REPUBLIC OF ETHIOPIA

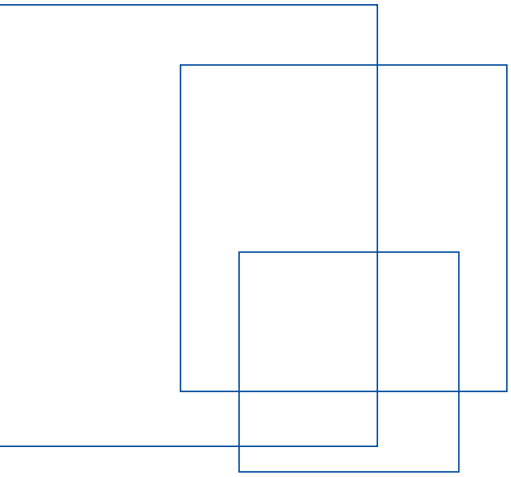
ILO / TC / ETHIOPIA / R.18

MARCH 2017

International Labour Organization

Report to the Government

Employment Injury Insurance in the Federal Democratic Republic of Ethiopia: Legislation, Financing and Administration Review



Global Employment Injury Programme

Enterprises Department

ILO Country Office for Ethiopia and Somalia, Addis Ababa

ILO/TF/Ethiopia/R.18

Ethiopia

Report to the Government

Employment Injury Insurance in the Federal Democratic Republic of Ethiopia: Legislation, Financing and Administration Review

Global Employment Injury Programme (ILO/GEIP)
Enterprises Department
ILO Country Office for Ethiopia and Somalia, Addis Ababa
International Labour Office, Geneva

First published 2017

ILO Cataloguing in Publication Data

Ethiopia : Employment Injury Insurance in the Federal Democratic Republic of Ethiopia: Legislation, Financing and Administration / International Labour Office, Global Employment Injury Programme (GEIP), Enterprises Department. - Geneva: ILO, 2017.

ISBN: 978-92-2-130770-9 (print) ; 978-92-2-130771-6 (web pdf)

International Labour Office. Enterprises Dept.

Printed in Switzerland

Foreword

Improving Social Protection for Sustainable Development, namely in case of work injury, is identified as one of the three priorities of the Decent Work Country Programme (DWCP) of Ethiopia, which was agreed by the Government, social partners and the ILO for the period 2014-15 and extended for 2016. With close involvement of the social partners, the ILO has collaborated to extensively review the national employment injury insurance system.

The Government of Ethiopia is mindful to promote inclusive growth for sustainable development. The National Social Protection Policy and Strategy is ensuring that all Ethiopians can aspire to enjoy social and income security and social justice whenever facing an injury at work. Moreover, the Policy's main objectives includes "increasing the social insurance system and promoting its coverage". The accompanying strategy, incorporates the need to ensure that workers are in safe working conditions and that injured workers are adequately compensated within the formal social protection scheme. Hence, these framework documents provide for strategic pillars including the strengthening of the occupational injury compensation system. This is achieved through developing strong cooperation among OSH services, Public Health and the Employment Injury Insurance schemes under the Public Servants' Social Security Agency (PSSSA) and Private Organization Employees' Social Security Agency (POESSA).

This report is organized in four parts. In light of the principles and practices of employment injury insurance, it reviews the legislative framework of employment injury in Ethiopia and its gaps with regards to international standards and practice. Then it analyses the performance in relation to relevant statistics and considerations regarding the financing of employment injury insurance. Statistics from available sources are discussed and directions recommended. The Illustrative Assessment Rating subsection provides a step-by-step calculation of a uniform contribution rate for employment injury insurance that would greatly strengthen the importance of affordable employment injury insurance for enterprises. We are pleased to share the review of the structure, some policies, legislation and regulations specific to administration; and some audits of the implementation of employment injury insurance.

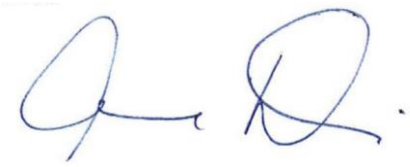
The ILO shares its recommendations for the way forward and discusses relevant considerations regarding occupational diseases and rates of disability.

We trust that this technical report is useful for those concerned with the full implementation of social security employment injury insurance in tandem with the economic goals of the Federal Democratic Republic of Ethiopia. The ILO remains a dedicated partner to make Ethiopia employment injury insurance successful for all enterprises and their workers.

Geneva, April 2017

Victor Van Vuuren
Director
Enterprises Department

George Okutho
Director
ILO Country Office for Ethiopia
and Somalia at Addis Ababa



Anne Drouin
Director
Global Employment Injury Programme
Enterprises Department

Content

Page

Foreword iii

Acknowledgements ix

Executive summary xi

Abbreviations, acronyms and key references xv

Introduction xvii

PART I. LEGISLATION 1

1. Principles and practices of employment injury insurance 1
   - 1.1. Social and Economic Background 1
   - 1.2. ILO Conventions and Recommendations 2
   - 1.3. General Principles 3
   - 1.4. Scope of Application 3
   - 1.5. Risk Sharing: employer liability versus social insurance 5
   - 1.6. Institutional Arrangements 6
   - 1.7. Classification of Risks 7
   - 1.8. Financing (assessments) 7
   - 1.9. Equity among employers 8
   - 1.10. Compensation Benefits 9
   - 1.11. Administration of the scheme 11
   - 1.12. Occupational Health and Safety 11
   - 1.13. General recommendations with regard to employment injury – basic insurance principles 12

2. Legislative framework of employment injury in Ethiopia 12
   - 2.1. Social Protection Policy framework 13
   - 2.2. Historical Labour Proclamations 14
   - 2.3. Other Relevant Proclamations 18
   - 2.4. Occupation Health & Safety 19

3. Ethiopia's employment injury scheme: A gap assessment with regard to international standards and practice 19
   - 3.1. Coverage and Protected Workers 20
   - 3.2. Benefit Entitlement (industrial accidents, occupational diseases, injury assessments) 22
   - 3.3. Compensation Benefits 24
   - 3.4. Financing of Ethiopia's Employment injury insurance scheme (assessments) 28
     - 3.4.1. Contributions 28
     - 3.4.1. Employer's liability through commercial Insurance Schemes 29

Page

3.5. Other Provisions 31
3.6. Other Recommendations and Trends 33
3.6.1. ILO Recommendation No. 121 concerning Employment Injury Benefits 33
3.6.2. Trends 33

PART II. FINANCING 37

4. Financial assessment 37
4.1. Economic Context 37
4.1.1. Macro-economic Environment 38
4.1.2. Economic Demographics – Employment and GDP 38
4.2. Social Context – Health 39
4.3. Reported Occupational Injuries 40
4.3.1. Fatal Injuries 40
4.3.2. Non-fatal Injuries 40
4.4. Occupational Injury Rates 41
4.5. Paid Employment 42
4.6. Labour Inspections and Labour Inspectors 42
4.7. Occupational Distribution 43
4.8. Labour Market 43
4.9. Regional Employment 2013-14 44
4.10. Monthly Wages 2013-14 44
4.11. Employment Injury Statistics 2013-14 45
4.12. Recommendations 46
4.13. Illustrative Assessment Rating 47
4.13.1. Calculator –Current Benefits 48
4.13.2. Calculator – data and assumptions 50
4.13.3. Calculator –scenarios and assumptions 51
4.13.4. Summary results 53

PART III. ADMINSTRATION 57

5. Administration 57
5.1. National Employment Policy 58
5.1.1. Trends in the Labour Market 58
5.1.2. Status of the Labour Market Institutions 58
5.1.3. Labour Market Data 58
5.1.4. Rationale 59
5.1.5. Objectives 59
5.1.6. Policies and Strategies 59
5.1.7. Institutional Framework 59
5.1.8. Administration 59

Page

5.2. Ministry of Labour and Social Affairs 59
5.3. Bureau of Labour and Social Affairs (BoLSA) 60
5.4. Labour Advisory Board 60
5.5. Occupational Safety and Health and Working Environment Department 60
5.6. Labour Inspection Services 61
5.7. Recommendations 62
5.8. Illustrative Components of an Administration Structure for Employment Injury Insurance 63

Part IV. SCHEDULE – LIST OF OCCUPATIONAL DISEASES; ASSESSMENT TABLE OF DISABILITY 71

6. Occupational diseases 71
6.1. Introduction to Occupational Health Services 71
6.2. Strategies for Action 75
6.3. Occupational Accidents and Diseases 75
6.3.1. Industrial Disease 77
6.3.2. Recommendation 1− ILO: List of occupational diseases (revised 2010) 79
6.3.2. Recommendation – List of Occupational Diseases Alternatives 83
6.3.3. Monitoring 84
6.3.4. Recommendation 3 –Choose a coding system for monitoring 87

7. Employment injury compensation (percentage of bodily injury table) 87
7.1. Introduction 87
7.2. Impairment versus Disability 88
Impairment 88
Disability 88
Differentiation 89
Reporting of impairment ratings 89
7.3. Rating Consideration 90
7.3.1. Determination 93
7.3.2. Future Reassessments 94
7.3.3. Benefits 94
7.3.4. Other Circumstances 94
7.4. Permanent Functional Impairment Rating Schedule 94
7.4.1. Recommendation 1 – Permanent Functional Impairment Rating Schedule 95
7.4.2. Recommendation 2 – Alternative: Permanent Functional Impairment Rating (AMA Guides) 99
7.5. Documenting Functional Level 99
7.5.1. Recommendation 3 – Use of WHODAS 2.0 100
7.6. Monitoring 100

Page

Appendices

A. Bibliography 101

B. Some Websites 103

Tables

1. Principles underlying the concept of employment injury insurance schemes 3

2. Categorization of industries for an efficient and equiadministration of EII schemes 5

3. Legal requirement for employment injury benefit: Convention No. 102 (Part VI) 10

1.12. Employers and Workers responsibilities in OSH 12

2.2. General characteristics of EII benefits 17

3.1. Status in employment 22

4.1. Economic Demographics 38

4.2. Social Context 39

4.4. Occupational Injury Rates 41

4.5. Paid Employment 42

4.6. Labour Inspections and Labour Inspectors 43

4.7. Occupational Distribution 43

4.8. Labour Market 44

4.9. Regional Employment 44

4.10. Wages 45

4.11. Industrial Injuries 45

4.11a. Industrial Injury Rates 46

4.13.1. Illustrative contribution costs 48

4.13.1. Illustrative contribution costs 49

4.13.1. Illustrative contribution costs 50

4.13.2. Data and assumptions 51

4.13.3. Scenarios and assumptions 52

4.13.3a. Sample disability pensions and assumptions 52

4.13.4a. Summary Results – current 53

4.13.4b. Summary Results – alternative 1 54

4.13.4c. Summary Results – alternative 2 55

Acknowledgements

The Director of the ILO Country Office for Ethiopia and Somalia at Addis Ababa, Mr George Okutho and the Director of the Global Employment Injury Programme (GEIP) of the Enterprises Department (ENTERPRISES), Ms Anne Drouin, in joint collaboration with the Actuarial Service Unit (SOC/ASU) of the Social Protection Department (SOCPRO) prepared this report in the context of the One UN Programme and the agreement between the Government of Federal Democratic Republic of Ethiopia and the International Labour Office.

The Director-General of the ILO appointed Ms Anne Drouin, for this assignment. Ms Crispina Caballero, Actuary, and Dr Jacques Pelletier, Medical Doctor specialized in employment injury, completed the present in-depth review for the purpose of this ILO report under the technical supervision of Mr Hiroshi Yamabana, Senior Policy Adviser in Employment Injury of GEIP. Mr André Picard, FSA, FCIA, of SOC/ASU provided extensive technical guidance with the assistance of Ms Victoire Umuhire, social protection and legal officer of SOCPRO. Mr Gilles Binet, Actuary, provided useful comments and reviewed the report. Ms Kidist Chala, Chief Technical Adviser, was responsible for the coordination from the ILO at Addis Ababa.

Ms Victoire Umuhire undertook a scoping mission from 20 to 23 of July 2015 to discuss the global parameters of the project with the Ministry of Labour and Social Affairs. Ms Crispina Caballero and Dr Jacques Pelletier were on mission in Ethiopia from 23 to 27 May 2016 to hold a training workshop in Adama where principles and practices of employment injury insurance were discussed and the preliminary report was presented. Mr André Picard was in mission in Ethiopia from 17 to 20 October to meet the social partners as well as the National Taskforce on Employment injury insurance.

The Director General of the ILO extends his sincere gratitude to the H.E. Minister Abdulfatah Abdullahi and to Mr Duressa Ayalew, advisor to Director General, Public Servants' Social Security Agency and Mr Mesfin Yilma, Chair of the National Taskforce on Employment injury insurance for their collaboration and assistance throughout the project. The ILO team is grateful to Mr Remy Pigois and Mr Yves Dublin of the UNICEF office in Addis Ababa who provided valuable support.

Executive summary

This report provides an assessment of the legislation on employment injury insurance in the Federal Democratic Republic of Ethiopia supervised and administered by the Ministry of Labour and Social Affairs (MoLSA), the Public Servants Social Security Agency (PSSSA) and the Private Organization Employees' Social Security Agency (POESSA). A comprehensive literature review of laws, decrees, regulations and policy documents has been carried out. The objective of the exercise is to propose amendments of the current legislation to the tripartite stakeholders including the MoLSA, PSSSA, POESSA, the Ethiopian Employers' Federation (EEF) and the Confederation of Ethiopian Trade Unions (CETU) based on international good practices and the ILO Standards on employment injury insurance, namely the Social Security (Minimum Standards) Convention, 1952 (No. 102), the Employment Injury Benefits Convention, 1964 (No. 121), and the Employment Injury Benefits Recommendation, 1964 (No. 121).

Employment injury insurance in the Federal Democratic Republic of Ethiopia is not embodied in a single legislation or administered by a single agency.

Fundamental rights of workers to safe and healthy workplaces as well as compensation for work-related injuries have been prescribed by such laws as the earliest labour proclamations in the 1900s based on the Constitution in 1995 and the comprehensive Labour Proclamation No. 377/2003 and its various amendments to the Pension Proclamations for private organizations' employees and for public servants.

The present report relied on the *Occupational Safety and Health Profile for Ethiopia*, from 2006, the *Decent Work Country Profile, Ethiopia,* 2014 and the *Annual Labour Market Bulletin* 2013/2014 as well as the Central Statistical Agency (CSA) *Labour Force Surveys* of 1999, 2005 and 2013 on matters related to employment injury.

There has been a trend to change employer-liability schemes to social insurance schemes in Africa. The contribution rates are usually set flat at the time of an introduction of the scheme and gradually changed into multiple rates in line with different risks by industry. Some of self-employed workers voluntarily join schemes. Many countries, including Ethiopia, are examining ways of extending social security coverage to micro and small enterprises through voluntary contributions to the existing social insurance schemes.

Ethiopia has been moving towards an adoption of a single legislation for Employment Injury Insurance for both private and public employees as seen in such countries as United Republic of Tanzania, South Africa and Zambia.

This report provides the following policy recommendations on the implementation of an employment injury insurance scheme based on discussions with stakeholders in Ethiopia:

(1) ***Review the employment injury and occupational disease compensation system and update the Schedule of Assessment Table of Disability and List of Occupational Diseases as well the directive on implementation:***

(a) Adopt a short, practical and applicable Table of Permanent Disablement and a List of Occupational Diseases as a first step towards effective implementation of the two Pension Proclamation Acts and the Labour Act. This should be done by adoption of a directive in line with these Proclamation Acts. Review the tables regularly, for example, at least once every five years, or any time when necessary.

(b) Address the environmental standards and safe exposure levels. This can be achieved by specific training of healthcare professionals; monitoring and training in the area of industrial hygiene is also required. In the application of the recommended List of Occupational Diseases, the degree and type of exposure as well as the type of work or occupation with respect to a particular risk of exposure should be taken into account. Although implementation of the list may appear difficult in the absence of local expertise, it is recommended to adopt a list and make sure that it is updated with international labour standards of the ILO. It is also advisable to work on a shorter list of chemicals or occupational stressors that can be controlled by the field workers and the medical staff. It is recommended to produce an inventory of national/local expertise such as the number of industrial hygiene specialist and Occupational Safety and Health (OSH) experts in order to assess capacity gaps and to prioritize capacity building activities.

(c) Enforce reporting of accidents/diseases at regional/city levels with oversight and trend evaluation from the federal level. This should allow for consistent and appropriate levels of details across regions/cities and allow for the evaluation and review of trends at the federal level. This needs proximity to regions and proper inspection and/or incentives in order to allow adequate reporting as well as better planning and management of the compensation schemes. The Labour Inspection System, the Public and Private Social Security Agencies and the associated Health Agencies would need to adopt a capacity building programme.

(d) Produce five-year data on industrial accidents and occupational diseases, including information on public/private enterprises, number of workers and injured workers. Within the pension schemes, separate branches should be created for employment injury benefits in order to improve governance and to ensure the long-term sustainability. This would entail some capacity building. Database should be developed with hardware, software and dedicated IT specialists and statisticians to maintain statistics on employers, employees; occupational accidents/diseases and relevant OSH conditions at workplaces; and number of injured workers, their rehabilitation and treatment plans and benefits.

(e) Continue the production of the Annual Labour Market Bulletins by MoLSA, the National Labour Force Surveys by CSA and other relevant documents such as the Decent Work Country Profile.

(f) Strengthen labour inspection services in the nine regional and the two city administration offices. City administrations should only inspect private enterprises by taking into account criteria such as location and resources.

(g) Processes, procedures, protocols, forms/documentations for legal enforcements should be consistent in principle but allow some flexibility. It is important to continue capacity building activities for labour inspectors of federal, regional and city administration. An assessment of institutions and the structure of the OSH is recommended to recognize capacity building needs for the labour inspection service.

(2) ***Review the workers' compensation system in terms of benefit adequacy, financing and administration. Improve benefits to meet international labour standards. Contributions for workers compensation benefits should be borne only by employers and contribution rates can be three different industry-wise rates or a single uniform rate to be applied to all employers:***

(a) Provide a permanent disability pension of 60 per cent of prior monthly salary for fully disabled persons, proportionately reduced in line with the disability degree

of partially disabled persons, in line with the ILO Convention No. 121 and the Recommendation No. 121. Benefits can be provided in lump sum for those with non-severe disability degrees (e.g. less than 20%) in order to avoid administrative complexity. Provide temporary disability benefits of 60 per cent of prior monthly salary up to 12 months. Encourage return to work of disabled persons.

(b) Calculate a uniform contribution rate for the redefined benefits in line with the ILO Convention No. 121, each for the PSSSA and the POESSA to establish a Public Servants' Accident Fund and a Private Organizations Employees' Accident Fund respectively. Each fund would collect the employment injury insurance contributions from public and private employers and would administer the benefit payments to public servants and private employees.

(c) Consolidate efforts on capacity building for the administration of the workers' compensation schemes.

(d) Adopt a coding system for monitoring occupational injuries and diseases.

(e) Consolidate information systems into a single database, which should be fully automated and maintained with a complete back-up. The single database would allow for federal access, oversight and audits, including access to information such as employers' contributions, accidents and diseases with details about the accident and disease claims. The information can be aggregated by employer, industry, types of claim, disposition type (returned to work with or without workplace adjustments, returned to work with a different employer, long-term disability and fatality with or without survivor benefits). The database should allow for sufficient flexibility to allow for additional and more detailed data. A system of checks on input data should be developed to improve data accuracy and consistency. Put in place a measure that guarantees the protection of beneficiaries' personal information in accordance with national legislation on the protection and access to information "*Freedom of the Mass Media and Access to Information Proclamation No. 590/2008*".

(f) Improve legislation so that Ethiopian and non-Ethiopian workers and their dependents would enjoy the same employment injury benefits.

(3) ***Strengthen prevention and rehabilitation services:***

(a) Develop a communication strategy to all stakeholders, namely employers, employees, injured workers, government ministries and agencies as well as the general public to inform that most of employment injuries and diseases are preventable.

(b) Strengthen labour inspections and occupational health and safety training and research in collaboration with the Ministry of Health, academia and companies providing employment injury insurance. Past and recent developments in neighbouring African countries such as Kenya, the United Republic of Tanzania, Zambia and Zimbabwe are good references. Both private and public social insurance institutions should dedicate some percentage of their gross annual budget, 1.2 per cent at least indicated by Ethiopia's tripartite partners, to strengthen prevention and rehabilitation services.

(c) Improve diagnostic capacity in OSH through clinical training of doctors in collaboration with the Ministry of Health as well as universities and vocational training institutions. The ILO could develop training curriculum adapted to national circumstances and provide trainings of medical personnel.

(d) Provide enforcement powers and increase capacity of OSH inspectors.

(e) Develop the infrastructure and expertise in rehabilitation.

Abbreviations, acronyms and key references

BoLSA	Bureau of Labour and Social Affairs
CETU	Confederation of Ethiopian Trade Unions
CSA	Central Statistical Agency
EEF	Ethiopian Employers' Federation
EESP	Employment Exchange Services Proclamation
EII	Employment Injury Insurance
FCIA	Fellow, Canadian Institute of Actuaries
FDRE	Federal Democratic Republic of Ethiopia
FSA	Fellow of the Society of Actuaries
GDP	Gross Domestic Product
GEIP	Global Employment Injury Programme
ILC	International Labour Conference
ILO	International Labour Organization
ILS	International Labour Standard
LP	Labour Proclamation
MOE	Ministry of Education
MOFEC	Ministry of Finance and Economic Cooperation
MOH	Ministry of Health
MoLSA	Ministry of Labour and Social Affairs
NLFS	National Labour Force Survey
OSH	Occupational Safety and Health
OSHWED	Occupational Safety and Health and Working Environment Department
PFACTS	Public Finance, Actuarial and Statistics Services
POESSA	Private Organization Employees' Social Security Agency
PSSSA	Public Servants Social Security Agency
SOCPRO	Social Protection Department
SSA	Social Security Administration (USA)
POEPP	Private Organization Employees' Pension Proclamation
PSPP	Public Servants Pension Proclamation
UEUS	Urban Employment and Unemployment Survey
UNICEF	United Nations International Children's Emergency Fund

Introduction

The authors were tasked with:

- A literature review of laws, decrees, regulations, policy documents and other relevant documents;
- Analysis of the legal framework of the current employment injury insurance scheme and proposed amendments in collaboration with the social protection policy and legal officer.

This study thus incorporates ILO standards and provides world trends, particularly for Africa. It also Provides supporting discussions to move from employer liability to social insurance and identifies gaps with respect to ILO C.102, C.121 and R.121. Moreover, the authors make recommendations on policy, proposed amendments to current legislation, financing and range of contributions, governance and board structure in respect of international legal standards and international good practices.

There are two very specific outputs attached:

- Schedule of Bodily Injury (percentages of Loss of Earnings Capacity);
- List of Occupational Diseases.

A training workshop was held in Adama, Ethiopia, on 25-27 May 2016 where principles and practices of employment injury insurance were discussed. The legal framework of employment injury insurance within international labour standards, in Ethiopia and among African nations was reviewed. A question and answer format was used to review employment injury insurance as currently implemented in Ethiopia with a view to identifying the major gaps.

The document is for the Ministry of Labour and Social Affairs (MoLSA) as well as the Public Servants' Social Security Agency (PSSSA) and the Private Organisations' Employees Social Security Agency (POESSA), both parties with very strong vested interests as they are the implementation agencies of social security in Ethiopia. Constructive contributions from the Ministry, the Representatives of workers' and employers' and other interested parties from academia were provided at the training workshop.

This report is intended to provide the greatest value to the Ministry of Labour and Social Affairs and importantly to the Social Security Agency and the Private Organization Employees' Social Security Agency. It is intended to provide some guidance to a more productive full implementation of social security employment injury insurance in tandem with the economic goals of the Federal Democratic Republic of Ethiopia.

A workers' compensation system evolves from the needs of the workers, the employers and the government of the particular jurisdiction, with reference to the industries, the economy and the people. The Federal Democratic Republic of Ethiopia has a tremendous asset, a significant labour force that could allow the country to meet its goal of becoming a middle-income country by 2025. [1] To achieve this developmental objective, the Government

[1] UNDP 2015: Country Brief; Ethiopia: "*The overarching objective of Ethiopia's national development strategy, the Second Growth and Transformation Plan (GTP II) is the realisation of Ethiopia's vision of*

of Ethiopia has recognized that social protection is a key instrument to promote inclusive growth for sustainable development. Thus, it has developed a National Social Protection Policy and Strategy to ensure that all Ethiopians enjoy social and economic security and social justice. Moreover, the Policy's main objectives includes "increasing the social insurance system and promoting its coverage". [2] The accompanying strategy, incorporates the need to ensure that workers are in safe working conditions and that injured workers are adequately compensated within the formal social protection scheme (National Social Protection Strategy, January 2016, section 2.3.2). Hence, these framework documents, issued in 2014, provide for strategic pillars including the strengthening of the occupational injury compensation system. This can be achieved through developing strong cooperation system among OSH services, Public Health and Social Security systems.

becoming a lower middle-income country by 2025", http://effectivecooperation.org/wp-content/uploads/2015/12/Ethiopia-Country-Brief.pdf (consulted on 7 September 2016).

[2] Government of the Federal Democratic Republic of Ethiopia 2014, National social protection Policy, p. 5.

PART I. LEGISLATION

Legislation provides the basis for extending fundamental labour rights and giving workers actionable rights at the workplace in a given Member State. International Labour Standards (ILSs) are international legal instruments that set out basic principles and rights at work. These were adopted by the ILO's constituents, composed of Member States as well as representatives of workers and employers, at the International Labour Conference (ILC). They represent the international consensus on how to tackle given labour issues based on knowledge and experience from countries around the world. ILSs are composed of Conventions and Recommendations that provide Member States with obligations and guiding principles for rights at work. Conventions are legally binding treaties that lay down principles to be applied by ratifying Member States, while Recommendations are subject to ratification, and serve as non-binding guidelines for all Member States on specific labour issues. They either supplement Conventions or are autonomous.

With regard to the Federal Democratic Republic of Ethiopia, rights at work are one of the four inseparable, interrelated and mutually supportive pillars of the Decent Work Agenda for Ethiopia. [1] One of the three major priorities areas of Ethiopia's Decent Country Programme is improving social protection for sustainable development, with the aim of improving social protection coverage and implementation of occupation safety programmes. Employment injury benefits constitute one of the 21 legal framework indicators used to measure achievement of the programme. With regard to the ILSs, Ethiopia has ratified 21 Conventions, including the Occupational Safety and Health Convention, 1981 (No. 155). [2] Ethiopia has not ratified any up-to-date social protection conventions such as the Employment Injury Benefit Convention, 1964 (No. 121), or the social security flagship convention, Social Security (Minimum Standards) Convention, 1952 (No. 102).

Part I of the report focuses on a brief discussion of principles and practices of employment injury insurance as well as the ILSs that inform them. A review and discussion of Ethiopia's legislation on employment injury insurance is aimed at making recommendations to improve the current employment injury insurance scheme with regard to international standards in terms of features such as coverage and level of benefits, as well as administrative and financial arrangements.

1. Principles and practices of employment injury insurance

1.1. Social and Economic Background

Ethiopia, officially the Federal Democratic Republic of Ethiopia, is the second most populous country in Africa with a population of around 99 million (2015 estimates). It is also one of the oldest sites of human existence and the only African country that has retained independence. Ethiopia is a multi-ethnic, multilingual and multicultural nation.

Ethiopia is one of the fastest growing economies in Africa and the world as a whole. During the last 10 years average economic growth was at 10.1 per cent. In 2015 its GDP was

[1] Decent Work Country Profile, p. i.

[2] Ratifications for Ethiopia: www.ilo.org/dyn/normlex/en/f?p=1000:11200:0::NO:11200:P11200_COUNTRY_ID:102950 (viewed on 26 April 2016).

estimated at around US$ 56 billion with an expected average annual growth rate of 6.3 per cent in the period 2016-2020. The estimated 2015 GDP per capita is US$597.

Ethiopia is a rugged landlocked country split by the Great Rift Valley. The economy of Ethiopia is based on agriculture, which accounts for close to 50 per cent of its GDP, about 60 per cent of its exports and roughly 80 per cent of its employment. Agriculture is a promising resource with a potential for export development in livestock, grains, vegetables and fruits. Three crops believed to have originated from Ethiopia are coffee, sorghum and castor beans. Ethiopia's coffee exports represent around 0.9 per cent of world exports, while oilseeds and flowers represent around 0.5 per cent. Ethiopia is the second biggest producer of maize in the world.

The country reviewed its investment to attract more foreign direct investment and have been aggressively working to construct industrial parks in different parts of the country to allow both foreign and local investor to create conducive environment for quick "plug in" and start production service. The country's development is towards a transformation from an agriculture led economy to an industrialised economy. Opportunity for employment of millions of middle scale manufacturing enterprises and light industries obviously require accessible and effective national Social Security System consistent with international and national Labour standards.

1.2. ILO Conventions and Recommendations

The International Labour Organization (ILO) is devoted to promoting social justice and internationally recognized human and labour rights. It has a tripartite structure and is the United Nations (UN) agency responsible for setting international labour standards that regulate conditions for work-related issues.

ILO's standards are in the form of conventions or recommendations. Conventions are legally binding international treaties that may be ratified by member states. Recommendations serve as non-binding guidelines.

The ILO has espoused the right to protection from employment injury since its early days. Standards on employment injury insurance are embodied in the Social Security (Minimum Standards) Convention, 1952 (No. 102) (Part VI), and the Employment Injury Benefits Convention, 1964 (No. 121), as well as its accompanying Employment Injury Benefits Recommendation, 1964 (No. 121).

The Social Security (Minimum Standards) Convention (Part VI) adopted in 1952 specified the standards of minimum social protection for any work accident or occupational disease resulting in the following contingencies: a morbid condition, the incapacity for work with resulting suspension of earnings, total loss of earning capacity or partial loss likely to be permanent, or a corresponding loss of faculty and the loss of support to dependents due to the death of the injured worker (Art. 32).

Convention No. 121 and its accompanying Recommendation No. 121 set even higher standards with respect to covered workers and levels of benefits. This Convention specifically documents standards for employment injury insurance with full recognition of the importance of improvements in the health and safety conditions at the workplace, prevention of employment injuries and provision of rehabilitation benefits with the goal of early but safe return to work and reintegration of disabled workers.

