



**COLLEGE OF DEVELOPMENT STUDIES  
CENTER FOR ENVIRONMENT AND SUSTAINABLE DEVELOPMENT**

**THE ROLES OF LABOUR UNION IN PREVENTING ENVIRONMENTAL  
POLLUTION; A CASE STUDY OF LABOUR UNIONS OF MODJO AND EAST  
AFRICA TANNARIES IN MODJO TOWN**

**BY**

**SHASHO MEKONNEN**

**ADVISOR:- Dr. TAMIRAT TEFERA**

**JUNE, 2020  
ADDIS ABABA**



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**A THESIS SUBMITTED TO CENTER FOR ENVIRONMENT AND  
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REQUIREMENTS FOR THE DEGREE OF MASTER IN ENVIRONMENT AND  
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This is to certify that the thesis prepared by Shasho Mekonnen entitled "The Roles of Labour Union in Preventing Environmental Pollution; a case study of Labour unions of Modjo and East Africa Tanneries in Modjo Town" and submitted in partial fulfillment of MA degree in Environment and Sustainable Development complies with the regulation of the university and meets the standards for its originality and quality.

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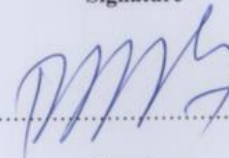
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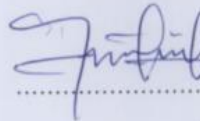
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**Declaration**

I, the undersigned, declare that this MA thesis is my original work. All sources of materials used for this MA thesis have been duly acknowledged. I further confirm that the thesis has not been submitted either in part or in full to any other higher learning institution to earn any degree.

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16/12/2020  
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## **ABBREVIATIONS AND ACRONYMS**

AAU	Addis Ababa University
EFCCC	Environment Forest and Climate Change Commission
ETP	Effluent Treatment Plant
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
EPA	Environmental protection Authority
FDRE	The Federal Democratic Republic of Ethiopia
FGD	Focused Group Discussion
GTP II	The Second Growth and Transformation of FDRE
ILO	International Labour Organisation
NGOs	Non-Government Organisations
KII	Key Informant Interview
LIDI	Leather Industry Development Institute
MLIP	Modjo Leather Industrial Park
OFAG	The Office of Federal Auditor General
OHS	Occupational Health and Safety
PPE	Personal Protection Equipment
SDG	Sustainable Development Goals
UN	United Nations
UNEP	United Nations Environment Programme
UNIDO	United Nations Industry Development Organization
WB	World Bank
WBCSD	The World Business Council for Sustainable Development

## ***Abstract***

*The objective of this study was to assess the roles of labour union in preventing environmental pollution, a case study of Labour unions of Modjo and East Africa tanneries in Modjo Town, and the working relationship with stakeholders that deal with the environment. Mixed methods research was applied by using qualitative and quantitative approaches to the stated objective. The survey questionnaire and interview checklists prepared as a research tool to collect data from 110 the respondents and key informants interview. The data were analyzed using descriptive statistics such as frequency, tables, percentages, and mean scale, to show the extent to which the respondents agreed or disagreed with the statements in the questionnaire, using a 5-points Likert scale. The result shows, that the involvement of labor unions in environmental pollution prevention is not adequately utilized, poor cooperation with stakeholders and there are non-compliance of the tanneries studied with some of the environmental regulations and standards that resulted in the downstream user communities of Modjo River, affected by the polluted wastewater discharged. Following community grievances, the landfill in-use by the tanneries and Modjo Municipality was prohibited and closed in 2018, but without rehabilitation. Therefore, due attention is required to enhance labour unions' role and participation through training and awareness creation to enable reduce or prevent environmental pollution, attain secured jobs for the workers in the tanneries and institutional capacity building at different government levels and more collaboration of relevant stakeholders with the labour unions to contribute more to sustainable development.*

***Keywords:- Labour union, Leather processing, Modjo & East Africa Tanneries, Pollution prevention and stakeholders.***

## CHAPTER ONE

### 1. Introduction

#### 1.1. Background

Definition:- The Black's law dictionary defined Labour Union (also termed as Trade union) as an organization formed to negotiate with employers, on behalf of workers collectively, about job-related issues, such as salaries, benefits, hours, and working conditions. Unions generally represent skilled workers in trades and crafts (Garner, 1999).

Swarne (2017), presented about labour union citing Chard's definition of 1974 as "Labour unions or trade unions are organizations formed by workers from related fields that work for the common interest of its members. They help workers in issues like the fairness of pay, good working environment, hours of work, and benefits. They represent a cluster of workers and provide a link between the management and workers.

The industrial revolution during the eighteenth century in Europe prompted a new surge of new workers to enter the job market that had previously remained at home and now needed representation. In the United States, early workers and trade unions played an important part in the role of independence. Although their physical efforts for the cause of independence were ineffective, the ideas they introduced, such as protection for workers, stuck in American culture (Devine, 2008).

Trade Unions have become an integral and powerful factor in the contemporary production and distribution system. Modern industrialization has paved the way for trade unions. They are now exercising a strong influence on the methods of production of goods and services, their distribution, the allocation of economic resources, the volume of employment and unemployment, the character of rights and privileges, policies of governments, the attitude and status of legal masses of the population, and the very nature of economic and social organizations (Bose, Mondgal and Banerje, 2013).

A trade union is an establishment by a group of wage earners to standardize the relationship between employee and employer, to sustain their jobs, to secure better wages and benefits, and to advance their working conditions. Trade unions have a major role in influencing employees working live (Tewedage, 2016).

Labour union leadership bargains with the employer on behalf of its members on terms and conditions of employment that include the negotiation of wages, work rules, complaint procedures, rules governing hiring, firing, and promotion of workers, benefits, workplace safety, and policies. Labour Unions also play a vital role in industrial relations and peace which is a win-win solution for both the organization and employee. They are the middle ground players between the workers and the employer standing on the side of the workers (Yayerad, 2018).

Apart from their collective interest trade unions are engaged in other areas that are of public and environmental interest. For example, Rengo (a large Japanese labor union) was campaigning against pollution and deforestation since the 1960s, has expanded the scope of its environmental policy to include global issues in 1992, sent a delegation to the Global Environment Summit held in Rio de Janeiro. The pillars of Rengo's environmental policy are the prevention of global warming, control over hazardous chemicals, and the promotion of waste management/ recycling. Its approach is to structure a recycling society, and the organization has gradually developed a way of promoting environmentally sustainable business and industry, community living, and personal lifestyle (Muhammad, Naseer, Tashfeen, Hamaaduddin, and Waleed, 2012).

This capacity was made possible through time, after the formation of the International Labour Organization (ILO) in 1919, with the mission to improve people's life by advancing social justice and promoting decent work for everyone. Member countries are abiding by the ILO conventions and declarations that they pass laws and regulations that help to achieve not only the labour union and its members' interest but also get in partnerships with stakeholders to contribute to sustainable development.

Trade unions seek to contribute to the transformation aspects of a broader social and economic strategy for change, in which environmental concerns are integrated into our traditional demands-workers' rights, greater equality, and social justice (Muhammad et al 2012).

The leather industry, one of the industries the labour unions serve, as a valuable value chain in agriculture and manufacturing, plays a significant role in providing an enormous economic market for foreign and local markets and social benefits through employment. As tanneries are engaged in labor-intensive activities, especially in developing countries, the number of employees they require will be higher than the minimum number of workers set out in the proclamation to form a labour union, which is ten or more (Proclamation no. 1156 art. 114).

## **1.2. Statement of the problem**

The tanning industry pollution to the environment deals with the release of poisonous chemicals and other toxic waste products which create air, water, and soil pollution, etc. which are all severely impact living conditions. Moreover, the receiving water bodies are disrupted by pollutants, the ecological and aquatic balance of the environment. Also, the pollutants are the source of the spread of various kinds of diseases (eg. Jaundice, diarrhea, skin disease) that affect human beings and animals (*Garai 2014*).

Hunengew (2015), cited Leather Industry Development Institute (LIDI), mentioned that a good number of tanneries in Ethiopia have primary and secondary treatment to manage their wastes, but they don't follow the right procedure to treat the waste by applying proper dosages of chemicals, good maintenance, and continuous monitoring and evaluation. There are about 12,500 m<sup>3</sup> wastewater and 150 tons of solid wastes generated per day from all tanneries (Hunegnew, 2015). Zeleke, 2011 indicated that one of the most damaging ways in which tanning industries have an impact on integrated aspects of internal processes and the external ecological system involves the various wastewater and treatment schemes. Preference of inadequate and costly end-pipe waste treatment technique to the technology-aided preventive approach at the source and each stage of the process is a puzzling issue of most Ethiopian tanneries (Zeleke, 2011).

Other researchers showed that the analysis of the tannery wastewater from different tanning processes viz, soaking, liming and unhairing, deliming and bating, pickling, chrome tanning, and retanning is high with a disagreeable pH, alkalinity, acidity, total solids, total dissolved solids, suspended solids, chemical oxygen demand, biochemical oxygen demand, chlorides, and sulfides. Thus, the analysis boldly indicates that the wastewaters from different units of Modjo town do not satisfy the legal ranges of selected parameters (Abdrie and Tesfalem, 2017). These researchers emphasized the role of labour unions protecting members' interest and enhancing productivity and performance of their respective organization and not shown other roles of labour union concerning environmental pollution, which the researcher beliefs pollution much affects their interest.

According to the Second Growth and transformation plan (GTP), it was planned to reach the annual export projection of 706.5 million USD export by the end of 2019/20 from the leather and leather products (GTP II, 2016). However, there is a conflict between this economic interest and environmental sustainability because most of the tanneries discharge their wastewater from the tanning process without or partial treatment, due to the high cost of installing and implementing

modern treatment plant as required. Implementing the environmental policy of the country in harmony with the required growth of the leather industry becomes a difficult task for the government of Ethiopia.

As a performance audit report of the Office of Federal Auditor General (OFAG- Feb 2019) indicates that there are 12 tanneries in Modjo town, based on field observation and interview with relevant stakeholders, found out that 8 of them have only first stage waste treatment plant, and it is only 4 tanneries which have the second stage and none of them have the third stage. As per the requirement for such a chemical-intensive industry, to have all the three stages of wastewater treatment plant before discharging liquid waste to the environment, but they were found out directly releasing the untreated waste/partially treated wastewater to Modjo River and dumping the solid waste on nearby areas.

On the other hand, the Environment, Forest, Climate Change Commission (EFCCC) report indicated similar findings that some of the tanneries in Modjo Town were given a warning, suspended temporarily, but reopened soon, thus highly affected the environment and also made workers jobless or put under great threat for their unemployment affecting their livelihood, which is the interest of the labour union. Also, the reports indicate the extent of pollution the tanneries are causing on the environment and workers, but have not indicated the role of labour union and workers in preventing the pollution from tanneries before it comes out to the surrounding river and environment and make many workers jobless.

Such harmful pollution will affect, the health and safety of the workers and the surrounding community, the job security of the workers, the environment as well as the economy, when the community grievance strengthens the government forced to close the tannery as it was seen in areas, like Sebeta, Debre Berihan, and Sululta Towns, as shown in table -1 below, although it is difficult to quantify here the environmental impact the tanneries have made during their operation and the rehabilitation cost it requires.

**Table-1:-** Status of closed tanneries due to their environmental pollution.

No	Name of tannery	Town	Year of closure, E.C	No. of workers lost a job	Annual Economic loss(From export) in USD
1	Haffed Tannery	Sebeta	2009	250	1,500,000.00
2	Blue Nile Tannery	Sebeta	2009	150	1,200,000.00
3	Tikur Abbay Tannery	Debrebrhan	2012	116	6,000,000.00
4	China-Africa overseas leather Factory *	Sululta	2009	373	12,000,000.00
5	Galan Tannery**	Modjo	2010	150	1,200,000.00
	<b>Total</b>			<b>1039</b>	<b>21,900,000.00</b>

\* Additionally, financial problems are mentioned as the reason for closure, unable to repay an external and local loan for banks.

\*\*Additionally, financial problems are mentioned as the reason for closure, unable to construct a treatment plant.

**Sources:** Addis Zemen Gazzetta Oct 2019, Reporter 2010, Hunegnaw, 2015 and personal calls.

Inappropriate environmental management of the tanning industry has a detrimental effect on the working environment. The tanneries are generally, chemical-intensive industrial complexes that generate and release a large volume of highly concentrated liquid and solid wastes into rivers, landfills, and to the air. This situation imposes a significant impact on workers' health and job security. There is no exception for the tannery industries established around the Modjo area that the problem is revealed and highly damaging the working environment & affects public health.

The other reason why this thesis is focusing on labour union role in pollution prevention is that their members are who know and actively engaged at all levels of the production process, inputting the chemicals and other materials in use and also in releasing the waste/ pollutants, etc. They have the experience, skill, and knowledge about the effects of these chemicals in use, they can make those possible to recycle, reuse, or act in properly disposing of the waste from the tannery. Also, they do have the chance to look/know the secret release of pollutants and the use of unauthorized chemicals by the company, acting as ethical citizens; they can disclose it to relevant government authority to save the environment they are working around.

The trade union members are the main and first victims of tannery pollution because they work there every day, it has an impact on their health and safety, secondly due to the non-compliance by

the tannery with environmental regulations and standards, if the tannery is to be closed by government authorities, the workers are the ones who lose their job, which highly affect their interest and livelihood.

So before such a loss-loss situation happens, which is not totally in line with Sustainable development, the Labour unions and stakeholder's collaboration are not seen to act by using their knowledge, experience, negotiation power and even call for strike not to work in the polluting industry, to contribute to the protection of the environment and the sustainable existence of their factory. In this Thesis, it was tried to address such gaps and recommended possible solutions.

### **1.3. Research question**

This study tried to answer the following question.

1. Are the labor unions playing their roles in preventing pollution?
2. How labor unions and their members' interests, as well as the environment, are affected by pollution from the tannery they are serving?
3. What relationship do labour union has or should have to develop with stakeholders to contribute to pollution prevention and as such sustainable development?

