls? _____			

STEP 3b. What further safety and health risk controls are necessary?	STEP 4a: Action to be taken, by whom?	STEP 4b: Action to be taken, by when?	STEP 5: Completed? When?
Control 1. Elimination & Substitution			
Control 2. Tools, technology, equipment, engineering			
Control 3. Safe work organization and practices, information and training			
Control 4. Hygiene & welfare			
Control 5. Health surveillance			
Control 6. Personal protective equipment			

Table 5. Risk level assessment table

		Severity of harm		
		Slight harm	Moderate harm	Extreme harm
Probability of harm (Likelihood)	Very unlikely	Very low risk	Very low risk	High risk
	Unlikely	Very low risk	Medium risk	Very high risk
	Likely	Low risk	High risk	Very high risk
	Very Likely	Low risk	Very high risk	Very high risk

Table 6. Risk assessment form for “tractor use”

Health and safety risk assessment form	
Name of the employer and enterprise:	
Work activity or workplace being assessed	Identify the main hazards and those at risk of injury or ill-health
Tractor use	<ol style="list-style-type: none"> 1. Rollover of tractor especially when on slopes. At risk: the driver, unauthorized riders or those working close by. 2. Being run over by tractors, especially when reversing. At risk: those working close by and bystanders such as children who live on farms. 3. High noise levels from the tractor engine. At risk: the driver. 4. High whole-body vibration levels from the tractor chassis. At risk: the driver.
Address:	Assess the likelihood of risk and severity of injury or ill-health
	<ol style="list-style-type: none"> 1. Risk of death or serious injury can be high in certain places. 2. Risk of being run over is high in areas of poor vision and close to domestic buildings. 3. Risk of noise-induced hearing loss is high over prolonged periods of exposure. 4. Risk of back pains and other musculoskeletal disorders is high over prolonged periods of exposure.
Risk reduction measures to be put into place	
	<ol style="list-style-type: none"> 1. The tractors should be equipped with a rollover protection structure (ROPS) and seat belt. All tractor operators should be trained in the safe use of tractors and particularly rollover prevention and required to follow safe work practices. The “one seat-one rider” rule should be enforced without exception. 2. All tractor operators should be alert to the presence of co-workers and bystanders and ensure that they are kept at a safe distance. Horns and flashing lights should be fitted, especially for larger tractors. If fitted, they should be used. 3. Sound-proofed safety cabs should be fitted, which may also serve as a ROPS. 4. Driver seating should be ergonomically designed.

Source: ILO, 2010. Code of practice on safety and health in agriculture, Meeting of experts to adopt a code of practice on safety and health in agriculture (Geneva, 25–29 October 2010).

Appendices

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Appendix I. Key child labour terminology

agriculture: A series of activities that can occur in a wide spectrum of contexts ranging from families to large commercial farms. A working definition of the term, though not exclusive, is:

‘Agriculture’ covers different types of farming activities, such as crop production, horticultural/fruit production, livestock raising, livestock-food preparation, forestry activities, fish farming, and insect raising. It also includes many other associated activities: the primary processing and packaging of agricultural and animal products, crop storage, pest management, irrigation, construction and domestic tasks (carrying of water, fuel-wood, etc.), as well as the use and maintenance of machinery, equipment, appliances, tools and agricultural installations. It can include any process, operation, transport or storage directly related to agricultural production. (ILO, 2006. *Tackling hazardous child labour in agriculture: Guidance on policy and practice.*)

bondage/bonded child labour in agriculture: Bonded labour is a form of forced labour where workers are tied or “bound” to their employer, often through forms of indebtedness. It is most commonly found in the agricultural sector. A prevalent form of bonded labour is **debt bondage**. It is a form of modern slavery whereby, in return for a cash advance or credit, a person offers their labour and/or that of their child for an indefinite period (until the debt is repaid). According to the ILO, the term refers to a worker who renders service under conditions of bondage arising from economic considerations notably indebtedness through a loan or advance. The implication is that the worker (or dependents or heirs) is tied to a particular employer/creditor for a specified or unspecified period until the loan is repaid, which may extend over generations (ILO, 2006. *Tackling hazardous child labour in agriculture: Guidance on policy and practice, Guidebook 2, p. 11*).