1.3. General Principles

Employment injury insurance is synonymous with workers' compensation. Social, economic and demographic factors influence the development of workers' compensation systems. The systems adapt to changing circumstances and the needs of workers and industries.

The key and practical characteristics of an efficient workers' compensation system are:

– legal prescription;

– changing and adapting to industries and their evolution;

– operation on an on-going basis with a long-term perspective;

– understood and supported by stakeholders, employers, workers and the government.

Table 1. Principles underlying the concept of employment injury insurance schemes

Principle	Definition
Scope of application	Industries covered, industries excluded, special situations
Risk sharing	Ranging from individual liability to collective liability
Institutional arrangements	Private insurance, government-administered insurance at the state/provincial/federal levels or a combination thereof
Classification of risks (underwriting)	Differentiation among employers in an industry grouping by their experience or among industry groupings of employers according to the risks associated with their industries; number of classes of risks may evolve from one or a few, depending on the needs of the system
Financing (assessments)	For the liabilities associated with industrial accidents or diseases, for incurred exposures or initially for current costs with or without some amortization of the total future costs of incurred claims
Equity among employers	No unfair advantage or disadvantage to an employer in any industry; consideration of current and future costs; minimisation of passing on costs to future employers for incurred claims costs; recognition when implementing new and additional benefits
Compensation benefits	Affordable for the employer, sufficient for the injured worker and dependants, encourage safe and early return to work
Administration	Simple, practical, capable, effective and responsive to changing needs of the system
Occupational health and safety	Prevention, reporting and a work culture that promotes OSH
No-fault insurance (loss to employer/injured worker)	Balance between financial costs of employers and legal rights of employees; mitigate unnecessary and lengthy law suits

1.4. Scope of Application

Employment injury coverage should be compulsory so as to provide protection for all workers. Article 33 of Convention No. 102 requires at least 50 per cent coverage of prescribed classes of employees (or their dependents on the death of injured workers). In certain circumstances coverage may only be required for industrial workplaces with more than 20 workers. However, Convention No. 121 sets a higher standard of coverage to include 100 per cent of all employees, with special mention of apprentices in the public and private sectors including co-operatives (Art. 4). Some exceptions in terms of coverage are allowed

including casuals, out-workers, family members in the family home and another margin of 10 per cent. Article 3 allows for exclusions, e.g. seafarers including sea-fishermen, and public servants if they are protected by special schemes at least equivalent to the protection required by Convention No. 121. Recommendation No. 121 requires that coverage be extended progressively to all categories of employees and other dependent family members, namely parents, brothers, sisters and grandchildren.

The scope of application lists the industries under which employers would be required to have mandatory employment injury insurance coverage. Such a list is accompanied by a list of exempted industries and certain employers in that industry.

To determine the scope of application of employment injury insurance laws and regulations in practice, the State needs to seriously consider the following elements:

- Mandatory participation is necessary for certain industry groups – to ensure financial certainty for the injured workman and his dependants and ensure that they receive the compensation to which they are entitled.
- Smaller employers are more vulnerable to the economic impact of industrial accidents or diseases and therefore need coverage.
- Self-insurance for some industries: large financially stable or secure corporations, private or public, can set aside funds on a pay-as-you-go basis, since they are required to pay compensation for incurred injuries.
- Excluded industries – may require special additional provisions in legislation.
- Voluntary coverage – requires an estimate of wage loss to determine coverage and assessments.
- Administrative burden to the Board − less initially and gradually increasing as the scheme becomes more sophisticated.

Employers covered by employment injury insurance could either pay an assessment rate or a contribution rate, or could be fully responsible for the compensation costs of their employees. Employers who pay assessment rates or contribution rates are usually termed “assessed employers” (social insurance schemes). The employers who are fully responsible for the compensation costs of all their covered employees are usually termed self-insured employers (employer liability type schemes). Assessed employers participate in a pool, and all participants are collectively liable for the compensations costs of all their covered employees (see Section 1.5 for comparison between social insurance and employer liability schemes). Self-insured employers are individually liable for the compensation costs of their respective covered employees. For the purposes of employment injury insurance (EII), industries may be categorized in different schedules with different contribution rates i.e. Schedule I of industries grouping the majority of industries of usually assessed employers while Schedule II industries could include government enterprises at the federal, state or local level, or private industries that operate across the country usually self-insured employers.

Table 2. Categorization of industries for an efficient and equitable administration of EII schemes

Schedule I Industries	Schedule II Industries	Excluded Industries
– **Manufacturing**	– Government enterprises	– Farming
– **Construction**	– Local or state corporations or commissions	– Wholesale and retail establishments
– **Mining**	– Railway industry	– Domestic service
– **Sawmills**	– Telephone companies	– Outworkers
– **Employment agencies**	– Navigation companies	– Proprietors and their spouses
		– Partners and their spouses

Certain employers in industries may be exempted if there is less than a fixed number of permanent employees. As seen above, Convention No. 102 allows for exempting workplaces with less than 20 persons in some cases. [3] However, these employers in the excluded industries can apply for voluntary personal coverage.

Moreover, people who perform work activities for which they are not paid, e.g. volunteer firefighters, apprentices or students, are usually accommodated if they are a part of a larger group of employees for that employer. The assessment rate is usually a flat amount.

1.5. Risk Sharing: employer liability versus social insurance

With individual liability, the employer is fully liable for all costs, current or future, that are related to an incurred industrial accident or disease. The employer can also purchase private insurance to cover employment injury for his employees. This type of scheme has some weaknesses; for instance, disputed claims may take a long time to resolve and be costly for both parties. Furthermore, in case of serious permanent disability or death the form of the benefit provided is not appropriate as it constitutes a lump sum to be paid unconditionally, with no inquiry or conditions as to how it might be used, except in the case of children. Moreover, it is very difficult to establish a system of periodic payments for individual employer liability, even if provided for by the insurance policy. It is also more costly for employers and the risk of not receiving any compensation in case of major industrial accidents is high. This was recently demonstrated by the 2013 Rana Plaza accident in Bangladesh, where employer liability is the norm.

An employment injury insurance scheme permits benefits to be paid out of a common fund. Employers collectively finance a workers' compensation scheme against the risk of work injuries and occupational diseases, and are therefore free from individual compensation responsibilities and court cases over compensation for work-related injuries or diseases. In return, employees abandon the right to sue their employer when an employment injury case occurs, but are automatically entitled to benefits of the compensation scheme. The consequences of the employment injury are matched by benefits that include life pensions where appropriate. According to ILSs and international practice, employment injury

[3] Convention No. 102, Art. 33, states: "(b) where a declaration made in virtue of Article 3 is in force, prescribed classes of employees, constituting not less than 50 per cent. Of all employees in industrial workplaces employing 20 persons or more, and, for benefit in respect of death of the breadwinner, also their wives and children." Article 3 allows temporary exceptions for developing countries, such as Ethiopia, in as far as its "economy and medical facilities are insufficiently developed" with respect to range of persons protected as well as the rate of and duration of benefits with regards to some risks, including employment injury benefits.

insurance benefits are periodic payments and are subject to adjustment (for long-term benefits) following substantial changes in general levels of earnings and/or cost of living. [4]

Insurance works extremely well with large numbers. The concept of collective liability is best explained by a couple of illustrative examples. If there are 15,000 employers in a particular jurisdiction, which can be grouped among 700 industries, employing 500,000 workers, these employers as a collective are able to pay for some $250,000 worth of claims, a few $500,000 claims and perhaps one $1,000,000 claim every five years or so as well as a very significant number of small claims for a total annual assessment of around $120,000,000. A member of the collective group has a lower probability of being unduly financially burdened by an unexpected industrial accident or disease.

The concepts of individual or collective liability are not mutually exclusive. There are degrees of collective liability and individual liability in most employment injury insurance schemes.

1.6. Institutional Arrangements

Administration of an EII scheme is usually the responsibility of a specific public institution; in some countries, it is a department of an institution with wider responsibilities for other social security benefits such as pensions, maternity and unemployment benefits.

This specific public body must administer operations with regard to financing (e.g. registration of employers and employees, collection of contributions, investment of reserves) and compensation (e.g. processing claims from workers or their dependants, payments of cash benefits to beneficiaries, healthcare service providers and physical as well as vocational rehabilitation services). In many countries, the institution is also mandated to promote various activities to prevent work injuries and occupational diseases by integrating prevention, compensation and rehabilitation.

In all jurisdictions, employers are obliged to maintain a safe working environment, and officers of the public institution have powers of inquiry to verify the reports and claims of employers and workers and to inspect working sites to ensure that company practices are in accordance with the safety standards stipulated in regulations.

The responsible public institution is usually under the general supervision of the Ministry of Labour, and its direction is supervised by a board of directors composed, in accordance with the principles enshrined in ILO standards, of members representing the government, the workers and the employers. [5] This tripartite board is responsible for the strategic planning of the institution, its financial statements, its policies relative to financing, compensation and prevention, concluding agreements with other institutions and making recommendations to the Ministry of Labour on regulation issues.

[4] ILO Conventions Nos. 102, Art. 36, 65(10) and 66(8), and 121, Art. 21.

[5] ILO social security standards, including Conventions Nos. 102, Article 72, and 121, Article 24, lay down fundamental principles for the governance of social security schemes and systems such as: supervision of the social security system or schemes by a public authority or joint administration by employers and workers; participatory management, involving representatives of the persons protected; and the general responsibility of the State for the administration of the institutions and services concerned.

1.7. Classification of Risks

Different industries have different risks. Employers are at various stages of achieving a safe and healthy workplace. Employers who fully support a health and safety workplace and culture and recognize the value of human capital and assets have different histories of employment injury accidents and industrial diseases, and this should be reflected in their assessments. This does not mean that the concept of random occurrence of accidents should be ignored.

The employers' contribution is calculated as a percentage of wages and is paid monthly to the scheme. The rate may depend on the risk of each employer, as assessed by past experience; it is determined annually and depends upon the funding method. One of the most common approaches is to use the pay-as-you-go (PAYG) method for short-term benefits (temporary disability benefits and medical care) and the terminal funding method for periodic payments of permanent disability benefits to injured workers, as well as survivors' benefits for dependants of workers who have died due to an employment injury. The contribution rate must cover annual payments of short-term benefits in each year and the present value of future periodic payments of permanent disability and survivors' benefits newly awarded each year. Various methods are used to determine the contribution rate of each employer. In some countries, a fixed rate is charged to each employer regardless of their economic activity, size or history of injuries.

In many countries, the employer's contribution rate reflects the risk associated with its economic activities. These countries apply insurance principles targeted to the different risks of employers in various economic activities. In many developed countries contribution rates are adjusted to take into account the past experience of injuries in each company; this provides an incentive for employers to prevent accidents and occupational diseases. To do so, reporting, monitoring and auditing is crucial to risk classification. An employer may have multiple business activities and these activities could change. Employers should be grouped with other employers according to their histories of occupational accidents and diseases.

At the inception of the scheme, there is no reliable history of claims to differentiate classes of risk or even employers from the same industry. In this case, it is advisable to start with a universal assessment rate per 100 Birr of payroll. However, accident and injury reporting should be diligent (even if manual at the start), otherwise there is no incentive to keep the workplace safe and healthy due to cross subsidization among employers in the same industry and even among industries with varying risks.

Options for Ethiopia would be a universal rate, a rate varying among the three major sectors of agriculture, industry and services, or even among the nine industrial sectors if there are sufficient data to differentiate employers by these industry groups. The most relevant need is data, and employers have a great incentive to report occupational accidents and diseases so that their assessment rate is consistent with their claims experience and their occupational health and safety practices at the workplace.

1.8. Financing (assessments)

With regard to financing the employment injury insurance scheme, general social security financing principles such as risk pooling and collective financing apply. [6]

[6] Article 71 of Convention No. 102 sets the general principle of collective financing:

> The cost of the benefits provided in compliance with this Convention […] shall be borne collectively by way of insurance contributions or taxation or both in a manner which avoids hardship to persons of small means and takes into account the economic situation of the Member and of the classes of persons protected.

Employers are usually the sole contributor to this type of scheme, and this is acceptable given the flexibility of Convention No. 102. The government may pay a small proportion of the costs, for example to cover some administrative expenses at the start of the programme or to cover the expenses of inspection services. Workers are not assumed to contribute. This insurance is mandatory for all employers, as set down in the legislation and provides greater solidarity and risk pooling. Thus, "*compulsory membership and financing through contributions or taxes are indispensable to give effect to such fundamental objectives as social solidarity and cohesion, equality and non-discrimination, protection of the poor and vulnerable members of the community*". [7] Furthermore, Articles 71(3) and 72 of Convention No. 102 require the Member State to accept general responsibility for providing due benefits, taking appropriate measures as well as taking full responsibility for the overall functioning of the system. Moreover, there is a precautionary limit to contributions by the worker in order to avoid financial hardship in terms of his or her capacity to contribute.

In practice there are two general types of assessment that determine the contribution rate. Collective assessments are differentiated by industry and are proportionate to the employer's experience. Self-insurance assessments make the particular employer fully liable for all past but unpaid, current and future expenses with respect to any accident in a particular year during which the employee is a permanent employee of that employer. Within each rate group, an employer can pay the average rate, pay a surcharge or receive a rebate, proportionate to his participation and based on his claims history. This method consists of experience rating.

An assessment rate would normally be associated with accidents expected to occur in a particular year. That assessment (including the investment returns) should be sufficient to pay for all current and future benefit payments for the incurred accidents, and should also have a provision for the administrative costs of these benefits. Sometimes there is also a provision for one year's exposure contributing to future occurrence of industrial diseases. For long-term disability payments, either to age 65 or for life, the reserve for future payments should be included in the assessments.

An employment injury insurance system is assumed to be a going concern, so that solvency is not a primary consideration at all times. There is flexibility to respond to financial variability since the goals of funding are long-term. An assessment system should be fair, simple, responsive and an evolution of a system that functions for the particular jurisdiction.

1.9. Equity among employers

The Board should be cognizant of generational equity among employers.

Assessments should cover current payments of benefits and all future costs associated with the claim, such as future long-term disability payments. This will avoid having a generation of employers that is overburdened by the cumulative impact of all cases of historically incurred long-term permanent disability. If the Board changes the conditions of benefits and decides on retrospective implementation, the future generation of employers will be economically responsible for any benefit improvements for accidents that have already occurred.

Moreover, in the classification of activities, the impact of any bankrupt industries should include some discussions of intergenerational equity among employers.

[7] ILO, 2011: *Social security and the Rule of Law. General Survey concerning social security instruments in the light of the 2008 Declaration on Social Justice for a Fair Globalization*, International Labour Conference, 100th Session, 2011, para. 56.

For any new benefits or entitlement to benefits, the Board should review the cost impact of such changes. The cost impact should be included in the assessment or contribution rates to encourage equity across generations of employers.

1.10. Compensation Benefits

The EII scheme is a no-fault programme. This means that a worker who sustains an injury during his/her work is entitled to the benefits of the programme and does not need to demonstrate the responsibility of the employer or employee. Injury due to a worker's voluntary actions is an exception. [8] If injury is solely attributable to the serious and wilful misconduct of the workman there should be no compensation unless the injury results in the death or serious disability of the worker. In many countries, injuries that cause interruption of work for less than two or three days are excluded in order to avoid administrative complexity, in conformity with Conventions Nos. 102 and 121 as well as Recommendation No. 121. [9]

Furthermore, the EII scheme does not exclude criminal or civil responsibility of the employer where gross negligence is involved. This would have to be decided by ordinary courts to the extent allowed by the relevant national legislation.

ILSs stipulate that benefits resulting from the following contingencies or events be compensated: [10]

– Poor health or morbid conditions;

– Inability to work with a corresponding loss of earning;

– Loss of earning capacity, total or partial, likely to be permanent, with an associated loss of faculty;

– Loss of support of dependants due to death of the injured worker.

Article 7 of Convention No. 121 requires a definition of an industrial accident, while Article 8 requires a list of occupational diseases with a general definition of occupational diseases.

[8] Convention No. 121, Art. 22 (e), allows workers' entitlement to a benefit to be suspended "where the employment injury has been caused by voluntary intoxication or by the serious and wilful misconduct of the person concerned".

[9] See Convention No. 102, Art. 38, Convention No. 121, Art. 9(3), where a benefit does "*need not be paid for the first three days in each case of suspension of earnings*".

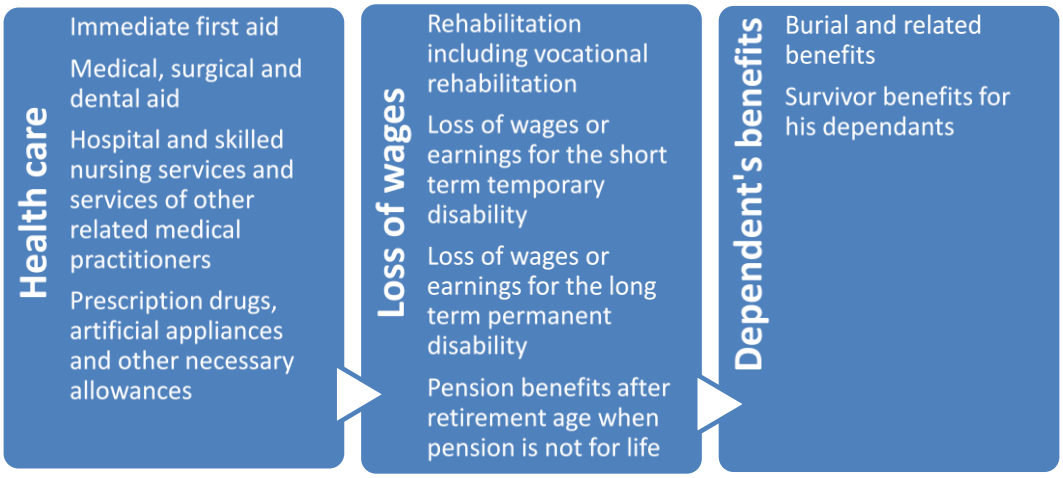
[10] See Conventions Nos. 102, Art.32, and 121, Art. 6.

Table 3. Legal requirement for employment injury benefit: Convention No. 102 (Part VI) and Convention No. 121

Benefit	Quality of the benefit	ILO Convention
Morbid condition, medical care	Adequate	Art. 34, Convention No. 102
	Broader scope	Art. 9 & 10, Convention No. 121
Incapacity for work, periodical payment/pension	At least 50% of former earnings or wage of an unskilled worker	Art. 67, Convention No. 102
	At least 60% of former earnings or wage of an unskilled worker	Art. 13, 19, 20, Convention No. 121
Survivor benefits, pension	At least 40% of former earnings or wage of an unskilled worker	Art. 67, Convention No. 102
	At least 50% of former earnings or wage of an unskilled worker	Art. 13, 19, 20, Convention No. 121
Funeral benefit	Normal cost	Art. 18, Convention No. 121

Benefits should be related to the earning power of the worker and should be payable for as long as the disability lasts. [11]

Benefits should include [12] with regards to:



[11] Conventions Nos. 102, Article 38, and 121, Article 9(3), require the benefit to be paid throughout the contingency, i.e. as long as the worker is incapacitated to work, or as long he/she suffers a loss of earning capacity or corresponding loss of faculty. Both Conventions Nos. 102, Articles 65(10) and 66(8), and 121, Article 21, that the level of benefits be reviewed in cases where there is a substantial change in the general levels of earning affecting the cost of living.

[12] ILO conventions: with regard to *health care* Conventions Nos. 102, Article 34, and 121, Articles 9 and 10; with regard *to Loss of wages* Conventions Nos. 102, Article 36, in conjunction with Articles 65 and 66, and 121, Articles 13-21; with regards to *Dependants benefits* Conventions Nos. 102, Article 36, and 121, Article 18.

1.11. Administration of the scheme

Article 72 of ILO Convention No. 102 requires that social security be supervised by a public authority or administered by an institution regulated by public authorities or a department responsible to the legislature. If administration is carried out by such an entity, it is prescribed that the management of the fund be participative by involving social partners and representatives of the persons protected. Convention No. 102, Article 72(2), also requires that Member States "accept general responsibility for the proper administration of the institutions and services concerned in the application of the Convention".

The administration of social security benefits, including administration of the EII, needs to be independent but requires the following:

– Oversight at Board level, on a tripartite basis;

– Strategic planning involving the Board, stakeholders and staff;

– Operational management, staff.

Administration should be efficient. The management should be comparable to that of a very well run private corporation. The staff should consist of trained professionals. But there should be some consideration as to whether it is more cost-effective to hire professionals in certain areas or to outsource them. This is a consideration for the treasury or the department responsible for assets and investments of the fund. It is also a consideration for the actuarial department.

Oversight is usually provided by a Board with equal and sufficient participation by relevant stakeholders, such as employers, employees and other groups representing the persons protected. Tenure should be long enough to be effective but short enough that members do not become complacent. The Board should report to the government but should also be independent.

Administration is most effective if it is close to the employers and employees, i.e. usually at the state or provincial and rather than at federal level. Employees of federal corporations or enterprises are administered at the state or provincial level where the employees are located.

Article 70 prescribes the right of appeal to every claimant. This is part of administration of the employment injury insurance system.

1.12. Occupational Health and Safety

Article 26 of Convention No. 121 requires the government to take measures to prevent industrial accidents and occupational diseases, and to provide rehabilitation services to facilitate resumption of gainful activity for the injured worker. Employment injury insurance therefore starts with occupational health and safety. Prevention of industrial accidents and diseases is more cost-effective for employers and the government, and better for employees from the perspective of human rights.

The employer and the employees have legal obligations to comply with occupational safety and health regulations as illustrated by the Table below.

Table 1.12. Employers and Workers responsibilities in OSH

Employer's responsibility	Worker's responsibility
■ Take every reasonable precaution to ensure health and safety ■ Comply with regulations ■ Ensure employees' compliance ■ Maintain equipment ■ Advise staff of hazards ■ Provide training and supervision ■ Provide personal protective equipment ■ Conduct workplace inspections ■ Report accidents ■ Cooperate with joint health and safety committee, health and safety officers and health and safety representatives	■ Take every reasonable precaution to ensure health and safety ■ Comply with regulations ■ Report hazards ■ Report accidents ■ Use protective personal equipment ■ Cooperate with joint health and safety committee, health and safety officers and health and safety representatives ■ Take necessary training ■ Participate in the joint health and safety committee

Training is crucial. Inspections are like other audit activities and keep employers alert and aware. Regulations, health and safety programmes and policies, safe work procedures, workplace inspection programmes and monthly reports are very important. Every workplace fatality should be discussed at Board level to avoid recurrence. Education, research and training go hand in hand with inspections.

1.13. General recommendations with regard to employment injury – basic insurance principles

- **Administration:** Ensure that experience data for both employers and workers are reported on a timely basis and recorded with the necessary level of detail. Records should be complete and accurate, even if prepared manually. Take advantage of local structures. Strengthen oversight capabilities.
- **Compensation benefits:** Take the necessary steps to meet minimum levels of benefits as per ILO Convention No. 121.
- **Financing, workers' compensation coverage, risk sharing, classification of risks, equity among employers and scope of application:** Start with simple procedures, then adapt them in the light of experience.
- **Occupational health and safety:** Protection at the workplace starts with occupational health and safety. Almost all workplace accidents and occupational disease are preventable. It is important to strengthen labour inspections as well as health and safety awareness and training at the workplace. Strengthen oversight capabilities, especially with research, procedures and timely intervention.
- **Rehabilitation:** Early rehabilitation allows for the resumption of previous and alternative suitable gainful activity to the injured worker with the co-operation of the employer.

2. Legislative framework of employment injury in Ethiopia

Rights at work are one of the four inseparable, interrelated and mutually supportive pillars of the Decent Work Agenda for Ethiopia. [13] Strengthening the country's social protection framework is therefore a priority of the Federal Democratic Republic of Ethiopia as demonstrated by the National Social Protection Policy. The government has manifested an interest to shift from the social welfare approach to a systemic and comprehensive social

[13] Decent Work Country Profile, p. i.

protection approach, with social insurance as one of the four key areas of focus. The Government of Ethiopia is committed to expand social protection schemes both in the formal and informal economy.

Legislation is the basis of implementation and amendments of the multi-faceted government policies. The legal framework of employment injury administration in Ethiopia consists of proclamations, regulations and directives, for both public servants and private sector workers.

The Constitution of the Federal Democratic Republic of Ethiopia establishes the fundamental, inviolable and inalienable human rights of its people. It also sets parameters for freedom and respect for the human and democratic rights of its citizens and people. With regard to the State's social contract, the Constitution sets social objectives and guarantees to all Ethiopians the provision of social security, including employment injury benefits and health to the extent of the resources available. [14] In terms of workers' rights, Articles 41 and 42 on economic, social and cultural rights establish minimum labour rights, namely freedom of association, equal pay for men and women as well as health and safety at work. Furthermore, Article 90 specifically guarantees the provision of social security to all Ethiopians, and Article 89 outlines the responsibility of the Government to protect and promote health, welfare and living standards as the basis of social protection of all Ethiopians.

Various sectorial policy and strategy documents as well as legal instruments such as Labour Proclamation No. 377/2003 stipulate these state obligations governing labour relations. The Proclamation: (1) promises governance of worker-employer relations under the basic principles of rights and obligations aiming for industrial peace and economic development; (2) guarantees to maintain all fundamental rights at work; and (3) defines the powers and duties of the body enforcing the ideals of the laws, the labour inspection services.

2.1. Social Protection Policy framework

In 2014, the Ministry of Labour and Social Affairs published the National Social Protection Policy of Ethiopia. The document reported on the current state of the policy and how it should be improved to guarantee social protection for all. [15]

Furthermore, social protection is addressed in other sectorial policy documents, including but not limited to the:

- Plan for Accelerated and Sustained Development to End Poverty (PASDEP) which aims to reduce poverty through economic growth;
- National health policy – Health Sector Development program (HSDP);
- Social Security Framework to provide retirement, survivors, invalidity and employment injury benefits;
- Employment and Occupational Safety and Health policy.

[14] Constitution of the Federal Democratic Republic of Ethiopia, Art. 90 (1): "To the extent the country's resources permit, policies shall aim to provide all Ethiopians access to public health and education, clean water, housing, food and social security."

[15] National Social Protection Policy of Ethiopia, p. 2.

The wide-ranging programmes are broad in scope. However, some structural gaps[16] have been noted with regards to the:

- Policy framework which requires a comprehensive and integrated social protection framework;
- Programme planning and implementation which requires comprehensive standards and equitable implementation;
- Institutional arrangement and capacity which require a consensus on the legal, economic, social and political rationale for social protection, its specific instruments and approaches by the legislature, civil service and civil society.

The National Social Protection Policy (NSPP) and Strategy demonstrate a paradigm shift from the developmental social welfare policy to a fully integrated social protection framework creating socio-economic developmental transformations. This aims to remedy the identified structural gaps in view of expanding social protection to all Ethiopians. In this regards, social protection is defined by the national policy as a series of formal and informal interventions to reduce social and economic risks, vulnerabilities and deprivations, and enable equitable growth for all. [17]

The NSPP sets priorities with the focus areas: [18]

- Social safety net;
- Livelihood and employment schemes;
- Social insurance;
- Addressing inequalities of access to basic services.

To ensure a success implementation of this policy, a monitoring and evaluation system has been envisaged. Moreover, MoLSA is entrusted with the establishment and implementation of a management information system.

In terms of financing this policy agenda, the government is set will allocate between 2-3 per cent of the GDP to finance social protection. Resources from the National Budget will be allocated on an incremental basis to finance the National Protection Strategy and Action Plan.

Moreover, oversight is envisaged to be the responsibility of a National Social Protection Steering Committee (NSPSC), to be established by the Council of Ministers, a chair will be appointed and members will be representative of relevant ministries and institutions.

2.2. Historical Labour Proclamations

In terms of regulating employment injury, the first legislations focused on safety and health such as Proclamation No. 58/1945, which addressed some of the industrialization that

[16] Ibid., p. 12.

[17] Ministry of Labour and Social Affairs (2016): National Social protection Strategy of Ethiopia, January 2016. p. 6.

[18] Ibid., p. 7.

took place in the 1940s and took into consideration some ILO conventions on labour inspection. Proclamation No. 232/1964, was more comprehensive and addressed occupational safety and health management in the light of some British experience. [19] Labour Proclamation No. 377/2003 consolidated labour rights and protection in comprehensive legislation that:

– promised governance of worker-employer relations under the basic principles of rights and obligations for industrial peace and economic development;

– guaranteed the rights of workers and employers to form their respective associations, engage in collective bargaining and establish procedure for expeditious settlement of labour disputes;

– established the powers and duties of the labour inspectors responsible for inspecting labour administration i.e. labour conditions, occupational health and safety, and the work environment.

This Proclamation Act broadly applies to all employer-employee relationships involving one or more persons. An employer is a person or entity carrying out any commercial, industrial, agricultural, construction or other lawful activity. Several "employers" are excluded from the scope of this labour legislation. [20]

Part 11 of Proclamation No. 377/2003 vests authority in the Minister of Labour and Social Affairs (MoLSA) to develop and implement a labour administration system (Art. 170, para. 2) and to issue directives (Art. 170, para. 1) regarding enforcement of labour law, such as occupational safety, health and protection of the work environment, standards of working conditions and organisations required to have insurance coverage for workers' compensation (Art. 170, para. 1) to name a few issues relevant to EII.

Part 7 of this Proclamation lays down the legal framework for OSH and employment injury benefits in the workplace: preventive measures (Art. 92-94), occupational injuries and degree of disablement (Art. 95-102) and compensation for employment injuries (Art. 103-122).

Furthermore, the legal responsibilities of the employer and the worker to prevent workplace accidents and occupational diseases are specified in Chapter One, as seen in Section 1.12 (Table 1.12).

The employer has an additional responsibility: she/he must not only comply with the regulations, but must also ensure that the worker complies with them.

In tandem with the labour proclamation are later developments pensions laws PSPP No. 714/2011 and POEPP No. 715/2011 where in Part 7 encompasses employment injury pension and gratuity benefits and the associated Part 8 survivorship pension and gratuity benefits. These sections define employment injury/occupational diseases, reference degrees of incapacity and its measurement and explains incapacity benefits for those covered under the public or private pension acts (proclamations).