### **1.4. Research objective**

The general objective of this research was to assess the roles of labour unions and their working relationship with stakeholders in preventing environmental pollution, in Modjo and East Africa tanneries in Modjo Town.

### **Specific Objectives**

More specifically this study targeted to:

1. Assess the roles of labour unions and workers' perceptions in preventing environmental pollution.
2. Assess the labour union's working relationship with stakeholders in preventing or reduction of environmental pollution.
3. Assess the extent of trade union's interest and occupational health and safety at work is satisfactory in the tannery they are serving.
4. Assess the tanneries' compliance with environmental regulations and standards set concerning pollution control.

### **1.5. Significance of the study**

The findings of the study have several significances. It is helpful to the readers to understand the contribution of labour unions and stakeholder's collaboration in preventing environmental pollution. It assists in enhancing the relationship between the trade union and stakeholders to collaborate in the protection of the environment and contribution to sustainable development.

It also reveals the international practices available, to make use of it in pollution prevention and sustainable environmental management. Also, it is an initiation of an idea for those who want to carry out further studies on the role of labor unions in preventing environmental pollution at source, before causing damage to the environment and exposing workers to jobless, affecting their livelihood, in the leather industry and other industries as well.

### **1.6. Scope of the study**

The main area of focus of the study is on the assessment of the roles of the labour unions in preventing pollution in Modjo and East Africa Tanneries in Modjo Town and the working relationship with stakeholders those dealing with the environment, that includes the EFCCC or Environmental protection Authority, Ministry of Trade and Industry (MoIT), Labour and Social Affairs, Environmental societies and community. Besides, the major targets are the labour union members and potential members at the sampled tanneries, to assess their role so far and what is expected of them in the future with pollution prevention.

### **1.7. Limitation of the study**

The limitations of the study were lack of local research materials, specifically related to the area of study (although a lot of international organizations' materials are available and used) and lack of cooperation from factories management/owners were not cooperative to the extent that the researcher required, in providing some materials either, they may not have it or do not willing to show it. Friendship Tannery denied access to the tannery even after receiving and reading the support letter from AAU and Modjo Town Environment, forest, and Climate Change office and not allowed the researcher to enter the tannery compound, so excluded from the sample.

## CHAPTER TWO

### 2. Literature review

#### 2.1. History of labour union

According to an article by Devine (2008), labour union history traces back to the guild system in Europe that sought to protect certain professions by controlling skill mastery and advancement. Although the relationship between guilds and unions is not perfectly linear and is therefore sometimes disputed, guilds as the forerunners of unions make sense - it is the first example of workers organizing according to their own rules rather than those of their employer.

Similarly, Swarne (2017), stated as a great demand for new workers to join the job market was triggered by the eighteenth century's industrial revolution in Europe. In the US in earlier times the trade unions and workers played a very important part in striving for their independence. It was only in the nineteenth century that the trade union became hugely popular after the founding of the National Labor Union, which is the very first national union. This union was formed in the year 1866 and it was open for all kinds of workers. Unfortunately, this union wasn't successful and was dissolved shortly and all that remains in history is its foundation (Swarne, 2017).

Adane (2018), in his work, trade unions and the state in Ethiopia, stated that the development of trade unions in the Western world contributed a lot to the birth of a wage-earning class and labour organizations in Africa. Regardless of providing their labour with little or no wages, African workers had not formed trade unions until the end of the Second World War.

In Ethiopia, workers started being organized in an economic situation dominated by foreign employers who attempted to operate in modes of the colonial era even though Ethiopia has never been colonized. They were subjected to oppression and exploitation which motivated them to stage struggles against employers' decision-making over which management claims sole and exclusive rights. The oldest union in Ethiopia was the Ethio-Djibouti railway workers union, established in 1945 E.C, was formerly known as the Franco-Ethiopian Railway Workers' Union. The proclamation of the 1963 Labour Relations Decree created an important landmark in the history of trade unionism in Ethiopia as it gave legal recognition to unions. Collective bargaining through labor unions also became a form of an employer-employee relationship in the country (Mahilet, 2016).

Adane (2018), strengthening this idea, stating that due to the significant role the self-help associations, particularly, *edders* or *märädajas*, played in the development of workers' awareness

regarding labour relations and the unfair treatment of workers by their employers, they were often assumed as the pre-cursors of trade unionism in Ethiopia.

Thus, *edders* began to serve as an effective and important type of mutual protection and benefit for the emerging industrial workforce. These associations provided immense support to the workers in the case of death, loss of a job, illness, accidents, etc., as it is common in many government institutions today.

Today, worldwide and in Ethiopia as well, labour unions are legally assisted by their respective country proclamations, usually formed to secure improvement in pay, benefits, working conditions, or social and political status through collective bargaining, by the increased bargaining power wielded by the banding of the workers.

These achievements were not without strike and sacrifice from the trade union leaders and member workers, from loss of a job to prison, even death when involved in the strikes, because the government tends to suppress strikes to keep peace and security for economic and social reasons.

## **2.2. Theories of trade unionism**

The theories related to labour union reviewed mainly, show the relationship and antagonistic struggle with capitalism, as advocated by Marxist and Engels theories of revolutionary and by Sydney and Beatrice Webbs of industrial relations, which in one way or another centered the workers and their unions movement and struggle for their right. Some of them are commonly stated in different works of literature reviewed and articles summarized and presented as follows.

### **2.2.1 Revolutionary Theory**

The revolutionary approach/theory of trade union is developed by Karl Marx “This theory is also known as “the theory of class war and dialectical materialism”. According to Marx, the trade union was the foremost organizing center to provide a locus for streamlining the forces of working classes. The trade unions are, for Marx, the instruments to overthrow capitalism. These are, thus, prime instruments of the class struggle between proletarian workers and capitalist businessmen.

According to the Marxian theory, the capitalist competition itself compels the capitalists for their survival to increasingly exploit the labour and to pay them substandard wages. In reaction, trade unions have been formed by the workers to maintain their rate of wages in the face of such onslaughts of the capitalists (Chand, 2012).

### **2.2.2 Evolutionary Theory**

The evolutionary theory is also known as, “the theory of industrial democracy” was articulated by Sydney and Beatrice Webbs. One of the conventional definitions of a labour union is that given by Webbs (1997) as —a continuous association of wage earners to maintain and improve the conditions of their working lives.

According to Webbs, trade unionism is an extension of democracy from the political sphere to the industrial sphere. Webb agreed with Marx that trade unionism is a class struggle and the modern capitalist state is a transitional phase that will lead to democratic socialism. Webbs were in favor of the “method of collective bargaining”, which in combination with the “method of legal enactment”, could strengthen the position of labourers in the labour market. Therefore, they held that the main union objective is the increase of labourers’ bargaining power against employers (Stavros and Ioannis, 2012).

### **2.2.3 Theory of Industrial Jurisprudence**

According to S. H. Slitcher the founder of the “Theory of Industrial Jurisprudence”, workers individually fail in bargaining with employers for protecting their interests. In his view, trade unionism served as a means for workers to protect them at work. Such an approach of trade unionism, Slitcher termed as “a system of industrial jurisprudence. He also agrees that unionism is a class struggle and the ultimate is the control of industry by labour and not a revolution as predicted by Marx (Chand, 2012).

As mentioned by Chatterje (2017), labour legislation and industrial jurisprudence are based on certain fundamental principles, like Social Justice, Social Equity, International Uniformity, and National Economy. The concept of social justice has become an integral part of industrial law. It is founded on the basic idea of socio-economic equality. In an industrial set-up social justice implies two things; first an equitable distribution of profits and other benefits accruing from the industry between the owner of the industry and workers; and secondly, providing or affording protection to the workers against harmful effects to their health, safety, and morality(Chatterjee,2017).

### **2.2.4 Rebellion Theory**

According to too Frank Tannenbaum, the pro-pounder of “Rebellion Theory”, trade unionism is a spontaneous outcome in the growth of mechanization. He believes that the use of machines leads to the exploitation of workers. Thus, the machine is the cause and labour movement, i.e., trade

unionism is the result. In other words, trade unionism is a rebellion approach against mechanization, automatization of industrial society to protect workers' interest in the enterprise.

But mechanization is known by others, even invented by workers to assist them, and by reducing effort and time spent in the production process to improve efficiency and productivity.

### **2.2.5 Perlman's Theory of the "Scarcity Consciousness" of Manual Workers**

According to Perlman, 'working people, in reality, felt an urge towards collective control of their employment opportunities, but hardly towards similar control of industry.' Perlman observed that three dominant factors emerged from the rich historical data:

- a) The capacity or incapacity of the capitalist system to survive as a ruling group in the face of revolutionary attacks (e.g., failure in Russia).
- b) The source of the anti-capitalist influences being primarily from among the intellectuals in any society.
- c) The most vital factor in the labour situation was the trade union movement. Essentially pragmatic trade unionism struggles constantly not only against the employers for an enlarged opportunity measure in income, security, and liberty in the shop and industry, but struggles also, whether consciously or unconsciously, actively or passively, against the intellectual who would frame its programmes and shape its policies.

It was when manual workers became aware of a scarcity of opportunity, that they banded together into unions to protect their jobs and distribute employment opportunities among themselves equitably, and to subordinate the interests of the individual to the whole labour organism. Unionism was ruled thus by this fundamental scarcity consciousness (Perlman, 1970).

### **2.2.6 Tannenbaum's Theory of Man vs. Machine**

According to Tannenbaum's theory, the union is formed in reaction to alienation and loss of community in an individualistic and unfeeling society. In his words, the trade union returns to the workers' society, which he left behind him when he migrated from a rural background to the anonymity of an urban industrial location. The union gives the worker a fellowship and a value system that he shares with others like him. Institutionally, the trade union movement is an unconscious effort to harness the drift of our time and reorganize it around the cohesive identity that men working together always achieve (Chand, 2012).

In all the above theories, as the workers right and the benefit was not protected, exploitation of different extent exercised by industries management and owners, hence workers in different countries of the world struggled for so long through their union, for the need for improved working condition and legal basis to form a union that negotiates with management to improve the working environment and their right protected by creating conducive industrial peace.

### **2.3. Roles of labour unions**

As indicated in different works of literature, apart from their main roles of serving members' interest labour unions are involved in different roles that are important to the community and the environment, that includes, anticolonial movements, strikes for environmental protection and climate change, research, education, and social welfare activities.

Historically, union representation and collective bargaining have been the keys to the growth of a stable working population in developed economies and it has made it possible for workers to gain a more equitable share of the wealth that they create; they can improve working conditions and help workers gain job security (Shreshte, 2012).

For example, according to Kojola (2009) reported that in the USA, before the mass environmental movements, of the late 1960s, labour was one of the strongest supporters of pollution control because of occupational and public health concerns. In the early 20th century, unions and environmental groups began to make connections between hazardous materials in the workplace and the environment. By the 1970s labour support in the USA helped to pass 'The Clean Air Act 1970' and 'The Clean Water Act 1972'. Environmentalists for Full Employment were formed in the 1970s and organized several conferences with unions and garnered support for the 'Humphrey-Hawking full employment bill' (Muhammad et.al, 2012).

Within the last ten years, labour and environmental organizations worked together to create the Blue Green Alliance and the Labour Network for Sustainability which promotes environmental protection, economic fairness, and social justice. These organizations mobilized union members for the 2017 People's Climate March, demonstrating the labor movement's commitment to environmental justice and protection of the environment (Uehlein, 2017).

Labour unions have played an immensely positive role in the development of most post-colonial states. They organized workers and advanced their interest in the context of exploitative labour relations. They participated actively in the decolonization process, and they struggled against neo-

colonial regimes to gain concessions to protect the socio-economic interests of the working classes (Emma, 2013).

Similarly, Sunmonu, and Scot (2008), in the Pan-Africanism movement, indicated that, as the nationalist movement began to grow after WWII African trade unions developed concomitantly. They mentioned, the contribution of trade unions to the liberation of many African countries from the yoke of colonialism was very significant, that many former African leaders and the founding fathers of the former Organization of African Unity (OAU) had once been active trade unionists. To mention a few of them, Patrice Lumumba of Congo, Ahmed Sekou Toure of Guinea, Julius Nyerere of Tanzania, Keneth Kaunda and Frederick Chiluba of Zambia, Hamani Diori of Niger, and Modibo Keita of Mali were trade unionists.

In the UN Agenda 21 (1992), it was stated as the established principles of tripartite provide a basis for strengthened collaboration between workers and their representatives, Governments, and employers in the implementation of sustainable development. Workers and their representatives should have access to adequate training to augment environmental awareness, ensure their safety and health, and improve their economic and social welfare. Such training should ensure that the necessary skills are available to promote sustainable livelihoods and improve the working environment.

The importance of unions as actors contributing to sustainable development was advocated almost twenty years ago in the Agenda 21 proposals from the 1992 Rio Earth Summit in a document on 'Strengthening the Role of Workers & their Trade Unions' (United Nations, 2009). Reading it today, three features, in particular, are striking. First, environmental issues are often bound up with health and safety issues, an association that we have found in our research as well. Second, there is an emphasis on collaboration within a tripartite system of government, employers' and workers' organizations to encourage capacity building within unions to involve them in decision-making on the design, implementation, promotion, and evaluation of programs for sustainable development.

Finally, it is advocated that unions should be involved in the development of improvements to both the work environment and the production process, as well as working within the local community (Nora and David, 2012).

#### **2.4. Empirical literature review**

Empirical literature shows that trade unions in different countries have been involved in various activities that serve the public and the environment; in some of them it has been enacted as a law to enforce the inclusion of environmental issues into their collective agreement.

Rathzel and Uzzell, (2012) stated, in the UK, workers and ‘environmentalists’ joined together on 24 April 1932 for an act of mass trespass when they walked across the grouse moors of Kinder Scout (owned by the landed gentry and wealthy industrialists) to protest at the lack of access to green spaces around the industrial cities of the north of England. The ‘right to roam’ was initiated by the British Workers' Sports Federation (BWSF), largely made up of members and supporters of the Communist Party, which enjoyed significant working-class support. For these groups, nature was a space for recreation and leisure that needed to be preserved as well as enjoyed (Rathzel and Uzzell, 2012).