child: a person of less than 18 years of age (Article 2 of the Worst Forms of Child Labour Convention, 1999 (No. 182)).

child labour: is work that negatively impacts on compulsory schooling and damages health, well-being and personal development. Classification as child labour is based on child’s age, hours and conditions of work, and hazards involved. More specifically, **child labour** is any work activity or task that:

- engages children below the minimum age for employment for that type of work;
- presents mental, physical, spiritual, social or moral hazards for children;
- interferes with compulsory education;
- is hazardous (listed in the “hazardous works list”).

Decent Work: Work as specified in Article 6 of the International Covenant on Economic, Social and Cultural Rights (ICESCR) must be “Decent Work”. This is work that respects the fundamental rights of the human person, as well as the rights of workers, in terms of conditions of work safety and remuneration. It also provides an income allowing workers to support themselves and their families, as highlighted in Article 7 of the Covenant. These fundamental rights also include respect for the physical and mental integrity of the worker in the exercise of their employment. (*Committee on Economic, Social and Cultural Rights, General Comment 18, Article 6: The equal right of men and women to the enjoyment of all economic, social and cultural rights (Thirty-fifth session, 2006), UN Doc. E/C.12/GC/18 (2006), <https://www1.umn.edu/humanrts/gencomm/escgencom18.html> [retrieved 6 march 2016].*)

debt bondage: (See **bondage**.)

forced labour: Forced labour refers to situations in which persons are coerced to work through the use of violence or intimidation, or by more subtle means such as accumulated debt, retention of identity papers or threats of denunciation to immigration authorities (ILO, 2014. http://www.ilo.org/global/topics/forced-labour/news/WCMS_237569/lang--en/index.htm [retrieved 6 march 2016].)

harm: The outcome or result of an uncontrolled hazard. Includes injury or disease to people and damage to the environment, property, plant or equipment.

hazard: Anything with the potential to do harm (injury or disease). For example, certain work materials, substances, equipment, practices can all cause harm. There are different types of hazards: physical, ergonomic, chemical, biological, psychological, and safety hazards, depending on the nature of the hazard. Safety hazards are also referred to as welfare-hygiene-safety hazards (see <http://www.healthyworkinglives.com/advice/Legislation-and-policy/employee-issues/welfare-workplace#what>).

hazardous work: Work which by its **nature** or by the **circumstances** in which it is carried out is likely to harm the health, safety or morals of children (Article 3(d) of Convention on Worst Forms of Child labour, 1999, No. 182). Hazardous work is one of the worst forms of child labour which should all be eliminated. The minimum age for admission to hazardous work is 18 years (Minimum Age Convention, 1973 (No. 138)), with the possibility of exceptions made for young workers aged 16 and 17 on the strict conditions of prior training and provision of health and safety measures (Convention on Safety and Health in Agriculture, 2001 (No. 184), Article 16(3)).

light work: Work that is not likely to be harmful to the child's health or development and which does not interfere with compulsory school attendance, participation in vocational orientation or training programmes, or their capacity to benefit from the instruction received. The Minimum Age Convention, 1973 (No. 138), fixes the minimum age for light work at 13 years of age. National legislation needs to specify the conditions and age threshold for light work. **In Lebanon**, this legislation has not yet been established, but is among the national objectives for the near future. Note: In developing countries, in which the minimum age of employment is set at 14 years, Convention (No. 138) allows for the minimum age for light work to be set at 12 years.

minimum age for employment: This is the minimum age for admission to employment. It is fixed at 15 years by Convention 138, with some exceptions. The minimum age for employment cannot be lower than the age of completion of compulsory schooling. **In Lebanon**, the minimum age for admission to employment is 14 years (end of 13 years). Compulsory schooling in Lebanon is set between ages 6 and 14 years, which coincides with the elementary (grades 1–6) and intermediate (grades 7–9) phases of basic education. Therefore, by age 14, a child living in Lebanon has the legal right to have completed the 9th grade.