[19] Occupational Safety and Health Profile for Ethiopia, p. 9.

[20] Labour Proclamation No. 377/2003, Part I, Art. 291 and 3.

Occupational Injuries and Diseases, Degrees of Disablement
(Proclamation No. 377/2003, Chapter two)

The employer is liable for any employment injury at the workplace, irrespective of fault as prescribed by Article 96 of the Proclamation. However, the law allows for two exceptions to the no-fault coverage: one where the worker completely disregards safety instructions or accident prevention rules and the other where she/he reports to work with a level of intoxication that prevents proper control over the body or the mind. [21] These exceptions are consistent with international standards, including Convention No. 121 (Art. 22 (d) and (e)).

As required by international standards, Ethiopia's Proclamation No. 377/2003 defines "occupational accident" and "occupational disease" (Art. 97 and 98): an occupational accident is sustained by the worker as a result of and in connection with his work while an occupational disease is a consequence of exposure due to the type of work or the environment at work. The Minister has the power to issue a directive regarding a Schedule containing the List of Occupational Diseases and this schedule should be revised at least every five years (Art. 98 (3)).

Disablement is defined as a decrease or loss of capacity to work as a result of any employment injury and can be classified in four categories: temporary disablement, permanent partial disablement, permanent total disablement, and death (Art. 99).

Temporary disablement reduces partially or totally a worker's capacity to work for a limited time period (Art. 100).

Permanent partial disablement assumes "incurable" employment injury (Art.101 (1)) [22] resulting in a decreased capacity to work. Injuries resulting in serious mutilation or disfigurement without any associated incapacity for work are considered permanent partial disablement.

Permanent total disablement assumes "incurable" employment injury and prevents the injured worker from any gainful employment (Art. 101 (2)).

A competent medical board will assess the degree of disablement within twelve months from the date of injury. The Minister will issue a directive that includes an Assessment Table of Disablement, Article 102 (1). There will be reassessments when necessary.

Compensation for Employment Injuries
(Proclamation No. 377/2003, Chapter Three)

According the Proclamation Act No. 377/2003, Compensation for employment injuries consists of: medical benefits (Art. 105 and 106), periodic payments for temporary disablement (Art. 108), a disablement pension or gratuity for permanent disablement (Art. 109) and a survivorship pension or gratuity for death of the worker resulting from a workplace injury (Art. 110).

[21] Ibid., Art. 96, para. 2.

[22] Ibid., Art. 100-101.

Table 2.2. General characteristics of EII benefits

Duration of the medical benefits	Periodical payments	Level of benefit
Decided by the Medical Board and will include: ■ **General and specialized medical and surgical care** ■ **Hospital and pharmaceutical care** ■ **Any needed prosthetic or orthopaedic appliances**	Cease on the earlier of: ■ Medical certification that the worker is no longer disabled ■ On the day he becomes entitled to a disablement gratuity or pension Twelve months from the day the worker stopped work	■ 100% of salary for the first three months ■ Not less than 75% of salary for the subsequent three months ■ Not less than 50% for the subsequent six months The salary will be based on the previous average yearly salary.

Disablement Benefits

For workers of state enterprises, coverage is be provided under an insurance scheme arranged by the employer or under the relevant pension law. Where the employer does not have any insurance arrangement, the pension laws shall provide coverage for workers covered under the pension acts.

For workers not covered by pension law, the disablement compensation will be paid in a lump sum:

– Permanent total disablement, five times the annual salary;

– Permanent partial disablement, a benefit proportionate to the degree of disablement.

The salary of an apprentice will be estimated at what he/she would have received as a qualified worker.

Benefits for Dependants

Dependants include the widow or widower, children less than eighteen years of age and any financially dependent parent according to Article 110 (2).

Compensation for dependants of workers not covered by the public servants pension law equals five times the annual salary of the deceased worker, Article 110 (4 & 5):

– 50 per cent for the deceased spouse;

– 10 per cent for each child below age fifteen;

– 10 per cent for each dependent parent.

When the total of the above percentages exceeds 100 per cent, each amount will be decreased proportionately.

Funeral expenses and burden of proof

Funeral expenses of no less than two months' salary of the worker are to be paid. Where the worker dies after twelve months from the date of injury, proof that the injury was the principal cause of death is required (Art. 111).

Non-taxable Benefits

Benefits are not taxable according to Article 112.

Later amendments to Labour Proclamation No. 377/2003 included Labour Proclamation No. 466/2005 [23] (revising Article 144, Sections 1 and 2, on establishment of the Labour Relations Board) and Labour Proclamation No. 494/2006 [24] (revising Article 3, Section 2c, on excluded management employees, adding details on Article 39, a general section on compensation for termination of employment, and revising Article 130 on collective bargaining negotiations as well as Article 185 on common offences under the penalty provisions).

2.3. Other Relevant Proclamations

Employment Exchange Services Proclamation No. 632/2009 defines public employment service and private employment agencies with regard to the economic activities of employment exchanges. The Proclamation safeguards the rights, safety and dignity of Ethiopian nationals seeking employment overseas. The prior Proclamation No. 104/1998 needed enhancement regarding the monitoring and regulation of domestic and overseas employment exchanges.

Article 15 (1e), requires the employer to pay for insurance coverage via the private employment agency. Furthermore, Article 16 (2k) requires a private employment agency to provide a worker who has suffered an employment injury with the necessary medical aid upon his return. Moreover, when a worker incurs a bodily injury or dies, the employment agency is to immediately investigate and report to the Ministry of Labour and Social Affairs on the cause of the incident and any corrective measures taken to prevent such accidents. If the worker returns with grave bodily injury or dies while working overseas, the employment agency must return the injured worker or his body with effects and cover the cost.

Article 20 guarantees minimum working conditions under the laws of Ethiopia and the same rights and benefits for the overseas worker as for those who work in a similar occupation in the country of employment. Article 32 allows direct recruitment and requires in Section 2 (b) confirmation of life and disability insurance coverage as required in Article 33. This ensures mandatory insurance for every worker employed overseas with life and disability insurance coverage (domestically or internationally) with details prescribed by MoLSA. The document must be presented to MoLSA.

The federal civil servants Proclamation No. 515/2007 clarifies matters with respect to civil servants and government institutions. It updates the definitions of civil servants, temporary civil servants and government institutions. Furthermore, it sets out various exceptions to these definitions and clarifies certain obligations regarding aspects such as occupational health and safety as well as compensation for employment injury.

Part Five of this proclamation specifically addresses occupational safety and health and compensation for employment injury namely: employment injury (Art. 47), safety measures (Art. 48), principles of disability (Art. 49), temporary disablement (Art. 50), permanent partial disability (Art. 51), permanent total disability (Art. 52), medical benefits and injury leave (Art. 53), disability pension and gratuity (Art. 54) and exemption from tax (Art. 55).

[23] Labour proclamation No. 466/2005, Art. 2, Amendment, p. 3176.

[24] Labour proclamation No. 494/2006, Art. 2, Amendment, p. 3422.

The government institution covers medical expenses associated with an employment injury.

Benefits for any permanent total or partial disability are provided for in the public servants' pension law. These benefits include survivors' benefits resulting from the death of the civil servant.

2.4. Occupation Health & Safety

There is leadership in developing proclamations related to industry sectors and establishing the authority to monitor these new industries.

Earlier proclamations on occupational health and safety were guidelines targeted at overall environmental protection, the construction industry, and the defence industry. For example, Proclamation to Provide for the Establishment of the Defence Industry Commission No. 313/1987, Environmental Protection Authority Establishment Proclamation No. 9/1995 and Proclamation for the Registration and Control of Construction Machinery No. 177/1999.

A directive in July 2008 on occupational safety and health placed greater emphasis on the responsibilities of employers and the rights of workers, safety and health policy and programmes, personal protective equipment, measures for working with risks from chemicals, noise, radiation, machinery, working at heights, boilers and lifting equipment, as well as the recording/notification of occupational accidents and diseases. These included the Proclamation on Radiation Protection (Proclamation No. 571/2008, Ethiopian Building Proclamation No. 624/2009 and Proclamation on Biosafety (Proclamation No. 655/2009).

General recommendations on OSH

(1) Empower labour inspectors with legal powers regarding the implementation of labour inspections as well as health and safety proclamations.

(2) Compile a comprehensive five-year report on actual occupational injury and disease experience. Include a listing of all employers/enterprises covered by respective pension laws. Include a listing of all hazardous undertakings that require an employer insurance scheme. Determine necessary clarifications, updates to sections on covered employers/undertakings, including exceptions and exemptions. Develop a plan to minimise exceptions and exemptions for covered workers.

(3) Stipulate procedures in Directives for implementing the requirements for reporting accidents and occupational diseases and for the establishment of an employment injury administration system incorporating the requirements of labour inspections.

(4) To ensure that the set up and functioning of the National Social Protection Steering Committee (NSPSC) responsible for monitoring the social protection policy and strategy are time bond and accountable, with due power to ensure follow-up of the implementation plans.

3. Ethiopia's employment injury scheme: A gap assessment with regard to international standards and practice

This section reviews the coverage provided for employment injuries in Ethiopia and makes recommendations on how to improve and extend coverage to non-covered workers with regard to the international standards discussed in Sections 1 and 2 above. To facilitate this gap assessment, comparative tables are provided for each parameter, followed by recommendations for the alignment of Ethiopia's legislation with international law and practice.

In 2007, the Central Statistical Agency (CSA) estimated that 1.8 million Ethiopians were employed in government, state-owned and private sectors – roughly 7.2 per cent of the total workforce. [25]

Although technically there is no compulsory insurance system for employment injuries, specific articles and sections of the following legislations provide a strong legal framework for employment injury insurance in the Federal Democratic Republic of Ethiopia:

- Labour Proclamation No. 377/2003, LP No. 377/2003;
- Employment Exchange Services Proclamation No. 632/2009, EESP No. 632/2009;
- Public Servants' Pension Proclamation No. 714/2011, PSPP No. 714/2011; Private Organization Employees' Pension Proclamation No. 715/2011, POEPP No. 715/2011.

3.1. Coverage and Protected Workers

With some exclusions and exceptions, the financial and legal burden of employment injuries (diseases) are the responsibility of Ethiopian employers.

Who should be covered?	
Protected persons	Protected persons include prescribed classes of employees (constituting at least 50% of all employees) and, for benefits in case of death of the breadwinner, also his wives and children. Where an exception is invoked, at least 50% of all employees in industrial workplaces with at least 20 employees and, for benefits in case of death of the breadwinner, also his wives and children. *ILO Convention No. 102, Articles 3 & 33.* Employees of public and private sectors, including apprentices and cooperatives. *ILO Convention No. 121, Art. 3-4.* Seafarers and public servants may be excluded provided that they are protected by special schemes with benefits at least equivalent to those provided by the Convention. Allowed exceptions are: – casuals, not employed for the purpose of the employer's trade or business; – out-workers; – members of the employer's family living in his house, with regard to their work for him; – others not more than 10% excluding the first three exceptions.

Item	Description	Ethiopian laws and regulations
Coverage	Required insurance coverage for employment injury compensation	LP No. 377/2003, Art. 170 (1) (l), allows the Minister to issue a directive on undertakings required to have insurance coverage for the payment of employment injury benefit. LP No. 377/2003, Art. 96 (1)-(2), places the financial and legal burden of employment injuries on the employer with the exception of two extreme situations: (1) non-compliance with safety instructions or non-observance of accident prevention rules; and (2) reporting for work while intoxicated and without control over body and mind. EESP No. 632/2009, Art. 15 (1) (e), allocates responsibility to the employer through the private employment agency for the costs of insurance coverage in relation to the employment of a worker.

[25] National Social Protection Policy of Ethiopia, p. 7.

Item	Description	Ethiopian laws and regulations
Protected persons	Classes of workers for whom protection is prescribed in legislation	LP No. 377/2003, Art. 3 (1) stipulates applicability to all employment relations. Art. 2 (1, 2 & 3) defines "employer" as a person or an undertaking with at least one worker, "undertaking" as any commercial, industrial, agricultural, construction or other lawful activity, and "worker" as a person who has an employment relationship with an employer. POEPP No. 715/2011, Art. 3, stipulates applicability to Ethiopian nationals who are permanent employees of private organizations as well as employees of religious and political organizations and persons engaged in the informal sector. PSPP No. 714/2011, Art. 3, stipulates applicability to public servants who are Ethiopian nationals.

Item	Description	Ethiopian laws and regulations
Protected persons	Exceptions, contract of employment	LP No. 377/2003, Art. 3 (2), excludes employment relations arising from the following contracts of employment from the prescribed insurance employment injury coverage: – contracts for upbringing, treatment, care or rehabilitation; – contracts for educating and training other than apprentice; – executive managerial employees; – contracts of personal service for non-profit purposes; – contracts relating to members of the Armed Force or Police Force, employees of state administration, judges of courts of law, prosecutors and others governed by special laws; – contracts relating to a person who performs an act for a consideration at his own business or s professional responsibility.

Item	Description	Ethiopia laws and regulations
Protected persons	Regulatory exemptions	LP No. 377/2003, Art. 3 (3), may provide regulatory exemption from the prescribed insurance coverage for employment relations: – between Ethiopian citizens and foreign diplomatic missions or international organizations; – established by religious or charitable organizations; – applicable to personal services.

In the Table below, sourced from the Annual Labour Bulletin 2013-14, originally from the CSA's 2013 Labour Force Survey, more than 75 per cent of all paid employees are public servants covered under PSPP No. 714/2011, and employees covered under POEPP No. 715/2011.

Table 3.1. Status in employment

	2013	Distributions (in %)
Paid Employees		
Government	*1 457 464*	34.3
Development organiation	410 389	9.7
Private	*1 778 837*	41.8
NGO/INT/Employees	98 162	2.3
Domestic Workers	401 210	9.4
Other Employees	106 539	2.5
Subtotal	**4 252 601**	**10.0**
Self-employed	*17 023 071*	40.1
Unpaid Family Worker	*20 642 907*	48.7
Employer	177 212	0.4
Apprentice and others	217 383	0.5
Member of Cooperatives	90 705	0.2
Subtotal	**38 151 278**	**–**
Total Employed	**42 403 879**	**76.2**
Population	55 629 498	

Source: CSA, 2013 Labour Force Survey; Annual Labour Bulletin 2013-14; Table 1.3 Paid employees; Table 1.2 Employment-to-Population Ratio; NGO, non-governmental organization; INT, international.

There is sufficient legal coverage in Ethiopia that meets Conventions Nos. 102 and 121.

Recommendations on data collection to enable extension of coverage and sustainability of EII schemes

(1) Compile accident statistics for undertakings with no pension coverage. Enable comparison for undertakings with pension coverage.

(2) Gather data and evaluate the concept of voluntary coverage for the informal sector of the economy. Voluntary coverage can be based on the benefit floor and an associated contribution level for assessments. In some instances coverage could be based on the benefit floor and a minimal flat assessment rate.

3.2. **Benefit Entitlement** (industrial accidents, occupational diseases, injury assessments)

The provisions of employment injury insurance are embodied in these three proclamations:

- Labour Proclamation No. 377/2003;
- Public Servants' Pension Proclamation No. 714/2011;
- Private Organization Employees' Pension Proclamation No. 715/2011.

What provision should there be for benefit entitlement? International labour standards benchmarks	
Industrial accidents	Definition of industrial accidents includes commuting accidents. Not necessary to provide for commuting accidents if other coverage is available. ILO C.121, Art. 7
Occupational diseases	Definition of occupational diseases. Prescribed list of occupational diseases at least as current as the 1980 Schedule. Process on how to handle those not in the prescribed list. ILO C.121, Art. 8
Benefit eligibility	Medical care and benefits to be provided. Length of employment, duration of insurance or payment of contributions precluded. Period of exposure for occupational diseases may be prescribed. Allows waiting period of three days for cash benefits for incapacity for work. ILO C.121, Art. 9
Benefit suspension	Injury caused by voluntary intoxication or serious and wilful misconduct. Neglects use of medical care, allied benefits, rehabilitation services without good cause or fails to comply with rules verifying the occurrence or continuance of contingency (also applies to beneficiaries). ILO C.121, Art. 22

Item	Description	Ethiopia laws and regulations
Employment injury	Any employment accident or occupational diseases	LP No. 337/2003, Art. 95 POEPP No. 715/2011, Art. 27 (PSPP No. 714/2011, Art. 28)
Occupational accident	Organic injury or function disorder related to the performance of work	Includes considerations for commuting to work. LP No. 337/2003, Art. 97 POEPP No. 715/2011, Art. 27 (PSPP No. 714/2011, Art. 28)
Occupational disease	Pathological condition caused by physical, chemical or biological agents	LP No. 337/2003, Art. 98. Defines basis for presumption. Gives authority to Minister to issue a directive including a schedule listing occupational diseases, for updating at least every five years. POEPP No. 715/2011 Art. 29 (PSPP No. 714/2011, Art. 30). The Agency to issue a directive with a schedule of degrees of incapacity and list of occupational diseases, including an estimated minimum duration of exposure, with periodic revisions. Art. 30 on presumption of occupational disease (Art. 31).
Self-inflicted injury		(1) Non-obedience to safety instructions or non-observance of accident prevention rules; and (2) reporting for work while intoxicated and without control over body and mind. POEPP No. 715/2011 Art. 28 (PSPP No. 714/2011, Art. 29)
Assessment of injury	By authorized medical board or referred to another medical board for further evaluation	POEPP No. 715/2011, Art. 33 (PSPP No. 714/2011, Art. 34)

In terms of the compliance with Conventions Nos. 102 and 121 the Ethiopian provisions on Employment injury, is the Ethiopian laws and regulations are in line with the definitions of industrial accidents including commuting accidents and occupational diseases and how to address other diseases resulting from an occupation and not in the list. However, there is still a need to implement the List of Occupational Diseases and decide on a prescribed period of exposure for such diseases otherwise known as the latency period. Moreover, there is compliance with the rules for benefit suspension and thus Ethiopia meets Convention No. 121 requirements.

Recommendations for the implementation of a prescribed schedule of degrees of incapacity and list of occupational diseases

In order to have a more comprehensive reporting of employment injuries, accidents or diseases as well as a more comprehensive reporting of labour inspections and a CSA/MoLSA collaborative documentation of industrial accident/occupational diseases to enable a determination of an initial employer contribution rate for EII the ILO recommends the following actions:

(1) Implement a Schedule of Degrees of Incapacity and a List of Occupational Diseases. Define procedure for handling occupational diseases that are not in the list. Define procedure for consistent implementation of measurement of degrees of incapacity. Complete the Directive for Implementation of the Schedule of Degrees of Incapacity and List of Occupational Diseases.

(2) Enable timely, comprehensive and accurate reporting of employment injuries, accidents or diseases and corresponding benefit payments as well as contributions.

(3) Enable timely, comprehensive and accurate reporting of labour inspections over a five-year period. Document enhancements of procedures for dealing with fatalities and high-risk industries and industry sectors.

(4) Suggest that CSA and MoLSA document a five-year history of comparative, comprehensive and accurate data on industrial accidents/occupational diseases, including information on public/private enterprises as well as healthy and injured workers. This should allow an initial employer assessment rate for employment injury insurance outside the pension systems but more effective than the employer liability scheme. Suggest continuation of the annual labour market bulletin.

3.3. Compensation Benefits

Workers compensation benefits include:

– Medical care;

– Temporary disablement;

– Permanent disablement;

– Dependants' benefits.

These benefits address the following contingencies:

– a morbid condition;

– a temporary incapacity for work with suspension of earnings;

– loss of earning capacity, total or partial, likely to be permanent;

– loss of support of dependants on the death of the injured worker.

The benefit provisions of employment injury insurance are embodied in these three proclamations:

– Labour Proclamation No. 377/2003;

– Public Servants' Pension Proclamation No. 714/2011;

– Private Organization Employees' Pension Proclamation No. 715/2011.

Which benefits should be covered? International labour standards benchmarks	
Medical benefits in case of morbid condition *ILO C.102, Art. 34*	(a) GP and specialist inpatient and outpatient care, including home visits; (b) Dental care; (c) Nursing care at home, hospitalization or care in other medical facilities; (d) Maintenance in hospitals, convalescent homes, sanatoria or other medical facilities (e) Dental, drugs or other medical or surgical supplies including prosthetic devices, their repair and eyeglasses; (f) Care from professions allied with the medical profession under the supervision of medical or dental practitioner; (g) If an exception is invoked, basic medical care from general practitioner, specialist care in or outside the hospital, essential supplies and necessary hospitalization. **Adequate medical benefits**; (h) *Additionally for Convention No. 121, Art. 9 & 10, emergency treatment and follow-up treatment if no lost day and provision of medical care and associated benefits to avoid hardship on injured worker.*
Temporary or initial incapacity for work, cash benefits *ILO C.102, Art. 34*	(a) Earnings-related, at least 50% of previous earnings, or flat-rate, at least 50% of wages of unskilled worker; (b) Allowing for 3 days waiting period Higher standard Convention No. 121 (c) *At least 60% of previous earnings, or a flat-rate, at least 60% of wages of unskilled worker (see Art. 13).*
Permanent loss of earning capacity or corresponding loss of faculty, in excess of a certain degree, cash benefits *ILO C.102, Art. 36*	(a) Periodical benefit; (b) Proportionate to loss of earning capacity; (c) 50% of previous earnings, or flat-rate, at least 50% of wages of unskilled worker; (d) Lump sum where degree of incapacity is slight; Higher standard Convention No. 121; (e) *At least 60% of previous earnings, or a flat-rate, at least 60% of wages of unskilled worker (Art. 13);* (f) *Levels of earnings to avoid hardship (Art. 14);* (g) *Prescribed increments for disabled persons in need of constant help or attendance of another person (Art. 16);* (h) *Adjustment of benefit, minimum amount of periodical benefit (Art. 21 and 20).*
Death of the injured worker, cash benefits *ILO C.102, Art. 37*	(a) Periodical benefits; (b) To spouse, dependent children and dependent parent, proportionate; (c) At least 40% of previous earnings, or flat-rate, at least 40% of wages of unskilled worker; Higher Standard Convention No. 121; (d) 50% of previous earnings, or a flat-rate, at least 50% of wages of unskilled worker (Art. 18); (e) Normal cost of a funeral (Art. 18); (f) *Adjustment of benefit, minimum amount of periodical benefit (Art. 21 and 20).*

Item	Description	Ethiopia laws and regulations
Medical care benefits	General/specialized medical/surgical care, hospital and pharmaceutical care, prosthetic or orthopaedic appliances.	LP No. 377/2003, Art. 105-106. Duration as decided by medical board
Disability	Decrease or loss of capacity to work: – temporary disability, limited time period or total loss of capacity for work; – permanent disability, incurable, with a decrease in capacity for work; – permanent total disability, cannot engage in any remunerated work; – death.	LP No. 377/2003, Art. 99-102
Periodical benefits	For temporary disability, one year monthly benefits, 100% of average wage for first 3 months, 75% for next 3.50% for next 6, until no longer disabled or becomes entitled to disability pension or gratuity.	LP No. 377/2003, Art. 108
Disability benefits	For public servants, benefits under insurance scheme or under pension law. *For employees*, benefits under pension law. *If not covered by pension law*, lump sum of five years of annual wages proportionate to the degree of disability.	LP No. 377/2003, Art. 109, states disability benefits under insurance scheme else under pension law, else lump sum from employer
Incapacity benefit	For employment injury of 10% or more: – *if with permanent incapacity* from engaging in any remunerated work, pension for life at 47% of prior monthly salary, retirement pension if greater; – *if no loss of capacity to work*, gratuity of 47% of prior monthly salary for 60 months adjusted by percentage of injury, forfeited if collective bargaining benefit from employer or insurance benefit.	POEPP No. 715/2011, Art. 34-38 (PSPP No. 714/2011, Art. 35-39)
Survivors' benefits	To spouse if not remarried (widow less than 45 (50)), children under 18 (21) and dependent parent: – of *worker's pension or gratuity*, total 100%: • spouse 50%; • child 20% (30%, 2 x 20%); • parent 15% (20%); – *if not covered by pension law*, lump sum based on 5 years of annual salary of deceased: • 50% to spouse; • 10% per child less than 15; • 10% per dependent parent; – *funeral expenses*, ≥ 2 months wages.	POEPP No. 715/2011, Art. 39-44 (PSPP No. 714/2011, Art. 40-45) LP No. 377/2003, Art. 107
Mode and adjustment of benefits	Gratuity in lump sum, monthly pension *Agency may adjust* minimum monthly pension and benefits every five years.	POEPP No. 715/2011, Art. 45-47 (PSPP No. 714/2011, Art. 46-48)

The following Table summarizes compensation benefits, highlighting the continuum of benefits and indicating when the Labour Proclamation or either of the Pension Proclamations provides the coverage.

Contingency	Benefit	LP No. 377/2033	PSPP No. 714/2011 POEPP No. 715/2011
Morbid condition	General and specialized medical and surgical care. Hospital and pharmaceutical care. Necessary prosthetic /orthopaedic appliances.	Art. 105-106	
Temporary disability, total or partial	Up to one year monthly benefit, at least 50% of average wage.	Art. 108	
Permanent disability	Employment injury less than 10%, lump sum five years of annual wages proportionate to degree of disability.	Art. 109	
Permanent disability, total incapacity for any remunerated work	Pension for life, 47% of prior monthly salary or retirement pension if greater.		Art. 35-39 (34-38)
Permanent disability, partial incapacity for work	Lump sum five years of annual wages proportionate to degree of disability.	Art. 109	
Permanent disability, no incapacity for work	Gratuity of 47% of prior monthly salary for five years, adjusted by percentage of injury, forfeited if collective bargaining benefit from employer or insurance.		Art. 35-39 (34-38)
Death of injured worker	To spouse if not remarried (younger than 45 (5)), children under 18 (21) and dependent parent. Of worker's pension or gratuity, 100%: – 50% to spouse; – 20% per child; – 15% per dependent parent.		Art. 40-45 (39-44)
Death of injured worker, if not covered by pension law	Lump sum of 5 years annual salary of worker, 100%: – 50% to spouse; – 10% per child (younger than 15); – 10% per dependent parent. Funeral expenses, at least 2 months wages.	Art. 107	
Mode and adjustment of benefits	Gratuity in lump sum, pension monthly. Adjust minimum monthly pension and benefits every five years.		Art. 46-48 (45-47)

Ethiopia's legislation complies with the minimum standards set forth in Convention No. 102. However, Ethiopia could target compliance with Convention No. 121 with respect to level of benefits, thus a minimum pension benefit could be specified by law. Moreover, the continuum of cash benefits for temporary and permanent disablement with varying incapacity for work could be better managed by providing the same percentage of benefit, for example by setting it at 60 per cent of wages proportionate to the degree of disablement. Furthermore, periodical cash benefits could be paid as an actuarial equivalent lump sum if appropriate measure with regard to Articles 15 and 18 of Convention No. 121 are set.

Recommendations for a review of the continuum of periodic benefits for incapacity and for a more formal assessment rating process for employment injury insurance benefits

(1) Review the continuum of periodic benefits for temporary and permanent partial or total incapacity. Implement changes for both the pension laws and the labour proclamation. Consider providing periodic 60% (50%) of wages for temporary disability up to a duration of 12 months, and a lifetime pension of 60% (50%) of wages (proportionate to degree of disability) for permanent partial or total disability. Benefits could be commuted on an actuarial basis and paid as a lump sum when appropriate for disablement of less than 25%.

(2) A more formal assessment rating process is needed for employment injury insurance benefits only. This would facilitate administration by PSSSA and POESSA of the workers' compensation system for collection of employer contribution rates and payment of employment injury insurance benefits as well as occupational health and safety activities.

3.4. Financing of Ethiopia's Employment injury insurance scheme (assessments)

Assessments are similar to insurance single premiums. For workers' compensation coverage, an annual assessment covers the current year and all future year benefit costs for all accidents or occupational injuries incurred in that accident year. The assessment that is collected takes into account the cost of administering the payment of benefits. Future actuarial valuations of the employment injury insurance scheme could result in a financial deficit or surplus of assets against liabilities. One other component of assessments is a discount or a surcharge to reflect prior years' experience.

3.4.1. Contributions

The workers' compensation scheme is incorporated in the social security scheme, and financing is therefore included in the pension plan contributions from the employer and from the worker.

Convention No. 121 does not give indication as to a preferred financing mechanism for employment injury insurance. However, Convention No. 121 provides guidance in terms of out-of-pocket financing for medical care, which should avoid hardship for the beneficiary to access medical care and allied benefits costs (Art. 11, C.121). However, the general benchmarks for financing social security benefits, including employment injury, are set by Convention No. 102. Indeed, Article 71 specifies that social security contributions should:

(a) Workers contributions should not amount to more than 50 per cent of total of all social security contributions;

(b) Avoid hardship.

In Ethiopia, the Private Organizations Employees Pension Fund and a Public Servants Pension Fund are established and correspond to the POESA and the PSSSA. Contributions are deposited to the Funds from which benefits are paid.

The contribution rate is a percentage of salary and contributions are payable monthly:

- Civil Service Pension Fund PSPP No. 714/2011, Article 10:
  - Public office: 11 per cent
  - Public servant: 7 per cent
- Military and Police Service Pension Fund PSPP No. 714/2011, Article 10:
  - Public office 25 per cent
  - Public servant 7 per cent
- Private Organizations' Pension Fund, POEPP No. 715/2011, Article 10:
  - Employer: 11 per cent
  - Employee: 7 per cent

According to the current financing provisions, voluntary coverage for employees of religious organizations, political organizations and persons working in the informal sector would need to pay the total 18 per cent of salary contribution to cover both the employer's and employee's share. There is no separate account or contribution collection for Employment injury benefits. These benefits are collected together with the pension contributions. This can be problematic in terms of accounting, administration and governance, as no clear delimitation is possible between the pension (long term benefits) and employment injury (short and long term benefits).

3.4.1. Employer's liability through commercial Insurance Schemes

The Labour Proclamation places responsibility for compensation for employment injuries on the employer, unless the employee's injury was self-inflicted. There are no specific data for premiums charged for worker's compensation or group personal accident coverage. Insurance companies such as Hibret Insurance S.C., Hibret In Awash Insurance Company S.C. (AIC) and the Ethiopian Insurance Corporation [26] have provided workmen's compensation and group personal accident insurance.