Apart from their role in serving the members' interest, labour unions are seen serving other roles like an effort to implement sustainable development that will involve adjustments and opportunities at the national and enterprise levels, with workers foremost among those concerned. In addition to their traditional bargaining activities, unions now have a newly acquired voice and representative function which matches the 21<sup>st</sup> century requirement. Many of them are trying to increase their value to workers by providing a variety of services to their members, as well as to the community to which they belong (Yayerad, 2018).

Ryder (2009) expressed that respect for rights is also critical to sustainable development. It is important that current workers are able, through their trade unions, to participate in and influence changes, just as workers in new jobs created by a ‘greener’ economy must have their rights fully protected, in particular, their rights to organize and bargain. Trade unions seek to contribute to the transformation aspects of a broader social, and economic strategy for change, in which environmental concerns are integrated into our traditional demands – workers’ rights, greater equality, and social justice (Muhammad et al, 2012).

The commitment of UNEP, ILO, and WHO to collaborate with trade unions in developing the environmental agenda provided an opportunity to fully extend this agenda to the world of labour.

There are examples whereby the trade union and workers have shown practical environmentalist activities:-

a) ***Canada: Extended Producer Responsibility (EPR) – making the environment a workers’ issue in the automobile industry***

Workers in the automobile industry, as well as management, need to be involved in decision making regarding the type of products to build and the environmental soundness of the production process. The Canadian Auto Workers union (CAW) has experimented with the use of collective bargaining as a tool to provide a voice for workers on environmental issues in and out of the workplace. Emphasizing the need to establish and strengthen workers’ right to bargain with employers on environmental issues, they have demonstrated the need to challenge management’s control of decision-making on environmental matters and to involve the public in campaigns to promote environmental concerns in the community.

b) ***The Nigeria Labour Congress campaign for safety at the workplace and Environmental protection***

The Nigeria Labour Congress (NLC) has initiated a project aimed to promote safety in the workplace and to protect the environment by ensuring, among other things, that:

- Collective bargaining includes environmental considerations;
- Workers receive equal pay for equal work;
- Workers are guaranteed a safe working environment;
- Health and safety laws are reviewed by the Government;
- Workers are aware of health and safety issues in the workplace and environmental considerations.

## **2.5. Challenges of trade union**

Trade unions may face challenges that reduce their effectiveness in protecting their members’ interests and play other social and environmental roles. According to Kisaka (2010), the challenges are categorized into operational, financial, and political or managerial interference. The government and employers look down upon trade unions and preconceive them as chaotic and irresponsible organizations whose major aim is to disrupt peace, order, and good governance. This perception attracts government and employers into affairs and activities of trade unions and thus tempts the government and employers to control trade unions activities.

The trade unions are increasingly faced with financial constraints emanating from the following factors, among others: loss of members as a result of organizational restructuring, leading to loss of revenue since trade unions depend on members' contributions to undertake their operations; splitting of the trade unions (Kisaka, 2010).

## **2.6. Leather processing and pollution**

### **2.6.1 Leather processing**

Leather is commonly made from cattle, pigs, sheep, bison, and goats' hides/skins as a by-product of slaughter for meat. Leather is also made from wild animals like, kangaroo, zebra, seals, lizards, and even sharks and stings, many of whom are either raised or hunted specifically for their skins.

A piece of skin that is not tanned (treated) is biodegradable, which means it would rot away, to prevent this natural breakdown, several dangerous toxins are used in the production and treatment of leather by a process of leather processing (tanning).

Tanning is the process by which the protein in the skin is stabilized and transforms hide into the leather with strong resistance to water and bacteria. For example, most leather chrome-tanned, even though the EPA considers chromium waste hazardous (Bei Xu, 2014).

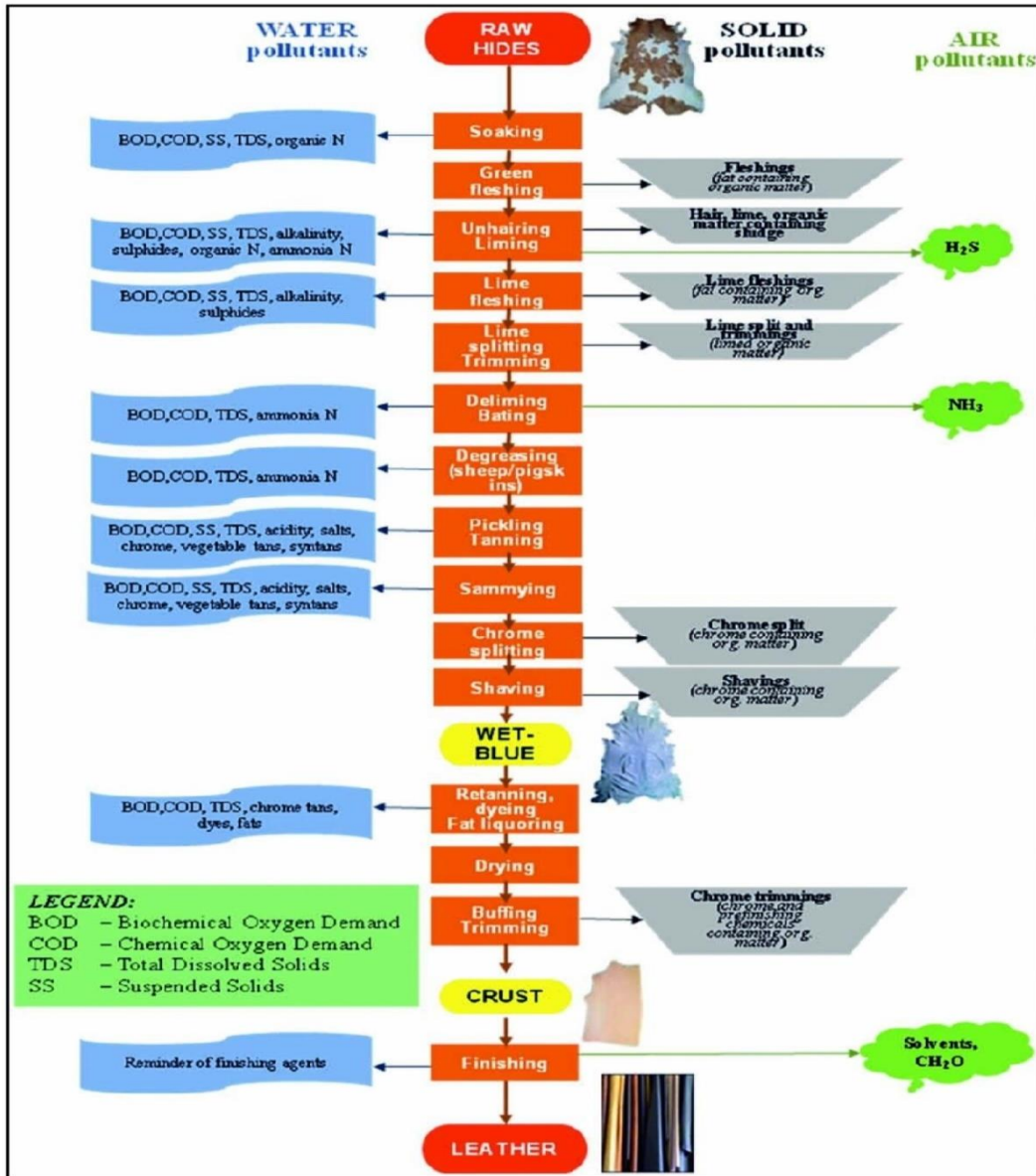
The processing of hides and skins into leather is a complex procedure that requires a precise combination of many chemical and mechanical operations of step-by-step that involves curing, soaking, de-hairing, fleshing, deliming, pickling, and tanning (Gupta, Gupta, and Tamra, 2007)

In the case of tanneries, the tanning process involves chemicals and organic compounds that can have a detrimental effect on the environment. Agents such as chromium, vegetable tannins, and aldehydes are used in the tanning step of the process. Chemicals used in tanned leather production increase the levels of chemical oxygen demand and total dissolved solids in water when not disposed of responsibly.

In all the phases of processing water and various chemicals are used that result in the form of solid waste, wastewater, and air pollutants as the following figure (Fig:-1) below details.

## Leather Processing

**Figure:-1.** Sources and types of pollutants in leather processing



Source: - UNIDO, 2016

### 2.6.2 Types of pollutants from tannery

Pollution is an unfavorable alteration in the physical, chemical, or biological characteristics of air, water, and land that may or will adversely affect human life, industrial life, industrial progress, living conditions, and cultural assets. Thus, it is a sort of negative stress exerted on the positive health of the ecosystem (Mitra, 2018). According to different works of literature, three main types of waste are generated from leather processing in the form of Solids, Wastewater, and Air pollution.

**Solid wastes-** Different types of solid wastes are generated at different stages of leather processing. Solid waste includes salt from raw skin/hide dusting; trimmings; hair from the liming/dehairing process, which may contain lime and sulfides; and fleshing from raw skins/hides. Other solid waste includes wet-blue shavings, which contain chromium oxide ( $\text{Cr}_2\text{O}_3$ ); wet-blue trimming, which is generated from finishing processes and contains chromium oxide, and buffing dust, which also contains chromium oxide, syntans, and dye. The reducing characteristics of tannery sludge stabilize Cr (III) concerning Cr(VI), due to the presence of organic matter and sulfides (IFC & WB, 2007).

**Wastewater:-** Wastewater contains chromium because the chromium sulphate chemical used during tanning and retanning will not completely fix the leather. More than 40% of the chrome sulphate used in the leather making process joins the wastewater treatment (Betelehem, 2018).

Tannery process water consumption, and consequently wastewater effluent discharges, varies greatly between tanneries, based on the processes involved, raw materials, and products. Generally, water consumption is greatest in the pre-tanning areas, but significant amounts of water are consumed also in the post-tanning processes. Wastewater from the beam house processes (e.g. soaking, fleshing, dehairing, and liming) and from associated rinsing is generally collected together. It may contain hide substance, dirt, blood, or dung and therefore have significant loads of organic matter and suspended solids. Wastewater from tanyard processes, deliming, and bating may contain sulfides, ammonium salts, and calcium salts and is weakly alkaline. After pickling and tanning processes, the main wastewater contaminants depend on the tanning techniques used. Finishing wastewaters may contain lacquer polymers, solvents, color pigments, and coagulants (IFC &WB, 2007).

## **Air emission**

Air emissions from tanning facilities include organic solvents from tanning and leather finishing operations; sulfides from the beam house and wastewater treatment; ammonia from the beam house, tanning, and post-tanning operations; dust/ total particulate from various process operations; and odors. Emissions of sulfur dioxide may occur during bleaching, post-tanning operations, or CO<sub>2</sub> delimiting, but they are not typically a significant source of emissions (IFC&WB, 2007).

Odors result from raw hides and skins, putrefaction, and substances including sulfides and organic solvents. Odors associated with wastewater are difficult to quantify because they are caused by a wide variety of compounds and they are a nuisance that is more qualitative than quantitative - sensitive persons easily detect very low concentrations of odoriferous substances in the air (sulphides/other sulphur compounds, ammonia, amines, etc.). Local geographic and climatic conditions such as wind direction, land shape, air humidity, ground, and air temperature, etc. play an important role. Along the treatment line, the main sources of bad smell are:

- Equalization and sulphide oxidation;
- Sludge thickening;
- Biological aeration;
- In-plant storage of dewatered sludge; (Temporary) sludge disposal site.

Yet, the main source of bad smell remains the stripping of hydrogen sulphide; it is not the concentration of sulfides present, but the lowering of pH: these not disassociated H<sub>2</sub>S is present only at pH below 10. Thus, it is crucial to control pH and, if needed, alkalis like NaOH or lime are added to achieve pH > 9.5-10. More extensive, uninterrupted aeration may help, but sometimes rigorous (and expensive) methods such as adding hydrogen peroxide or pure oxygen are necessary. Nowadays, in some places, nearly the entire ETP is covered and the air is purified (UNIDO, 2011).

### **2.6.3 The effects of pollutants on the environment and human health**

Environmental issues have been at the top of tanners' agenda for the last few decades since dealing properly with tannery wastes is expensive. This has caused concerns about the fairness and appropriateness of demands made by governments, and about whether it will be possible for tanneries to operate on a global level.

Most of the main issues of solid and liquid waste are now well understood, but the industry does have many evolving areas of concern on the use of:

- Common salt (NaCl) and some other water-soluble salts getting into water recipients - rivers, lakes, and/or groundwater- and making the water unsuitable for drinking and other uses;
- The lack of environmentally acceptable and cost-effective solutions for solid waste disposal; landfill for solid wastes.
- Growing consumer pressure and associated regulations regarding an increasing number of chemicals now deemed harmful for various reasons and
- High levels of water consumption.

Water consumption has been a major issue for a long time and great strides have been made over the last three decades to control and reduce the amount of water needed (UNIDO, 2010).

According to Mushahary and Mirunali(2017),waste management in the leather Industry- environmental and health effects and suggestions to use in construction purpose two main areas are:-

#### **Environmental effect**

The major environmental issues of tanneries are solid wastes and wastewater. The effluents discharged from tanneries are large in volume, highly colored, and contain heavy sediment load, toxic metallic compounds, chemicals, biologically oxidable materials, and large quantities of putrefying suspended matter. Solid wastes of tanneries are usually dumped improperly inside and around the factory area. Large pH fluctuation and high BOD value caused by tannery effluents can kill all-natural life in affected water. Hydrogen sulphide formed due to the presence of sulphides in

the effluent is highly toxic to many forms of life. Another toxic pollutant, of great concern present in tannery effluents, is chromium which is known to cause perforations and bronchogenic carcinoma to continuously exposed humans.

### **Health effect**

The tanning industry poses many dangers to both the environment and those that work within it. Work within the tannery itself is fraught with dangers due to the result of inadequate or non-existent worker protections. These include slips and falls on improperly drained floors, exposure to lime, tanning liquor, acids, bases, solvents, disinfectants, and other noxious chemicals, injury from heavy machinery, or flaying knives, drowning, being boiled alive, or buried in lime are all terrifyingly real hazards. Still, the most dangerous part of modern tanning is handling chromium.

