

2. Understanding occupational safety and health in the coffee supply chain

2.1. What is occupational safety and health?

Occupational safety and health (OSH) is generally defined as the science of the anticipation, recognition, evaluation, and control of hazards and risks arising in or from the workplace that could impair workers' health and well-being, taking into account the possible impact on the surrounding communities and the general environment. This domain is necessarily vast, encompassing a large number of disciplines and numerous workplace and environmental hazards.³

Main International Labour Standards

The ILO has adopted more than 40 standards specifically dealing with occupational safety and health as well as over 40 Codes of Practice. Nearly half of ILO instruments deal directly or indirectly with occupational safety and health issues.⁴ ILO standards on OSH provide essential tools for governments, employers, and workers to establish sound prevention, reporting and inspection practices for safety and health at work.

Key instruments on occupational safety and health for the coffee supply chain

- [Promotional Framework for Occupational Safety and Health Convention, 2006 \(No. 187\)](#)

As an instrument setting out a promotional framework, this Convention provides for coherent and systematic treatment of occupational safety and health issues and to promote recognition of existing Conventions on occupational safety and health. The Convention aims to establish and implement coherent national policies on occupational safety and health through dialogue between government, workers' and employers' organizations and to promote a national preventive safety and health culture.

- [Occupational Safety and Health Convention, 1981 \(No. 155\)](#) and its [Protocol of 2002](#)

The convention provides for the adoption of a coherent national occupational safety and health policy, as well as action to be taken by governments and within enterprises to promote occupational safety and health and to improve working conditions. This policy shall be developed by taking into consideration national conditions and practice. The Protocol calls for the establishment and the periodic review of requirements and procedures for the recording and notification of occupational accidents and diseases, and the publication of related annual statistics.

³ Alli, B. O. (2008). *Fundamental principles of occupational health and safety*. International Labour Office – Geneva: ILO.

⁴ ILO (n.d.). *International labour standards on occupational safety and health*. (Online). Available at: <https://www.ilo.org/global/standards/subjects-covered-by-international-labour-standards/occupational-safety-and-health/lang--en/index.htm>

- **Occupational Health Services Convention, 1985 (No. 161)**

This convention provides for the establishment of enterprise-level occupational health services which are entrusted with essentially preventive functions and which are responsible for advising the employer, the workers and their representatives in the enterprise on maintaining a safe and healthy working environment.

- **Safety and Health in Agriculture Convention, 2001 (No. 184)**

The convention has the objective of preventing accidents and injury to health arising out of, linked with, or occurring in the course of agricultural and forestry work. To this end, the Convention includes measures relating to machinery safety and ergonomics, handling and transport of materials, sound management of chemicals, animal handling, protection against biological risks, and welfare and accommodation facilities.

- **Occupational Cancer Convention, 1974 (No. 139)**

This instrument aims to establish a mechanism for the creation of a policy to prevent the risks of occupational cancer caused by exposure, generally over a prolonged period, to chemical and physical agents of various types present in the workplace. For this purpose, states are obliged to determine periodically carcinogenic substances and agents to which occupational exposure shall be prohibited or regulated, to make every effort to replace these substances and agents by non- or less carcinogenic ones, to prescribe protective and supervisory measures as well as to prescribe the necessary medical examinations of workers exposed.

- **Working Environment (Air Pollution, Noise and Vibration) Convention, 1977 (No. 148)**

The convention provides that, as far as possible, the working environment shall be kept free from any hazards due to air pollution, noise or vibration. To achieve this, technical measures shall be applied to enterprises or processes, and where this is not possible, supplementary measures regarding the organization of work shall be taken instead.

- **Chemicals Convention, 1990 (No. 170)**

The Convention provides for the adoption and implementation of a coherent policy on safety in the use of chemicals at work, which includes the production, the handling, the storage, and the transport of chemicals as well as the disposal and treatment of waste chemicals, the release of chemicals resulting from work activities, and the maintenance, repair and cleaning of equipment and containers of chemicals. In addition, it allocates specific responsibilities to suppliers and exporting states.

A complete list of OSH standards can be consulted [here](#).