risk: The chance, or probability/likelihood, that a hazard will result in injury or illness to people, or damage to the environment, property, plant or equipment. The level of risk depends on 2 factors: It is a combination of the probability that a particular negative outcome will occur and the severity of the harm if realized, and may be expressed as an equation: $\text{risk} = (\text{probability of harm}) \times (\text{severity of harm})$

serfdom: The condition or status of a tenant who is (by law, custom or agreement) bound to live and labour on land belonging to another person and to render some determinate service to such other person, whether for reward or not, and is not free to change his status (Office of the United Nations High Commissioner for Human Rights, 2002. "Abolishing slavery and its contemporary forms", p.6, <http://www.ohchr.org/Documents/Publications/slaveryen.pdf>).

worst forms of child labour: Defined by the Worst Forms of Child Labour Convention, 1999 (No. 182), as:

(a) all forms of slavery (sale and trafficking of children, debt bondage and serfdom, and forced or compulsory labour, including forced or compulsory recruitment of children for use in armed conflict);

(b) the use, procuring or offering of a child for prostitution or pornographic materials or performances;

(c) engagement of children in illicit activities; and

(d) work which by its *nature* or by the *circumstances* in which it is carried out is likely to harm the health, safety or morals of children (hazardous work).

youth employment: Children above 14 years are considered to be in “youth employment” if the work they do is acceptable for their age and not hazardous. They are in child labour if they are engaged in hazardous work.

young workers: Female or male adolescents below age 18 who have attained the minimum legal age for admission to employment and are, therefore, legally authorized to work under certain conditions. Under Convention 138, the minimum age for employment or work should not be less than 15 years, but developing countries may fix it at 14 years (as is the case for Lebanon). A number of countries have fixed it at 16 years.

Appendix II. International legal framework

UN Convention on the Rights of the Child, 1989

Article 32, states the right of children to be protected from performing any work that is likely to interfere with their education, or to damage their health or mental, physical, spiritual, moral or social development.

ILO Conventions and Recommendations

Worst Forms of Child Labour Convention, 1999 (No. 182)

Article 2 of Convention No. 182 states that “the term “child” shall apply to all persons under the age of 18”.

Article 3 of Convention No. 182 defines the **worst forms of child labour** as:

(a) all forms of slavery or practices similar to slavery, such as the sale and trafficking of

children, debt bondage and serfdom and forced or compulsory labour, including forced or compulsory recruitment of children for use in armed conflict;

(b) the use, procuring or offering of a child for prostitution, for the production of pornography or for pornographic performances;

(c) the use, procuring or offering of a child for illicit activities, in particular for the production and trafficking of drugs as defined in the relevant international treaties;

(d) work which, by its nature or the circumstances in which it is carried out, is likely to harm the health, safety or morals of children (otherwise called “**hazardous work**”).

Article 6 of Convention No. 182

Under this Article, governments are required to:

- design and implement programmes of action to eliminate, as a priority, the worst forms of child labour; and
- consult with relevant government institutions and employers’ and workers’ organizations, taking into consideration the views of other concerned groups as appropriate.

Article 7 of Convention No. 182

Under this article :

1. Each member shall take all necessary measures to ensure the effective implementation and enforcement of the provisions giving effect to this Convention including the provision and application of penal sanctions or, as appropriate, other sanctions.
2. Each member shall, taking into account the importance of education in eliminating child labour, take effective and time-bound measures to:
 - (a) prevent the engagement of children in the worst forms of child labour;
 - (b) provide the necessary and appropriate direct assistance for the removal of children from the worst forms of child labour and for their rehabilitation and social integration;
 - (c) ensure access to free basic education, and, wherever possible and appropriate, vocational training, for all children removed from the worst forms of child labour;
 - (d) identify and reach out to children at special risk; and
 - (e) take account of the special situation of girls.
3. Each member shall designate the competent authority responsible for the implementation of the provisions giving effect to this Convention.