In humans, chromium causes a myriad of ailments depending on how it is absorbed. When inhaled, chromium acts as a lung irritant and carcinogen, affecting the upper respiratory tract, obstructing airways, and increasing the chances of developing lung, nasal, or sinus cancer. Chromium has been linked to increased rates of asthma, bronchitis, polyps of the upper respiratory tract, pharyngitis, and the enlargement of the Hilary region and lymph nodes. By the start of this century, researchers had uncovered another link between Hexavalent Chromium or Cr (VI) compounds and increased risk of respiratory cancer. Throughout the tanning industry as well as the automotive industry, Cr (VI) has been labeled as a known human carcinogen by the EPA, the International Agency for Research on Cancer (IARC), and the WHO (Hill, 2010).

### **2.7. Pollution prevention**

Pollution caused by a pollutant is “any substance introduced into the environment that adversely affects the usefulness of a resource (Hill, 2004). Pollution prevention is a major global concern because of the harmful effects of pollution on human health and the environment. Environmental pollution comes in various forms, such as air pollution, water pollution, soil pollution, etc. Everyone is a stakeholder as we are all inhabitants of this one and only mother earth. Each person can contribute something to advance environmental pollution mitigation measures. Environmental protection means caring for our resources and subsequently for ourselves and ensuring a sustainable

future for generations to come will have a better environment. “*If we heal the earth, we heal ourselves*”-Wangari Maathai (Boda, 2015).

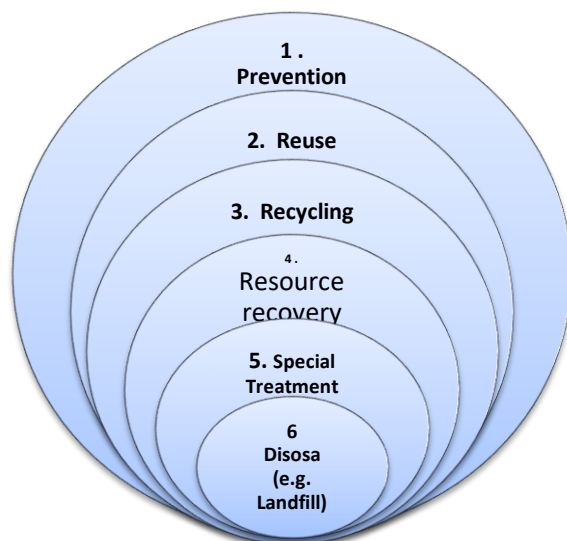
Pollution Prevention (P<sup>2</sup>) is decreasing or eliminating the amount of pollution produced. Developing steps to reduce pollutant emissions when a product is manufactured is P<sup>2</sup>, selecting less noxious chemicals to use in a process where previously hazardous chemicals were used. Using less energy also means P<sup>2</sup> because pollutant emissions are reduced. Likewise, using less water is P<sup>2</sup>. The first step a company often takes in a P<sup>2</sup> program is to evaluate its housekeeping practices, commit management, and involve employees in the process (Hill, 2010).

According to the World Commission on Environment and Development, chaired by Gro Harlem Brundtland in 1987, sustainable development is "a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development, and institutional change are in *harmony* and enhance both current and future potential to meet human needs and aspirations (D’Sozua, 2013).

### **2.7.1 Waste Management System**

Waste management is another good means of preventing and reducing pollution in the leather industry and other activities as well. To improve waste management, the following steps in should be followed in the order of:- 1. Prevention 2. Reuse 3. Recycle 4. Resource recovery, 5. Special treatment and, 6. Disposal (e. g. Landfill).

**Figure-2:-** Steps in waste management



**Source:-** UNIDO-,2000, P 34

According to UNIDO, in the case of operating a tannery at a very low rate of water consumption, around 12 m<sup>3</sup>/t raw hide, presupposes the implementation of the best available advanced technologies coupled with excellent chemicals management and ideal housekeeping. However, the resultant effluent is highly concentrated and difficult to treat. For example, a decrease in water consumption is mainly achieved as follows:-

- Reducing:- Short float processing, batch-wise washing instead of rinsing and combining processes can reduce water consumption by 30% and more.
- Recycling:- Soaking, liming, unhairing, pickling, and chrome tanning liquors are examples of floats suitable for recycling, although in most cases pre-treatment equipment has to be installed. Overall water consumption can be reduced by 30 - 50%.
- Reusing:- Up to 60% of the beam house and tanning process floats can be replaced by treated effluent (UNIDO, 2000).

### 2.7.2 Effluent Treatment plants

Wastewater treatment is a multi-stage process to purify wastewater before it enters a body of natural water, or it is applied to the land, or it is reused. The goal is to reduce or remove organic matter, solids, nutrients, Cr, and other pollutants since each receiving body of water can only receive certain amounts of pollutants without suffering degradation. Therefore, each effluent treatment plant must adhere to discharge standards- limits usually publicized by the relevant environmental authority as allowable levels of pollutants, for practical reasons expressed as Biochemical Oxygen Demand (BOD<sub>5</sub>), Carbon Oxygen (COD), suspended solids (SS), Cr, total dissolved solids (TDS) and others.

The three main categories of tannery wastewater, each having very distinctive characteristics is:-

- Effluents emanating from the beam-house- liming, deliming/bating, water from fleshing and splitting machines; they contain sulphides, their pH is high, but they are chrome-free.
- Effluents emanating from the tan-yard (tanning and re-tanning, sammying) - high Cr content, acidic.
- Soaking and other general effluents, mainly from post-tanning operations (fat-liquoring, dyeing) - low Cr content (*UNIDO, 2011*).

It is very important to separate these streams and to pre-treat them separately based on their characteristics to avoid possible safety risks (formation of deadly hydrogen sulphide) and to reduce the cost of treatment and sludge disposal (to avoid contamination of sludge with Cr).

According to UNIDO (2011) introduction to effluent treatments, and other literature and regulations as well, to avoid such deadly consequence and reduce the waste from tannery it is recommended to have a three-stage treatment plant which comprises the following:-

#### **Preliminary treatment**

Typically, common effluent treatment plants (CETPs) servicing in tannery clusters are often found in developing countries, it is essential to have pre-treatment units installed in individual tanneries. They serve to remove large particles, sand/gravel, and grease, but also to significantly reduce the content of chrome and sulfides before the effluent is discharged into the collection network.

### **Physical-chemical treatment (primary)**

The objective here is the removal of settle-able organic and inorganic solids by sedimentation and the removal of materials that will float (scum) by skimming. Approximately 25-50% of the incoming biochemical oxygen demand (BOD<sub>5</sub>), 50-70% of total suspended solids (SS), and 65% of the oil and grease are removed during primary treatment.

### **Biological treatment (secondary)**

In most cases, secondary treatment follows primary treatment, its goal being the removal of biodegradable dissolved and colloidal organic matter using aerobic biological treatment processes. Aerobic biological treatment is carried out in the presence of oxygen by aerobic micro-organisms (principally bacteria) that metabolize the organic matter in the wastewater, thereby producing more micro-organisms and inorganic end products (principally CO<sub>2</sub>, NH<sub>3</sub>, and H<sub>2</sub>O). Several aerobic biological processes are used for secondary treatment and the differences among them have to do primarily with how oxygen is supplied to the micro-organisms and with the rate at which organisms metabolize the organic matter.

### **Advanced (tertiary) treatment**

Tertiary or advanced wastewater treatment is used to reduce residual COD load and/or when specific wastewater ingredients are not removed by previous treatment stages. This stage is usually more sophisticated and rather expensive treatments such as mineralization of organic compounds by oxidation with H<sub>2</sub>O<sub>2</sub> in the presence of ferrous sulphate.

### **Sludge handling and disposal**

Effluent treatment plants produce treated, "cleaned" effluent and sludge because inherently the primary aim of wastewater treatment is the removal of solids and some potentially hazardous substances from the wastewater. Furthermore, biologically degradable organic substances are converted into bacterial cells, and the latter are removed from the wastewater.

The main purpose of sludge dewatering is to reduce the volume and weight of material to be transported and attain the dry matter content required for disposal at landfills (UNIDO, 2011).

The main barriers to the adoption of more environmentally acceptable methods of leather processing and effluent treatment are the additional costs as follows: specialty chemicals required in reducing or eliminating the use of the main polluting chemicals; the cost of purchase and installation of water conservation devices, wastewater collection and reuse equipment; effluent treatment chemicals and process and effluent monitoring equipment; extra personnel and training to maintain technical control of low waste technologies and effluent treatment (Shivam and Tamra, 2007).

### **2.7.3 The proposed Modjo Leather Industry Park**

UNIDO considering the experience from countries, with common waste treatment facilities in existing clusters (e.g. India, Italy, and Pakistan), others in the process of relocation (e.g. Egypt, Iran, Morocco, and Thailand), in 2017 conducted a case study in 9 countries including Ethiopia. By this study, UNIDO proposed the Modjo Leather industry park, which at completion to make up to 20 tanneries, including those to be relocated from Addis Ababa and nearby area.

One of the examples cited was Italy, with Five (5) Leather Industrial Parks located in different parts of the country- in December 2015; the total number of tanneries including small and medium enterprises was 1254, which in total employed 18,000 employees. The main advantages of clustering the leather industry include:-

- Modernization of the tanning and leather product industries including the introduction of both mandatory and optional cleaner production methods (such as desalting, hair-save liming, Cr-recycling, etc.) to be included,
- Removal of the current pollutant problems and introduction of proper eco- friendly technologies and production at full scale, up to finished leather and products.
- Strict segregation of streams of "chrome-free" and "chrome contained" liquor for easier treatment and possible re-use of sludge e.g. as fertilizer.
- Solid waste management focuses on by-product manufacture that on one hand reduces

disposed volumes or mass for landfill and, at the same time creates jobs and increases value-added on the overall leather production.

MLC (Modjo Leather City) is a good chance to set up an environmentally friendly leather tanning cluster to form a network of tanneries and other businesses located in Modjo Town, plus wet ends of other tanneries that will be relocated from and around Addis Ababa. The priority of the cluster is given to the provision of a Common Effluent Treatment Plant (CETP), to reduce the environmental impact of the leather processing. As the process of relocation and construction of CETP is costly to the industry, it was proposed to be run by a private-public partnership, i.e. to be owned by private and government. The second phase is a long-term future development of the district that involves the implementation of all facilities for material recovery, a closer integration with the municipality, the full implementation of green in-house treatment technologies, and possible evolution of the regulatory limits for effluent discharges.

According to UNIDO, the aim is to highlight the potential that an efficient leather park has in terms of offering better working conditions inside the tanneries and safeguarding the environment, as a "work in progress" the next step is for the Ethiopian government to ask for financing from the European Investment Bank for the construction of necessary infrastructure and the realization of the park including the CETP (UNIDO, 2017).

## **2.8. Legal frameworks and environmental policy**

### **2.8.1 Related to the labour union**

Currently, Labour union in Ethiopia is given due attention from the Ethiopian Federal Democratic Republic (FDRE) Constitution 1/1995 which provides for in its *Article 31 Freedom of Association* "Every person has the right to freedom of association for any cause or purpose, and Article 38 (2) The Right to Vote and to be Elected". The right of everyone to be a member of his own will in a political organization, labour union, a trade organization, or employers' or professional association shall be respected if he or she meets the special and general requirements stipulated by such organization.

General Freedom of Association is laid down in the Constitution (Article 31, "for any cause or purpose") and specified in Article 42, "Rights of Labour", which reads: "Factory and service sector

employees, peasants, agricultural workers, other rural workers, government employees below a certain level of responsibility and the nature of whose employment so requires, shall have the right to form associations to improve their economic and employment conditions. This right shall include the right to form a trade union and join other associations and to negotiate with their employers and other organizations affecting their interests”.

The Labour Proclamation No 1156/2019 in its preamble, with two broad aims concerning workers, environmental protection, and development issues:

- to ensure worker-employer relations are governed by basic principles of rights and obligations to enable workers and employers to secure durable industrial peace; sustainable productivity and competitiveness through cooperative engagement towards the all-round development of our country,
- to create a favorable environment for investment and achievement of national economic goals without scarifying fundamental workplace rights by laying down well-considered labour administration; and determine the duties and responsibilities of governmental organs entrusted with the power to monitor labour conditions; occupational health and safety; and environmental protection together with bilateral and tripartite social dialogue mechanisms (pro. No. 1156/2019).

In this Proclamation No.1156/2019, under Article 129 and Art.130, matters to be determined by collective agreement include:

- 1) Matters specified by the provisions of this Proclamation or other laws to be regulated by the collective agreement;
- 2) the conditions for maintenance of occupational safety and health and the manner of improving social services;
- 3) workers' participation, particularly, in matters about a promotion, wages, transfer, reduction, and discipline;
- 4) conditions of work, on work rules and grievance procedures;
- 5) apportionment of working hours and interval break times;
- 6) parties covered by the collective agreement and its duration of validity;

- 7) On the establishment and working system of bipartite social dialogue.
- 8) On the establishment of daycare.

It is noted that the Ethiopian law has not indicated/listed that environmental and community matters to be included as a collective bargaining agreement directly. But the amended proc. No. 1156/2019 in its preamble, indicates that one of the reasons for the amendment is the need to create a favorable environment for investment and achievement of national economic goals without scarifying fundamental workplace rights by laying down well-considered labour administration and determine the duties and responsibilities of governmental organs entrusted with the power to monitor labour conditions; occupational health and safety; and environmental protection together with bilateral and tripartite social dialogue mechanisms.

## **2.8.2 The Constitution and environment**

The FDRE constitution in its article 44 has enacted an environmental rights, that all persons have the right to a clean and healthy and all persons who have been displaced or whose livelihood have been adversely affected as a result of state programs have the right to commensurate monetary or alternative means of compensation, including relocation, with adequate assistance.

To comply with this constitutional enactment and align with different UN resolutions and declarations the government of Ethiopia has enacted relevant proclamations and regulations and has set an environmental policy to promote sustainable social and economic development by proper management and use of resources. This was initiated in 2011 the Climate-Resilient Green Economy initiative to protect the country from the adverse effects of climate change and to build a green economy that will help realize its ambition of reaching middle-income status before 2025.