Coverage under workmen's compensation covers death or bodily injury during work time for workplace accidents or occupational diseases as follows:

- *Death benefit:* minimum of five year's salary;
- *Permanent total disablement:* percentage of five year's salary;
- *Temporary total disablement:* monthly salary payment up to twelve months;

[26] State-owned and established in 1976 by Proclamation No. 68/1975, merging 13 insurance companies.

- *Permanent partial disablement:* percentage of five year's salary;

- *Medical, surgical and hospital expenses:* varies, starting with Birr 1,000 per procedure and arrangements with the insurance company.

As for the group personal accident insurance, it provides payment for up to a specific amount to the insured or dependants for death or bodily injury disablement during work hours or otherwise or both. Terms, conditions and exceptions apply. The Labour Proclamation states that "occupational injury" means an 'employment accident' or "occupational disease" for the purposes of the Proclamation.

There are no reports suggesting that the above insurance companies have developed any systems to collect experience statistics on occupational accidents and diseases. They do not appear to have developed and programmes for occupational health and safety or for prevention and rehabilitation of occupational injuries.

Pay As You Go

The pay-as-you-go method is used to funds insurance to cover employment injuries (occupational accidents and occupational diseases).

Serious workplace accidents may result in a fatality. Fatalities are expensive as they require pensions (periodic payment to replace the loss of earning incurred by the dependants of the deceased. Where injury is relatively serious there may be medical attention such as surgery and days or weeks of hospitalizations that occasion loss of income. After physical recovery there should be a reasonable pension for the injured worker to cover this loss endured by the injury sustained at work.

Many workplace accidents result in less serious injuries. These require payments of lost wages (for a few weeks) for the duration of the incapacity to work, and often rehabilitation including vocational support where needed to reintegrate the labour market. However, a large proportion of workplace accidents do not even result in lost days from work.

With regards to financing employment injury benefits, Ethiopia is in compliance with ILO standards with regards to level of contribution by the workers. However, in terms of best practices, relying on employer liability for certain category of workers in the private sector is not in line with standard good practice. Social insurance is often the preferred method to ensure sustainability, through risk pooling and fair treatment of workers who don't have to undergo long civil procedures for compensation. Ethiopia would thus benefit from reviewing the possibility to extend the coverage of the employment injury insurance to all excluded workers, at least of the formal economy.

Recommendations for a formal assessment rating process for incorporating changes in compensation benefits, collection of accurate historical data on occupational accidents and diseases, and calculate uniform contribution rates for employment injury insurance

(1) There should be established a formal assessment rating process for any contemplated changes in compensation benefits.

(2) It is recommended that CSA and MoLSA document a five-year comprehensive history of accurate data on industrial accidents/occupation diseases, including information on public/private enterprises, workers and injured workers. This should allow an initial employer assessment rate for employment injury insurance outside the pension systems but more efficient than the employer liability scheme. Suggest continuation of the annual labour market bulletin.

(3) It is recommended to Calculate either a uniform or 3 industry sector employment injury insurance contribution rates. Given the lack of historical data, an informal calculation of a uniform contribution rate at revised benefit levels should be envisaged until sufficient reliable statistics are compiled for a formal calculation of contribution rates.

3.5. Other Provisions

There are other provisions for day-to-day administration including claim procedures, collection of contributions and payment of benefits, accident reporting as well as the right to complain and appeal.

There is also a very important provision for the overall functioning of the scheme.

Benchmarks

1. Administration (Art. 72, C.102):
   - (a) Institution regulated by public authority or government department responsible to legislature;
   - (b) Otherwise, management representation of workers;
   - (c) Prescribed participation of employers and the government;
   - (d) *Similarly (Art. 24, C.121).*
2. Appeal (Art. 70, C.102):
   - (a) Right of appeal for refusal of benefit or objection regarding quality and quantity;
   - (b) *Similarly (Art. 23, C.121).*
3. Claims procedure (Art. 72, C.102):
   - (a) For proper administration and services;
   - (a) *Similarly (Art. 25, C.121).*
4. Full responsibility (Art. 71, C.102):
   - (a) General responsibility for due provision of benefits and taking all due measures;
   - (b) *Similarly (Art. 24, C.121).*

5. *Prevention, rehabilitation and safe and early return to work of disabled workers (Art. 26, C.121).*

6. Equality of treatment of non-nationals (Art. 68, C.102):

   (a) *Non-national residents shall have the same rights as national residents;*

   (b) *Equality of treatment of non-nationals with respect to employment injury insurance (Art. 27, C.121).*

Item	Description	Ethiopian laws and regulations
Pension contributions	Payments	POEPP No. 715/2011 Art. 11 (PSPP No. 714/2011, Art. 12)
Administration	Of the Scheme	POEPP No. 715/2011 article 12 by POESSA (PSPP No. 714/2011, Art. 13, SSA)
Accidents	Reporting within 30 days	POEPP No. 715/2011 Art. 32 to POESSA (PSPP No. 714/2011, Art. 33, SSA)
Employment injury	Medical assessment	POEPP No. 715/2011 Art. 35 (PSPP No. 714/2011, Art. 34, SSA)
Tax exempt	Benefits	POEPP No. 715/2011, Art. 56 (PSPP No. 714/2011, Art. 56)
Final decision	Right of complaint and appeal	POEPP No. 715/2011, Art. 55 (PSPP No. 714/2011, Art. 54)
Overall responsibility	Allowable utilization of funds and actuarial evaluation every five years	POEPP No. 715/2011, Art.13-14 (PSPP No. 714/2011, Art. 14-15)
Foreign nationals	Employment of foreign nationals in Ethiopia	LP No. 377/2003, Art. 22 and 24

There is compliance to administration, right to appeal, claim procedure, full responsibility and prevention. Ethiopia meets Convention No. 121 requirements. Legislation needs to strengthen wording re equality of treatment of non-Ethiopian Nationals to follow best practices and ILS, especially the Equality of Treatment (Social Security) Convention, 1962 (No. 118).

Recommendations to close gaps in legislation with regard to benefit levels and equality of treatment of non-Ethiopian nationals

(1) There are two legislative gaps that need to be closed: benefit levels and equality of treatment of non-Ethiopian nationals. With respect to benefit levels these relate to the implementation of the legislation and communication/cooperation among stakeholders. Improvement of implementation may require investing in capacity building to administer the workers' compensation system. Capacity building will need to start with the PSSSA and POESSA and the services for occupational health and safety as well as those for prevention and rehabilitation services. An initial step would be development of a communication strategy for stakeholders, employers, employees, injured workers, government ministries and agencies, labour and trade unions, employer associations, medical and hospital services, academia and the general public. Administration of the workers' compensation system should be simple, practical and applicable to changing needs. Exploit synergies with other sectors in the system such as micro and small to medium enterprises. With respect to equality of treatment of non-Ethiopian nationals there is need to look closely at the experience of other African countries, in addition whether international bilateral and multilateral agreement will be necessary or not and means of transfer of right.

3.6. Other Recommendations and Trends

3.6.1. ILO Recommendation No. 121 concerning Employment Injury Benefits

The Recommendation provides additional guidance and higher levels of benefits that the Convention. Although the Recommendation is not a binding instrument, it provides additional guidance that is helpful to Member States in the implementation of employment injury benefits.

The additional guidelines of the Recommendation include:

(1) Extension of employment injury benefits (by stages if necessary);

(2) Recommendation of voluntary insurance and targeting specific groups of workers:

- Members of cooperatives;
- Self-employed in small-scale businesses or farms;
- Unpaid volunteers, including apprentices and students;
- Separate financing;

(3) Prescribed list of occupational diseases;

(4) Definition of industrial accidents;

(5) Removal of waiting period for benefits;

(6) Benefits at 67 per cent of injured person's earnings;

(7) Periodic payment for degree of loss. This should be at least 25 per cent, or else a lump sum equivalent to periodic payments for three years.

3.6.2. Trends

The following tables provide a summary of employment injury insurance programmes for African nations, sourced from Table B.4 "Employment Injury" from the *World Social Protection Report 2014/2015*. There is a trend away from employer-liability schemes and towards social insurance. There is also universal recognition that the cost of employment injury insurance is the employer's responsibility, with a handful of financing still less than the global contribution rate for old-age social insurance protection. Contribution rates are usually flat but with a trend towards recognition of industry risk. There is also some participation from the self-employed sector, through voluntary contributions to the scheme. There are one or two sources of direct financing from the government.

Employment Injury Insurance Trends

Major area, country	Type of programme	Contribution rate (in %)			
		Employee	Employer	Self-employed	Government financing
Africa					
Algeria	Social insurance	None	1.25	Not covered	None
Angola	Social insurance				
Benin	Social insurance	None	2.5 (1 to 4 based on risk)	Not covered	None
Botswana	Employer-liability	None	Whole cost	Not covered	None
Burkina Faso	Social insurance	None	3.5	Not covered	None
Burundi	Social insurance	None	3	Voluntary to be implemented	None
Cameroon	Social insurance	None	3.4 (1.75 to 5 based on risk)	6	None
Cape Verde	Social insurance	None	2 to 6 based on worker's status Fixed for household worker	Not covered	None
Central African Republic	Social insurance	None	3	Not covered	None
Chad	Social insurance	None	4	Not covered	None
Congo	Social insurance	None	2.25	Not covered	None
Congo, Democratic Republic of	Social insurance	None	1.5	Not covered	None
Cote d'Ivoire	Social insurance	None	3.5 (2 to 5 based on risk)	Voluntary	None
Djibouti	Social insurance	None	6.2	7	None
Egypt	Social insurance	None	3	Not covered	None
Equatorial Guinea	Social insurance	Global, old-age, 4.5	Global, old-age, 21.5	Not covered	Global, old-age, 25
Ethiopia	Social insurance	Global, old-age, 7	Global, old-age, 11, 25 (military)	Not covered	None
Gabon	Social insurance	None	3	Special system	None
Gambia	Employer-liability	None	1	Not covered	None
Ghana	Employer-liability	None	Whole cost	Not covered	None
Guinea	Social insurance	None	4	Not covered	None
Kenya	Employer-liability	None	Whole cost	Not covered	None
Lesotho	Social insurance	None	Varied, industry or ministerial directive	Not covered	None
Liberia	Social insurance	None	1.75	1.75	None
Libya	Social insurance, employer-liability	Global, old-age	Global, old-age & sickness	Global, old-age & sickness	Global, old-age & sickness

Employment Injury Insurance Trends

Major area, country	Type of programme	Contribution rate (in %)			
		Employee	Employer	Self-employed	Government financing
Africa					
Madagascar	Social insurance	None	1.25	Not covered	None
Malawi	Employer-liability	None	Whole cost	Not covered	None
Mali	Social insurance	None	2.5 (1 to 4 based on risk)	2.5 (1 to 4 based on risk)	None
Mauritania	Social insurance	None	3	Not covered	None
Mauritius	Social insurance	None	Global, old-age, 6 to 10.6	Not covered	None
Morocco	Employer-liability	None	Whole cost	Not covered	None
Namibia	Social insurance	None	Whole cost	Not covered	None
Niger	Social insurance	None	2	1.75	None
Nigeria	Social insurance	None	1	To be determined	None
Rwanda	Social insurance	None	2	Not covered	None
Sao Tome and Principe	Social insurance	Global, old-age, 4	Global, old-age, 6	Not covered	None
Senegal	Social insurance	None	1,3,5 based on risk	1,3,5 based on risk	None
Seychelles	Social insurance	None	None	None	Income tax
Sierra Leone	Employer-liability	None	Whole cost	Not covered	Annual contribution
South Africa	Employer-liability	None	Whole cost	Not covered	None
Sudan	Social insurance	None	2	Global, old-age, 25	None
Swaziland	Employer-liability	None	Whole cost	Not covered	None
Tanzania, United Republic of	Social insurance	None	1 private, 0.5 public	Not covered	None
Togo	Social insurance	None	2	2	None
Tunisia	Social insurance	None	0.4 to 4 based on risk	Voluntary	None
Uganda	Employer-liability	None	Whole cost	Not covered	None
Zambia	Employer-liability	None	Varied, based on risk	Not covered	None
Zimbabwe	Employer-liability	None	Whole cost	Not covered	None

There has also been a trend towards a single legislation, for example the Workers' Compensation Acts for Malaysia, South Africa, United Republic of Tanzania, Thailand and Zambia.

Workers' compensation is a valuable development for labour, especially in countries with accelerated growth and where there is a good supply of labour.

A proactive occupational health and safety culture is a positive encouragement to minimise the incidence rates of occupational accidents and diseases. Rehabilitation plays a major role in reducing the severity and promoting an early and safe return to work. For permanent total and partial disabilities, provision of necessary prosthetics and adequate

services contribute to improving if not restoring the ability to work and attend to the activities of daily living (ADLs).

In Section 6 of the *World Social Protection Report 2014/2015* there are key messages on expanding social protection: [27]

- Most middle-income countries (e.g. China and Brazil) are boldly expanding their social protection systems and realizing domestic demand-led growth strategies.
- Some lower-income countries are in the process of building social protection floors as part of comprehensive social protection systems, and governments are realizing that it is possible to expand fiscal space for social protection.
- Lastly there is a compelling case during these times for social protection as a human right and a sound economic policy.

In other words, social protection contributes to economic growth, enhances human capital and productivity and is critical for transformative national development. It is also supportive during slow recovery and low global demand.

The strong emphasis on social protection policies in many middle-income countries [28] reflects the understanding that sustainable and equitable growth requires strong social protection policies and progressive extension of social security coverage to much larger groups of the population. Notable examples are Argentina, Brazil, China, India, Indonesia, Mexico, Namibia, South Africa and Thailand, as well as Cape Verde, Ghana, Lesotho and Zambia.

In low-income countries there has been a shift in perception [29] from regarding social protection policies as a 'cost' to a realization that they constitute an 'investment in people' that is indispensable for future development. Such policies are an investment in human capital and capabilities with a view to achieving more sustainable and inclusive growth. They are an investment in human infrastructure. However, it must be recognized that institutional capacity is limited and needs to be expanded. A strong institutional framework is needed as well as a legislative framework. Employment-generating economic investments are also required.

Economic investment are being funded by extending social security contributions, [30] for example Brazil, China, Costa Rica, Lesotho, Namibia, South Africa and Thailand are introducing new measures to bring more workers into formal employment and expanding the coverage of contributory social security schemes.

Many countries in Asia, Africa and Latin America have developed ways of synergizing [31] social protection mechanisms with labour market policies and services, thereby safely returning the unemployed to the market.

[27] *World Social Protection Report 2014/2015*, p. 120.

[28] Ibid., p. 141.

[29] Ibid., p. 146.

[30] Ibid., p. 151.

[31] Ibid., p. 156.

PART II. FINANCING

This section covers relevant statistics and considerations regarding the financing of an employment injury insurance scheme. Statistics from available sources will be discussed, and some directions will be recommended. Finally there is a subsection, Illustrative Assessment Rating, which provides a step-by-step calculation of a uniform contribution rate for employment injury insurance. This will distinguish information that is readily available from information with limitations or which still needs to be collected.

4. Financial assessment

This section is about statistics; these can provide comparative information and illustrate trends:

– population, labour and enterprises;

– reported occupational injuries and incidence rates by major industry sector;

– health environment, facilities and health care practitioners;

– labour inspectors, labour inspections.

The goal is to look at all available statistics, evaluate the numbers and make recommendations with regard to employment injury insurance.

4.1. Economic Context

Main industries include agriculture (mainly coffee, oil seed, lentils and floriculture), food processing, beverages, textiles and garment, leather, chemicals, metal processing and cement. [34]

In the 2013 National Labour Force Survey: [35]

Total population	80.4 million	
Working age (15-64)	41.9 million	50 per cent of total
Employed	35.5 million	85 per cent of working age (42.4 million with age 10-14)
Paid Employment	4.3 million, 1.5 million government, 1.8 million private, 12 per cent of employed	

In the 2005 National Labour Force Survey: [36]

Total population	63.2 million	
Working age (15-64)	31.4 million	50 per cent of total
Employed	25.5 million	80 per cent of working age

[34] Technical Memorandum Ethiopia Labour Inspection Audit, p. 1.

[35] Annual labour Market Bulletin, Federal Democratic Republic of Ethiopia, sourced from CSA 2013 Labour Force Survey.

[36] Decent Work Country Profile for Ethiopia, various pages and tables.

Paid employment	2.3 million	9 per cent of employed
Agriculture	0.285 million	15 per cent
Industry	0.145 million	5 per cent
Services	1.843 million	80 per cent

For the same time period, 2005 there were:

Health facilities	11,005 (131 hospitals, 600 health centres)
Health care providers	37,397 (2,453 physicians, 776 health officers, 18,809 nurses)

For the same time period, 2005, the economy performed as follows:

GDP (USD million)	7,330
GDP (Birr million)	55,051
GDP per capita (Birr)	1,559
GDP per capita (USD)	180

4.1.1. Macro-economic Environment

Other relevant statistics: [37]

MoLSA	24,513 officially registered enterprises
Ethiopian Employers Federation	220 corporate members, 500 associate members
Confederation of Ethiopian Trade Unions	300,500 members, 523 collective agreements

4.1.2. Economic Demographics – Employment and GDP

Gross domestic product increased five-fold from 1999 to 2010 (Birr and USD) and about three-fold from 2005 to 2010; three-fold and two-fold respectively for USD per capita.

In the Table below, sectors of employment in 1999-2005 reflect national levels whereas those for 2009-10 reflect urban levels. There is a significant difference because of the greater presence of private enterprises in urban areas.

Table 4.1. Economic Demographics

	1999	2005	2009	2010
Employment	100.0	100.0	100.0	100.0
Agriculture	79.9	82.4	9.8	11.4
Industry	5.4	5.8	21.5	20.5
Services	14.6	11.8	68.7	68.1
GDP (USD million)	7 330	11 330	30 351	27 504
GDP (Birr Million)	55 051	98 006	316 253	354 527
GDP at current market price (million)	58 789	106 473	335 392	382 939
GDP per capita (Birr)	996	1 559	4 367	4 860
GDP per capita (USD)	133	180	419	377
Average inflation rate (CPI)		10.3	3.0	18.0

Source: Decent Work Country Profile Ethiopia Table 1.1.

[37] Technical Memorandum Ethiopia Labour Inspection Audit, p. 1.

The Ministry of Finance and Economic Development provided information on gross domestic product and per capita for 1999, 2005, 2009 and 2010. See Table 1.1 of Decent Work Country Profile Ethiopia. (1 USD = Birr 16.9261, July 7, 2011)

4.2. Social Context – Health

There was 50 per cent growth in the number of facilities from 2000 to 2005, with health posts more than fully supporting the smaller number of hospitals and health centres; there was then a further 50 per cent increase to 2009. Health services personnel doubled from 2000 to 2005 with the nurses providing substantial support to the small number of physicians and health officers. There was another 50 per cent increase to 2009.

Table 4.2. Social Context

	2000	2005	2006	2007	2008	2009
Health staff to population ratio						
Doctors to population ratio	–	–	–	–	1:37 996	1:36 158
Health officer to population ratio	–	–	–	–	1:63 785	1:48 451
Nurses to population ratio	–	–	–	–	1: 4 725	1: 3 869
Health extension workers to population ratio	–	–	–	–	1: 3 224	1: 2 514
Number of facilities						
Hospitals	103	131	138	143	149	195
Health centres	356	600	635	690	732	1 362
Health station + national health service	2 330	1 662	1 206	1 376	1 517	-
Private clinics not for profit	–	379	480	397	271	271
Private clinics for profit	1 119	1 578	1 784	1 756	1 788	2 582
Health posts	833	4 211	6 191	8 528	11 446	12 488
Pharmacies	304	276	246	320	–	–
Drug shops	250	381	476	577	–	–
Rural drug vendors	1 950	1 787	1 754	2 121	–	–
Total	**7 245**	**11 005**	**12 910**	**15 908**	**15 903**	**16 898**
Human resources in health services						
Physicians	1 263	2 453	2 115	1 806	2 085	2 151
Health officers	201	776	715	1 151	1 242	1 606
Nurses	6 713	18 809	17 845	18 146	16 765	20 109
Health assistants	8 330	6 363	4 800	3 184	2 140	1 486
Paramedical	2 201	6 259	5 431	3 863	7 731	5 021
Health extension workers	–	2 737	9 900	17 653	24 571	30 578
Total	**18 708**	**37 397**	**40 806**	**45 803**	**54 534**	**60 951**

Source: Decent Work Country Profile Ethiopia Table 1.3

Data is sourced from the Ministry of Health, Health and Health Related Indicators June 2007-08 and 2008-09.

4.3. Reported Occupational Injuries

In Canada, the National Work Injuries Statistics Program [38] (NWISP) was established to use work injury and disease data for statistical purposes. Since 1996, the Association of Workers' Compensation Boards in Canada (AWCBC), has coordinated this programme among the 12 provincial and territorial jurisdictions.

The employment data from Statistics Canada and the work injury and disease data from NWISP provide statistics that allow evaluation of health and safety programmes.

The various ministries in the Federal Democratic Republic of Ethiopia have provided a compilation of employment, health and occupational injury statistics [39] in *Decent Work Country Profile Ethiopia* as well as other technical documents.

A more current and regular Annual Labour Bulletin issued by the MoLSA (2013-14) contains more detailed data. Later sections will use this resource.

4.3.1. Fatal Injuries

Fatal injuries are serious incidents. All fatal injuries are investigated and discussed at the Board level. There is usually a small number of fatalities in an accident year.

4.3.2. Non-fatal Injuries

Non-fatal injuries and their level of severity should be reported and tabulated. The level of severity is usually reported in terms of the number of days of work lost. The more severe injuries result in more than a year of days lost. These are monitored, as such cases may have serious disabilities. Only a few such cases per year are to be expected.

Some summary tabulations are as follows:

(1) No loss time;

(2) Loss time:

  (a) Less or equal to two weeks;

  (b) Greater than two weeks to one month;

  (c) Greater than one month to one year;

  (d) Greater than one year.

Injuries that are very serious at the beginning are also so labelled as such. A different list is maintained for fatalities. These are also tracked from the date of accident and the date approved.

[38] Occupational Injuries and Diseases in Canada, 1996-2008: Injury Rates and Cost to the Economy, p. 5.

[39] Decent Work Country Profile Ethiopia, Table 9, p. 27.

4.4. Occupational Injury Rates

Table 4.4. Occupational Injury Rates

	2005	2006	2007	2008	2009	2010
Reported occupational injuries	1 422	9 020	2 846	3 027	5 438	6 745
Agriculture	549	578	471	554	809	952
Industry	832	8 413	2 359	2 399	4 516	5 645
Services	41	29	16	74	113	148
Reported occupational injuries (non-fatal)	1 417	9 013	2 768	3 022	5 390	6 699
Agriculture	545	578	466	554	809	950
Industry	831	8 406	2 287	2 396	4 513	5 603
Services	41	29	15	72	68	146
Reported occupational injuries (fatal)	5	7	78	5	48	46
Agriculture	4	-	5	–	–	2
Industry	1	7	72	3	3	42
Services	–	–	1	2	45	2
Occupational injury rate (non-fatal) per 1,000	*0.623*	–	–	–	2.392	2.823
Agriculture	1.909	–	–	–	14.916	11.708
Industry	5.742	–	–	–	8.929	11.572
Services	*0.022*	–	–	–	*0.040*	*0.081*
Occupational injury rate (fatal) per 100,000	0.220	–	–	–	2.130	1.939
Agriculture	1.401	–	–	–	-	2.465
Industry	0.691	–	–	–	0.594	8.674
Services	–	–	–	–	*2.657*	*0.111*

Source: Decent Work Country Profile Ethiopia Table 9.

Table 4.4 tabulates occupational injuries for 2005-2010. The number of people employed in Annex 4 is used to generate injury rates for associated categories. The italicized numbers used are adjusted numbers and derived injury rates from Annex 4 (Table 4.5).

The 2006 experience is an outlier, perhaps from a very specific incident or accident, or the numbers are not accurate. The number of fatalities in 2007, 2009 and 2010 of 78, 48 and 46, respectively would have been subject to occupational health and safety investigations.

The national injury rates for 2005 are materially lower than the urban experience of 2009 and 2010. The fatality rate for the major category 'industry' for 2010 would have been subject to occupational health and safety investigations.

4.5. Paid Employment

In 1999, fewer than two million people were working and receiving wages, out of more than twenty million people who were working. This is less than ten percent. The situation was similar in 2005. The statistics for 2009 and 2010 are only for urban areas. Of the 4.3 million people employed, a little more than half received wages. The situation was very similar in 2010. Of those receiving wages, about three quarters were in the service industry.

Table 4.5. Paid Employment

	1999	2005	2009	2010
Annex 4	*denominator of injury rates*			
Paid employment	1 831 001	***2 273 418***	2 253 398	2 372 717
Agriculture	387 523	285 417	54 238	81 139
Industry	325 379	144 721	505 460	484 188
Services	***1 118 099***	***1 843 280***	1 693 700	1 807 385
Employed persons	20 432 891	25 508 572	4 264 957	4 534 605
Annex 5	*denominator for collective*			
Paid employment	1 831 001	2 273 418		
Male	1 201 755	1 418 995	1 368 043	1 398 207
Female	629 246	854 423	885 355	974 505
Urban areas	1 064 383	1 416 809	2 253 398	2 372 712
Rural areas	766 621	856 610	–	–

Source: Decent Work Country Profile Ethiopia Annex 4 & 5.

Annex 4 and 5 on page 59 of the Decent work Country Profile Ethiopia tabulate the number of people employed in agriculture, industry and services for 1999, 2005, 2009 and 2010. The data for 1999 and 2005 are derived from the respective National Labour Force Surveys (NLFSs), and the data for 2009 and 2010 are from the respective Urban Employment and Unemployment Surveys (UEUSs). The 1999 and 2005 data are for rural and urban areas whereas the data for 2009 and 2010 are only for urban areas. The italicized numbers were adjusted to match the total and the similar total in Annex 5 (Table 4.5).

4.6. Labour Inspections and Labour Inspectors

The number of labour inspectors has doubled over five years. The number of labour inspections has tripled.

Labour inspections should be made across the board for all industries. A goal would be to inspect all employers within a three or five-year period. However, there should be higher priority schedules for industries with higher occupational risks. Some items to consider are the presence of complex machinery requiring significant manual intervention, routine activities for long periods of time as found in processing plants, extreme temperatures of the work environment (hot or cold), and of course situations with many shifts or during peak seasons.

The statistics on injuries (especially fatalities) should be considered in depth. Repeat offenders responsible for infractions of health and regulations in the workplace should be given particular attention. Newly formed or established companies should also be targeted. If possible, an index of workplace health and safety should be prepared and progress for each company reported.

Table 4.6. Labour Inspections and Labour Inspectors

	2005	2006	2007	2008	2009	2010
Number of labour inspectors	50	57	57	73	106	123
Male	49	54	54	69	92	107
Female	1	3	3	4	14	16
per 10,000 paid employees	*0.220*	–	–	–	0.470	0.518
per 10,000 employed persons	0.020	–	–	–	0.249	0.271
Number of labour inspections	826	2,734	1,062	1,459	1,285	2,328
per 10,000 paid employees	3.633	–	–	–	5.702	9.812
per 10,000 employed persons	0.324	–	–	–	3.013	5.134

Source: Decent Work Country Profile Ethiopia Table 9

4.7. Occupational Distribution

A large percentage of occupations are skilled workers in agriculture or fisheries. There is a wider range of occupations in the urban areas.

Table 4.7. Occupational Distribution

Occupational distribution by sex	NLFS				UEUS			
	1999		2005		2009		2010	
	Male	Female	Male	Female	Male	Female	Male	Female
Legislators, administrators & managers	0.5	0.1	0.6	0.2	4.5	1.7	4.6	1.5
Professionals	0.4	0.1	0.8	0.4	7.5	4.4	8.1	5.5
Technicians & associate professionals	1.5	0.7	1.6	0.8	8.1	5.4	7.6	5.7
Clerks	0.6	0.8	0.6	0.8	4.4	8.5	4.0	8.0
Service and shop sales workers	4.3	8.7	4.6	10.5	20.3	33.5	18.3	30.6
Skilled agriculture & fishery workers	64.7	14.8	63.3	24.5	8.1	4.9	8.5	6.2
Craft & related workers	4.1	24.5	4.8	11.0	18.9	16.8	20.4	17.1
Plant and machine operators & assemblers	1.0	0.2	1.0	0.3	8.5	1.3	8.7	1.1
Elementary occupations	22.8	50.2	22.6	51.3	19.7	23.5	19.9	24.3

Source: Decent Work Country Profile Ethiopia Table 8.1

4.8. Labour Market

The economy is strongly supported by the working segment of ages 15-64, with a slightly higher proportion in urban areas.

Table 4.8. Labour Market

Age group	Measure	1999			2005			2009	2010
		Total	Urban	Rural	Total	Urban	Rural	Urban	Urban
All	No	54 453 004	7 351 318	47 101 686	63 228 599	8 974 598	54 254 001	12 119 898	12 572 775
% population	(in %)	100	100	100	100	100	100	100	100
Children (0-14)	No	25 594 100	2 751 271	22 842 829	29 791 986	3 215 206	26 576 780	3 975 072	4 099 000
% population	(in %)	47.0	37.4	48.5	47.1	35.8	49.0	32.8	32.6
Working age (15-64)	No	27 018 157	4 360 239	22 657 918	31 383 990	5 476 653	25 907 337	7 679 756	8 004 917
% population	(in %)	49.6	59.3	48.1	49.6	61.0	47.8	63.4	63.7
Old age (65+)	No	1 840 747	239 808	1 600 939	2 052 623	282 739	1 769 884	465 070	468 858
% of population	(in %)	3.4	3.3	3.4	3.2	3.2	3.3	3.8	3.7

Source: Decent Work Country Profile Ethiopia, Annex 1.

4.9. Regional Employment 2013-14

There are significant regional variations in employment as well as industries.