2.2. What is the coffee global supply chain?

The concept of “global supply chain” refers to the cross-border organization of the activities required to produce goods or services and bring them to consumers through inputs and various phases of development, production and delivery.⁵ Global supply chains (GSCs) are complex, diverse, fragmented, dynamic, and evolving organizational structures⁶ and agricultural GSCs are no exception. They differ based on product and process characteristics, end markets, and different types of firms and workers are involved in different countries and stages of the chain. Agriculture GSCs span from input provision through marketing and distribution. The industry's most important inputs are seeds, agrochemicals (fertilizers, herbicides, fungicides, and pesticides) and farm equipment and machinery.

GSCs also involve a range of supporting actors and institutions, which include:

- The national authorities responsible for OSH (i.e. Ministry of Labor and/or Ministry of Health) and the Ministries responsible for the sector (i.e. Ministry of Agriculture or the Ministry of Industry), and the Ministry of Trade.
- Institutions for OSH prevention, promotion, and compensation (i.e. health and social protection schemes, occupational health services (OHS)⁷, social security Institutions, OSH advisory services and training providers).
- Providers of services related to employment and skills (public or private).
- Employers' and workers' organizations and other industry associations.
- Private compliance initiatives (PCIs) and certifications.

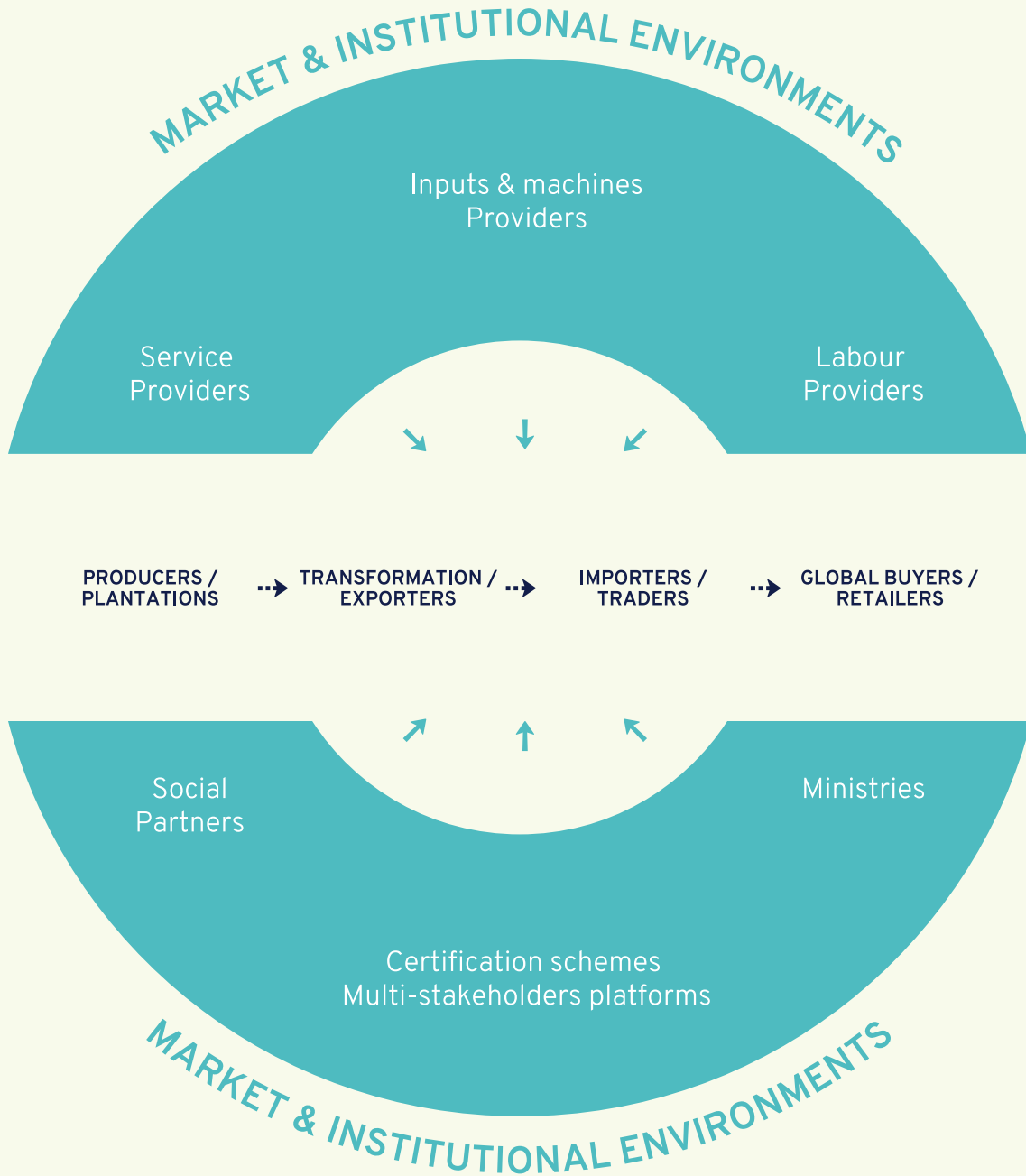
Coffee global supply chains are different, depending on many factors, such as the country of origin, the national regulations, the buyers and much more. However, generally, global supply chains involve many actors, including market and institutional actors contributing to the supply chain processes. Figure 1 illustrates the type of actors involved in an agricultural global supply chain, and figure 2 illustrates the Colombian coffee global supply chain.