### **2.8.2.1 Establishment of environmental protection organs**

Proclamation No. 295/2002 establishes the organizational requirements and identifies the need to establish a system that enables coordinated but different responsibilities of environmental protection agencies at federal and regional levels. The Proclamation indicates the duties of different administrative levels responsible for applying federal law. Depending on the decisions made, resources available, and the specific organizational situation in each Region, Regional States have devolved duties and responsibilities to woredas and kebeles.

The objective of the Authority is to formulate policies, strategies, laws, and standards, which foster social and economic development in a manner that enhances the welfare of humans and the safety of the environment sustainable, and to spearhead in ensuring the effectiveness of the process of their implementation. (Proclamation No. 295/2002)

### **2.8.2.2 Environmental pollution control**

Proclamation No. 300/2002 on Environmental Pollution Control primarily aims to ensure the right of citizens to a healthy environment and to impose obligations to protect the environment of the country. The proclamation is based on the principle that each citizen has the right to have a healthy environment, as well as the obligation to protect the environment of the country. It also addresses the management of hazardous waste, municipal waste, the establishment of environmental quality standards for air, water, and soil; and monitoring of pollution.

Furthermore, it empowers the EPA (presently, EFCCC) and the Regional Environmental Authority to assign environmental inspectors with the duties and responsibilities of controlling environmental pollution. To ensure the implementation of environmental standards and related requirements, the inspectors are empowered by the Proclamation to enter, without prior notice or court order, any land or premises at any time, at their discretion.

### **2.8.2.3 Solid waste management**

Proclamation No. 513/2007 aims to promote community participation to prevent adverse effects and enhance benefits resulting from solid waste.

In this proclamation (Article 5.1) states that Urban Administrations shall ensure the participation of the lowest administrative levels and their respective local communities in designing and implementing their respective solid waste management plans. Measures related to waste handling and disposal, according to this proclamation, any person shall collect waste in an especially designated place and in a manner, which does not affect the health of the society and no person shall dispose solid, liquid, or any other waste in a manner which contaminate the environment or affects the health of the society.

#### 2.8.2.4 Prevention of industrial pollution regulation

As a follow up to Proclamation 300/2002, a regulation to prevent industrial pollution was developed by the Federal Environmental Protection Authority and endorsed by the Council of Ministers to ensure compatibility of industrial development with environmental conservation.

This Regulation confers important obligations to industrial operators. A factory subject to the regulations is obliged to prevent or minimize the generation and release of pollutants to a level not exceeding the environmental standards. The regulation also obliges industrial operators to handle their equipment, inputs, and products in a manner that prevents damage to the environment and human health. Moreover, the regulations urge industrial operators to prepare and implement an emergency response system of their own. On the other hand, industrial operators are required to prepare and implement internal environmental monitoring systems and keep written records of the pollutants generated and the disposal mechanisms used to get rid of the pollutants. Concerning this, factories are required by the regulation to submit annual compliance reports with the provision of the regulations (Regulation No. 159/2008).

#### 2.8.2.5 Environmental standards for pollution control in Ethiopia

Based on the proclamation and regulation regarding pollution control, detailed emission limit values for discharges to the receiving water in the case of effluents and the atmosphere for gaseous emissions from manufacturing plants were set, specific to the tanning industry as shown in Table-2 below. It is one of the 12 major sectors in which most industrial activity takes place, is set as Ethiopian standards for discharge and emission limit.

**Table: 2-** Tanning and leather finishing discharge and emission limits

##### A) Limit values for discharges to water

No	Parameter	Limit value
1	Temperature	40 0c
2	PH	6-9
3	BOD <sub>5</sub> at 20 0c	90% removal or 200 mg/l, whichever is less
4	COD	500mg/l
5	Suspended solids	50mg/l
6	Total ammonia (as N)	30mg/l

No	Parameter	Limit value
7	Total nitrogen (as N)	80% removal or 60 mg/l, whichever is less
8	Total phosphorus (as P)	80% removal or 10 mg/l, whichever is less
9	Oils, fats, and grease	15 mg/l 20
10	Mineral oils at oil trap or interceptors	mg/l 2
11	Chromium (as total Cr)	mg/l
12	Chromium (as Cr VI)	0.1mg/l
13	Chlorides (as Cl)	1000mg/l
14	Sulphides (as S)	1 mg/l 1
15	Phenols	mg/l

### B) Limit values for emissions to air

No	Parameter	Limit value
1	Total particulates	50 mg/Nm <sup>3</sup>
2	Volatile organic carbons	75 g/m <sup>2</sup> product produced
3	Total hydrogen sulphide, sulphides and mercaptans (as S)	5 ppm v/v
4	Ammonia	40 ppm v/v <sup>3</sup>
5	Acid Vapours (HCL)	30 ppm v/v <sup>3</sup>

**Source:-**Environmental standards for industrial pollution control in Ethiopia

### 2.9. Occupational health and safety

Occupational health and safety (OHS) refers to protecting workers from accident, injury, or illness associated with exposure to hazards encountered in the workplace. Hazards can arise from materials (including chemicals, physical and biological substances and agents), environmental or working conditions (e.g. oxygen-deficient environments, excessive temperatures, improper ventilation, poor lighting, faulty electrical systems), or work processes, including tools, machinery, and equipment (UNDP, 2014).

WHO defined OHS as it deals with all aspects of health and safety in the workplace and a strong focus on primary prevention of hazards and the main focus in occupational health is on three different objectives: (i) The maintenance and promotion of workers' health and working capacity;

(ii) The improvement of the working environment and work to become conducive to safety and health and

- (iii) Development of work organizations and working cultures in a direction that supports health and safety at work and in doing so also promotes a positive social climate and smooth operation and may enhance the productivity of the undertakings (Alli, 2008).

Environment, health, and safety is a discipline and specialty that studies and implements practical aspects of environmental protection and safety at work. In simple terms it is what organizations must do to make sure that their activities do not cause harm to anyone, emphasizing an environmental standpoint, it involves creating a systematic approach to complying with environmental regulations, and such as managing waste or air emissions to helping sites reduce the company's carbon footprint.

Tanning industry using heavy machinery and different kinds of chemicals from its various level of processing of hides and skins to be discharged in the form of solid and wastewater that OHS is paramount importance for the trade union and all the workers involved in the process.

### **2.9.1 Purpose of OHS**

According to ILO Occupational safety and health (OSH) is defined as the science of the anticipation, recognition, evaluation, and control of hazards arising in or from the workplace that could impair the health and welfare of workers, taking into account the possible impact on the surrounding communities and the environment (Alli, 2008).

The ILO Conventions and Recommendations on OSH embody principles that define the rights of workers in this field as well as allocating duties and responsibilities to the competent authorities, to employers, and workers. For example, the Promotional Framework for Occupational Safety and Health Convention, 2006 (No. 187) is aimed at establishing and implementing coherent national policies on occupational safety and health through dialogue between government, workers' and employers' organizations and to promote a national preventive safety and health culture( ILO,2014)

### **2.9.2 Core principles of OSH**

According to Alli (2008), Occupational safety and health is an extensive multidisciplinary field, invariably touching on issues related to scientific areas such as medicine- including physiology and

toxicology- ergonomics, physics, and chemistry, as well as technology, economics, law, and other areas specific to various industries and activities.

Despite this variety of concerns and interests, the basic principles include the following:-

- a) ***All workers have rights.*** Workers, as well as employers and governments, must ensure that these rights are protected and must strive to establish and maintain decent working conditions and a decent working environment. More specifically:
  - Work should take place in a safe and healthy working environment;
  - Conditions of work should be consistent with workers' well-being and human dignity;
  - Work should offer real possibilities for personal achievement, self -fulfillment, and service to society (ILO, 1984).
- b) ***Occupational safety and health policies must be established.*** Such policies must be implemented at both the national (governmental) and enterprise levels. They must be effectively communicated to all parties concerned.
- c) ***A national system for occupational safety and health must be established.***  
Such a system must include all the mechanisms and elements necessary to build and maintain a preventive safety and health culture.
- c) ***A national programme on occupational safety and health must be formulated.***  
Once formulated, it must be implemented, monitored, evaluated, and reviewed.
- d) ***Social partners (that is, employers and workers) and other stakeholders must be consulted.*** This should be done during formulation, implementation, and review of all policies, systems, and programmes.
- e) ***Occupational safety and health programmes and policies must aim at both prevention and protection.***

Efforts must be focused above all on primary prevention at the workplace level. The working environments should be planned and designed to be safe and healthy.

The principles include other areas like continuous improvement of OHS, sharing relevant information, OHS service covering all workers, education, and training, the duties, responsibilities, and obligations of workers, employers, and competent authorities.

In Ethiopia, the above principles are included in the labour proclamation No. 1156/2019 Part seven- Occupational Health and Safety and working Environment Art.92 to 112 to be implemented in all

relevant industries. It includes all the obligations of the employers and the employees, the required compensation in cases of injury, and medical services.

**2.10. Stakeholders**

Stakeholders are those who have rights or interests in a system. If you are concerned with the future of a system - the stakeholders are those you should worry about. For an organization, for example, stakeholders are any group or individual who can affect, or is affected by the achievement of the organization’s purpose. Some prefer to restrict the term to those who have a ‘stake’, claim or vested interest- those who provide something of importance to the organization, and expect something in return(Mayers,2005).

**Figure:-3.** Power/interest matrix of stakeholders

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Power / Interest Matrix (Gardner et al. (1986))

		Level of Interest	
		Low	High
Power	Low	A Minimal effort	B Keep informed
	High	C Keep satisfied	D Key players

Stakeholders can be selected or identified for different industry, based on their nature. For the leather industry; those who are the potential leaders in government, research communities, and civil society, who are responsible for facilitating and implementing policies and measures for environmental management; those who control the largest financial contributions for sectoral lending or direct foreign investment; those who are actively working in environmental management or on relevant issues; and the media who are responsible for the formal and informal dissemination of knowledge and information can be a stakeholder(Ingle, Harada, Wei, Minamoto and Ueda, 2010).

According to Mayers (2005), Stakeholders can be individuals, communities, social groups, or organizations. For example, stakeholders in a forest policy might include people who live in or near the relevant forests, people who live further away who use these forests, settlers from elsewhere in the country, or abroad, workers, small scale entrepreneurs, forest officials, timber company managers, environmentalists, politicians, public servants, national citizens, consumers, forest authorities, central government agencies, local government agencies, national NGOs, academics and researchers, donors, consultants, international NGOs, community-based organizations in general.

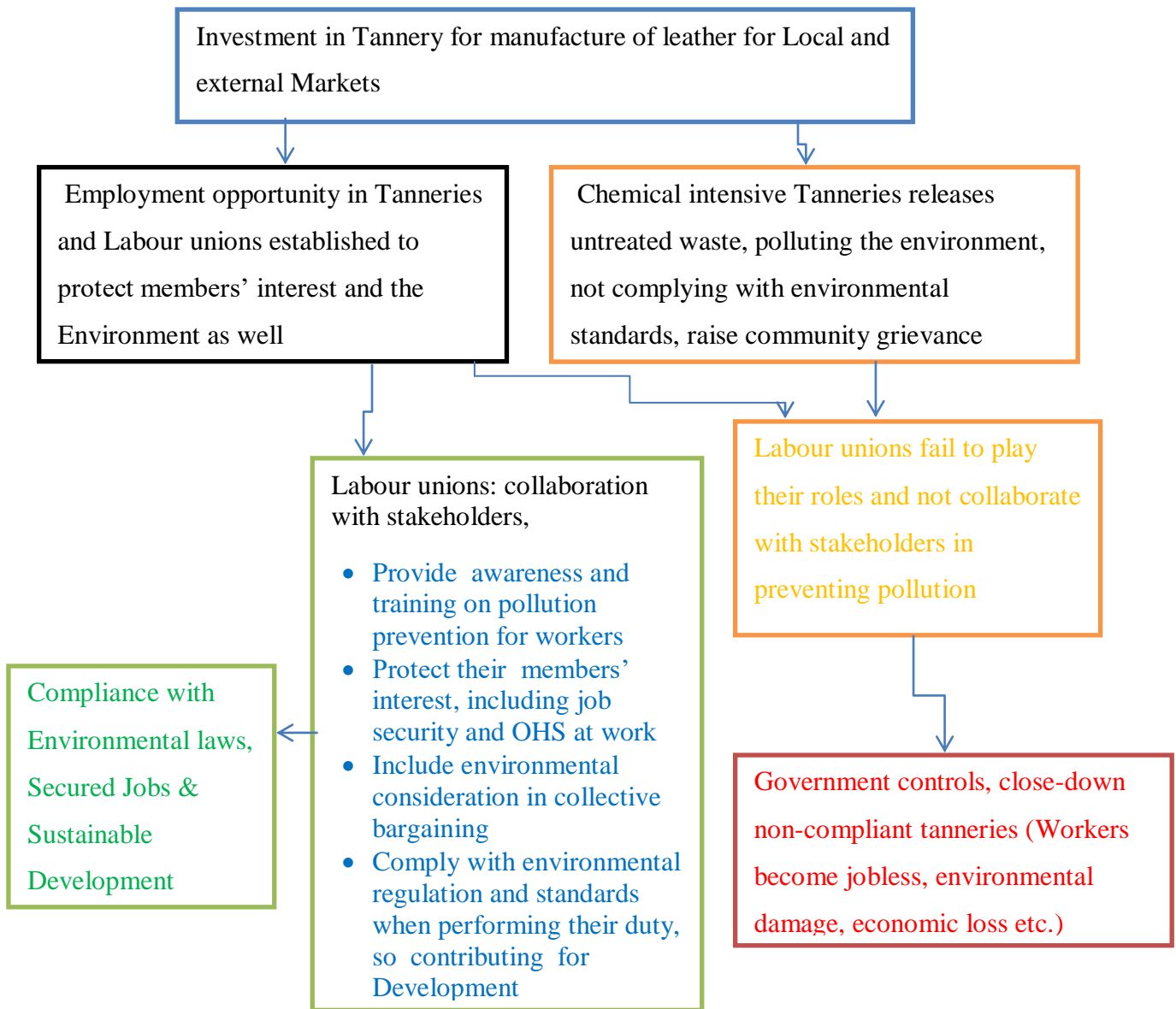
In the case of a tannery industry and environmental pollution prevention, stakeholders include trade union and its members/workers can be taken as a stakeholder group in preventing pollution of the environment in collaboration with the tannery management, EFCCC, MoTI/LIDI, the Labour and Social Affairs Authorities, Environmental Societies, NGOs and the surrounding community. The stakeholders do have much interest in protecting the environmental and social objectives achieved through involvement in the provision of support, either in financial, training, and awareness creation programs to the labour unions and workers.