ILO Worst Forms of Child Labour Recommendation, 1999 (No. 190)

This relates to ILO advice provided to governments on certain activities in hazardous work of children that should be prohibited. It describes the types of work of concern and identifies where they occur:

- (a) work which exposes children to physical, psychological or sexual abuse;
- (b) work underground, under water, at dangerous heights or in confined spaces;
- (c) work with dangerous machinery, equipment and tools, or which involves the manual handling or transport of heavy loads;
- (d) work in an unhealthy environment which may, for example, expose children to hazardous substances, agents or processes, or to temperatures, noise levels, or vibrations damaging to their health;
- (e) work under particularly difficult conditions such as work for long hours or during the night or work where the child is unreasonably confined to the premises of the employer.

Minimum Age Convention, 1973 (No.138) and its Recommendation (No. 146)

The convention stipulates that ratifying states are to fix a minimum age for admission to employment or work which should not be less than 15 years. States whose economic and educational facilities are insufficiently developed may fix it at 14 years. A number of countries have gone beyond the requirements of the convention and fixed the minimum age at 16 years.

Article 7, Paragraph 1 of the Convention states that:

(1) National laws or regulations may permit the employment or work of persons 13 to 15 years of age on light work which is:

- (a) not likely to be harmful to their health or development; and
- (b) not such as to prejudice their attendance at school, their participation in vocational orientation or training programmes approved by the competent authority or their capacity to benefit from the instruction received.

Article 7, Paragraph 4 of the same Convention allows developing countries to substitute the ages of 12 and 14, for 13 and 15 in Paragraph 1 above.

ILO Recommendation No. 146 provides more detailed guidance on the subject areas covered by Convention No. 138.

Safety and Health in Agriculture Convention, 2001 (No. 184), and its Recommendation (No. 192).

Article 16 of the convention emphasizes the prohibition of employing children of any age in hazardous work. It states:

(1) The minimum age for assignment to work in agriculture which by its nature or the circumstances in which it is carried out is likely to harm the safety and health of young persons shall not be less than 18 years.

But continues, with specific reference to young workers and hazardous work:

(3) Notwithstanding Paragraph 1, national laws or regulations or the competent authority may, after consultation with the representative organizations of employers and workers concerned, authorize the performance of work referred to in that Paragraph as from 16 years of age on condition that appropriate prior training is given and the safety and health of the young workers are fully protected.

Appendix III. Lebanese legislation and policy documents on child labour

1. Lebanese Code of Labour: Law of 23 September 1946 (as amended)

Employment of children and women (chapter 2)

A. Employment of children

Article 21 (as modified by Law No. 536 of 24 July 1996)

The employment of adolescents under eighteen years of age is subject to the provisions of the present chapter.

Article 22 (as modified by Law No. 536 of 24 July 1996)

It is absolutely forbidden to set to work adolescents who have not yet completed their thirteenth year of age. An adolescent may only begin to work after a medical examination to ascertain that he can carry out the work for which he was hired.

Medical certificates are delivered free of charge by the Ministry of Public Health until the adolescent reaches the age of eighteen. They may be withdrawn at any time if it is later noticed that the adolescent is no longer capable of doing the work for which he was hired.

Article 23 (as modified by Law No. 536 of 24 July 1996 and Law No. 91 of 14 June 1990)

It is forbidden to set adolescents to work in industrial enterprises or in jobs which are too strenuous or detrimental to health, listed in Annexes No. 1 and No. 2 of the present law, before they have completed their fifteenth year of age.

It is also forbidden to set to work adolescents before they have completed their sixteenth year of age in jobs of a dangerous nature or which represent a threat to life, health or public morals because of the circumstances in which they are carried out.

These jobs shall be determined by decree issued by the Council of Ministers on the proposal of Minister of Labour.

It is forbidden to set adolescents, who have not yet completed their eighteenth year of age, to work more than six hours a day, with a break of at least one hour if the daily working period exceeds four consecutive hours.