⁵ ILO (2016). Glossary - Decent Work in Global Supply Chains. Available at: https://www.ilo.org/wcmsp5/groups/public/---ed_dialogue/---sector/documents/terminology/wcms_475457.pdf

⁶ ILO (2016). *Decent Work in Global Supply Chains*. Report IV, International Labour Conference, 105th Session, Geneva, 2016. Available at: https://www.ilo.org/wcmsp5/groups/public/---ed_norm/---relconf/documents/meetingdocument/wcms_468097.pdf.

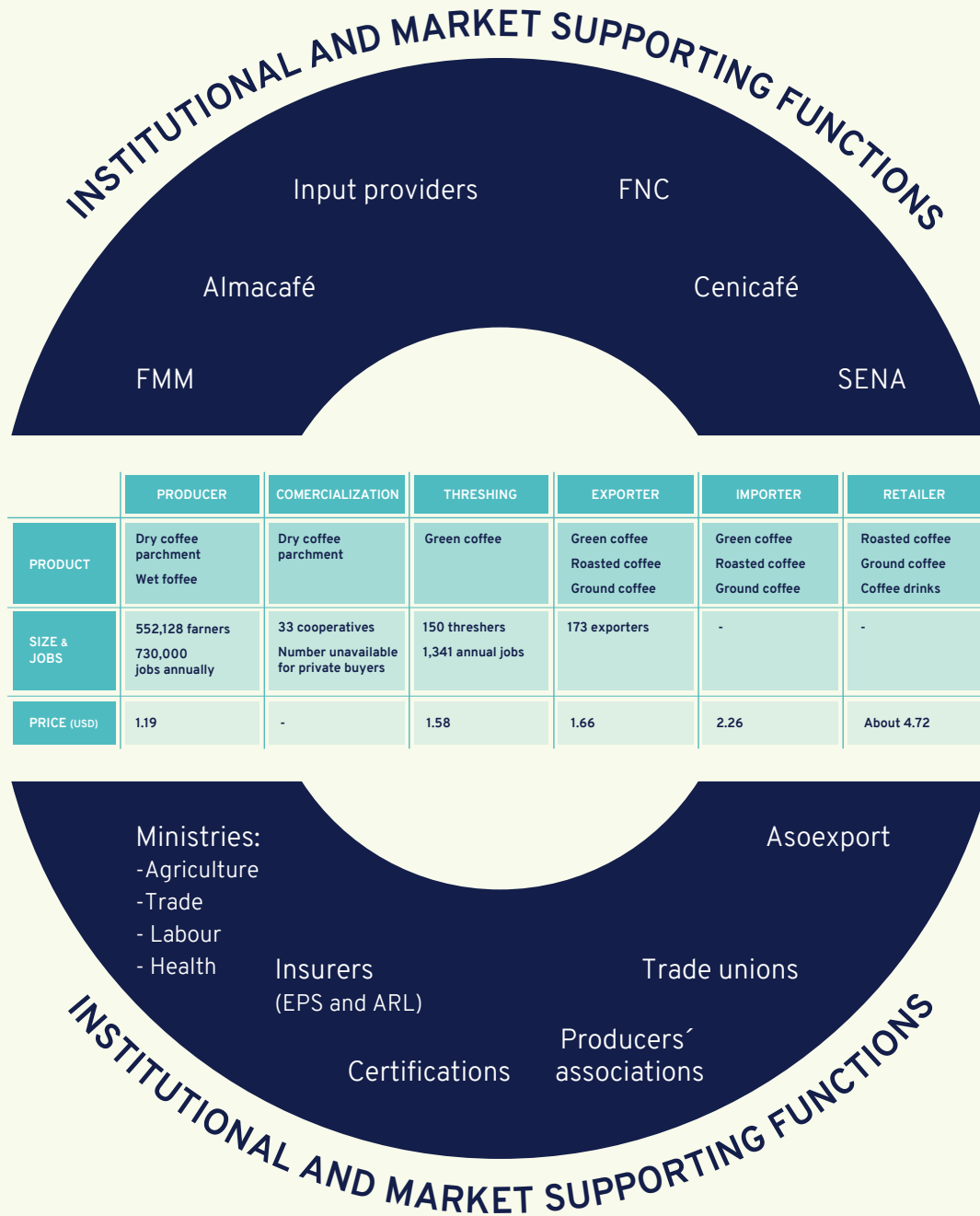
⁷ Occupational health services (OHS), via the expertise of occupational health professionals, carry out promotion, preventive and curative activities. Different models exist and can be combined at the national level: internal services (in big industries), external services, private health care centre providing OHS as part of its services, primary health care providing OHS, public health care providing OHS, group service owned or organised by several companies and/or hospital polyclinics.