In the above matrix, the stakeholders do have a different position in the quadrant, for example, the government (with EFCCC, MoTI, MoLSA..) holds the 'D' quadrant having high power and interest as a key player and decision-maker. Labour unions and NGOs fall on quadrant 'B' as having high interest but low power concerning environmental pollution; they have to be involved and consulted to be fruitful. The tannery management holds the 'C' quadrant as having high power but with low interest in pollution prevention has to be engaged. Workers and local communities fall in quadrant 'A', with both low interest and power, but can move to higher power and interest position by increasing their awareness and involvement.

### 2.11. Conceptual framework

The conceptual framework showing the role of a trade union, the cause of pollution, and its impact and collaboration required in preventing pollution is sketched as follows:-

**Figure:- 4.** Conceptual framework map



**Source:-** Own construction

## CHAPTER THREE

### 3. Research methodology and study area

#### 3.1. Description of the study area

**Mojo** (also spelled as **Modjo**) is a town in East Showa zone, Oromia Regional State, Ethiopia, and located on latitude and longitude of 8°35' N and 39°07' E with an elevation between 1788 and 1825 meters above sea level respectively. Modjo is the administrative center of Lume woreda and located 70 km South of Addis Ababa on dissecting to the ways to Adama and Hawassa. The town was established in 1888 E.C following the Ethio-Djibut railway construction and has two Kebeles (Modjo town bulletin, 2011 E.C).

#### 3.2. Socio-economic profile

##### 3.2.1 Population

Based on figures from the Central Statistical Agency in 2013, the estimated total population of Modjo Town was 54,325(26,329 males and 27,996 females). But in a recent 2<sup>nd</sup> quarter report (December/2019) by Modjo Town Forest, environment and climate change office, indicates that the Town population is Male 34,129 and Female 37,334 in total 71,463.

##### 3.2.2 Economy

Modjo hosts more than 198 industries that employed 6,831 permanent and 6,854 workers temporarily. Among the industries, Modjo hosts 12(37.5%) of the 32 tanneries throughout the country and a dry port, Addis-Adama express road and Modjo-Awassa express road (Under construction) are main projects which also adds on the socio-economic activities of the area. The leather industries in Modjo town alone employed about 4500 workers on a permanent, contractual, and casual basis. The financial institutes include 9 banks (with two or more branches each) and other microfinance supporting economic activity and created additional job opportunities. There are also sufficient communication, electricity, Potable water (with 95% coverage), health and education infrastructures (Modjo Town Bulletin-2011E.C).

Within each industry, there is a requirement, as per the proclamation No. 1156/2019 art. 114(1) , and the right of workers to form labour union when the number of workers in 10 and above. With this

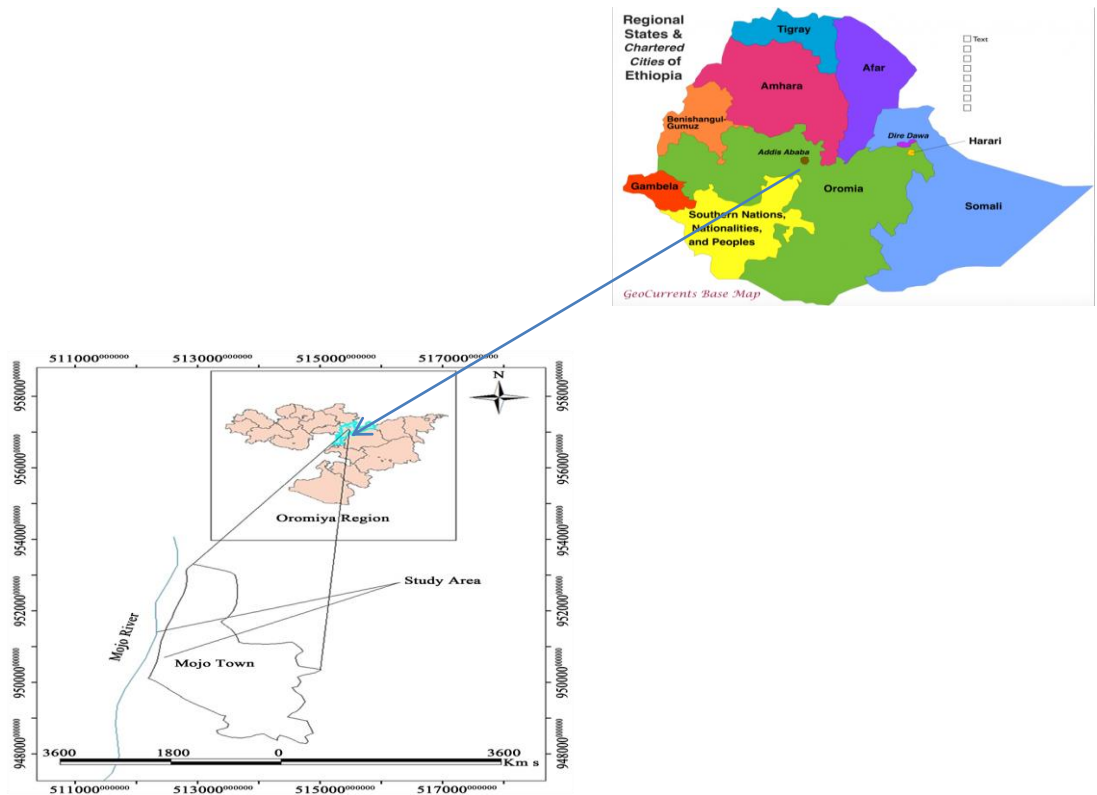
number of industries, there is no landfill for solid waste and no sewerage treatment plant built by the municipality (the open landfill in Lume woreda was prohibited and closed) that the industries are a source of pollution to the environment, especially the leather industries.

About 32 tanneries (this figure is increasing when new tanneries join the industry and decrease when some are closed) are operating in Ethiopia, and 12 of them are situated in Oromia Regional State, East Shoa Zone, Modjo Town, among which two tanneries were selected for this study.

The first, Modjo tannery was established in 1964 G.C, about fifty years, has passed through ups and downs, nationalized during the Derg regime, and operated as a public enterprise. Privatized in 1998 E.C to a French company and now owned by an Ethiopian investor, part of Dire International PLC, employed 230 workers. Building its capacity through time the tannery can produce up to 7000 hides and 6000 skins/day to export standard. The Modjo tannery labour union, establishment date not stated exactly, but some older members date it more than forty years, i.e. about 1972 E.C. The labour union has a certificate from Modjo Town Labour and Social Affairs office and has 65 members and lead by a committee consisting of 7 members.

The second one, which is named as East Africa Tannery was established in 2010(2003 E.C), by an Ethiopian investor and presently owned by a Chinese investor. The tannery can produce 6000 skins /day and employed 93 workers. The labour union in the tannery has a certificate from Modjo Town Labour and Social Affairs office and has 37 members, with a committee consisting of 6 members leading the association.

**Figure:- 5.** Map of the study area



**Source:** Partly as shown by Amanial (2016)

### 3.3. Research design

In this study, mixed research, both qualitative and quantitative approaches, was applied for collecting the essential data used to assess the role of the labour Union in the prevention of pollution in selected tanneries.

Descriptive research relies on observation as a means of collecting data. It attempts to examine situations to establish what was the norm, which could be predicted to happen again under the same circumstances. ‘Observation’ can take many forms, depending on the type of information sought, people can be interviewed, questionnaires distributed, visual records made, even sound and smells recorded. The important point is that the observations are written down or recorded in some way so that they can be subsequently analyzed. The data so collected must be organized and presented

clearly and systematically so that the analysis can result in invalid and accurate conclusions (Williams, 2006).

### **3.3.1 Research approach, data sources, and methods of data collection**

This research employed both qualitative and quantitative research approaches. Also, the study has used both primary and secondary data sources; considering that the items can complement each other. A primary source of data was collected using the following data collection techniques:

### **3.3.2 Tools and technique to collect primary data**

The qualitative data was gathered by employing a self-administered questionnaire, Focus Group Discussion (FGDs), Key Informant Interviews (KII), and field observation. The tools of data collection were prepared such as questionnaires and checklist/guideline to guide the interview and observations.

The questionnaire was developed in two main parts. In part one, to collect data on demographic characteristics of respondents. Part two has four sub-sections related to the research objectives to collect as much data as possible. The first section (A) assess the effectiveness of the labour union leadership in protecting the members' interest, consists of 6 closed questions with two open-ended questions. The second section (B) deals with environmental pollution prevention and the role of labour union and tannery management consist of 8 closed questions and 3 open-ended questions. The third section (C) raised the issue of OHS and consist of 8 closed questions and 2 open-ended questions and the fourth section (D) assess the relationship with stakeholders, consists of 6 closed and one open-ended question. The questionnaire was developed first in English and then translated into Amharic and Afan Oromo considering the language used by respondents to enable respondents to understand and respond comfortably.

**Key Informant Interview (KII)** - was conducted to assess the relationship and activities with relevant stakeholders' representatives.

**Focus Group Discussion (FGD)** - with downstream user community was conducted at two sites, those living around the previous landfill site in Kurmo Fatole Kebele (6 people involved) and vegetation plantation by farmers from Modjo River in Ejersa Jerro kebele (9 people involved).

During the discussion at both sites an expert from Lume woreda Environment, Forest and Climate Change office was present.

A checklist of points were prepared to guide interviews with key informants and for FGD points, not to lose focus during the discussion and additional questions asked based on the responses from the respondent on matters that need clarifications. The information obtained from the interviews and FGD not presented separately rather used to supplement the data obtained from the survey questionnaires and observation.

### **Field Observation**

The observation was conducted around the Tannery processing, effluent treatment plants of both tanneries, and downstream of Modjo River, a previous landfill site. At the landfill, both the solid and liquid waste was used to be dumped that, by taking various descriptive notes of what was happening all around. Photographs were taken during field observation, focusing on the Waste treatment plant and disposal sites.

### **3.3.3 Secondary data**

Secondary data were collected from journal articles, books, legal documents (proclamations, regulation, and directives) statistical abstracts, assessment reports, audit reports, etc., these sources of secondary information have been accessed from the internet, institutions, and organizations, such as EFCCC and MoLSA(Federal and Modjo Town level), OFAG and MoTI (LIDI). Also, reviewing reports and materials, discussions held with experts who work in those offices.

### **3.4. The sampling technique and sample size**

The Labor union and their member workers in the tannery are the main focus for this study, trade unions of Modjo and East Africa tanneries were select and assessed. This study tried to show the role of trade unions in preventing pollution at source and relation with stakeholders to address their view of the environment as practicable as possible.

The two tanneries have a total population of 323 (Modjo 230 and East Africa 93) permanent, contractual, and casual workers to be sampled and assessed. But as the focus of the study tends to the role of labour union members, the population has reset to exclude all management staffs (15) and

all Casual workers (160) who do not have the right to be labour union members and other staff members (18) from Modjo Tannery, who are working at Addis Ababa Office. So the population to be sampled was only 152.

For this study, the formula derived by Yamane (1967) was used, for its simplicity and accommodate a large sample size. From a total of 152 permanent and contractual workers to be surveyed using the following formula, a sample was drawn from the total population.

$$n = \frac{N}{1 + N(e)^2}$$

$$n = \frac{152}{1 + 152(0.05)^2} = 110$$

Where N= population size, n = sample size, e = level of precision given that 95% confidence level and P = ±5% are assumed.

The stakeholders such as Labour union leaders and company management, Labour and Social Affairs authorities, EFCCC, and MoTI- the LLDII was contacted through interviews and other data collection methods mentioned above.

### **3.5. Methods of data analysis**

Since the data collected are qualitative and quantitative, the data analysis of this research depends on both quantitative and qualitative approaches. Demographic data be analyzed using tables, frequency and percentages and perception regarding the variables analyzed/rated using a 5-point Likert scale that ranges from strongly agree(1), Agree(2), Neutral (3), Disagree(4) to strongly disagree (5) aggregated by frequency, percentage and mean scale.

The qualitative data obtained through key informant interviews, field observation, and focus group discussions analysed by thematic and narrative analysis and pictures.

## CHAPTER FOUR

### 4. Data presentation, analysis, and interpretation

One of the major techniques employed was to collect data for this study was using a questionnaire response along with interview questions. The survey was employed to get firsthand information to be used for analysis and drawing of conclusion and recommendations based on the assessment on the role of trade unions in preventing environmental pollution and assess the relationship with stakeholders in playing the role of safeguarding members' interest in Modjo and East Africa tanneries. 110 copies of the questionnaire were distributed to labour union members and potential members in the tanneries, from which 40 fully completed & returned from East Africa Tannery and from Modjo tannery of the 70 distributed 64 were returned, from which 2 were rejected as not correctly completed and the remaining 6 were not returned. So the overall return rate is 92.72% and satisfactory for the purpose. The collected primary and secondary data analyzed and presented tools using tables, pictures, and narrations used. Discussions with key informants and focus groups are presented in the discussion of the survey questionnaire as part of the provision of more information on related matters. Also, the secondary data obtained is presented in such a way that it supports the primary data.

#### 4.1. Profile of the respondents

The profile of the respondents assessed from both tanneries includes gender, age group, educational level, and work experience, as well as the membership period of the labour union of each respondent. The table annexed (Annex-1) shows the profile of the respondents.

As indicated in Annex-1 62(60.78%) of the respondents are male, and 40(39.22%) female. The age group of respondents comprises 21-30 years 52(50.98%), followed by 31-40 years 26 (25.49%), and 18-20 years and 41-50 years are 10(9.80%) each and 51 years and above only 4(3.92%). This indicates the workers are composed of a main active workforce that could contribute much to the productivity of the industry.