It is also forbidden to set them to work between seven o'clock in the evening and seven o'clock in the morning. A period of rest of at least 13 unbroken hours must be granted to the adolescent between two periods of work, and it is absolutely forbidden to set him to work on an additional job or set him to work during daily or weekly periods of rest or during holidays or periods during which the establishment is closed.

Every adolescent employed in an establishment for at least one year shall be entitled to an annual holiday of 21 days with full pay. The adolescent shall benefit from at least two-thirds of the period of holiday without interruption, and he shall benefit from the rest of the period during the same year.

Article 24

The establishment of the age of children and adolescents shall be expected under the responsibility of employers, irrespective of the categories to which they belong. They are required to ask every child or adolescent to produce his identity card before hiring him.

Article 25 (as modified by Law No. 91 of 14 June 1999)

Vocational training establishments may derogate to the provisions of article 22 and 23 on condition that the adolescents is not under full twelve years of age and on condition that the programme of the said establishments specifies the nature of the trades, the hours and conditions of work and that it is approved both by the Ministry of Labour and Public Health Services.

B. Provisions common to children and women

Article 30

Shall be penally responsible for the enforcement of the provisions of the present chapter concerning the employment of children, adolescents and women:

- (1) Employers and their proxies;
- (2) Parents or guardians who have hired out or allowed to be hired out their children or adolescents or the children or adolescents in their charge, contrary to the provisions of the present law.

2. The International Programme on the Elimination of Child Labour (IPEC) in Lebanon, 2000.

A summary of IPEC in Lebanon, its history, present and future, may be accessed through the following link: <http://www.clu.gov.lb/english/pdf/ipec-summary.pdf>.

3. Establishment of the National Committee to Combat Child Labour: Decree No. 5137 (1 October 2010)

Article 2

A national committee to combat child labour shall be established in the Ministry of Labour. The task of the committee consists in preparing and following-up the implementation of programs, plan and projects aiming at combating child labour with the collaboration of the ILO and IPEC concerned with the elimination of child labour as well as the other international and Arab concerned organizations, national bodies and committees as well as concerned ministries and departments.

4. National action plan to eliminate the worst forms of child labour in Lebanon by 2016 (NAP)

The NAP was prepared by the Government of Lebanon in 2012, in close cooperation with the ILO. The NAP reflects the Government's commitment to the elimination of the worst forms of child labour. Based on ILO guiding principles and approaches, with eleven areas of strategic intervention, it aims to eliminate the worst forms of child labour in Lebanon by 2016. These strategic areas are:

- (1) legislation and law enforcement;
- (2) free and compulsory education;
- (3) integration with the educational system;
- (4) economic opportunities for parents and youth of working age;
- (5) capacity building and development;
- (6) development services centres;
- (7) local authorities;
- (8) local community and community leaders;
- (9) prevention;
- (10) withdrawal; and
- (11) rehabilitation.

5. Decree No. 8987, 2012, concerning the prohibition of employment of minors under the age of 18 in work that may harm their health, safety or morals

The full decree may be accessed at: <http://www.clu.gov.lb/english/pdf/decree-wfcl.pdf>

Articles of special importance (Articles 1, 2 (especially Annex 2), and 3).

Article 1 [on prohibition of the worst forms of child labour]

Minors under the age of 18 shall not be employed in totally prohibited works and activities which, by their nature harm the health, safety or morals of children, limit their education and constitute one of the worst forms of child labour included in Annex No. (1) hereto attached. (Annex (1) may be accessed on the website stated above.)

Article 2 [on prohibition of hazardous work for children under 16 years]

Minors under the age of 16 shall not be employed in works which, by their nature or the circumstances in which they are carried out, are likely to harm the health, safety or morals of children. These works are included in Annex No. (2) hereto attached.