Table 4.9. Regional Employment

Regions	Total	Urban	Rural
Tigray	2 547 502	443 786	2 103 716
Afar	652 108	102 460	549 648
Amhara	11 174 123	1 387 072	9 787 051
Oromia	16 529 563	1 863 072	14 666 491
Somali	783 017	83 451	699 566
Benishangul-Gumuz	484 220	74 207	410 013
SNNP	8 507 979	950 828	7 557 151
Gambella	162 075	41 018	121 057
Harari	100 225	49 802	50 423
Addis Ababa	1 285 597	1 285 597	–
Dere Dawa	177 471	101 565	75 906

Source: Table 1.4: Annual Labour Market Bulletin, MoLSA, 2013-14.

4.10. Monthly Wages 2013-14

Distribution of wages allows for setting minimum and maximum benefits if needed.

Table 4.10. Wages

Amount of total payment per month (birr)	**Total**	**Urban**	**Rural**
	4 252 601	**2 872 885**	**1 379 716**
<500	1 166 647	590 653	575 994
501-1 000	1 025 012	669 031	355 981
1 001-1 500	742 280	501 849	240 431
1 501-2 000	471 489	362 121	109 368
2 001-2 500	265 884	232 837	33 047
2 501-3 000	193 806	176 188	17 618
3 001-3 500	115 849	109 407	6 442
3 501-4 000	68 310	62 686	5 624
4 000+	150 097	142 229	7 868
No data	53 227	25 884	27 343

Source: Table 1.10: Annual Labour Market Bulletin, MoLSA, 2013-14.

4.11. Employment Injury Statistics 2013-14

Industrial injuries according to occupation.

Table 4.11. Industrial Injuries

Occupational Code	Occupation	Paid Employment	Employers	Employees	Fatal Injuries	Total Injuries	Days Lost	Claims
1	Legislation, Senior Official & Managers	160 727	59	10 085	8	507	1 259	3 309 152
2	Professional	535 449	25	137	1	–	–	6 300
3	Technicians & Associate Professional	721 397	114	11 911	2	1 408	3 744	933 987
4	Clerks	203 373	19	1 088	–	8	184	8 700
5	Service Workers and Shop & Market Sales Workers	600 465	57	4 480	7	489	702	604 335
6	Skilled Agricultural & Fishery Workers	225 213	–	–	–	–	–	–
7	Crafts and Related workers	378 561	–	–	–	–	–	–
8	Plant & Machine Operators and Assemblers	247 469	7	62	–	–	–	1 490
9	Elementary Occupations	1 179 947	21	240	–	–	–	900

Source: Table 4.1, 4.6 & 1.13: Annual Labour Market Bulletin, MoLSA, 2013-14.

Table 4.11a. Industrial Injury Rates

Occupational Code	Occupation	% Employed	Fatal Injuries (per 100,000)	Non-fatal Injuries (per 1,000)	Average Days Lost	Average Claims
1	Legislations, Senior Official & Managers	0.5	5.0	3.1	2.5	6 527
2	Professional	1.3	0.2	– 0.0	–	–
3	Technicians & Associate Professional	1.9	0.3	1.9	2.7	663
4	Clerks	0.5	–	0.0	23.0	1 088
5	Service Workers and Shop & Market Sales Workers	8.7	1.2	0.8	1.4	1 236
6	Skilled Agricultural & Fishery Workers	47.9	–	–	–	–
7	Crafts and Related workers	4.4	–	–	–	–
8	Plant & Machine Operators and Assemblers	1.0	–	–	–	–
9	Elementary Occupations	33.7	–	–	–	–

Source: Tables 4.1, 4.6 & 1.13: Annual Labour Market Bulletin, MoLSA, 2013-14, 2013 NLFS, CSA.

4.12. Recommendations

(1) Continue with comprehensive comparative reports:

- Annual Labour Market Bulletin (MoLSA);
- Decent Work Country Profile;
- National Labour Force Surveys.

(2) Develop a comprehensive workplace administration system effectively employing existing data file structures, document formats, occupational accident/disease reporting processes and public/private undertaking statistics collections as well as some future research on data compilation for the informal sectors of the economy. The probability of a safe return to work decreases as time passes. Safe return to work gets more difficult after six months. Recording and reporting of occupational accidents and diseases are tailored to allow for assessment rating and valuation of liabilities. A real time administration system that allows for monitoring of accidents and diseases as well as allow tracking of employers paying their assessment is a crucial development.

(3) Develop a protocol for addressing fatalities at the workplace. There should be associated resulting occupational health and safety policies and procedures.

(4) Develop a program for targeting hazardous industries with the goal of training/educating workers and employers and maybe even encouraging labour side participation through safety associations managed by trade unions and groups.

(5) There is an immediate goal of compiling comprehensive, relevant and accurate occupational injury/disease and employer statistics for an initial universal assessment rate. With the intent to develop enough reliable data to allow for industry sector or industry assessment rate.

(6) For occupational health and safety, inspection and training schedules are very important. Inspection should be complete over a period of time, say three to five years with priority for offenders or emerging industries. A safety rating index could be determined and trended over time.

4.13. Illustrative Assessment Rating

This section illustrates a process to calculate a uniform contribution rate for employment injury insurance. The calculations are very dependent on the underlying assumptions.

The following are very basic and necessary data:

- Number of covered or insured workers;
- Average monthly salary to estimate covered payroll;
- Incidence of employment injury:
  - Incidence of fatal accidents;
  - Incidence of loss time claims;
  - Ratio of loss time claims to no loss time claims;
  - Proportion of loss time claims that become permanent disablement;
  - Proportion of permanent disablement claims with total incapacity for work;
- Duration of temporary disablement claims;
- Average costs:
  - Average medical costs;
  - Average rehabilitation costs;
- Average age:
  - Average age of permanent disabled worker with total incapacity for work;
  - Average age of spouses of workers who died from employment injury.

It is also important to perform some sensitivity analyses, especially for assumptions where the data are incomplete or unavailable. Comparative data for neighbouring countries would be useful benchmarks.

The recommendation is to compile five years of experience on the above basic and necessary data to allow calculation of a uniform contribution rate (or rate for major sectors or industrial sectors) for employment injury insurance. Three years of experience would be sufficient. Alternatively, three years of comparative and credible experience from similar neighbouring nations would provide reasonable approximations until Ethiopia's own experience emerges. Mandatory coverage should strongly promote occupational health and safety culture.

The administration will need dedicated infrastructure as well as effective staff and systems for the compilation of occupational accident and disease reports, collection of employment injury insurance contribution rates from employers, as well as inspections and education of labour enterprises.

4.13.1. Calculator –Current Benefits

Table 4.13.1 illustrates a uniform contribution rate for the current benefit based on certain assumptions. Section 4.13.2 discusses currently available data with derived assumptions providing some explanations. Some assumptions are indicated by dark blue font and orange highlighting and are high level reasonable assumptions but with no available data for verification. Section 4.13.3 discusses the derivation of the scenarios.

Section A shows insurable earnings or an estimated payroll for covered workers. The estimated payroll is the product of the number of workers and an average monthly salary times twelve.

Section B derives the cost of short term benefit separated into temporary incapacity and no loss time. The temporary incapacity cost is derived from the incidence of loss time (excluding fatalities) among covered workers multiplied by an average benefit amount. The average benefit amount is wages for an assumed number of loss days plus an average medical benefit and an average rehabilitation benefit. The no-loss time cost is derived from the no-loss time incidence among covered workers multiplied by an average medical benefit.

Table 4.13.1. Illustrative contribution costs

		Units	Base	Low	High
A.	**Insurable earnings**				
(1)	Number of workers	lives	4 500 000	4 500 000	4 500 000
(2)	Average monthly salary	Birr	1 500	1 500	1 500
(3)	Estimated payroll ([12x (2) x (1)]/1000000	million Birr	81 000	81 000	81 000
B.	**Short term benefit**			1 000	100
	Temporary incapacity			100 000	1 000 000
(4)	Incidence (in %)		0.424	0.424	0.424
(5)	Scenario factor (in %)		100	59	118
(6)	Average lost days (very rough estimate)		*45*	*45*	*45*
(7)	Monthly benefit		1 500	1 500	1 500
(8)	Medical benefits		*150*	*150*	*150*
(9)	Rehabilitation benefits		*500*	*500*	*500*
(10)	Estimated cost [(1) x (4) x (5)]x[((7)/4.33)x((6)/5) + (8) + (9)]/1000000	million Birr	72	42	85
(11)	Cost as a % of estimated payroll [100 x (10)/(3)]		0.089	0.052	0.105
	No loss time				
(12)	Incidence (in %)		0.851	0.851	0.851
(13)	Scenario factor (in %)		100	59	118
(14)	Medical benefits		*150*	*150*	*150*
(15)	Estimated cost [(1) x (12) x (13)]x[(14)]/1000000		6	3	7
(16)	Cost as a % of estimated payroll 100 x (15)/(3)]		0.007	0.004	0.008
(17)	Short term benefit cost as a % of estimated payroll (11) +(16)		0.096	0.056	0.113

Section C illustrates the cost of permanent disablement broken down into total incapacity and no loss of incapacity. A small percentage of loss time claims is assumed to become permanent disablement claims. These permanent disablement claims are separated into those with total incapacity for remunerated work claims and the remainder. The current split is a very high level assumption. Total incapacity cost is the product of the assumed proportion of loss time incidence among workers and the total incapacity benefit. The total incapacity for remunerated work benefit is a life time pension at 47 per cent of wages, calculated for a representative male worker 45 years of age. For the rest of the permanent disablement claims, the benefit is the product of an average disablement and 47 per cent of monthly wages for 60 months, and usually paid in lump sum.

Table 4.13.1. Illustrative contribution costs

		Units	Base	Low	High
C.	**Permanent disability**				
	Total incapacity				
(18)	Incidence (in %)		0.013	0.013	0.013
(19)	Scenario factor (in %)		100	59	118
(20)	Proportion (in %)		*75*	*75*	*75*
(21)	% disability		100	100	100
(22)	Multiplier (in %)		47	47	47
(23)	Annuity factor, M45		21.722	21.722	21.722
(24)	Estimated cost [(1) x (18) x (19)]x[20)]x[(21) x (22) x (12 x (2)) x (23)]/1000000	million Birr	79	46	92
(25)	Cost as a % of estimated payroll [100 x (24)/(3)]		0.097	0.057	0.114
	No loss of incapacity				
(26)	Incidence (in %)		0.013	0.013	0.013
(27)	Scenario factor (in %)		100	59	118
(28)	Proportion (in %)		25	25	25
(29)	% disability		*55*	*45*	*75*
(30)	Multiplier (in %)		47	47	47
(31)	Duration (months)		60	60	60
(32)	Estimated cost [(1) x (18) x (19)]x[20)]x[(21) x (22) x (12 x (2)) x (23)]/1000000	million Birr	3	2	5
(33)	Cost as a % of estimated payroll [100 x (32)/(3)]		0.004	0.002	0.007
(34)	Permanent disability cost as a % of estimated payroll [(24) +(33)]		0.101	0.059	0.121
D.	**Fatality**				
(35)	Incidence (in %)		0.004	0.004	0.004
(36)	Scenario factor (in %)		100	59	118
(37)	% disability		100	100	100
(38)	Multiplier (in %)		47	47	47
(39)	Annuity factor, F40		25.895	25.895	25.895
(40)	Factor to cover other benefits (in %)		*110*	*110*	*110*
(41)	Estimated cost [(40)*{[(1) x (35) x (36)]x[(37) x (38) x (12 x (2)) x (39)]}/1000000]	million Birr	48	28	57
(42)	Cost as a % of estimated payroll [100 x (41)/(3)]		0.060	0.035	0.070

Section D provides the calculation of fatality benefits. The cost of death benefits is the product of the incidence of fatalities among workers multiplied by survivor and other death benefits. The survivor benefit is a lifetime pension at 47 per cent of worker's wages calculated for a representative spouse female age 40. To estimate other death benefits, the survivor benefit is multiplied by a factor of 110 per cent.

Table 4.13.1. Illustrative contribution costs

		Units	Base	Low	High
E.	**Employer Liability Scheme**				
(43)	Estimated cost	million Birr	*38*	*38*	*38*
(44)	Cost as a % of estimated payroll [100 x (41)/(3)]		0.046	0.046	0.046
F.	**Total Cost of Benefits**				
(45)	Estimated cost [(10) + (15) + (24) + (32) + (41) +(43)]	million Birr	245	160	284
(46)	Cost as a % of estimated payroll [100 x (45)/(3)]		0.303	0.197	0.350
G.	**Administration Expense**				
(47)	**Percentage of total benefit cost** (in %)		***5.00***	***5.00***	***5.00***
(48)	Estimated cost [(47) x (45)]	million Birr	12	8	14
(49)	Cost as a % of estimated payroll [100 x (48)/(3)]		0.015	0.010	0.018
H.	**Total Cost**				
(50)	Estimated total cost [(45) + (48)]	million Birr	258	168	298
(51)	Contribution rate per 100 of payroll [100 x (50)/(3)]		**0.318**	**0.207**	**0.368**

Section E carries forward the cost of the employer liability scheme.

Sections B to E allow for a summation of benefit costs in Section F. This generates an estimate of administration costs as a percentage of total benefit cost (Section G). Section H shows the total expenses in Birr (millions) and as a percentage of total payroll or insurable earnings.

Note that there is a base scenario, a low scenario and a high scenario. The base scenario assumes an incidence rate not too far from that of the high scenario. Also note that there is neither an explicit additional cost assumption nor amortization of the costs of existing claims in the illustrated uniform contribution rate. It is assumed that workers covered by the employer liability scheme will continue in the scheme.

4.13.2. Calculator – data and assumptions

Accidents are only reported from around 10 per cent of the undertakings that are covered by the legislation

The 2013 data for paid employees, non-fatality rate per thousand of paid employees, fatality rate per hundred thousand paid employees and the paid employees' average monthly wage provided the starting point for the 2016 assumptions in Table 4.13.2. The fatality rate assumes that only 10 per cent are reported and adds a small margin. The non-fatality rate

assumes that only 10 per cent are reported and adds a material margin by multiplying by a factor of two.

The no-loss time claims are observed to be roughly twice the number of loss time claims. Long-term disability or permanent disablement appears to be a very small proportion of the loss time claims. It is assumed to be 3 per cent.

Table 4.13.2. Data and assumptions

Year	Data			Assumption	
	1999	2005	2013	2016	
Population	54 453 004	63 228 599	55 629 498	–	–
Labour force (15-64)	22 320 493	33 088 793	41 895 508	–	5.8%
Employed population (15-64)	20 453 958	31 435 108	34 030 077	–	–
Employed payroll	–	–	–	–	5.8%
Employed persons	20 432 891	25 508 572	34 030 077	–	–
Paid employment	1 831 101	1 327 608	4 252 601	4 500 000	4 500 000
Total number of claims	4 127	1 422	3 236	67 730	–
No loss time claims (NLT)	–	–	824	45 000	4 380 000
Loss time (LT) claims (excludes fatality)	4 115	1 417	2 394	22 500	–
Long-term disability	–	–	–	675	–
Fatal claims	12	5	18	230	–
Number of days lost	14 669	–	5 889	454 600	–
Total benefit payments	200 014	–	4 864 864	–	–
Non-fatal rate (per 1000 paid employment)	2.25	1.07	0.76	15.0	15
Fatal rate per 100k paid employment	0.66	0.38	0.42	5.0	5
Lost days per accident	3.6	–	2.4	20.0	–
Payments per accident, LT and fatal	48	–	2 017	2 200	2 115
Paid employment average monthly wage			1 305	1 500	1 500
LT claims per NLT claims (in %)				50.000	
Long-term disability rate per LT claim (in %)				3.000	
Decent Work Profile Ethiopia, Annex 4					

4.13.3. Calculator –scenarios and assumptions

Three scenarios were derived from the assumptions discussed above based on the data from 2016. These assumptions were used for the high assumption scenario, a low assumption scenario was derived at 50 per cent of the high assumption scenario and a base assumption scenario was derived at 85 per cent of the high assumption scenario.

The total claim is the sum of fatality claims, no loss time claims and loss time claims. The incidence rate is the total claim as a percentage of paid employment; 1.28 per cent is a reasonable level.

Table 4.13.3. Scenarios and assumptions

	85%		50%	100%
	Base assumption		Low assumption	High assumption
	2016	Incidence (in %)	2016	2016
Paid employment	4 500 000		4 500 000	4 500 000
Total number of claims	*57 600*	1.280	*33 920*	*67 730*
No loss time claims (NLT)	*38 300*	0.851	*22 500*	*45 000*
Loss time (LT) claims (excludes fatality)	*19 100*	0.424	*11 300*	*22 500*
Long-term disability	*570*	0.013	*340*	*680*
Fatal claims	*200*	0.004	*120*	*230*
Non-fatal rate (per 1,000 paid employment)	15	–	–	–
Fatal rate per 100k paid employment	5	–	–	–
Lost days per accident	20	–	–	–
Payments per accident, LT and fatal	2 200	–	–	–
Paid employment average monthly wage	1500	–	–	–
LT claims per NLT claims (in %)	50.000	–	–	–
Long-term disability rate per LT claim (in %)	3.000	–	–	–

Table 4.13.3a. Sample disability pensions and assumptions

	Current	C.121	C.121	
Average monthly salary	1 500	1 500	1 800	–
Payroll	–	–	–	81 000 000 000
Average monthly salary	–	–	–	1 500
Average monthly salary with a floor of 1 000	–	–	–	1 800
(in %)	47	60	60	–
Annuity Factor (M, 55, 1.17%, Ethiopia Mortality)	–	–	–	16.456
Disability pension for life	139 120	177 600	213 000	296 000
Annuity Factor (F, 50, 1.17%, Ethiopia Mortality)	–	–	–	20.691
Disability pension for life for survivor	174 840	223 200	268 200	372 000
(in %)	47	60	60	–
Annuity Factor (M, 45, 1.17%, Ethiopia Mortality)	–	–	–	21.722
Disability pension for life	183 770	234 600	281 400	391 000
Annuity Factor (F, 40, 1.17%, Ethiopia Mortality)	–	–	–	25.895
Disability pension for life for survivor	219 020	279 600	335 400	466 000

The working population of Ethiopia is relatively young. Table 4.13.31 illustrates the pension annuity factor for a male aged 45 and a corresponding female surviving spouse aged 40 as well as for a male aged 55 and a corresponding female surviving spouse aged 50.

4.13.4. Summary results

Table 4.13.4a summarizes the step-by-step calculations in Section 4.13.3 under the current benefits.

Table 4.13.4a. Summary Results – current

		Base	Low	High
Uniform contribution rate		0.318	0.207	0.368
Estimated payroll (million)	81 000			
Paid employment	4 500 000			
Total costs (in million)		**257.71**	**167.50**	**297.70**
Long-term disability		81.88	47.81	97.74
0Fatality		48.20	28.35	56.70
Short term disability		71.97	42.33	84.66
No loss time		5.75	3.38	6.76
Pension scheme		37.66	37.66	37.66
Administration		12.27	7.98	14.18
Incidence rates	1.280			
No loss time claims (NLT) incidence rate (in %)	0.851			
Loss time (LT) claims (excludes fatality) incidence rate (in %)	0.424			
Long-term disability incidence rate (in %)	0.013			
Fatal claims incidence rate (in %)	0.004			
Assumptions				
Pension monthly benefit level (in %)	47			
Average monthly wage	1 500			
Medical benefits	150			
Rehabilitation benefit	500			
Expense load (in %)	5			
Temporary disability average loss days	45			
Fatality benefit load (in %)	110			
Permanent disability % (100% incapacity)	100			
Permanent disability % (no incapacity)		55.0	45.0	75.0
Proportion total incapacity (in %)	75			
Permanent disability (no incapacity) months of benefits	60			
LTD annuity factor	21.722			
SV annuity factor	25.895			
Scenario factor (in %)		100.0	58.8	117.6

Table 4.13.4b summarizes the corresponding results at 50 per cent pension benefit level. Further it assumes that there is a minimum level of benefit so the average monthly salary is set at 1,800.

Table 4.13.4b. Summary Results – alternative 1

		Base	Low	High
Uniform contribution rate		0.379	0.243	0.440
Estimated payroll (in million)	81 000			
Paid employment	4 500 000			
Total costs (in million)		**307.26**	**196.51**	**356.42**
Long-term disability		104.52	61.03	124.78
Fatality		61.53	36.19	72.38
Short term disability		83.88	49.34	98.68
No loss time		5.75	3.38	6.76
Pension scheme		37.66	37.66	37.66
Administration		13.93	8.91	16.16
Incidence rates (in %)	1.280			
No loss time claims (NLT) incidence rate (in %)	0.851			
Loss time (LT) claims (excludes fatality) incidence rate (in %)	0.424			
Long-term disability incidence rate (in %)	0.013			
Fatal claims incidence rate (in %)	0.004			
Assumptions				
Pension monthly benefit level (in %)	50			
Average monthly wage	1 800			
Medical benefits	150			
Rehabilitation benefit	500			
Expense load (in %)	4.8			
Temporary disability average loss days	45			
Fatality benefit load (in %)	110			
Permanent disability % (100% incapacity)	100			
Permanent disability % (no incapacity)		55.0	45.0	75.0
Proportion total incapacity (in %)	75			
Permanent disability (no incapacity) months of benefits	60			
LTD annuity factor	21 722			
SV annuity factor	25 895			
Scenario factor (in %)		100.0	58.8	117.6

Table 4.13.4c summarizes the corresponding results at 60 per cent pension benefit level. It also assumes that there is a minimum level of benefit with the average monthly salary set at Birr 1,800.

Table 4.13.4c. Summary Results – alternative 2

		Base	Low	High
Uniform contribution rate		0.421	0.267	0.490
Estimated payroll (in million)	81 000			
Paid employment	4 500 000			
Total costs (in million)		**341.23**	**216.36**	**396.77**
Long-term disability		125.43	73.24	149.73
Fatality		73.83	43.43	86.86
Short term disability		83.88	49.34	98.68
No loss time		5.75	3.38	6.76
Pension scheme		37.66	37.66	37.66
Administration		14.69	9.32	17.09
Incidence rates (in %)	1.280			
No loss time claims (NLT) incidence rate (in %)	0.851			
Loss time (LT) claims (excludes fatality) incidence rate (in %)	0.424			
Long-term disability incidence rate (in %)	0.013			
Fatal claims incidence rate (in %)	0.004			
Assumptions				
Pension monthly benefit level (in %)	60			
Average monthly wage	1 800			
medical benefits	150			
Rehabilitation benefit	500			
Expense load (in %)	4.5			
Temporary disability average loss days	45			
Fatality benefit load (in %)	110			
Permanent disability % (100% incapacity)	100			
Permanent disability % (no incapacity)		55.0	45.0	75.0
Proportion total incapacity (in %)	75			
Permanent disability (no incapacity) months of benefits	60			
LTD annuity factor	21 722			
SV annuity factor	25 895			
Scenario factor (in %)		100.0	58.8	117.6

PART III. ADMINSTRATION

Administration covers various levels of responsibility. At the State level, the Minister (MoLSA) is empowered to implement the labour law and execute the labour administration system. The Advisory Board is responsible for investigating the status of the employment service, working conditions, the safety and health of workers and the labour laws in general, and advising the Minister accordingly.

To implement the labour administration system, the Minister has established an employment service, a labour inspection service and a permanent advisory board.

Administration of the pension fund is relevant to employment injury insurance because employer/public office and employee/public servant contributions are deposited into the fund, benefit payments for the workers and operational expenses for the Agency (POESSA/PSSSA) are withdrawn from the fund, and any remaining funds are invested at the discretion of the Ministry of Finance and Economic Development.

5. Administration

Administration is vital to any form of insurance system. Efficiency requires qualified staff, documented policies and supporting directives as well as a reporting system that is flexible and automated as far as possible.

This section reviews: (i) the structure; (ii) some policies, legislation and regulations specific to administration; and (iii) some audits of the implementation of employment injury insurance.

The Ministry of Labour and Social Affairs is mandated with labour administration. The Public Servants Social Security Agency and the Private Organizations' Employees Social Security Agency are accountable to the Ministry.

The Ministry of Public Service and Human Resource Development has its own Occupational Safety and Health Unit, which is responsible for promoting safety and health in the public sector. [40]

"The inspectorates of the Federal Civil Service Agency and the Ministry of Health were outside the main labour inspection organizational structures, and we recommend that relevant Ministries consider the feasibility of integrating these inspectorates." [41]

The labour administration must be responsive to the needs of the labour market and in synchrony with the direction of the national employment policy.

[40] Technical Memorandum Ethiopia Labour Inspection Audit, p. 10.

[41] Ibid., p. 19.

5.1. National Employment Policy

There is a rapid growth of labour supply. [42] Almost half the population is below the age of 15. [43] The national employment policy must reflect the interaction between labour supply and demand.

5.1.1. Trends in the Labour Market

A large segment of the labour market is in the informal sector and subsistence farming. [44] About 10 per cent of the employed population is in paid employment. [45]

The employment policy framework, including employment injury insurance, needs to address this profile and the dynamics of the labour population. Employment injury insurance needs to provide protection to the wider working sector.

The country's focus on agriculture and rural development for broad-based growth is a key initiative. [46] Roughly 85 per cent of the population is in rural areas and dependent on agriculture. [47]

The informal sector consists of the self-employed or own-account workers (OAW) and contributing family workers (CFW).

5.1.2. Status of the Labour Market Institutions

The Labour market institutions consist of the employers' organizations and the trade unions. These usually support the formal employment sector.

5.1.3. Labour Market Data

The Central Statistical Agency has several comprehensive sources of data, mainly from surveys. These include the 1999, 2005 and 2013 Labour Force Surveys, the 2007 Census and the 2009 and 2010 Urban Employment and Unemployment Surveys. It would be beneficial to link the results of these surveys (and any future surveys) and analyse trends over time. Care should be taken to ensure that historical comparative data are not lost.

[42] National Employment Policy and Strategy of Ethiopia, MoLSA, November 2009, p. 1.

[43] Decent Work Country Profile Ethiopia, Annex 1.

[44] Ibid., p. 1.

[45] National Social Protection Policy of Ethiopia, p. 7; Decent Work Country Profile Ethiopia, Annex 4.

[46] National Employment Policy and Strategy of Ethiopia, p. 5.

[47] Ibid., p. 5; Decent Work Country Profile Ethiopia, Annex 1.

5.1.4. Rationale

The goal is very straight forward. The vision is to become a middle income country within 20 years. [48] There is a need for an integrated framework of policy formulations that deals with both the supply and demand aspects of labour and institutional reforms. [49]

5.1.5. Objectives

The objectives include social welfare, economic growth and political stability. The goal of economic growth is to sustain and develop the most important resource of the country, the labour force. [50] This goal involves employment protection and employment injury insurance.

5.1.6. Policies and Strategies

It is recognised that both the formal and informal sectors of private industries need to be enhanced, and that the civil service needs to be lean and highly skilled in order to support a thriving private sector. On the demand side [51] of the labour market, there is a need to create a demand for more labour intensive opportunities for the large and growing working population. On the supply side [52] of the labour market, there is a need to promote increased productivity of agriculture and the informal sector as well as further strengthening of the private and public sectors.

5.1.7. Institutional Framework

Labour protection and decent working conditions must be insured, and gaps in the legislative framework need to be filled.

5.1.8. Administration

MoLSA and its regional counterparts (Bureaus of Labour and Social Affairs) will have crucial roles.

5.2. Ministry of Labour and Social Affairs

Part Eleven of Labour Proclamation No. 377/2003 deals with the enforcement of the labour law, labour administration and the powers of the Minister of Labour and Social Affairs with respect to the labour administration system. It notes that the labour administration system requires the establishment of an employment service, a labour inspection service and a permanent tri-partite Advisory Board, with members from the government, employers' associations and trade unions. [53] The Ministry of Labour and Social

[48] National Employment Policy and Strategy of Ethiopia, p. 12.

[49] Ibid., p. 12.

[50] Ibid., p. 13.

[51] Ibid., pp. 15-25.

[52] Ibid., pp. 26-39.

[53] Labour Proclamation No. 377/2003, p. 2499.

Affairs therefore has a major role in enabling a peaceful relationship between workers and employers, as well as a primary role in occupational health and safety and the respective services that are required. The Ministry is mandated with labour administration including occupational safety and health at national and regional levels.

MoLSA is a member of the Council of Ministers at the federal level. The Minister of Labour and Social Affairs and one State Minister are responsible for labour affairs and another State Minister is responsible for social affairs. The Labour Advisory Board is tripartite and has fifteen members. The Labour Relations Board hears collective labour disputes. [54]

5.3. Bureau of Labour and Social Affairs (BoLSA)

At the regional level are the Bureaus of Labour and Social Affairs (BoLSAs) and the two City Administrations in Addis Ababa and Dere Dawa. These bureaus and city administrations are responsible for labour administration and labour inspections. Labour inspections are further delegated to zone and district offices. [55]

5.4. Labour Advisory Board

Labour Proclamation No. 377/2003 stipulates a tripartite board promoting tripartite consultation.

The Advisory Board advises MoLSA on labour matters. The intent is also to promote tripartite consultations at the regional levels. Social partners include:

– Ethiopia Employer' Federation;

– Confederation of Ethiopian Trade Unions.

5.5. Occupational Safety and Health and Working Environment Department

At the Federal level the Occupational Safety, Health and Working Environment Department (OSHWED) is responsible for labour inspections.

OSHWED has three teams each responsible for labour inspection matters in the areas of:

– Occupational safety;

– Occupational health;

– Minimum conditions of work.

OSHWED performs labour inspections for 106 publicly owned enterprises in Addis Ababa and Dere Dawa.

In addition to labour inspections, OSHWED has functions in policy making as well as in data collection and analysis. OSHWED is expected to compile national statistics from

[54] Decent Work Country Profile Ethiopia, p. 12.

[55] Technical Memorandum Ethiopia Labour Inspection Audit, p. 5.

information provided by BoLSA. There is a dedicated agency for implementing a national register of occupational injuries. [56]

The other two agencies with MoLSA are Industrial Relations and Employment Services; these provide advice to labour inspectors in their respective areas. [57]

5.6. Labour Inspection Services

The federal structure of the government is reflected in the structure of labour inspection services.