Figure 1: A global supply chain map: type of actors included in a global supply chain.



Source: ILO, 2018.

Figure 2: The Colombian coffee supply chain.



Source: ILO, 2017.

2.3. What are the main hazards and risks in a coffee supply chain?

In every coffee supply chain, the hazards and risks vary slightly depending on the environment, the national regulations, the actors involved and more. However, the main categories of occupational hazards and risks identified in coffee GSC⁸ are the following:⁹

Biological

- Exposure to animals/snakes' bites which can cause fatal injury and/or exposure to mosquito bites which can transmit infectious diseases (e.g. dengue fever and malaria).
- Access to unclean drinking water or unhygienic sanitary facilities and rest areas which can lead to infections and transmission of diseases.
- Virus, bacteria, fungi and parasites.

Mechanical

- Risk of being injured while using cutting tools.
- Contact with moving parts of machinery without any collective protection, which can cause serious injuries.

Ergonomic

- Repetitive movements, awkward working positions, and manually handling heavy loads, which can lead to musculoskeletal disorder.

Chemical

- Exposure to hazardous materials (e.g. agrochemical, fertilizers, other chemicals for industrial use) which can cause injuries and lead to various diseases.

Psychosocial

- Resulting from the organization and type of work, long hours and/or stressful work.

Physical

- Exposure to a high temperature which can cause heat exhaustion, dehydration, dizziness, etc.

⁸ See: ILO (2020). Improving occupational safety and health in the global value chain of coffee in Mexico: Drivers and constraints. A case study. Available at: https://www.ilo.org/wcmsp5/groups/public/---ed_dialogue/---lab_admin/documents/publication/wcms_749646.pdf; ILO (2020). Improving occupational safety and health in the global coffee value chain in Honduras: Drivers and constraints. Available at: https://www.ilo.org/wcmsp5/groups/public/---americas/---ro-lima/---sro-san_jose/documents/publication/wcms_759585.pdf; ILO (2020). Improving occupational safety and health in the global value chain of coffee in Lao People's Democratic Republic: Drivers and constraints. A case study. Available at: https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---sro-bangkok/documents/publication/wcms_761319.pdf; ILO. (2017). Food and Agriculture Global Value Chains: Drivers and Constraints for Occupational Safety and Health Improvement. Volume 2 - Three Case Studies. Geneva: ILO. Available at: www.ilo.org/safework/projects/WCMS_593288/lang--en/index.htm.

⁹ Information is drawn from the four assessment of drivers and constraints for OSH improvement conducted in Colombia, Honduras, Mexico and Lao PDR coffee GSCs. Overall, there is a dearth of literature available on OSH in coffee GSCs and knowledge overall remains limited to the study of a few workplaces and countries. The occupational hazards and risks are not listed in order of importance. In most of the case studies, the information on the probability or likelihood of the occurrence of an injury or ill-health and the severity of injury or damage to the health was limited. Risks assessments in workplaces remains essential to identify occupational hazards and risks and for the management of OSH in enterprises.

- Exposure to sunlight which can lead to skin burns and other disorders.
- Exposure to loud noise which can cause hearing loss.

Many tools included in the toolkit are useful to determine the hazards and risks present in the different tiers of the supply chain.