Article 3 [on provision of the conditions of safety and health measures for children above 16 years – young workers – employed in hazardous work]

Minors of more than 16 years of age may be employed in the works indicated in Annex No. (2) provided they are offered full protection for their physical, mental and moral health and provided these minors received a special education or appropriate vocational training in the field of these works, unless the type of work or the hazard is totally prohibited for those under the age of 18 as specified in Annex No. (1).

Annex 2 [on the provision of a nationally established “hazardous works list”]

Annex 2 provides a list of specific types of work-related hazards (also called occupational hazards) and work-related activities that children below 16 years should not be exposed to or employed in (works that are prohibited). They are grouped in two lists: List A and List B.

List A. Works that expose the working child to any of the following occupational hazards:

- (a) chemical hazards, including dusts and fibres;
- (b) physical hazards;
- (c) biological hazards (viruses, bacteria, parasites, etc.);
- (d) ergonomic hazards (the compatibility between humans and work equipment and machines);
- (e) psychological, social and mental hazards and general working conditions;
- (f) safety hazards.

List B. Works prohibited to minors:

- (1) agricultural activities (including family farms);
- (2) fishing activities that are deep in the sea, or involve diving, using fishing guns, explosives or electricity;
- (3) working in animal slaughter houses;
- (4) working with dangerous, wild or poisonous animals;
- (5) all types of jobs and activities in factories that manufacture tiles, rocks, slabs and other

similar products;

(6) all types of jobs and activities in production or transformative industries employing more than 20 workers;

(7) all types of jobs and activities in the supply of electricity, gas, water and steam;

(8) all types of jobs and activities in building, demolition, excavation, construction, sand blasting and climbing heights;

(9) working in commercial, industrial, services small enterprises (of less than 20 workers) with high rate of occupational hazards;

(10) working in hotels, restaurants, amusement centres, internet cafes, which may expose the minor to certain hazards;

(11) working in any of land, air or marine means of transportation;

(12) working in places where there is an exchange of currencies, transfer or custody of funds, jewellery and other precious goods;

(13) working in health and medical centres that may expose the child to chemical, biological, physical and psychological hazards;

(14) working in social centres with the elderly, the disabled, persons with congenital malformations, or persons suffering psychological or mental diseases or addiction (unless for short intermittent periods and under the direct supervision of specialized social workers or persons familiar with juvenile psychology);

(15) working in centres for personal security and as bodyguards;

(16) working in cleaning services, waste collection and sorting, in sewers or stagnant water channels;

(17) working in all types of jobs and activities to secure protection of others against potential hazards, such as a lifeguard at the beach and pools;

(18) working on horse racing tracks and in all activities related to horse-racing.

6. Guide on the Decree 8987 on the worst forms of child labour

This guide was designed to provide a detailed yet simplified version of all eight articles of the Decree 8987, with numerous illustrations such that the contents may be understood and implemented by a much wider audience of practitioners in various sectors of child and youth employment, including labour inspectors, members of labour unions, employers, as well as young employees and their parents or guardians, and all members of the general public with an interest in the contents of the Decree 8987. The guide will be disseminated across Lebanon in centres affiliated with the ILO and MOL in order to facilitate accessibility by the public. It may also be accessed electronically through the following website:

http://www.ilo.org/wcmsp5/groups/public/---arabstates/---ro-beirut/documents/publication/wcms_443273.pdf

Appendix IV. Contents of guide and CD

The **guide** contains four sections: the introductory note, the chapters, appendices, and references.

The **CD-ROM** contains 10 PowerPoint Presentations that correspond to the chapters and sections in the guide, namely, chapters 1, 2, 3a, 3b, 3c, 4a, 4b(i), 4b(ii), 4b(iii), 4b(iv), and Appendices I, II and III (which include key child labour terminology and the international and national legal frameworks for child labour).

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Additional references: The chapter contents of the guide are based primarily on the contents of the adjunct PowerPoint Presentations (PPP) in the CD-ROM. References which are specific to materials used in individual PowerPoint Presentations are added here:

PPP 1

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PPP 2

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PPP 3.a

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PPP 3.c

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PPP 4.a

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