OSHWED is responsible for labour inspections at the federal level, in particular the Occupational Safety and Health Unit within the Federal Civil Service Agency, which has its own labour inspectors. [58] At the regional level, labour inspection services are the responsibility of the BoLSA and the City Administrations of Addis Ababa and Diere Dawa. The BoLSAs and the City Administrations have Zone offices with inspectors and District offices with labour officers. There are nine different regions and two city administrations. The city administrations are only responsible for the labour inspections of private enterprises.

Objectives of the labour inspection service: [59]

– ensure work places minimize occupational accidents, diseases and disabilities;

– promote good health and safety of the worker at the workplace;

– encourage respect for minimum working conditions;

– ensure that the construction of workplaces respects the environment and workers;

– protect workers against hazards at the workplace such as contaminants, chemical substances, physical forms of energy;

– ensure that workers respect and implement occupational safety and health guidelines, policies and facilities;

– require employers to assess hazards of methods, processes, construction, machinery and substances, and educate workers accordingly;

– ensure compliance with occupational safety and health legislation and directives;

– record and report occupational information and injuries on a timely basis to competent authorities.

[56] Ibid., p. 9.

[57] Ibid., p. 9.

[58] Ibid., p. 10.

[59] Occupational Safety and Health Profile for Ethiopia, p. 29.

The key to successful planning depends to a large extent on having a comprehensive computer database or registry of establishments, accidents, etc. While some registries are kept, these are not comprehensive and need to be updated. Modern IT systems in the Federal and Regional offices would help enormously here, while questions of cost have to be considered. [60]

Section 7.3 of the Technical Memorandum Ethiopia Labour Inspection Audit has many valid and specific recommendations regarding organization and communications.

These mainly involve:

- Consistency – ministries, federal/regional/district levels, public or private enterprises.
- Tripartite consultations – government, employers and employees.
- Policy making versus operational issues – policy makers cannot manage both, but there needs to be interaction and integration of the two areas given continual change in employment markets and environments.
- National statistics to allow proactive anticipation and prevention instead of reaction to workplace incidents.

Section 7.3 of the Technical Memorandum Ethiopia Labour Inspection Audit has other recommendations specific to inspection programmes, staffing and training.

5.7. Recommendations

(1) Labour inspection services: nine regional and two city administration offices. City administrations only inspect private enterprises, with rationale of location of private enterprises and availability of labour inspectors. Processes, procedures, protocols, forms/documentations and legal enforceability of orders. Suggest consistency at the principle level but flexibility at the detail level. Suggest the ability to summarise data from private as well public enterprises. Suggest similar levels of training for labour inspectors in regional and city administrations and possibly cross-training.

(2) Labour inspection services: research and development of OSH promulgations. Suggest allocation of specific resources, manpower and budget, as these areas need to work hand-in-hand with national employment and social protection programmes aimed at targeting developments in certain sectors of industry or labour supply.

(3) Labour inspection services: conduct studies and compile statistical data on employment injuries. Suggest allocation of specific resources, manpower and budget, as these studies and data will indicate useful trends and warning signals. Comprehensive and accurate statistics for private/public enterprises, workers and injured workers.

(4) Tri-partite advisory board: advisory boards ensure oversight, governance and overall financial well-being for an employment injury insurance system. Opposing vested interests among the various stakeholders provide a balance between benefits and contribution rates and public interest.

[60] Technical Memorandum Ethiopia Labour Inspection Audit, p. 13.

5.8. Illustrative Components of an Administration Structure for Employment Injury Insurance

A dedicated corporate body responsible for the administration of an employment injury insurance system has many advantages.

Collection as well as the associated documentation and process for such collection are crucial, since the expenses of the administrative body are dependent on the collections. The administrative body must maintain the long-tern sustainability of the workers' compensation system, and ensure intergenerational equity and collective liability among employers.

It is crucial to understand the needs and delivery of caring, sufficient and balanced services to employers as well as healthy and injured workers.

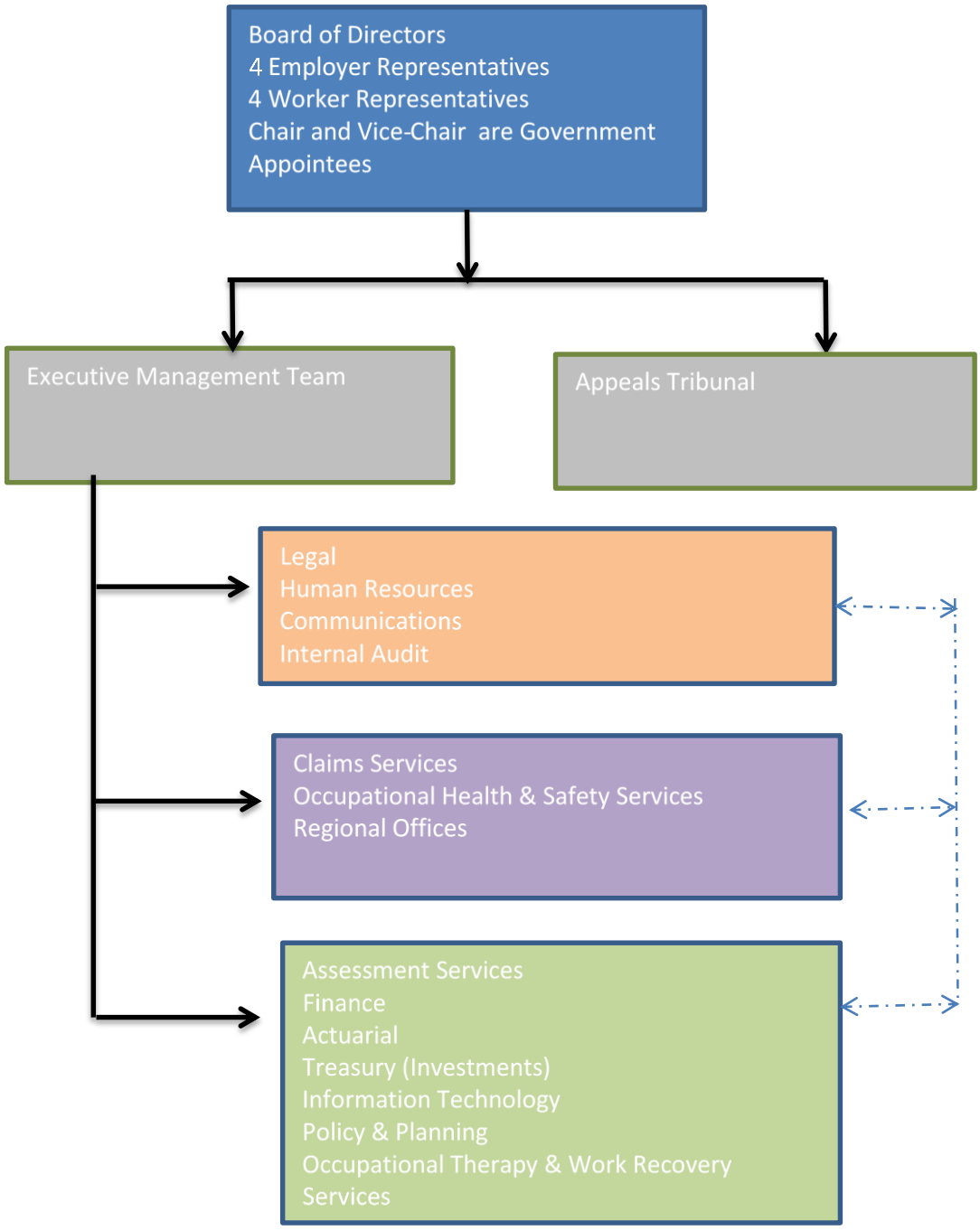
The oversight body for the administrative system requires representation from the employers, the workers and the government to ensure balance among the needs of these stakeholders. This tri-partite representation ensures that the system will self-correct as a long-term, on-going enterprise.

It is also inherent that the organization is under the auspices of a government ministry. This ministry appoints the chairperson and the vice-chairperson. It also appoints board members from representatives recommended by the employers and the workers. The terms of office are long enough to allow for meaningful work but not too long to encourage complacency.

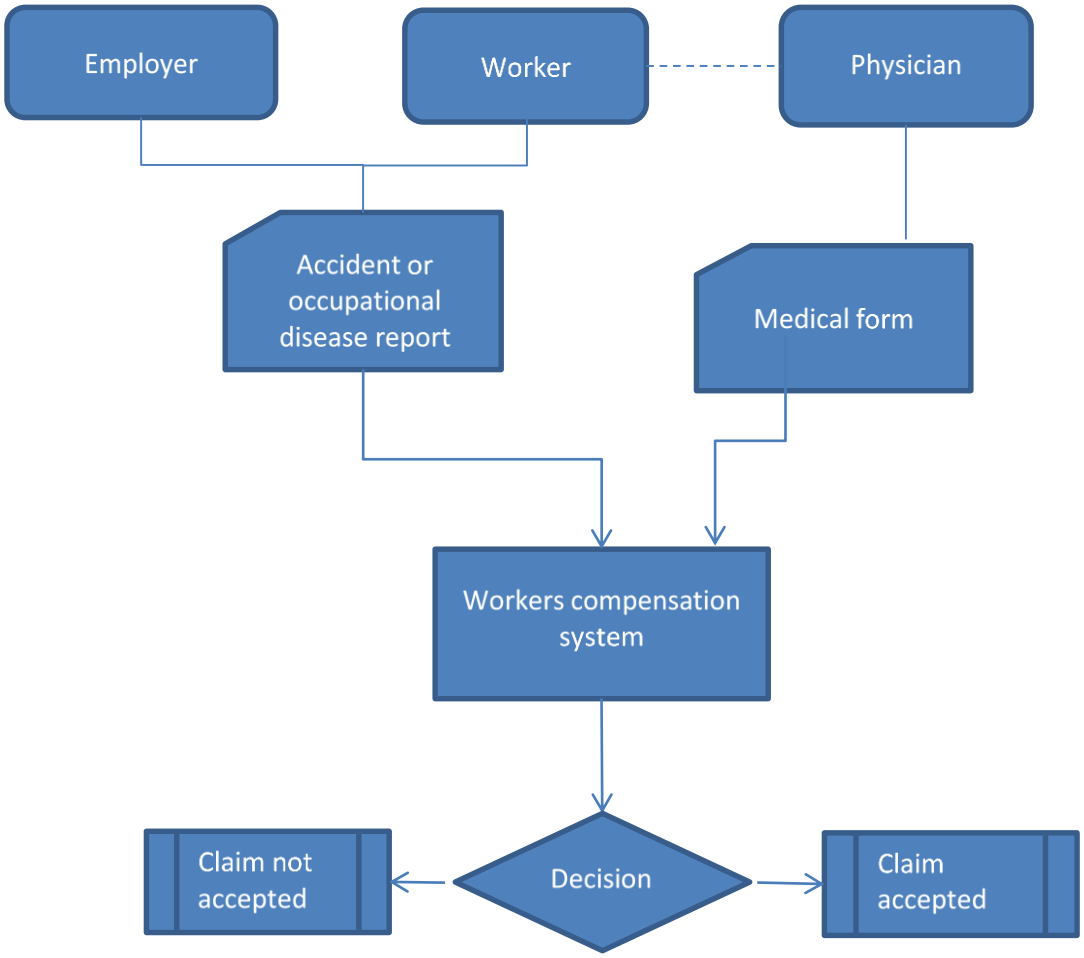
The organization requires:

- Board, with equal representation from the employers and from the workers. The government appoints the chairperson and the vice-chairperson, and takes full responsibility for all decisions of the organization;
- Staff, led by an executive management team, composed of technical professionals, fully supporting the Board;
- Appeals Tribunal, where the complaints of employers, workers and injured workers are made, heard and decided upon;
- Work services, providing claims services, occupational health and safety services, and including a regional structure for accessibility to local employers and workers and injured workers; second opinion from medical practitioners and associated services;
- Corporate services, providing assessment collection as well as finance, actuarial, investment, information technology, policy and planning and sometimes occupational health and recovery services;
- Overhead support such as human resources, communications, legal counsel and internal audit.

Organization – Basic structure



Initiation process of a compensation claim



Some of the basic forms are:

- Accident or Occupational Disease Report;
- Incident Report;
- Physician Procedure Billing;
- Surgery Billing;
- Clearance Certificates;
- Employer Registration Application;
- Optional Personal Coverage Application.

Accident or Occupational Disease Report

- Name and contact information of injured worker; name and identification information of employer including a contact person and his contact information;
- Details of the accident or occupational disease, including date of accident, dates of start and finish of exposure to cause of occupational disease, part of body injured, address and location and description of accident, witnesses and physician's information;

- Employer to complete information regarding injured worker such as date of hire, type of employment including whether a subcontractor, owner/operator or piece worker, gross weekly earnings, number of hours per day and any employment benefits to be paid to the injured worker;

- Dated signatures of the injured worker and employer.

Incident Report

- Accidental exposure incident;

- Preliminary information;

- Employer information including name of person reporting and contact information;

- Details of the incident being reported such as loss of consciousness, amputation, fracture, burn, loss of vision, deep laceration, admission to hospital or death; exposure to biological, chemical or physical agents, explosion, catastrophic event or catastrophic equipment failure;

- Description of the incident including date and time, location, and preliminary details;

- For incidents or events with injuries, injured worker(s), nature of injury and information on the hospital if relevant;

- Sampling details for exposures.

Clearance Certificate

This document certifies in writing that the enterprise has no outstanding assessment contributions to the employment injury insurance system. It is issued annually by assessment services.

Employer Registration/Optional Personal Coverage Application

All employers or enterprises subject to mandatory coverage by the employment injury insurance system are required to register. Those that are not automatically covered by legislation may purchase optional personal coverage.

Management Information System

Administration data files are the basis of a management information system. Administration systems are real-time, online information technology systems that record information as processes and procedures are initiated, updated or completed. Information is stored and retrieved or updated as necessary.

Some characteristics of an administrations system are:

- Backed up regularly, for example weekly;

- Snap shot version at end of the month, and end of the year, labelled MIS or management information system;

- Accessible as read-only for most part of the organization, sometimes there are production and test versions;

- Feeds other systems such as the general ledger system for financial statements and finance activities;
- Feeds and receives data from occupational health and safety systems;
- Tightly controlled access.

Information technology has specialists in data architecture, applications and technical support for software and hardware. Updates to tables of data are controlled by level and type of change, and the associated level and type of information technology management.

The following tables of information are essential:

- Employer data;
- Accident data;
- Claim data;
- Claimant or individual data or injured worker data;
- Claim transaction data.

Additional data tables also need to be defined:

- Claim disposition codes;
- Payment type codes;
- Claim status codes;
- Claim status type codes.

The information technology systems and the data are dynamic and safeguarded by audit trails and controls.

The following are illustrative data files:

Employer file

eer _no	eer_name
eer_type_code	eer_region_code
vol_coverage_flag	contractor_flag
subcontractor_flag	collection_letter_flag
billing_cycle_code	mo_current_balance
mo_over30_balance	mo_over60_balance
mo_over90_balance	total_mo_balance
ann_current_balance	ann_over30_balance
ann_over60_balance	ann_over90_balance
total_ann_balance	last_audited_date

Claim file

claim _no
claim_status_code
legisllation_code
admin_region_code
claim_manager_user_id
receiving salary code
occupation_code
classification_system_type_code
classification_system_code
claim_creation_date
total_days_lost
total_claim_cost
fatality_flag
disallow_reason_code

Accident file

claim _no
accident_name
accident_county_code
accident_date
age_at_accident
event_exposure_code
source_of_injury_code
orig_nature_of_injury_code
nature_of_injury
part_of_body_code
accident_eer_no
accident_eeer_operation_no
accident_residence_county
length_of_service
second_source_of_injury_code

CLAIM_STATUS_TYPE_CODE

F 01	final
F 02	first & final
F 03	lost time med aid only
F 04	no lost time
F 05	out of country
J 11	adjudication
J 12	appeal
J 13	reconsideration
J 14	reopening-recurrence
J 15	reopening-administrative
J 16	review
R 06	claim recorded
R 07	claim disallowed
R 08	claim error
R 09	no claim
P	pre-adjudication
A	active

CLAIM_DISPOSITION_CODE

001	pre-acc eer-same job
002	pre-acc eer-mod job
003	pre-acc eer-new job
004	new eer-same type of job
006	new eer-new job
007	self-employed
008	LOE ended
009	pension award > PAE
010	lump sum pay out
011	unable to work
012	voluntary retirement
013	ben terminated non-compliance
014	>=age 65
015	deceased IW
016	left country
017	returned to school
018	miscellaneous
019	surviving spouse option selected
020	no longer dependent
021	ben terminated non-compensable
022	return to RLOE from LTD
023	pre-recurrence job
024	deceased dependants

PAYMENT_TYPE_CODE

1	47% regular LOE
2	47% final LOE
3	47% adjustment LOE
6	47% ST RLOE
7	47% LT RLOE
8	post 2016 47% RLOE
-1	50% regular LOE
-2	50% final LOE
-3	50% adjustment LOE
-6	50% ST RLOE
-7	50% LT RLOE
-8	post 2016 50% RLOE
1	60% regular LOE
2	60% final LOE
3	60% adjustment LOE
6	60% ST RLOE
7	60% LT RLOE
8	post 2016 60% RLOE
01	60% training on the job
02	60% vocational training
03	60% academic training
04	60% interim rehab payment
05	60% work assessment
06	60% supplementary
07	correspondence/night course
08	grants
09	rehabilitation aids
10	home modifications
14	temporary partial disability
15	temporary partial disability lump sum
16	permanent partial disability partial lump sum
17	vocational rehabilitation
18	burial expenses
21	medical account
22	drugs
23	transportation
24	ambulance
25	medical supply/artificial appliance
26	glasses/contact lenses
27	dentures/teeth
28	clothing allowance
29	hearing aids
30	care allowance
3D	waiting days reimbursement
41	hospital account
42	nurse
43	lab test
44	board
45	legal fees
50	physiotherapy

Individual file

individual _no
ss_no
healthcare_no
birth_date
death_date
sex
language_code
last_name
given names
address line 1
address line 2
city
region_state_code
case_managed_flag
country_code
postal_code
location_code
location_type_code
telephone_no
bank_no
bank_transit_no
bank_account_no
history_flag

Claim 1 file

claim _no	claim_status_code
claim_status_type_code	admin_region_code
claim_manager_user_id	rehab_officer_user_id
occupational_therapist_user_id	comp_week_code
compa_day_code	individual_no
administering_act_code	rejected_legislation_claim_no
duplicate_of_claim_no	case_managed_flag
receiving_salary_flag	difficult_claim_flag
image_flag	history_flag
accident_date	accident_county_code
accident_residence_county_code	accident_eer_no
accident_eer_operation_no	eer_type_code
part_of_body_code	
classification_system_type_code	
years_of_service	months_of_service
disallow_reason_code	cost_allocation_no
cost_allocation_operation_no	
cost_allocation_type_code	
pen_cost_allocation_no	
pen_cost_allocation_operation_no	
pen_cost_allocation_type_code	percent disability
legislation code	
annual_ben_review_due_date	
percent_impaired	
impaired_determination_date	
rtw_incentive_status_code	pension_status_code
pension_benefit_start_date	

Applied Claim Txn file

txn _no	claim_no
payment_no	txn_type_code
batch_no	recipient_no
recipient_type_code	
recipient_sub_type_code	
coc_period	cost_allocation_no
cost_allocation_operation_no	
cost_allocation_type_code	
manual_cheque_req_no	cheque_no
cheque_deposit_date	bank_no
bank_transit_no	bank_account_no
payment_method_code	non_tax_amount
tax_amount	txn_amount
admin_region_code	
scheduled_processing_date	processed_date
explanation	txn_entry_date
txn_entry_user_id	related_txn_no
canceled_txn_flag	
recipient_name	
address line 1	
address line 2	
city	
region_state_code	
country	
postal_code	
use_default_address_flagcheque_print_group_code	

Part IV. SCHEDULE – LIST OF OCCUPATIONAL DISEASES; ASSESSMENT TABLE OF DISABILITY

Article 98 of Labour Proclamation No. 377/2003 requires a Schedule that includes a list of occupational diseases and an assessment table of disability.

Relevant considerations regarding occupational diseases and rates of disability are discussed below.

6. Occupational diseases

6.1. Introduction to Occupational Health Services

This section is intended to provide background information on the concepts of incapacity, impairment and disability. The use and development of tables of bodily injury percentage and occupational diseases are discussed. Recommendations and alternatives are provided.

Occupational medicine, occupational safety and compensation of adverse events are relatively new concepts that emerged in the late nineteenth century. Anecdotal reports linked work and disease much earlier, such as descriptions of accidents in Egyptian papyri and connections that Hippocrates made between asthma and work. Philippus von Hohenheim (Paracelsus) described specific disorders in miners as early as around 1500.

Making working conditions safe and healthy is in the interest of workers, employers and governments, as well as the public at large. Although it seems simple and obvious, this idea has is not yet universally recognised. Hundreds of millions of people throughout the world are employed today in conditions that result in ill health and/or are unsafe (WHO 1999): [61]

- Each year, work-related injuries and diseases kill an estimated 2 million people worldwide, which roughly equals the global annual number of deaths from malaria.
- Only 5-10 per cent of workers in developing countries and 20-50 per cent of workers in industrial countries (with a few exceptions) are estimated to have access to adequate occupational health services. [62]

The health status of the workforce in every country has an immediate and direct impact on national and world economies. Total economic losses due to occupational illnesses and injuries are enormous (WHO 1999). [63]

Occupational diseases and injuries are preventable in principle. Approaches to prevention include developing awareness of occupational health and safety hazards among workers and employers, assessing the nature and extent of hazards, as well as introducing and maintaining effective control and evaluation measures. These approaches are sometimes

[61] World Health Organization. www.who.int/occupational_health/network/en/oeh4meetreport.pdf.

[62] C. Hogstedt, B. Pieris: *Occupational Safety and Health in Developing Countries Review of strategies, case studies and a bibliography*; http://nile.lub.lu.se/arbarch/arb/2000/arb2000_17.pdf.

[63] See note 44.

undertaken solely by employers and workers within a specific workplace. At other times external involvement is needed. This may range from encouragement by appropriate individuals or agencies outside the specific workplace to the promulgation and rigorous enforcement of occupational health and safety regulations.

A major objective of the ILO in relation to occupational safety and health is to enable countries to extend social protection to all groups in society and to improve working conditions as well as health and safety at work through programmes which cover working conditions. The objectives of such programmes are:

– to create worldwide awareness of the dimensions and consequences of work-related accidents, injuries and diseases;

– to promote the goal of basic protection for all workers in conformity with international labour standards; and

– to enhance the capacity of member States and industry to design and implement effective preventive and protective policies and programmes.

Development of a structure specifically addressing occupational health sends a clear message that the conditions of the working population are a national priority. Creation of an Employment Injury Insurance (EII) scheme is a mark of respect and a fair component of a national development plan.

Health care authorities are familiar with and accept as routine the need to provide health care for certain sectors of the community, such as the mother and child, the aged, the handicapped, and the schoolchild. But such facilities are rarely available for the working population. [64] Furthermore, full rehabilitation services are often minimal or neglected in developing countries. The burden must then be borne by relatives.

[64] J. Jeyaratnam: *Occupational Medicine*, 3rd ed., Chap. 77, p. 1139.

Rationale for Special Health Services [65]

Mother and Child (MCH services)	Working population (OSH services)
▪ Important sector: determines future generation	▪ Important to national economy
▪ Large percentage of total population	▪ Large percentage of total population
▪ Vulnerable to health hazards (pregnancy and childhood)	▪ Vulnerable to health hazards at work place
MCH services always present	OCH services usually absent

To achieve provision of decent OSH services, priorities will need to be set and there will need to be cooperation and coordination at the highest levels by stakeholders, including the Ministry of Health, the Ministry of Labour and an Occupational Health Advisory Board. The functions and activities of occupational health services are set out in ILO Convention No. 161 and Recommendation No. 171, and state the essential preventive role of these services. These include surveillance of the working environment, education and training in workers' health, first aid and treatment – all as part of health programmes. To achieve implementation, the authorities will have to enforce or develop field level capacities: the knowledge and expertise of occupational health by medical personnel and doctors, as well as the capacity of OSH inspectors and technicians to assist them with inspections and hygienic measures OSH.

There are specialists in occupational medicine as well as healthcare personnel with specific interests in occupational health in many developing countries. It is important to bring them together. They could be a useful source of recommendations for Ethiopia.

Organizational Model for OSH [66]

Managerial	**Occupational health services – Ministry of Health**	
Secondary care level	Specialists in occupational health and hygiene	University academics – Industrial hygiene – Toxicology/chemistry – Public health Specialists in hospital – Dermatologists – Chest physicians – Neurologists, etc.
Primary care level	Physicians	– Polyclinics – MCH clinics – General practitioners – Company doctors
	Field staff	– Safety officers – Occupational Hygiene Inspectors – Occupational Health nurses, etc.
	Community at risk – working population	

[65] Ibid.

[66] Ibid., p. 1142.

The world and workplaces undergo constant changes that make it more difficult to protect workers and create a safer and more rewarding work environment. Despite all the support structures as well as the good will and involvement of stakeholders in enterprises for preventive measures, workers remain exposed to contaminants and risks of procedures in the workplace. The consequences are occurrence of occupational diseases and work accidents.

Pre-employment medical examination

A company could retain medical services for the management of internal aspects of occupational health and safety. This might be difficult in practice in countries where professional health resources are scarce. There is also a misconception that preliminary documentation of the health of a future worker would provide some protection for employers. In a public social scheme of insurance, pre-employment status does not directly impact the costs of reparation.

This policy should be part of a partnership for better prevention. However, it primarily serves the interests of employers. This management initiative is entirely separate from the responsibilities required of a public insurance scheme for social security. Although there appears to be convergence on some aspects of prevention, the public insurance system must be fully independent of employers. It must be objective in its assessment of the needs of workers.

Employers who implement an internal medical service usually delegate the following activities:

- Determining patient employability or fitness to work prior to employment or after a sick leave.
- Visiting the workplace to obtain more thorough knowledge of work conditions and job requirements, and then advise according to findings.
- Determining work relatedness when a worker presents with an illness or injury whose cause has not been clearly established.
- Making recommendation to the employer to control the cost of disability.
- Evaluating disability objectively and accurately.

However this practice raises several ethical questions related to occupational medicine:

Responsibility: Independence of health professionals who negotiate with the paying agent: to whom is the doctor accountable?

The American College of Occupational and Environmental Medicine's Code of Ethics stresses that:

- *Health professionals "have a primary responsibility to the health and safety of the individual".*
- *The physician "should behave honestly and ethically in all professional relationships".*
- *The physician must give an honest opinion and avoid having his medical judgment influenced by any conflict of interest.*

Confidentiality: Who should have access to the collected data, and which data?

The transmission of sensitive data must be bilateral. If the employer wants some form of protection by documenting the status of its workers, the workers should be informed of any dangers and potential threats to their status.

Reporting: To whom should suspected or known work-related hazards or illnesses be reported?

The current practice suggested for pre-employment exams is more limited. It is not intended to exclude, by discrimination, individuals in the labour market. It is limited to ensure that certain jobs, including activities requiring specific skills or high-risk situations, are not the source of potential dangers to individuals who practice them. Far from being perceived now as a defensive procedure, it is rather a part of a responsible preventive policy based on individual abilities and suitability of skills/tasks.

The responsible authorities must have the tools to address the consequences of adverse events in the context of work. Such tools prevent arbitrary decisions or procedures and provide guidance for the detection, recognition and management of dangerous situations.

Employment Injury Benefits Convention, 1964 [Schedule I amended in 1980] [67] (No. 121), of the ILO pertains to benefits available in case of accidents and occupational diseases.

6.2. Strategies for Action

Developments are needed to promote local autonomy of action in OSH.

First, the responsibilities of the Ministries (Health, Labour and Environment) for determining acceptable levels of exposure of toxic substances and health hazards in the workplace. Development of capacity is needed for monitoring these risk factors by training technicians and industrial hygienists who can make inspections and make recommendations if needed.

Second, there is a need to facilitate medical expertise in occupational medicine both at clinical and university level. The primary healthcare personnel are often asked to identify occupational diseases. This requires appropriate medical training curricula and the necessary equipment.

Recommendation – Promote the development of diagnostic capacity through adequate clinical training of doctors in OSH

Recommendation – Promote the intervention capacity and powers of inspectors in OSH

6.3. Occupational Accidents and Diseases

This section provides some relevant considerations with respect to occupational accidents and diseases. There is a recommended list of occupational diseases. An alternative is also presented.

[67] www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C121

According to the Protocol of 2002 to the Occupational Safety and Health Convention, 1981 (No. 155), the term "occupational disease" [68] covers any disease contracted as a result of an exposure to risk factors arising from work activity.

The ILO Employment Injury Benefits Recommendation, 1964 (No. 121), Article 6 (1), defines occupational diseases in the following terms: "diseases known to arise out of the exposure to substances and dangerous conditions in processes, trades or occupations as occupational diseases."

There are two main elements in the definition of an occupational disease:

- a causal relationship between exposure in a specific working environment or work activity and a specific disease; and
- occurrence of the disease among a group of exposed persons with a frequency above the average morbidity of the rest of the population.

Occupational diseases are dependent on the industries, natural resources and foreign business investments in a country. Injury rates and costs of occupational injuries and diseases provide a factual basis for establishing and evaluating health and safety programmes.

Workers compensation benefits are paid for any injury or disease resulting from a work-related event or exposure to hazardous elements.

For example, with regard to claims by firefighters regarding cancer as an occupational disease, a certain number of years of service may justify the assumption that a primary cancer arose from and in the course of employment. In another example from Ontario (Canada), a primary pleural mesothelioma is regarded as an occupational disease that is compensable if the injured worker can prove current and/or previous employment in a workplace associated with exposure to airborne asbestos fibres.

In other jurisdictions, there is further need for establishing medical and scientific causation, i.e. that work-related exposure has caused the disease. To determine a causal association between the exposure and the disease, the "Bradford Hill" [69] criteria are usually applied. The criteria include plausibility, temporal correlation, specificity, dose-response relationship, consistency and strength of association. An attributable risk fraction is derived which provides "a measure of the proportion of cases reasonably attributable to the exposure".