The educational status of respondents shows that the labor-intensive nature of the tanneries that, no MA or above and only 7(6.86%) BA/BSC degree, 18(17.65%) of the respondent holds a diploma,

3(2.94%) Certificate and the remaining majority 74(72.55%) of the respondents are 12 grade complete and below. This indicates that the industry is labour intensive and not knowledge-based, uses very cheap labour, but this requires more training and skill development for workers. Regarding their work experience, 45(44.12%) of the respondents has 0- 5 years, 39(38.24%) is 6-10 years, 7(6.86%) are 11-15 years, 5(4.90%) are 16-20 and 6 (5.88%) has served more than 21 years. As of the department, in which the respondents are working, the results show that 18(17.65%) are working in Production and quality control units, 10(9.80%) in areas of waste management and effluent treatment plant, 32(31.37%) in tannery processing and shift leaders, and the remaining 42(41.18%) are supervisors, operators, and other workers.

The respondents' membership in labour unions and years of membership indicates that 79(77.45%) are members of the labour union. Their membership period ranges from less than one year, 12(11.76%), 2 to 5 years 37(36.27%), 6 to 10 years 20(19.61%), and more than 10 years are 10(9.80%) of the respondents.

#### 4.2. Perception of workers regarding labour union leadership serving members' interest

This part of the questionnaire is was intended to gather data related to perceptions of the workers, how the labour union leadership is protecting members' interest, whether it plays its main role in protecting members' interest, and the involvement of workers in decision making on matters that affect them.

**Table:- 3.** Perception of workers in labour union protecting members' interest

No	Questions		Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Total / Mean Scale
		Scale	1	2	3	4	5	
1	The Labour union is effective in handling grievances and complaints of workers and always stands to serve the members' interests.	Fre	16	17	11	30	28	102
%		15.69	16.67	10.78	29.41	27.45	100.00	
Mean scale		0.16	0.33	0.32	1.18	1.37	3.36	

2	The labour union is playing a vital role in supporting both employees and management to know their rights and responsibilities.	Fre	22	24	9	22	25	<b>102</b>
		%	21.57	23.53	8.82	21.57	24.51	<b>100.00</b>
			0.22	0.47	0.26	0.86	1.23	<b>3.04</b>
3	The labour union has a significant role in facilitating workers' participation in the decision-making process, i.e. workers are empowered	Fre	15	20	6	29	32	<b>102</b>
		%	14.71	19.61	5.88	28.43	31.37	<b>100.00</b>
			0.15	0.39	0.18	1.14	1.57	<b>3.42</b>
4	The labour union is strong in bargaining, negotiating, and convincing the management towards offering better terms and conditions of employment	Fre	20	9	9	33	31	<b>102</b>
		%	19.61	8.82	8.82	32.35	30.39	<b>100.00</b>
			0.20	0.18	0.26	1.29	1.52	<b>3.45</b>
5	The management has positive thinking towards the labour union and organized movement of workers and usually willing to deal with the union to solve problems.	Fre	15	17	9	32	29	<b>102</b>
		%	14.71	16.67	8.82	31.37	28.43	<b>100.00</b>
			0.15	0.33	0.26	1.25	1.42	<b>3.42</b>
6	There is mutual understanding, trust, and cooperation between labour union leaders and management	Fre	15	14	6	30	37	<b>102</b>
		%	14.71	13.73	5.88	29.41	36.27	<b>100.00</b>
			0.15	.27	0.18	1.18	1.81	<b>3.59</b>

**Fre** - Frequency      **%** - Percentage

**Source:-** Survey, Feb/2020

Regarding the labour union leadership effectiveness in handling grievance and complaint of workers and always stands to serve the members' interest, 16(15.69%) of the respondents strongly agree, 17(16.67%) agree and 11(10.67%) are neutral, 30(29.41%) disagree and 28(27.45%) strongly disagree. The mean scale is 3.36 near to disagree. So based on the response, more respondents think that the union is not effective to serve members' interest in handling grievance and compliant of members as they expect it to be.

Regarding, whether labour union is playing a vital role in supporting both employees and management to know their right and responsibilities and in allowing better communication between workers and management, from the respondents 22(21.57%) strongly agree, 24 (23.53%) agree and 9(8.82%) are neutral, 22(21.57%) disagree and 25(24.51%) of the respondents strongly disagree. The mean scale is 3.04 around neutral. The survey result on this point leaves indifferent, as those strongly agree and agree constitute 45.10% and those disagree and strongly disagree 46.01% nearly equal. As this is required to look at the two unions separately, those of Modjo tannery strongly agree and agree 53.23% and that of East Africa Tannery strongly disagree and disagree with 60%. So the union at Mojo Tannery do have better performance in supporting both employees and management to know their rights and obligation and allow better communication, this is supported by the discussion with Deputy General Manager of Modjo Tannery who expressed it as “ the workers accept their union leaders view than the management when telling their roles and responsibility”. With this regard, the East Africa Tannery labour union needs much effort to improve and win the members’ and management acceptance in serving as a communication channel between the workers and management.

The 3<sup>rd</sup> question in this section deals with workers’ participation in the decision-making process, 15(14.71%) of the respondents strongly agree, 20(19.61%) agree and 6(5.88%) are neutral, 29(28.43%) disagree, 32(31.27%) strongly disagree; the mean scale is 3.42 near to disagree. This indicates that there is less empowerment of workers and the labour union is not in a position to involve the workers in decision making.

When considering, the bargaining, negotiating, and convincing power of union leaders, 20(19.61%) of the respondents strongly agree, 9 (8.82%) agree and 9(8.82%) are neutral, 33(32.35%) disagree, 31(30.39%) strongly disagree, the mean distribution scale is 3.45, near disagree, that still with this aspect the labour union is weak as the survey result indicates.

When considering the managements’ positive thinking to deal with the union to solve any problems, 15(14.71%) of the respondents strongly agree, 17(16.67%) agree and 9(8.82%) are neutral, 32(31.37%) disagree, 29(28.49%) strongly disagree. The mean scale is 3.42 near to disagree. Those

disagree and strongly disagree constitute 59.86% of the respondent, that the management is not positive towards organized labour union movement and not willing to solve their problems.

Regarding the existence of mutual understanding, trust, and cooperation between labour union leaders and the management, 15(14.71%) of the respondents strongly agree, 14(13.73%) agree, 6(5.88%) are neutral, 30(29.41%) disagree and 37(36.27%) strongly disagree. The mean scale is 3.59 near to disagree, indicating less mutual understanding, trust, and cooperation between labour union leaders and the management.

Apart from those closed-ended questions above some of the respondents reacted on the two additional open-ended questions raised, as “Have you encountered any problem from the management side for being a member of the Labour union? And any required improvement regarding the labour union and the management?” The summarized response for this question indicates that 14(46.66%) said no problem encountered and 16(54.44%) raised problems related to demotion or change of position, threat to transfer to Addis Ababa, or being warned not to talk/raise in a meeting about their right, about payment issues.

Based on the discussion made with the human resource administrator at East Africa Tannery, he explained that from 2005 E.C there is a collective agreement, it was set in cooperation with management and labour union, the wage was set at a low rate at that time, it is not improved yet, as the tannery ownership changed from French to Ethiopian and presently Chinese, even the Chinese are changing the shareholders now and then. The Labour and Social Affairs representatives from Modjo town were present at the agreement; the workers always complain of wage level, it has to be revised every three years, now without change for 6 years. He added any grievance that may be raised resolved through the structural hierarchy/line- team leader, an officer; at last, go through the tannery management hierarchy, based on the collective agreement.

The administrator continued his explanation stating that the tannery management tries to work in collaboration with labour union, but there are some problems- two-tier supervisors at work, who may have two views, one Ethiopian and the other Chinese- sometime they may not accept the

Ethiopian who try to act considering local culture, but they act on their own, misunderstanding the local culture and practices.

In a discussion with Labour and social Affairs office experts, as for the right of workers, they explain that workers are always asking for salary increment, the government has not set the minimum wage, that the employer promise to increase benefits by a % tied with an increase in profit level, but they say that the expected profit level has not achieved and the workers stayed so long without salary increment. The workers may work to increase the productivity which they are in control of as far as enabling facilities are there, but the cost and the recording and reporting of the profit are not at them, that they always complain and the owners mention the profit level has not achieved, which the union and workers are not convinced. To summarize, of the 6 statements set to know how far members' interest is protected, in 5 of the respondents disagree, and one neutral. Indicating labour union leadership is not effective in serving worker's interest, less empowerment, and involvement in decision making and management not positive enough towards organized labour, unions not strong enough in bargaining and, negotiation with tanneries management.

#### 4.3. Labour union environmental pollution prevention

The questions in this part set to understand the level of compliance of the Tannery with environmental regulations and standards and the labour union/worker's role in reducing the pollution from the tannery and understanding of its effect on themselves and the environment.

**Table:- 4.** Perception of workers and the role of the labour union in preventing pollution

No	Questions		Strongly agree	Agree	Neutral	Dis-agree	Strongly disagree	Total
		Scale	1	2	3	4	5	
1	The tannery applies Environmental guidelines and standards as set by the EFCC/MoTI for the Industries and labour unions and workers comply with it	Fre	17	26	13	20	26	<b>102</b>
		%	16.67	25.49	12.75	19.61	25.49	<b>100.00</b>
		Mean scale	0.17	0.51	0.38	0.78	1.27	<b>3.12</b>
2	The tannery has established a treatment plant as required by	Fre	32	26	6	20	18	<b>102</b>

No	Questions		Strongly agree	Agree	Neutral	Dis-agree	Strongly disagree	Total
	the standard, and the wastewater is analyzed for its chemical content before discharge.	%	31.37	25.49	5.88	19.61	17.65	<b>100.00</b>
			0.31	0.51	0.18	0.78	0.88	<b>2.67</b>
3	There is daily measurement and registration of wastes segregated into solid and liquid waste types and reported timely to the environmental authority.	Fre	14	15	14	28	31	<b>102</b>
		%	13.73	14.71	13.73	27.45	30.39	<b>100.00</b>
			0.14	0.29	0.41	1.10	1.52	<b>3.46</b>
4	There is a waste management system that helps to <b>Prevent, Reduce, Reuse and Recycle</b> waste generated by the tannery and labour union follows up implementation	Fre	13	15	12	28	34	<b>102</b>
		%	12.75	14.71	11.76	27.45	33.33	<b>100.00</b>
			0.13	0.29	0.35	1.10	1.67	<b>3.54</b>
5	An environmental expert is assigned in the tannery and is responsible for the implementation of environmental policy & management plan	Fre	28	30	10	19	15	<b>102</b>
		%	27.45	29.41	9.80	18.63	14.71	<b>100.00</b>
			0.27	0.59	0.29	0.75	0.74	<b>2.64</b>
6	There are continuous training/ awareness creation programs by labour union for workers on areas of environmental protection, use of chemicals, and related hazards	Fre	17	15	12	26	32	<b>102</b>
		%	16.67	14.71	11.76	25.49	31.37	<b>100.00</b>
			0.17	0.29	0.35	1.02	1.57	<b>3.40</b>
7	There is a system for proper handling, storage, and disposal of expired chemicals that are used in the tannery process	Fre	25	33	10	20	14	<b>102</b>
		%	24.51	32.35	9.80	19.61	13.73	<b>100.00</b>
			0.25	0.65	0.29	0.78	0.69	<b>2.66</b>
8	Labour union members/workers have a full understanding of the cost and consequence of environmental pollution from their tannery and always take	Fre	22	18	8	24	30	<b>102</b>
		%	21.57	17.65	7.84	23.53	29.41	<b>100.00</b>

No	Questions		Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Total
	care not to release waste to the environment?		0.22	0.35	0.24	0.94	1.47	<b>3.22</b>

**Source:-** Survey, Feb /2020

This part of the question targets environmental pollution prevention at its source, compliance with environmental regulation, and waste management status.

The first question in this section raised whether “the tannery applies Environmental guidelines and standards as set by the EFCC/MoTI for the leather Industries” from the respondents 17(16.6%) strongly agree, 26(25.49%) agree and 13(12.75%) are neutral, 20(19.61%) disagree and 26 (25.49%) strongly disagree. The mean scale is 3.12 a little above neutral, the result leaves on indifferent, being much general. On specific environmental pollution prevention issues, the result indicated as follows.

Regarding the question whether the tannery has established a treatment plant as required by the standard and the wastewater released is analyzed for its chemical content before discharging to a water body,32(31.37%) of the respondents strongly agree, 26(25.49%) agree and 6(5.88%) are neutral, 20(19.61%) disagree, and 18(17.65%) strongly disagree with the statement. The mean scale is 2.67 near to agree. As most of the respondents agreed the treatment plant is in place in both tanneries up to the secondary treatment plant, even the one at Modjo tannery do have a sort of plantation pond, 3 parallel dam/ plantation pond to grow some resistant plants by using the nutrient from the treated wastewater and then released to the river. In discussion with the environmental experts and observation in both tanneries, there is no laboratory to analyze wastewater for its chemical content before discharge. The secondary treatment plant in East Africa Tannery is partially operational as the reactor was stuck for more than 6 months. It was not repaired, due to the expert to repair it has to come from china and also the shortage in foreign exchange for spare parts to substitute, still, the factory is operational without solving the problem.

**Figure:-6.** Partial view of Secondary treatment plant- Reactor- Not functional, East African Tannery



**Source:-** Field survey, Feb /2020

In a related open-ended question with choice, what is/ are the main challenges in using waste treatment plant by their tannery, most of the respondents(27) chosen that the management/owners are not willing to invest much in the treatment plant. The other 14 mentioned it is due to lack of finance and other 9 respondents, it is lack of knowledge and experience in the area and 5 more stated it is a lack of proper follow-up and continuous control from the government side to take immediate action.

In an interview with Modjo town Environment, Forest and climate change office expert, he mentioned that the treatment of effluent and also checking its chemical analysis is the hardest task; the factories do not have the laboratory to test. The laboratory at Oromia has been closed for more than three years and the office does not have the experts to check, so the control here is poor. He explained that his office requires the tanneries to submit a report of the sample test of effluent discharged quarterly, which the factories may not do actually.