A date of occurrence is determined. This is usually defined as the date when the disability is first recorded. For example, the date of occurrence of hearing loss is the date of the audiologist's first report on the hearing loss. It is not the date of the initial exposure. The occupational disease or associated disabilities may have resulted from a single exposure at one workplace or multiple exposures at various workplaces.

The list of industrial diseases is strongly correlated with the industries prevalent in a particular jurisdiction. The industrial diseases listed by workers' compensation jurisdictions

[68] *List of Occupational Diseases* (revised 2010): Identification and recognition of occupational diseases: Criteria for incorporating diseases in the ILO list of occupational diseases. Occupational Safety and Health Series 74, p. 7, www.ilo.org/wcmsp5/groups/public/@ed_protect/@protrav/@safework/documents/publication/wcms_150323.pdf.

[69] A. Bradford Hill: The Environment and Disease: Association or Causation? http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1898525/.

are largely determined by the associated industry or process. Some jurisdictions even specify the particular employer.

Philippus von Hohenheim (Paracelsus, 1493-1541), who is regarded as the founder of toxicology, said: "All things are poison and nothing is without poison; only the dose makes a thing not a poison." He also wrote one of the earliest treatises on occupational disease ("On the Miners' Sickness and Other Diseases of Miners".

6.3.1. Industrial Disease

Accidents

Mechanical factors, unshielded machinery, unsafe structures at the workplace and dangerous unprotected tools are among the most prevalent hazards in both industrial and developing countries. They affect the health of a high proportion of the workforce. Most accidents can be prevented by applying relatively simple measures, working practices, and safety systems in the work environment, as well as ensuring that appropriate behavioural and management practices are used. This can significantly reduce accident rates within a relatively short period of time. Accident prevention programmes have been shown to be very cost-effective and yield rapid results. However, ignorance of such precautions, particularly in sectors where production increases rapidly, may lead to increasing rates of occupational accidents (WHO, 1995).

Chemical and organic exposures

About 100,000 different chemical products are currently in use in work environments, and the number is increasing constantly. The extent of exposure varies widely according to the industry, activity and the country. The adverse effects of such exposures include metal poisoning, solvent damage to the central nervous system and liver, pesticide poisoning, skin and respiratory allergies, cancers and reproductive disorders. Pesticide exposure is the major chemical hazard in developing countries, where personal protection is particularly difficult and other preventive means should be implemented (Wesseling et al., 1997). The major threat posed by pesticides in many developing countries is acute poisoning. The WHO recently estimated the annual number of cases of severe poisoning as about 3 million, with about 220,000 deaths.

Mesothelioma is a very specific example of an occupational disease and is associated with any process involving airborne asbestos fibres. Asbestos-induced mesothelioma and lung cancers continue to occur and the incidence has even increased due to the long induction period for this form of cancer. The incidence will eventually decrease as use of asbestos fibres has been banned in many countries.

Malignant epithelioma is associated with any process involving the handling of coal tar, pitch, bitumen, asphalt and related products. Cancer of the nasal cavities or paranasal sinuses is associated with the nickel-producing industry.

There is a long list of occupational diseases that are due to poisoning or chronic conditions arising as complications of exposure to toxic substances. These result from continual exposure to chemical elements or compounds and associated preparations, such as arsenic, benzene, beryllium, brass, nickel, zinc, cadmium, carbon dioxide, carbon disulphide, carbon monoxide, chlorinated hydrocarbons, chromium, fluorine, lead, mercury, nitro or amino-derivatives of benzene, phenol or their homologues as well as compounds of nitrogen and phosphorus.

Biological agents

Many biological agents are responsible for occupational diseases. These include viruses, bacteria, parasites, fungi, moulds and organic dusts. In industrial countries, around 15 per cent of workers may be at risk of viral or bacterial infection, allergies and respiratory diseases. In many developing countries the most important exposures are to organic and biological agents. Hepatitis B and Hepatitis C viruses and tuberculosis infections (particularly among healthcare workers), asthma (among persons exposed to organic dust) and chronic parasitic infections (particularly among agricultural and forestry workers) are the most common occupational diseases that result from such exposures (WHO, 1995).

Anthrax is a bacterial infection associated with any process involving the handling of animal products such as wool, hair, bristles, hides and skin. Brucellosis is also a bacterial infection, and may be acquired by workers in the livestock sector.

Physical exposures

Workers may be exposed to several physical factors that are known to affect their health, such as noise, vibration, radiation and microclimatic conditions.

Noise-induced hearing loss is one of the most prevalent occupational diseases in both developing and industrial countries, although many preventive means are available. Hearing loss is associated with any industry or process where there is prolonged exposure to excessive noise levels. Preventive strategies have also been developed for other physical factors, particularly for localized vibration and ionizing radiation.

Ergonomics and musculoskeletal exposures

Between 10 per cent and 30 per cent of the workforce in industrial countries and between 50 per cent and 70 per cent in developing countries may be exposed to heavy physical workloads or to inappropriate ergonomic working conditions such as lifting heavy items or repetitive manual tasks. Such tasks are found in many industrial and service occupations. Musculoskeletal disorders are the main cause of short-term and permanent work disabilities in many industrial countries, and they can cause economic losses that may amount to 5 per cent of the GDP. Most exposures can be eliminated or minimized through mechanization, improvement of ergonomics, better organization of work and training.

Psychosocial exposures

Up to 50 per cent of all workers in industrial countries judge their work to be “mentally heavy”.

Psychological stress caused by time pressure, hectic work, and risk of unemployment has become more prevalent during the past decade (Isaksson et al., 2000). Other factors that may have adverse psychological effects include jobs with heavy responsibilities for human or economic concerns, and work that is monotonous or that requires constant concentration. Others are shift work, jobs with the threat of violence, such as police or prison work, and isolated work. Psychological stress and overload have been associated with sleep disturbances, burnout syndromes, anxiety and depression. Psychological stress is also associated with an elevated risk of cardiovascular disorders, particularly coronary heart disease and hypertension.

Respiratory Diseases

These include asthma, extrinsic alveolitis (farmers’ lung or mushroom workers’ lung), broncho-pulmonary diseases, asbestosis, silicosis and pneumoconiosis. The associated industries or processes involve red cedar dust, respirable organic dusts, hard metal dust,

cotton dust, flax, hemp or sisal dust, airborne asbestos fibres, silica dust and dusts from stones, metals or pottery.

Skin and Eye Diseases

These include dermatitis, retinitis and ulceration of the skin or cornea. The associated industries or processes involve irritants, allergens or sensitizers, electric and oxy-acetylene welding and cutting, tar, pitch, bitumen, mineral oil, paraffin and other compounds, products or residues.

6.3.2. Recommendation 1− ILO: List of occupational diseases (revised 2010)

Recommendation – List of Occupational Diseases

The recommendation is to use the List of Occupational Diseases produces by the ILO.

ILO: List of occupational diseases (revised 2010) [70]

This list is complete and has been produced with the support of experts familiar with the latest developments and knowledge in occupational health.

However, it does not address environmental standards or safe exposure levels. These are the responsibility of the regulatory powers of the legislature. When using this list, the degree and type of exposure and the specific work or occupation should be taken into account.

It is not a necessary part of medical training or a substitute for monitoring and training needs in industrial hygiene.

The management and implementation of the list may appear difficult in the absence of sufficient local experts. However, it may be wise to adopt this list and ensure that it is updated with the publications of the ILO, but possibly work on a shorter list of chemicals or occupational stressors that can then be controlled by the field workers and medical staff.

In Section II of the document, the ILO proposes criteria that support updates to the list. This document should considered if it is planned to add medical conditions to the list (reference) [11].

1.	**Occupational diseases caused by exposure to agents arising from work activities**
1.1.	*Diseases caused by chemical agents*
1.1.1.	Diseases caused by beryllium or its compounds
1.1.2.	Diseases caused by cadmium or its compounds
1.1.3.	Diseases caused by phosphorus or its compounds
1.1.4.	Diseases caused by chromium or its compounds
1.1.5.	Diseases caused by manganese or its compounds

[70] *List of Occupational Diseases* (revised 2010): Identification and recognition of occupational diseases: Criteria for incorporating diseases in the ILO list of occupational diseases. Occupational Safety and Health Series 74, www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---safework/documents/publication/wcms_150323.pdf.

1.1.6. Diseases caused by arsenic or its compounds

1.1.7. Diseases caused by mercury or its compounds
1.1.8. Diseases caused by lead or its compounds
1.1.9. Diseases caused by fluorine or its compounds
1.1.10. Diseases caused by carbon disulphide 1.1.11. Diseases caused by halogen derivatives of aliphatic or aromatic hydrocarbons
1.1.12. Diseases caused by benzene or its homologues
1.1.13. Diseases caused by nitro- and amino-derivatives of benzene or its homologues
1.1.14. Diseases caused by nitroglycerine or other nitric acid esters
1.1.15. Diseases caused by alcohols, glycols or ketones
1.1.16. Diseases caused by asphyxiants like carbon monoxide, hydrogen sulphide, hydrogen cyanide or its derivatives
1.1.17. Diseases caused by acrylonitrile
1.1.18. Diseases caused by oxides of nitrogen
1.1.19. Diseases caused by vanadium or its compounds
1.1.20. Diseases caused by antimony or its compounds
1.1.21. Diseases caused by hexane
1.1.22. Diseases caused by mineral acids
1.1.23. Diseases caused by pharmaceutical agents
1.1.24. Diseases caused by nickel or its compounds
1.1.25. Diseases caused by thallium or its compounds
1.1.26. Diseases caused by osmium or its compounds
1.1.27. Diseases caused by selenium or its compounds
1.1.28. Diseases caused by copper or its compounds
1.1.29. Diseases caused by platinum or its compounds
1.1.30. Diseases caused by tin or its compounds
1.1.31. Diseases caused by zinc or its compounds
1.1.32. Diseases caused by phosgene
1.1.33. Diseases caused by corneal irritants like benzoquinone
1.1.34. Diseases caused by ammonia
1.1.35. Diseases caused by isocyanates
1.1.36. Diseases caused by pesticides
1.1.37. Diseases caused by sulphur oxides
1.1.38. Diseases caused by organic solvents
1.1.39. Diseases caused by latex or latex-containing products
1.1.40. Diseases caused by chlorine
1.1.41. Diseases caused by other chemical agents at work not mentioned in the preceding items where a direct link is established scientifically, or determined by methods appropriate to national conditions and practice, between the exposure to these chemical agents arising from work activities and the disease(s) contracted by the worker

1.2. Diseases caused by physical agents

1.2.1. Hearing impairment caused by noise
1.2.2. Diseases caused by vibration (disorders of muscles, tendons, bones, joints, peripheral blood vessels or peripheral nerves)
1.2.3. Diseases caused by compressed or decompressed air
1.2.4. Diseases caused by ionizing radiations
1.2.5. Diseases caused by optical (ultraviolet, visible light, infrared) radiations including laser
1.2.6. Diseases caused by exposure to extreme temperatures
1.2.7. Diseases caused by other physical agents at work not mentioned in the preceding items where a direct link is established scientifically, or determined by methods appropriate to national conditions and practice, between the exposure to these physical agents arising from work activities and the disease(s) contracted by the worker

1.3. Biological agents and infectious or parasitic diseases

1.3.1. Brucellosis

1.3.2. Hepatitis viruses

1.3.3 Human immunodeficiency virus (HIV)

1.3.4. Tetanus 1.3.5. Tuberculosis

1.3.6. Toxic or inflammatory syndromes associated with bacterial or fungal contaminants

1.3.7. Anthrax

1.3.8. Leptospirosis

1.3.9. Diseases caused by other biological agents at work not mentioned in the preceding items where a direct link is established scientifically, or determined by methods appropriate to national conditions and practice, between the exposure to these biological agents arising from work activities and the disease(s) contracted by the worker

1. Occupational diseases by target organ systems

2.1. Respiratory diseases

2.1.1. Pneumoconiosis caused by fibrogenic mineral dust (silicosis, anthraco-silicosis, asbestosis)

2.1.2. Silicotuberculosis

2.1.3. Pneumoconiosis caused by non-fibrogenic mineral dust

2.1.4. Siderosis

2.1.5. Bronchopulmonary diseases caused by hard-metal dust

2.1.6. Bronchopulmonary diseases caused by dust of cotton (byssinosis), flax, hemp, sisal or sugar cane (bagassosis)

2.1.7. Asthma caused by recognized sensitizing agents or irritants inherent to the work process

2.1.8. Extrinsic allergic alveolitis caused by the inhalation of organic dusts or microbially contaminated aerosols, arising from work activities

2.1.9. Chronic obstructive pulmonary diseases caused by inhalation of coal dust, dust from stone quarries, wood dust, dust from cereals and agricultural work, dust in animal stables, dust from textiles, and paper dust, arising from work activities

2.1.10. Diseases of the lung caused by aluminium

2.1.11. Upper airways disorders caused by recognized sensitizing agents or irritants inherent to the work process

2.1.12. Other respiratory diseases not mentioned in the preceding items where a direct link is established scientifically, or determined by methods appropriate to national conditions and practice, between the exposure to risk factors arising from work activities and the disease(s) contracted by the worker

2.2. Skin diseases

2.2.1. Allergic contact dermatoses and contact urticaria caused by other recognized allergy provoking agents arising from work activities not included in other items

2.2.2. Irritant contact dermatoses caused by other recognized irritant agents arising from work activities not included in other items

2.2.3. Vitiligo caused by other recognized agents arising from work activities not included in other items

2.2.4. Other skin diseases caused by physical, chemical or biological agents at work not included under other items where a direct link is established scientifically, or determined by methods appropriate to national conditions and practice, between the exposure to risk factors arising from work activities and the skin disease(s) contracted by the worker

2.3. Musculoskeletal disorders

2.3.1. Radial styloid tenosynovitis due to repetitive movements, forceful exertions and extreme postures of the wrist

2.3.2. Chronic tenosynovitis of hand and wrist due to repetitive movements, forceful exertions and extreme postures of the wrist

2.3.3. Olecranon bursitis due to prolonged pressure of the elbow region

2.3.4. Prepatellar bursitis due to prolonged stay in kneeling position

2.3.5. Epicondylitis due to repetitive forceful work

2.3.6. Meniscus lesions following extended periods of work in a kneeling or squatting position

2.3.7. Carpal tunnel syndrome due to extended periods of repetitive forceful work, work involving vibration, extreme postures of the wrist, or a combination of the three

2.3.8. Other musculoskeletal disorders not mentioned in the preceding items where a direct link is established scientifically, or determined by methods appropriate to national conditions and practice, between the exposure to risk factors arising from work activities and the musculoskeletal disorder(s) contracted by the worker

2.4. Mental and behavioural disorders

2.4.1. Post-traumatic stress disorder

2.4.2. Other mental or behavioural disorders not mentioned in the preceding item where a direct link is established scientifically, or determined by methods appropriate to national conditions and practice, between the exposure to risk factors arising from work activities and the mental and behavioural disorder(s) contracted by the worker

2. Occupational cancer

3.1. Cancer caused by the following agents

3.1.1. Asbestos

3.1.2. Benzidine and its salts

3.1.3. Bis-chloromethyl ether (BCME)

3.1.4. Chromium VI compounds

3.1.5. Coal tars, coal tar pitches or soot

3.1.6. Beta-naphthylamine

3.1.7. Vinyl chloride

3.1.8. Benzene

3.1.9. Toxic nitro- and amino-derivatives of benzene or its homologues

3.1.10. Ionizing radiations

3.1.11. Tar, pitch, bitumen, mineral oil, anthracene, or the compounds, products or residues of these substances

3.1.12. Coke oven emissions

3.1.13. Nickel compounds

3.1.14. Wood dust

3.1.15. Arsenic and its compounds

3.1.16. Beryllium and its compounds

3.1.17. Cadmium and its compounds

3.1.18. Erionite

3.1.19. Ethylene oxide

3.1.20. Hepatitis B virus (HBV) and hepatitis C virus (HCV)

3.1.21. Cancers caused by other agents at work not mentioned in the preceding items where a direct link is established scientifically, or determined by methods appropriate to national conditions and practice, between the exposure to these agents arising from work activities and the cancer(s) contracted by the worker

4. Other diseases

4.1. Miners' nystagmus

4.2. Other specific diseases caused by occupations or processes not mentioned in this list *where* a direct link is established scientifically, or determined by methods appropriate to national conditions and practice, between the exposure arising from work activities and the disease(s) contracted by the worker

6.3.2. Recommendation – List of Occupational Diseases Alternatives

Recommendation – List of Occupational Diseases Alternatives

Lists need to be kept current in order to reflect the needs of a particular jurisdiction. Reporting the occurrence of occupational diseases as they occur is very important. Monitoring new occupational diseases from other jurisdictions provides forewarning of potential occurrence as well as heightened awareness during occupational workplace inspections. However, in developing countries this may involve expertise that is not always available.

Early detection, timely intervention and effective treatment of occupational diseases are beneficial for the workers' health. Training and education of workers and employers and administrators will heighten awareness.

If it is planned to make an alternative choice to the list recommended by the ILO, it may be worthwhile to look at the choices made by neighbouring or comparable jurisdictions. While such lists of occupational diseases may be similar if they are derived from the ILO guidelines, many of these lists were adopted before the 2010 revision. In fact Ethiopia developed its own "short list" in a document last edited in 2008. It is important that a country develop its own of priorities, but to the best of our knowledge, this list and the guidelines for acceptable levels of exposition have not been enforced.

List of occupational diseases	**ILO** (Recommended)	**Tanzania**	**Kenya**	**Uganda**
Number of entries in the list	115	79	40	54
Differences		No mental health entry	No mental health entry Short list of poisonous substances Short list of cancer Short list of target organ systems	No mental health entry Short list of poisonous substances. Short list of cancer Short list of target organ systems
	Everyone is concerned by biological agents.			

The regulations cannot be reproduced in full here. The reader is invited to view the following sites:

- *Kenya:* The Occupational Safety and Health Act, 2007, Second schedule, Prescribed Occupational diseases, pp. 113-120, http://www.ilo.org/dyn/natlex/natlex4.detail?p_lang=en&p_isn=78264.
- *Tanzania (United Republic of): The Workers' Compensation Act, 2008*, The United Republic of Tanzania, No. 20 of 2008, Third Schedule, pp. 51-54, http://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---ilo_aids/documents/legaldocument/wcms_125593.pdf.
- *Malaysia: Employees' Social Security Act 1969*, Laws of Malaysia Act 4, January 1, 2006, Fifth Schedule, pp. 98-108, www.ilo.org/dyn/travail/docs/1626/Employees'%20Social%20Security%20Act%201969%20-%20www.agc.gov.my.pdf.

- *South Africa: No. 130 of 1993: Compensation for Occupational Injuries and Diseases Act as amended by Compensation for Occupational Injuries and Diseases Amendment Act, No. 61 of 1997, Schedule 3, pp. 48-49,* http://www.ilo.org/dyn/natlex/natlex4.detail?p_lang=en&p_isn=35121.

- *Uganda:* Workers Compensation Act 2000 (CH 225), Third Schedule, pp. 31-34 www.ilo.org/dyn/natlex/natlex4.detail?p_lang=en&p_isn=56869&p_country=UGA&p_classification=15.03, UGA56869.pdf.

6.3.3. Monitoring

Records of compensation, rehabilitation of workers injured or fatally injured on the job and administrative records are collected to meet specific programme requirements. The administrative data reflect the collection practices, reporting requirements, claims policies and definitions of each individual compensation board.

In Canada, the Association of Workers' Compensation Boards of Canada (AWCBC) has coordinated the National Work Injuries Statistics Program (NWISP), which was established to utilize work injury and disease statistics from the twelve provincial and territorial Workers' Compensation Boards and Commissions in Canada.

The actual number of workers covered for the provinces are taken from the annual average figures of the Labour Force Survey (LFS) published by Statistics Canada. The LFS includes all categories of workers, including self-insured workers. Annual averages from the Survey of Employment, Payrolls and Hours (SEPH) provide the number of paid employees for the territories.

These employment figures are adjusted by using the AWCBC's estimate of the number of workers covered. The industries covered in different jurisdictions vary widely in their relative potential for work injury.

Standards

A standard defines a coding structure for nature of injury or disease for workplace accidents, injuries and occupational diseases.

In Canada, the AWCBC has used a standard derived from the Occupational Injury and Illness Classification of the United States Bureau of Labour and Statistics. The standard is embodied in a coding manual. This coding manual is updated regularly. The AWCBC manages the NWISP, [71] the programme referred to above that provides comparative work statistics on work injuries according to jurisdiction.

General rules and guidelines apply when coding workplace injuries and diseases.

A workplace injury or disease is described by:

– Nature of injury or disease;
– Part of body;
– Source of injury;
– Event or exposure.

[71] Coding_Manual_2013725.pdf, p. 1.

There may be a secondary source of injury or disease.

Nature of Injuries or Diseases

The nature of injury or disease variable specifies the principal physical[72] characteristics of the workplace injury or disease. This variable is a 5-digit code.

The major groups of nature of injury or disease are self-explanatory and are as follows:

– 0* − traumatic injuries and disorders;

– 1* − systemic diseases and disorders;

– 2* − infectious and parasitic diseases;

– 3* − neoplasms, tumours and cancer;

– 4* − symptoms, signs and ill-defined conditions;

– 5* − other diseases, conditions and disorders;

– 8* − multiple diseases, conditions and disorders;

– 9* − unknown;

– NC* − not coded.

Traumatic injuries or disorders:

– in general the result of a single incident;

– include the effects of external agents and poisoning.

Systemic diseases and disorders:

– include toxic and non-toxic diseases or disorders affecting systems of the body;

– sometimes affecting the whole body system but more commonly a system or part of the body.

Infectious and parasitic diseases:

– include five types of infections –bacterial, viral, rickettsial, fungal and parasitic infections;

– may be transmitted by inhalation, ingestion or contact with the skin;;

– are communicable and transmissible.

[72] Ibid., p. 5.

Neoplasms (tumours and cancer):

– include diseases or conditions related to tumours or neoplasms including growth of tissue characterized by uncontrolled and progressive multiplication of cells;

– benign or cancerous or uncertain.

Symptoms, signs and ill-defined conditions:

– classify symptoms, signs or abnormal results from laboratory or medical tests or procedures;

– include conditions that cannot be classified elsewhere.

Other diseases, conditions and disorders:

– classify physical characteristics for which no specific code in previous divisions exist.

Multiple diseases, conditions and disorders:

– classify multiple physical characteristics whose individual codes are included in two or more previous diseases classes.

Unknown:

– 99,990 unknown.

Samples of traumatic injuries and disorders codes are:

– 1,200 fractures;

– 2,190 sprains, strains, tears, not elsewhere classified.

Samples of systemic diseases and disorders codes are:

– 12,560 welder's flash;

– 12,610 deafness, hearing loss or impairment.

Samples of infectious and parasitic diseases codes are:

– 21,120 pulmonary tuberculosis;

– 22,192 contact with HIV caused by aggression.

Samples of neoplasms, tumour and cancer codes are:

– 31,340 leukaemia;

– 31,901 mesothelioma.

Samples of other diseases, conditions, and disorders codes are:

– 52,100 anxiety, stress, neurotic disorders, uns;

– 52,110 post-traumatic stress.

Reporting

Compliance with reporting of accidents and occupational diseases to the occupational health and safety body (regional or federal) is necessary for evaluation of incidence, trends, and provision of timely alerts to developments that need immediate attention.

Some jurisdictions target specific industries with the goal of reducing unusually high claim costs. Safety associations are also funded by certain industries to promote occupational health and safety awareness among the workers and employers.

Presumption

When certain occupational diseases generate attributable risk fractions of fifty per cent or higher (with the application of tools like the Bradford Hill criteria), it could be suggested that presumption with proof of employment in an industry involving exposure to hazardous elements be considered. A minimum number of years of employment in associated industries/processes or a minimum number of years of exposure should also be considered.

Other Claim Codes

The World Health Organization (WHO) maintains the International Classification of Diseases and Related Health Problems (ICD), currently in its tenth revision (ICD-10). This is a diagnosis-based classification system of diseases for health care. There is already a beta version of the eleventh revision (ICD-11); it is intended to include occupational causes of diseases in this revision.

ICD-10

Diagnosis coding of diseases permits more transparent and consistent recording of disease severity. The ICD-10 is a standard tool for recording data in the health insurance industry. Its use by compensation boards has been discussed in Canada.

There is also an ICD-10-CM, a clinical modification of the ICD-10 that is intended for diagnosis coding in all U.S. healthcare settings. It was developed by The National Center for Health Statistics (NCHS), a federal agency of the United States.

6.3.4. Recommendation 3 –Choose a coding system for monitoring

Recommendation – Adopt a coding system for monitoring

7. Employment injury compensation (percentage of bodily injury table)

7.1. Introduction

The percentage of bodily injury table will allow the medical board to make an assessment of the disability of an injured worker. This section is intended to provide relevant background information regarding the use and development of percentage bodily injury tables. It also provides a recommendation and an alternative.

By jurisdiction, policies and intentions retained by the states; various approaches to compensation may be made to cover losses relating to workplace injuries:

- *Impairment-based approach:* based on the degree of impairment. No links with future loss of earnings.
- *Loss of earning capacity approach:* relies on a projected economic impact on the ability to re-enter the labour market.
- *Wage loss approach:* permanent "extension" of temporary disability benefit until return to work (if any).
- Mixed approach.

These approaches are intended to find a balance between the concepts of disability and impairment, and to propose a fair compensation for the losses of an individual injured at work. [73] The eventual payment of compensation may be provided as a lump sum or by payment of a pension.

7.2. Impairment versus Disability [74]

Impairment

The sixth edition of the *Guides to the Evaluation of Permanent Impairment*, published by the American Medical Association (AMA) in 2008, defines impairment as "a significant deviation, loss, or loss of use of any body structure or body function in an individual with a health condition, disorder, or disease". The World Health Organization (WHO) defines impairment as "any loss or abnormality of psychological, physiological or anatomical structure or function".

The Social Security Administration (SSA) defines a medically determinable impairment as "an impairment that results from anatomical, physiological, or psychological abnormalities which can be shown by medically acceptable clinical and laboratory diagnostic techniques". The PSSSA further states that a physical or mental impairment "must be established by medical evidence consisting of signs, symptoms, and laboratory findings – not only by the individual's statement of symptoms".

According to the AMA Guides, impairments that are to be rated are permanent impairments. A permanent impairment is defined as one that has reached maximum medical improvement (MMI) and is well stabilized and unlikely to change substantially in the next year with or without medical treatment. Each state's workers' compensation system has its own definition of impairment. These definitions may vary from state to state but are generally consistent with the definition expressed in the AMA Guides.

Disability

The AMA Guides define disabilities as "activity limitations and/or participation restrictions in an individual with a health condition, disorder, or disease". The WHO defines disability as an activity limitation that creates a difficulty in the performance,

[73] P.S. Barth: *Compensating workers for permanent partial disabilities*, Social Security Bulletin, Vol. 5, No. 4 2003-04, www.ssa.gov/policy/docs/ssb/v65n4/v65n4p16.html.

[74] E.B. Holmes: *Impairment Rating and Disability Determination*, Medscape 2014, http://emedicine.medscape.com/article/314195-overview#a2.

accomplishment, or completion of an activity in the manner or within the range considered normal for a human being. Difficulty encompasses all of the ways in which the performance of the activity may be affected.

On the other hand, the SSA defines disability as "the inability to engage in any substantial, gainful activity by reason of any medically determinable physical or mental impairment(s), which can be expected to result in death or which has lasted or can be expected to last for a continuous period of not less than 12 months". Workers' compensation systems usually define disability as a reduction in wage-earning capacity as a result of an injury, illness, or occupational disease that arose from or in the course of employment.

Differentiation

Distinguishing between impairment and disability is imperative. One individual can be impaired significantly and have no disability, while another person can be quite disabled with only limited impairment.

Because of this difference between impairment and disability, physicians are encouraged to rate impairment based on the level of impact that the condition has on the performance of activities of daily living (ADL) rather than on the performance of work-related tasks. According to the AMA Guides, impairment ratings derived from the Guides are "a physician-driven first approximation of a process that attempts to link impairment with a quantitative estimate of functional losses" in the patient's "personal sphere of activity".

Recommendation – Development of infrastructure and expertise in rehabilitation

Recognition of permanent sequelae in a worker should be the final step of its management. Beyond curative healthcare, it is necessary to consider the development of a network capable of providing optimum physical and social rehabilitation for the injured worker. Monetary recognition cannot replace a maximized return to functional status.

Interestingly, various professionals and institutions regularly use the AMA Guides for the direct measurement of disability. Most states recognize the impairment ratings determined by the AMA Guides as direct measures of disability, despite the stated intent of the authors.

Reporting of impairment ratings

The examiner should act professionally at all times and base his observations on objective and factual opinions in his area of expertise. It will take time to complete physical examinations with patience and understanding. The findings should be reported precisely and if possible with measurements. The physician must retain his independence and avoid conflicts of interest.

The examiner's report should include at least the following elements:

– History and physical examination findings;

– Statement about medical stability;

– Medical record review;

– Diagnosis;

– Whole-person impairment percentage (with calculations);

– Relationship between the permanent impairment and prior conditions (when appropriate);

– Functional ability statement regarding the individual's residual functional capacity;

– Assessment of the credibility of alleged pain and limitations;

– Future medical treatment recommended or required;

– Statement about sincerity of effort or motivation;

– Statement about causation of the impairment;

– Answers to any other specific questions posed by the requesting adjuster or agency;

– References.

7.3. Rating Consideration

A recent survey [75] of workers' compensation boards in Canada, the United States and Australia, conducted by the workers compensation board of British Columbia, has shown general consistency in the percentage permanent impairment rating schedules. Since the rating tables are usually silent on methodology, it was suggested to also monitor the medical/scientific literature on an ongoing basis for changes in disability assessment methodology.

As previously mentioned, the best time to evaluate permanent injury varies with jurisdictions or institutions. It is generally acceptable to proceed when the improvement is maximal and no further progress is expected by the medical team.

Percentage of bodily injury tables are used in workers' compensation jurisdictions in different forms, with various ranges of values and different historical perspectives.

Percentage of bodily injury tables are available as:

– Permanent clinical impairment guide;

– Permanent disability evaluation schedule;

– Permanent impairment rating schedule;

– Permanent physical impairment rating schedule;

– Permanent functional impairment rating schedule;

– Permanent impairment rating guide;

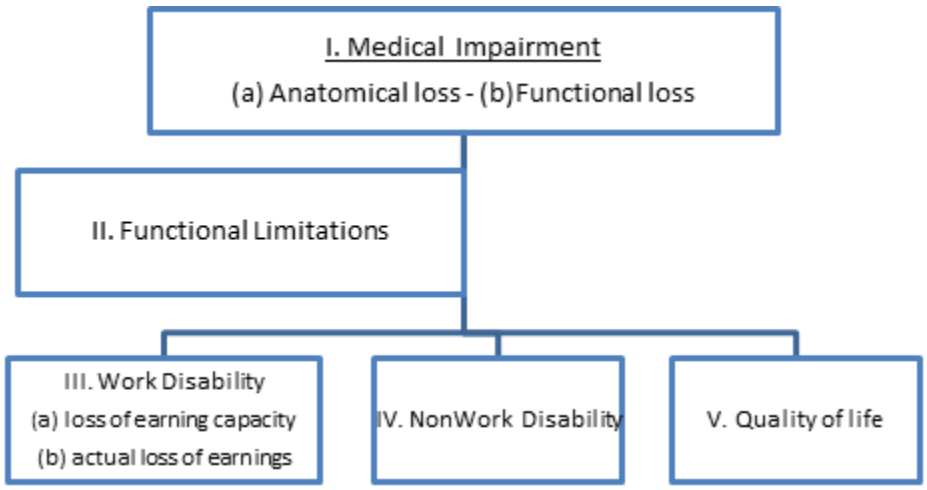
– Scale of bodily injuries.

[75] Policy Review discussion Paper Regarding the Permanent Disability Evaluation Schedule (PDES), Workers Compensation Board of British Columbia, p. 7.

These are very similar schedules and the values are mostly consistent with one another. They are used as guides by the medical assessment practitioner.

Dr. Robert D. Rondinelli commented on how important it is to keep diagnosis-based [76] physician-driven medical impairment ratings assessments. He listed the following steps: (1) determine the clinical problem or diagnosis; (2) review the patient report or indications of functional loss; (3) report examination findings; (4) use results of clinical studies.

In practice, jurisdictions choosing to adopt impairment ratings as a procedural surrogate for disability ratings pose the following problem. All disability systems seeking to fairly compensate for disability are faced with the challenge of adequately compensating for losses in three major domains: these are typically viewed as losses due to work disability, non-work disability, and quality of life (QOL). [77]



This brings us to the *American Medical Association's Guides to the Evaluation of Permanent Impairment, 6th Edition (AMA Guides)*, Medical Editor Robert D. Rondinelli, 2008. Chapter 2 covers the practical applications of the guide and includes a section on the use of the AMA Guides in workers' compensation and other disability systems.

The 6th edition has moved to an evidence-based diagnosis approach [78] to impairment rating, an improvement over the earlier ratings of earlier editions. It has inherent simplicity and transparency, using an impairment grid and classes 0-4 from least severe to most severe. It has a functional basis as it requires classification of functional severity, and has adopted the conceptual framework of disability espoused by the WHO in its International Classification of Functioning, Disability and Health (ICF).

It was and still is a consensus-based rating system. It is revised to reflect the latest scientific and medical research. However, it is still not intended for direct use in estimating work participation restrictions. Despite the stated intent of the authors, most jurisdictions recognise the impairment ratings of the AMA as direct measures of disability. Another

[76] Robert D. Rondinelli, MD, PhD: *A Critical Review of Spinal Range of Motion (ROM) as a Method of Assessing Permanent Back Injuries*, International IME Services, LLC, p. 26.

[77] M. McGeary, M. Ford, S.R. McCutchen et al. (eds): IOM Committee on Medical Evaluation of Veterans for Disability Compensation. A 21st Century System for Evaluating Veterans for Disability Benefits. The Rating Schedule, Washington, DC, The National Academies Press, 2007, pp. 92-138

[78] Robert D. Rondinelli, MD, PhD: *A Critical Review of Spinal Range of Motion (ROM) as a Method of Assessing Permanent Back Injuries*, International IME Services, LLC, p. 27.

criticism of the AMA Guide's 6th edition is that some subjective inter-rater variability is still associated with its use.

The permanent disability evaluation should provide guidance in determining the compensation for an injured worker's permanent disability under the loss of function approach. The schedule provides percentages of disability for given permanent physical or psychological impairments. Note that the permanent impairment covers both physical and psychological impairments. The percentages range from 0 to 100 per cent. Under the loss of function approach, an estimated impairment of earning capacity is determined. In other words the permanent disability evaluation schedule provides percentages of impairment of earning capacity.

A permanent disability resulting from a compensable injury provides entitlement to non-economic loss payment based on measurable clinical impairment and an economic loss payment based on the degree of loss of earning capacity. The permanent clinical impairment rating is based on the relevant medical history and physical examination of the worker.

While most boards include both permanent physical and psychological impairment under the label 'permanent functional impairment', some only include permanent physical impairment, which should be labelled as such in their rating schedules.

However, it was noted that it was difficult to find a direct correlation between standard percentage rates of impairment for specified injuries and measurement of earning capacity (or real loss of earning power) without the application of an occupational variable.

The rating schedules are used to provide workers' compensation benefits [79] in various ways:

– Ratings are used to assess disability or impairment;

– Are applied to different base amounts;

– Generate awards payable over varying periods of time.

The base amount could be a worker's actual earnings, regularly updated industrial average earnings, or a multiple of this to a prescribed amount. Sometimes a minimum benefit is also prescribed.

Most compensation boards have continued to distinguish[80] non-economic loss from permanent impairment and economic loss or loss of earnings. Often, non-economic loss is determined with reference to an impairment rating schedule and compensation is a lump sum award. Some jurisdictions use a schedule of ratings to determine compensation for economic loss, usually awarded for permanent disability and payable to age 65.

Impairment ratings are "estimates determined by medical consensus that reflect the severity of the limitation of the body part." Additionally these impairment ratings "reflect the loss of opportunity that individuals experience in their ability to perform normal activities of daily living, self-care, physical activity and/or sensory function". [81] There will be many

[79] Policy Review Discussion Paper Regarding the Permanent Disability Evaluation Schedule (PDES), Workers' Compensation Board of British Columbia, p. 7.

[80] Ibid., pp. 8-9.

[81] Policy 21-250, Permanent Physical Impairment, Workers' Compensation Board of New Brunswick, p. 3.

cases that will not necessarily fit a rating category and the examining physician will therefore need to exercise judgment. [82]

Ratings schedules provide guidelines on adding, combining, enhancing or devaluating ratings for multiple injuries or serious injuries.

The assessments are intended to be performed by medical practitioners after the injured worker has reached a medical plateau, usually after twelve to eighteen months, or up to two years for head injuries and major nerve injuries. For amputations, time after fitting a prosthesis is also needed.

7.3.1. Determination

The first step is to establish whether there is a permanent physical impairment (permanent functional impairment for other boards). This is the responsibility of an approved medical examiner, experienced physician, disability award medical advisor or external medical service provider, who assesses the degree of permanent physical impairment relating to a workplace accident or occupational disease.

A physical assessment is required when the schedule assigns a range of impairment ratings or when there is not sufficient evidence to make the determination.

Impairment ratings are solely related to demonstrated permanent loss of body function. The following are not considerations in determining the rating: [83]

– Surgical treatment;

– Pain and suffering except those directly linked to tissue damage from the impairment;

– Age, education, or other social factors;

– Ability or inability to work;

– Loss of employment or earnings resulting from the compensable injury or impairment.

The minimum impairment rating is usually defined as 0 per cent and the maximum is 100 per cent.

When assigning ratings for more than one body part, there is a combined value chart in the *AMA Guides* to determine whole-body impairment rating.

Alternatively the formula:

$$\text{Combined value of A and B} = [A + (1-A) \times B]$$

can be continuously applied starting with the higher rating percentages. Again the maximum rating is 100 per cent.

[82] Ibid., p. 3.

[83] Ibid., p. 7.

7.3.2. Future Reassessments

Permanent physical impairment ratings may be reassessed: [84]

- If there has been a change in the level of physical impairment since the last assessment;
- An additional body part has been affected by the original work-related injury; or
- The compensable injury or disease has aggravated the prior non-compensation conditions.

If the reassessment generates a higher impairment rating, the difference between the new assessment and the original assessment may generate an additional award.

7.3.3. Benefits

Many jurisdictions provide for a lump sum award calculated by multiplying the impairment rating with a multiple of average industrial aggregate earnings, or the maximum annual assessable earnings for the year of accident or injury or diagnosis of occupational disease. A minimum amount could also be set by legislation.

The average industrial aggregate earnings or the maximum assessable earnings for the year will be set as the first day of each fiscal year. The regulation defines how the earnings base is calculated. The formula could allow for indexing or reflect some inflation.

In some jurisdictions the ratings schedule is used to determine economic loss or loss of earnings. Determination of loss of earnings is defined.

7.3.4. Other Circumstances

The benefit can be calculated as long as there are documents supporting the determination of the ratings. For example, if the injured worker has already died, his entitlement to the benefit can be calculated if the documents to evaluate his permanent physical impairment are available and will allow the determination. The benefit will be paid to the dependents or estate.

7.4. Permanent Functional Impairment Rating Schedule

This recommendation is comprehensive but not too complicated. The recommendation also has flexibility for the medical board. It is based on a review of North American and Australian schedules carried out by a Canadian compensation board. [85] A review of some

[84] Ibid., p. 9.

[85] Policy Review Discussion Paper Regarding the Permanent Disability Evaluation Schedule (PDES), Workers' Compensation Board of British Columbia, December 2012.

Asian and African countries schedule was also carried out, in particular Kenya, [86] Malaysia, [87] South Africa, [88] United Republic of Tanzania, [89] and Uganda. [90]

7.4.1. Recommendation 1 – Permanent Functional Impairment Rating Schedule

Recommendation – Permanent Functional Impairment Rating Schedule

The following proposal is based first and foremost on the tool developed by the "Alberta Permanent Clinical Impairment Guide" (1996). However, in 2008 Ethiopia produced its own guidelines for assessments of permanent disability in a document addressing several issues of Occupational Medicine and Health and Safety at Work. It would be worthwhile to consider this work produced by local stakeholders, who often have an informed perception of opportunities and community capacity in regard to rehabilitation.

The recent experience of neighbouring Tanzania in implementing its compensation schedule has highlighted some needs, especially regarding neuropsychiatric, thoracic and abdominal sequelae. In the past, compensation schedules have emphasised the musculoskeletal system. Unskilled workers, by the nature of their activities, frequently present some vulnerabilities to limbs. However, workers are increasingly exposed to other hazards with equally serious health risks, to other parts of the body. The proposed compensation schedule reflects this new situation. It consists of Part I and Part II.

- Part I – Permanent Total Disability lists eight permanent functional impairments that are rated at 100 per cent;
- Part II – Permanent Partial Disability lists several permanent functional impairments groupings.

Impairment ratings are expressed as a percentage of total or whole-body impairment.

Some impairment ratings are provided as ranges. Many cases will not fit into a rating category.

[86] Kenya: *Work Injury Benefits Act*, pp. 24-27; www.ilo.org/dyn/natlex/docs/ELECTRONIC/77501/82171/F486758541/KEN77501%202012.pdf.

[87] Malaysia: *Employees' Social Security Act 1969*, Laws of Malaysia Act 4, January 1, 2006, Second Schedule, pp. 87-91, www.ilo.org/dyn/travail/docs/1626/Employees%E2%80%99%20Social%20Security%20Act%201969%20-%20www.agc.gov.my.pdf.

[88] South Africa: No. 130 of 1993: *Compensation for Occupational Injuries and Diseases Act as amended by Compensation for Occupational Injuries and Diseases Amendment Act*, No. 61 of 1997, Schedule 2, p. 47; www.labour.gov.za/DOL/downloads/legislation/acts/compensation-for-occupational-injuries-and-diseases/amendments/Amended%20Act%20-%20Compensation%20for%20Occupational%20Injuries%20and%20Diseases.pdf.

[89] The United Republic of Tanzania: *The Workers' Compensation Act, 2008*, No. 20 of 2008, Third Schedule, pp. 51-54.

[90] Uganda: *Workers Compensation Act. 2000* (CH 225), Second Schedule, pp. 27-30; www.ilo.org/dyn/natlex/natlex4.detail?p_lang=en&p_isn=56869&p_country=UGA&p_classification=15.03, UGA56869.pdf.

Some compensable injuries could involve an impairment rating from more than one body part.

The examining physician must exercise judgment. The rating that is used should be consistent with ratings for impairments of the body that would have a similar effect on the activities of an average person. [91] An enhancement factor may be necessary for multiple injuries or serious injuries but should be proportionate to the total body. A combined value for multiple impairments could involve a reduction.

Some impairment ratings may need individual consideration, such as head injuries or loss of abdominal organs. Each case should be reviewed on its merits.

Part I. Permanent Total Disability

Item	Description	Percentage (%) of Loss of Earning Capacity
1	Total loss of vision of both eyes	100
2	Loss of both feet at or above the ankle	100
3	Loss of both hands at or above the wrist	100
4	Loss of two limbs	100
5	Loss of one foot at or above the ankle and one hand at or above the wrist	100
6	Injury to the central nervous system resulting in mental incompetence that renders the worker incapable of being gainfully employed	100
7	Injuries resulting in being bedridden permanently	100
8	Quadriplegia	100
9	Paraplegia	100
10	Hemiplegia	100
11	Any other injury causing permanent disablement	100
	Complete and permanent loss of the use or function of a limb or a member referred to in this Schedule is equivalent to the loss of the limb or member.	
	Time interval following injury or surgery for assessment is usually between 12 to 18 months. Two years for head injuries and major nerve injuries. For amputations, time after fitting of prosthesis.	
	The loss of a remaining eye, arm or leg by a previously disabled worker should be considered equal to the simultaneous loss of the two.	

Part II. Permanent Partial Disability

Item	Description	Percentage (%) of Loss of Earning Capacity
	Amputations -upper extremities	
12	Proximal third of humerus or disarticulation at shoulder	70
13	Middle third of humerus	65
14	Distal third of humerus to biceps insertion	60
15	Biceps insertion to wrist	50-60
16	Loss of one hand at the wrist or four fingers and thumb of one hand	50
17	Thumb, including first metacarpal	20
18	Thumb, at MCP joint	15

[91] Workplace Health, Safety and Compensation Commission of Newfoundland and Labrador Permanent Functional Impairment Rating Schedule, p. A-2.

Item	Description	Percentage (%) of Loss of Earning Capacity
19	Thumb, at IP joint	10
20	Thumb, one-half distal phalanx at IP joint	5
21	Thumb, at least one-quarter distal phalanx	3
22	Loss of four fingers	45
23	Loss of three fingers	30
24	Loss of two fingers	20
	Loss of fingers of right or left hand	
	Index finger	
25	Whole finger	5
26	Two phalanges	4
27	One phalanx	2
	Middle finger	
28	Whole finger	4
29	Two phalanges	3.5
30	One phalanx	2
	Ring or little finger	
31	Whole finger	3
32	Two phalanges	2.5
33	One phalanx	1
	Loss of metacarpals	
34	First or second (additional)	3
35	Third, fourth or fifth (additional)	2
	Amputations -lower extremities	
36	Hip	65
37	Below hip	50
38	Below knee	35-45
39	Leg, at ankle	25
40	Through foot	10-25
41	Great toe, both phalanges	5
42	Great toe, one phalanx	2
43	All toes, total amputation	7.5
	Sense of smell	
44	Complete loss of sense of smell	3
	Loss of vision	
45	Complete loss of one eye	30
46	Total loss of vision, one eye	30
47	Diplopia, all fields	10
48	Scotoma, depending on location and extent	0-16
49	Partial loss of vision	0-16

Item	Description	Percentage (%) of Loss of Earning Capacity
	Loss of hearing	
50	Deafness, complete one ear	5
51	Deafness, both ears	30
52	Deafness, complete in both ears occurring as a sudden and complete traumatic loss of hearing	60
53	Unilateral and bilateral degrees of hearing loss	0-5
	Disfigurement and scarring from burns or other trauma	
54	Minor	0-5
55	Moderate	6-10
56	Major	11-25
	General impairment	
	Loss of cervical, thoracic and lumbar spine functions, judgment ratings, multiples of 2.5%	
57	Minor loss of function	0-5
58	Moderate loss of function	6-10
59	Moderate to severe loss of function	11-20
60	Severe loss of function	21-50
	Neuropsychiatric injuries −individual consideration	
61	Minor loss of function	0-20
62	Moderate loss of function	21-40
63	Moderate to severe loss of function	41-60
64	Severe loss of function	61-80
	Loss of abdominal organs −individual consideration	
65	Minor loss of function	0-20
66	Moderate loss of function	21-40
67	Moderate to severe loss of function	41-60
68	Severe loss of function	61-80

Time interval following injury or surgery for assessment usually between 12 to 18 months. Two years for head injuries and major nerve injuries. For amputations, time after fitting of prosthesis.

Complete and permanent loss of the use or function of a limb or a member referred to in this Schedule is equivalent to the loss of the limb or member. The percentage of incapacity for ankyloses of any joint shall be reckoned as from 25 to 100 per cent of the incapacity for the loss of the part at that joint, according to whether the joint is ankylosed in a favourable or unfavourable position.

Combined value for several impairments could include an enhancement, a reduction or use a continuous application of [A+B (1-A)]. Maximum of 100%.

Where there is loss of two or more parts of the hand, the percentage of incapacity shall not be more than for the whole hand.

For neuropsychiatric injuries and thoraco-abdominal loss:

- *Minor loss of function:* minor changes that do not render the person incapable of adaptation, there is little reduction in daily activities, or alteration of personal performance;
- *Moderate loss of function:* constant use of alleviating therapeutic measures, modification of daily activities leading to more or less marked reduction in personal or social efficiency, or intermittent cessation of regular activities;
- *Moderate to severe loss of function:* clear deterioration of social or individual performance and serious changes in daily activities;
- *Severe loss of function:* state of regression, deterioration or dependence in regular activities.

7.4.2. Recommendation 2 – Alternative: Permanent Functional Impairment Rating (AMA Guides)

Recommendation – Alternative: Permanent Functional Impairment Rating (AMA Guides)

An alternative is adoption by legislation of the most current version of the *American Medical Association' Guides to Evaluation of Permanent Impairment, (AMA Guides).* The most current version is now the 6th edition.

The book has about 640 pages. It is a medical book and quite complex, but previous versions were widely used by compensation boards. A suggested approach is to go the section or table on amputations for the particular body section. A range of impairment ratings allows a medical examiner to choose from different levels of severity.

If the AMA Guides are chosen, the issue of copyright will need to be clarified by contacting the publisher. Some Canadian compensation boards use the book and pay for it. The AMA Guides cannot be copied without permission.

On page 19, Chapter 2 of the *AMA Guides*, 6th edition, whole person impairment ratings range from 0 per cent for normal, through ≥ 90 per cent for people who are totally dependent on others for care, to 100 per cent.

The 6th edition has moved to an evidence-based diagnosis approach [92] for impairment rating, an improvement over the earlier estimates of the previous editions. It has inherent simplicity and transparency, and uses an impairment grid with classes 0-4 from least severe to most severe. It has a functional basis as it requires classification of functional severity, and has adopted the conceptual framework of disability espoused by the WHO in its International Classification of Functioning, Disability and Health (ICF).

It was and still is a consensus-based rating system. It is revised to reflect the latest scientific and medical research. However, it is still not intended for direct use in estimating work participation restrictions.

7.5. Documenting Functional Level

Just as important as the disease label itself is whether a person can work and carry out the routine activities necessary to fulfil his or her roles at home, work, school or in other social areas. Summed up by the phrase "what people cannot do when they are ill", this aspect differs greatly, independently of the disease concerned. Information on functioning (i.e. an objective performance in a given life domain) and disability is taken into account by professionals in clinical and social services; however, proper measurement of functioning and disability has long suffered from a lack of consistent definitions and tools. [93]

Beyond a percentage of disability, the clinician is required to document the functional status of the injured worker to have a global picture.

[92] Robert D. Rondinelli, MD, PhD: *A Critical Review of Spinal Range of Motion (ROM) as a Method of Assessing Permanent Back Injuries*, International IME Services, LLC, p. 27.

[93] Measuring Health and Disability: Manual for WHO Disability Assessment Schedule (WHODAS 2.0).

7.5.1. Recommendation 3 – Use of WHODAS 2.0

Recommendation – Use of WHODAS 2.0 [1]

This publication [2] documents the current status and the interventions necessary for possible rehabilitation.

[1] http://apps.who.int/iris/bitstream/10665/43974/1/9789241547598_eng.pdf?ua=1&ua=1;
[2] www.who.int/classifications/icf/icfchecklist.pdf?ua=1

7.6. Monitoring

A schedule of permanent physical impairment ratings should be reviewed at least once every five years or earlier if necessary. Changes in the guidelines should be considered as practice and experience evolves.

Keeping abreast of changes and developments in other compensation boards is also good practice. Since the ratings tables are usually silent on methodology, it is also advisable to monitor the medical/scientific literature regularly for changes in disability assessment methodology.

On a different note, monitoring involves the reporting and recording of the workplace injuries and occupational diseases. For each injury or occupational disease a claim record should be created and updated with relevant information pertaining to the claims such as:

– Date of accident or injury or the date of diagnosis of an occupational disease;

– Relevant details about the injury or occupational disease;

– Medical reports including any hospitalisations;

– Actual earnings during the previous twelve months;

– Relevant details about the employer;

– Dates, amounts and payee of any employment injury insurance payments;

– Relevant details about the injured worker, including dependants;

– Log of decisions regarding the claim.

Appendix A

Bibliography

AWCBC, 2013: *Coding Manual, National Work injuries Statistics Program*.

Bell, D.E., 22 August 1960: *Report to the Association of Workmen's Compensation Boards of Canada, Subject: Permanent Disability Evaluation*, The Permanent Disability Evaluation Schedule (PDES) Appendices, Submission by the British Columbia Nurses' Union (BCNU), 18 October 2013.

—, March 1966: *Permanent Disability Evaluation Under Workmen's Compensation*, The Permanent Disability Evaluation Schedule (PDES) Appendices, Submission by the British Columbia Nurses' Union (BCNU), 18 October 2013.

Central Statistical Agency, 2014: *Statistical Report on the 2013 National Labour Force Survey* (Addis Ababa).

Country Report, *Employment Injury Insurance in Thailand*.

Ethiopia, 1994: *Constitution of the Federal Democratic Republic of Ethiopia*.

—, 2003: *Labour Proclamation No. 377/2003* (Addis Ababa).

—, 2005: *Labour Proclamation No. 466/2005* (Addis Ababa).

—, 2006: *Labour Proclamation No. 494/2006* (Addis Ababa).

—, 2007: *Federal Civil Servants Proclamation No. 515/2007* (Addis Ababa), ETH-2005-L-97344.

—, 2009: *Employment Exchange Services Proclamation No. 632/2009* (Addis Ababa), ETH-2009-L-85145, Part 2.

—, 2011: *Private Organization Employees' Pension Proclamation No. 715/2011* (Addis Ababa).

—, —: *Private Organization employees' Social Security Agency Proclamation No. 202/2011* (Addis Ababa).

—, —: *Public Servants' Pension Proclamation No. 714/2011* (Addis Ababa).

—, —: *Public Servants' Social Security Agency Proclamation No. 203/2011*.

Gilks and Logan, OSHD: Labour Program, HRSDC, *Occupational Injuries and Disease in Canada, 1996-2008: Injury Rates and Cost to the Economy*, oidc_10.pdf.

ILO, 2010: *List of Occupational Diseases* (revised 2010), wcms_150323

Labour Administration and Inspection Programme, ILO, 2009: *Technical Memorandum Ethiopia Labour Inspection Audit*, wcms_119248.pdf.

Laws of Malaysia, *Employees' Social Security Act 1969*.

Ministry of Labour and Social Affairs, 2006: *Occupational Safety and Health Profile for Ethiopia*, (Addis Ababa).

—, 2009: *National Employment Policy and Strategy of Ethiopia*.

—, 2012: *National Social Protection Policy of Ethiopia*.

—, 2013: *Decent Work Country Profile, Ethiopia*.

—, 2013-14: *Annual Labour Market Bulletin*.

Ralph Meredith, 1913: *Meredith Report*.

—, —: *Final Report on Laws Relating to the Liability of Employers To Make Compensation to their Employees for Injuries received in the course of their employment which are in force in other countries*.

Reporter Series, Commissioner's Decision No. 8: *Re The Measurement of Partial Disability*, 2 October 1973; The Permanent Disability Evaluation Schedule (PDES), Appendices, Submission by the British Columbia Nurses' Union (BCNU), 18 October 2013.

Republic of South Africa: *Compensation for Occupational Injuries and Diseases Act*.

Rondinelli, Robert D., MD, PhD, International IME Services, LLC, 30 July, 2013: *A Critical Review of Spinal Range of Motion (ROM) as a Method of Assessing Permanent Back Injuries*,.

United Republic of Tanzania: *The Workers Compensation Act*, 2008.

Workers' Compensation Board, Alberta, 2006: *Alberta Permanent Clinical Impairment Guide*, June1996.

—, British Columbia, December 2012: *Policy Review Discussion Paper Regarding the Permanent Disability Evaluation Schedule (PDES)*, PermanentDisabilityEvaluationScheduleFull.pdf.

—, New Brunswick: *Policy 21-250, Permanent Physical Impairment*.

—, *Policy 25-014, Medical Aid Decisions*.

—, *Policy 21-111, Conditions for Entitlement – Occupational Diseases.*

Workplace Health, Safety and Compensation Commission of Newfoundland and Labrador, 2009: *Permanent Functional Impairment Rating Schedule*.

Zambia: *The Workers' Compensation Act*.

Appendix B

Some Websites

1. http://awcbc.org/wp-content/uploads/2013/12/meredith_report.pdf; *The Meredith Report*, 31 October 1913.
2. https://www.bcnu.org/Safe-Workplace/IllnessDisabilityServices/Documents/PDES_Appendices.pdf, *Permanent Disability Evaluation Schedule Discussion paper*, December 2012.
3. http://laws.gnb.ca/en/ShowPdf/cs/W-13.pdf, *Workers' Compensation Act*. This Act is consolidated to 1 April 2015.
4. http://laws.gnb.ca/en/ShowPdf/cr/82-165.pdf, *New Brunswick Regulation 82-165 under the Workers' Compensation Act* (O.C. 82-762).
5. www.worksafenb.ca/pdf/resources/policies/21-250.pdf, *Policy 21-250. Permanent Physical Impairment*.
6. http://laws.gnb.ca/en/ShowPdf/cr/84-66.pdf, *New Brunswick Regulation 84-66 under the Workers' Compensation Act* (O.C. 82-762) (Industrial diseases).
7. www.bcnu.org/Safe-Workplace/IllnessDisabilityServices/Documents/PDES_Appendices.pdf, The Permanent Disability Evaluation Schedule (PDES), Appendices.
8. www.ilo.org/dyn/natlex/natlex4.countrySubjects?p_lang=en&p_country=ETH:
   - wcms_187630.pdf Occupational Safety and Health Profile for Ethiopia, MoLSA, 2006;
   - wcms_236130.pdf Decent Work Country profile Ethiopia, MoLSA, 2013.
9. http://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---safework/documents/policy/wcms_187630.pdf: *Occupational Safety and Health – Profile for Ethiopia*, Ministry of Labour and Social Affairs, compiled by Dawit Seblework (ILO Consultant), October 2006.
10. http://phe-ethiopia.org/resadmin/uploads/attachment-188-Ethiopia_National_Social_Protection.pdf, National Social Protection Policy, The Federal Democratic Republic of Ethiopia, Ministry of Labour and Social Affairs, 26 March 2012.
11. www.ilo.org/dyn/natlex/natlex4.detail?p_lang=en&p_isn=89586&p_country=ETH&p_classification=15, Public Servants' Pension Proclamation, Proclamation No. 714/2011, 24 June 2011, Addis Ababa.
12. http://www.ilo.org/dyn/natlex/natlex4.detail?p_lang=en&p_isn=89585&p_country=ETH&p_count=141, Private Organization Employees' Pension Proclamation, Proclamation No. 715/2011, 24 June 2011, Addis Ababa.
13. http://www.ilo.org/dyn/natlex/natlex4.detail?p_lang=en&p_isn=67274&p_country=ETH&p_classification=01, Labour Proclamation No. 377/2003, Proclamation No. 377/2003, 26 February 2004, Addis Ababa.
14. http://www.ilo.org/dyn/natlex/natlex4.detail?p_lang=en&p_isn=97344&p_country=ETH&p_classification=01, Labour Proclamation No. 466/2005, Proclamation No. 466/2005, 30 June 2005, Addis Ababa.
15. http://www.ilo.org/dyn/natlex/natlex4.detail?p_lang=fr&p_isn=74476&p_count=96232&p_classification=01.02&p_classcount=1073, Labour Proclamation No. 494/2006, Proclamation No. 494/2006, 29 June 2006, Addis Ababa.
16. http://ilo.org/dyn/natlex/docs/ELECTRONIC/85145/95153/F850596174/ETH85145.pdf, Employment Exchange Services Proclamation No. 632/2009, Proclamation No. 632/2009, 6 August 2009, Addis Ababa.
17. http://www.ilo.org/dyn/natlex/natlex4.detail?p_lang=en&p_isn=89582&p_country=ETH&p_count=141, Public Servants Social Security Agency Establishment, Council of Minister Regulation No. 203/2011, 25 March 2011, Addis Ababa.

18. http://www.ilo.org/dyn/natlex/natlex4.detail?p_lang=en&p_isn=47312&p_country=ETH&p_classification=01, Constitution of the Federal Democratic republic of Ethiopia, National Legislative Bodies, Ethiopia, 21 August 1995, Addis Ababa.

19. http://www.ilo.org/dyn/natlex/natlex4.countrySubjects?p_lang=en&p_country=ETH (choose a subject, for example, social security, and then specific legislation).

20. National legislation and NATLEX Database: http://www.ilo.org/dyn/natlex/natlex_browse.country?p_lang=en&p_country=ETH.