He continued, there are 12 Tanneries in operation in Modjo, and many other industries, only two Factories- Kolba Tannery and Ethio-Japan Textile do have a laboratory to test their effluent. The office has four experts, for effective control it needs test check on surprise and use own experts, which the office lacks.

During observation and discussion with the environmental unit head, the treatment plant at East Africa has a control room where the chemicals to be used to treat wastewater are measured and added, but the environmental unit head explains the machine is not operational and they used to add the required chemicals by estimation, which may not be effective to treat the effluent to the required standard.

As there was no proper measurement and analysis of wastewater for its chemical content, it was not available from both tanneries to check their compliance with the discharge limit set, the researcher has used the report by EFCCC issued in 1<sup>st</sup> quarter of 2011 EFY, even though it has not covered some 15 parameters, taken to indicate the non-compliance in those measured 10 parameters as presented in the table-5 below.

**Table:- 5.** Limit values for discharge to water Vs. Tanneries effluent discharge.

No	Parameter	Limit Value	Modjo Tannery*	East African Tannery *
1	Temperature	40 0c	20.4	25.5
2	PH	9 to 10	11.1	7.5
3	BOD5 at 20°C	90% removal or 200 mg/l, whichever is less		
4	COD	500mg/l	420.8	1391.1
5	Suspended solids	50mg/l	229	3080
6	Total ammonia (as N)	30mg/l	100.8	212.8
7	Total nitrogen (as N)	80% removal or 60 mg/l, whichever is less	595.0	1087.0
8	Total phosphorus (as P)	80% removal or 10 mg/l, whichever is less	0.1	0.9
9	Oils, fats, and grease	15 mg/l 20		
10	Mineral oils at oil trap or interceptors	mg/l 2		
11	Chromium (as total Cr)	mg/l	ND *	ND *
12	Chromium (as Cr VI)	0.1mg/l		
13	Chlorides (as Cl)	1000mg/l	1081.9	2297.9
14	Sulphides (as S)	1mg/l 1	8.2	64.3

No	Parameter	Limit Value	Modjo Tannery*	East African Tannery *
15	Phenols	mg/l		

**Source:-** EFCC 1<sup>st</sup> quarter report 2011 EFY, \* ND- Not detected

As indicated in the report, from the sample test taken for 10 parameters from 15, Modjo tannery did not comply in six of the parameters and East Africa tannery did not comply with seven of the parameters as compared to the standard discharge limit set. This indicates non-compliance with the discharge limit and polluting the receiving water body, as the two tanneries are built adjacent to the Modjo River.

In a discussion with the farmers at Ejersa Qerro Kebele, they expressed in regret, about the pollution of the Modjo River as follows. We used to drink and use for all cleaning purposes and youth to swim, all of which we cannot do presently. The color of the water is darker and sometimes changes to red and with bad odor, it is not even suitable for animals to drink, but as there is no alternative the animals drink it. The animals get thin, weaker and their hair slowly removed, even not marketable to sale.

Those using for irrigation by pumping the water mention that, they get skin rash and itching hands and foot from using the water. We complained all this to Lume woreda authorities and officials always, but no solution so far, and question the existence of the government saying, “ The government is serving few factory owners by affecting so many people and animals living in more than 4 Kebeles around here”. The old man continued in regret “God has provided us with clean water to use it for our entire life requirement for so many years back from our families, but now it is polluted and we can't use it. We do not know even who is doing this”.

Regarding the daily measurement and registration of wastes, segregation into solid and liquid waste types and report timely to the environmental authority- according to the respondents 14(13.73%) strongly agree, 15(14.71%) agree and 14(13.73%) are neutral, 28(27.45%) disagree and 31(30.39%) strongly disagree. The mean scale is 3.46 near disagree, indicating weakness in the area, regarding the segregation both the tanneries, do have separate effluent pipes/lines as general waste, Sulfide waste, and chrome waste as the following picture-7 shows. The environmental expert at East

African Tannery explained, the challenges here- when the equipment failed and not repaired soon, at the same time the factory is still producing and partially treated effluent is discharged. The owners/ Chinese do not care as such about the treatment of effluent, but require having quality leather to export and increase their profitability, before two years there was no environmental unit and now a mini-laboratory is built, but with no lab equipment.

In both tanneries, they do the segregation of waste into two types- solid and the effluent (as General waste, Sulfide, and Chrome waste) to treat them at different levels. The environmental experts explain the pollution from the tannery is much reduced as compared to previous years, no support from the government in tax or other types in reducing the pollution from the tannery, the chemicals are exported and too expensive, our customers require us to use environmentally friendly chemicals in the production process and all are to be procured from ISO certified providers.

But regarding solid waste, from June/2019 the landfill in Lume wereda rural area was prohibited and all the solid waste from a tannery is dumped in the tannery premises in a different place (Fig-7 and 8).

**Figure:-7.** Wastewater segregation lines and a partial view of heap of solid waste, Modjo tannery



**Source:-** Field survey, Feb- 2020 by the researcher.

**Figure:- 8.** Open solid waste disposal in East Africa Tannery premises.



**Source:-** Field survey, Feb- 2020 by the researcher.

All relevant stakeholders, officers, and labour union representatives contacted, as well as respondents for the open-ended question on environmental pollution, raised the concern on the lack of landfill for the municipality, accumulation of solid waste in the tanneries premises creates bad odor, it gets unpleasant, can be washed/leaching by rain to underground water, pollutes the premise and also aesthetics of the town as a whole.

During the discussion with farmers living around the previous landfill, they explained that the landfill was closed due to community grievances as it created bad odor, caused asthmatic and other diseases, their animals died eating plastic bags and other unknown materials, their animals eaten by wild animals like hyena scavenging around the landfill, their farm crop/harvest covered with dust and plants around dried, etc. They explained that since it was closed they get relief, that they breathe clean air, although the area is not rehabilitated and they cannot make use of the land for any purpose.

**Figure:-9.** Un-rehabilitated Previous landfill for both solid waste and sewerage, by the side of Modjo River



**Source:-** Field survey, Feb 2020, Photo by the researcher.

Regarding the status of a waste management system that helps to **Prevent, Reduce, Reuse and Recycle and disposal** of waste generated by the tannery, 13(12.75%) of the respondents strongly agree, 15(14.71%) agree and 12(11.76%) are neutral, 28(27.45%) disagree and 34 (33.33%) strongly disagree. The mean scale is 3.54 near to disagree. According to most of the respondents, the system is not in place or functional as it has to be. In the discussion with the Environmental expert at Modjo tannery, two practical issues related to this point were mentioned. The first was the reuse of salt to preserve hides/skin until to be soaked in NaCl not to get rotten; the salt is reused by a ratio of 40/60, i.e. 40% reused and 60% new salt is used to soak the hides. The second is the methane production by the anaerobic reaction –Bacteriological action takes place without oxygen in a closed process. As a result the tannery using the Biogas collector and produces about 16Kv of power that is used for the cafeteria. Otherwise, byproducts (cuttings, collagen, etc.) are dumped to waste as no one takes them even free of charge.

As per the discussion with The LIDI environmental directorate director, the Institute has to take the role of coordinating training and awareness creation programs among the stakeholders, but as of to date the progress of MLIP is too slow, mainly due to the frequent changes in leadership in Modjo municipality and some other stakeholders, that made coordination difficult to progress and the issue of land availability and compensation for the farmers in two farmers associations who are bordering the proposed project area and the source of funding has not agreed yet.

When considering the implementation of environmental policy and EMP in the tannery, 28(27.45%) of the respondents strongly agree, 30(29.41%) agree and 10(9.80%) are neutral, 19(18.63%) disagree and 15(14.71%) strongly disagree. The mean scale is 2.64 near to agree. In both the tanneries environmental experts are assigned and in place, although 18.63% of the respondents are neutral, as of proper implementation of the plan.

Regarding the provision of continuous training/awareness creation programs for workers on areas of environmental protection, use of chemicals, and related hazards, 17(16.67%) of the respondents strongly agree, 15(14.71%) agree and 12(11.76%) are neutral, 26(25.49%) disagree, and 32(31.37%) strongly disagree. The mean score is 3.40 near disagree. According to most of the respondents, 57.86% claims that there is no continuous training, and awareness creation programs related to the environment.

The system for proper handling, storage, and disposal of expired chemicals that are used in the tannery process, 25(24.51%) of the respondents strongly agree, 33(32.35%) agree and 10(9.80%) are neutral, 20(19.61%) disagree and 14(13.73%) strongly disagree. The mean score is 2.66 near to agree. It was observed during the field visit that both tanneries do have a store for chemicals (more than 100 types) used for production and waste treatment, especially the one at East Africa Tannery, is large and well aerated. But the one at Modjo Tannery is made of metal sheet both for wall and roofing, and too old. The workers mentioned that they used to water the floor daily to make it cool on hot and sunny days. No record of expired chemicals in both tanneries.

The last question in this section was about workers awareness of pollution and its consequence. The response for this question indicates 22(21.57%) of the respondents strongly agree, 18(17.65%) agree

and 8(7.84%) are neutral, 24(23.53%) disagree, and 30(29.41%) strongly disagree. The mean score is 3.22 around neutral that as regards to awareness and continuous training in both the tanneries are weak in this regard. Overall, out of the 8 questions set for Environmental pollution prevention- in one of its respondents agree and one near to neutral, regarding the establishment of a treatment plant and assignment of the environmental expert. For the rest of 6 questions, the respondents disagree that, they perceive their role in preventing environmental pollution and the tanneries' compliance with environmental regulations is not satisfactory.

For an open-ended question about the role of labour union members regarding pollution prevention, “If the tannery is under threat of closure due to the challenges, for example, non-compliance with environmental standards, the interest of workers is highly affected due to loss of a job, what will be the roles of the workers and labour union, before this comes to happen regarding pollution prevention?” Of 102 respondents only 60(58.82%) responded and their response summarized as follows:-

- To comply with government regulations and report to the relevant authority, when non-compliance is detected.
- To work in collaboration with each other and execute their work properly, training and educate each other,
- To keep neatness of the tannery and perform quality works every day.
- All workers to work together in reducing waste and clean their area of work.
- Workers take care and put all waste into their types, liquid, and solid waste, only at the allocated place to properly dispose of.
- Labour union, workers, and the management of the tannery to cooperate and comply with all the environmental regulations accepted by the government.
- The labour union must involve all workers in preventing pollution and keep the tannery compound clean and make follow up on the neatness of the tannery.
- The labour union has to urge the management to build the treatment plant that operates in full capacity and provide proper chemicals to treat liquid waste.
- Create awareness to workers about the chemicals and reduce the use of chemicals as much as possible.

- One of the respondents expressed his view as “The problem of pollution is not limited to labour union and the tannery, but it affects our community and the environment” so we have to cooperate to reduce pollution.

These all responses indicate some of the workers do have the understanding that pollution affects their interest and actions required of them, their union, and stakeholders, but requires to boost this to the whole workers through involvement, training, and awareness creation.

#### 4.4. Occupational Safety and Health

In this part, the questions set to find out compliance with OSH regulation at work and to know the perception of workers, whether the labour union and workers have been consulted and participated in the design of work rules and the use of PPE and related training programs and level of understanding in this area.

**Table:-6.** OSH at work, tannery workers perception

No	Questions		Strongly agree	Agree	Neutral	Dis-agree	Strongly disagree	Total
		Scale	1	2	3	4	5	
1	The tannery has taken the necessary measures to safeguard adequately the Health and safety of workers as stated by the proclamation?	Fre	10	12	11	34	35	<b>102</b>
		%	9.80	11.76	10.78	33.33	34.31	<b>100.00</b>
		Mean scale	0.10	0.24	0.32	1.33	1.72	<b>3.71</b>
2	The management has assigned a safety officer and established the OHS committee with proper representation	Fre	9	9	8	40	36	<b>102</b>
		%	8.82	8.82	7.84	39.22	35.29	<b>100.00</b>
			0.09	0.18	0.24	1.57	1.76	<b>3.83</b>
3	Workers are provided with	Fre	15	17	11	25	34	<b>102</b>

No	Questions		Strongly agree	Agree	Neutral	Dis-agree	Strongly disagree	Total
	all necessary personal protective equipment, clothing, and other materials which they use when performing their duty	%	14.71	16.67	10.78	24.51	33.33	<b>100.00</b>
			0.15	0.33	0.32	0.98	1.67	<b>3.45</b>
4	Workers always make use of safety devices and other appliances furnished for the protection of health and safety.	Fre	15	20	12	23	32	<b>102</b>
		%	14.71	19.61	11.76	22.55	31.37	<b>100.00</b>
			0.15	0.39	0.35	0.90	1.57	<b>3.36</b>
5	The labour union has been consulted and participated in the formulation of work rules regarding the safeguard of workers' health and safety at work	Fre	14	20	12	21	35	<b>102</b>
		%	13.73	19.61	11.76	20.59	34.31	<b>100.00</b>
			0.14	0.39	0.35	0.82	1.72	<b>3.42</b>
6	Workers are properly instructed and notified concerning hazards that may occur during performing daily activities and report any related accidents	Fre	12	8	14	31	37	<b>102</b>
		%	11.76	7.84	13.73	30.39	36.27	<b>100.00</b>
			0.12	0.16	0.41	1.22	1.81	<b>3.72</b>
7	In case of accidents/ or injury the management provides proper first aid in	Fre	33	26	9	21	13	<b>102</b>
		%	32.35	25.49	8.82	20.59	12.75	<b>100.00</b>

No	Questions		Strongly agree	Agree	Neutral	Dis-agree	Strongly disagree	Total
	time and appropriate means of transport to the nearest medical center		0.32	0.51	0.26	0.82	0.64	<b>2.56</b>
8	For workers who have been injured by accidents on the job the management covers all medical service and medicine expense and also provide proper compensation for any disablement as per the proclamation	Fre	27	25	10	17	23	<b>102</b>
		%	26.47	24.51	9.80	16.67	22.55	<b>100.00</b>
			0.26	0.49	0.29	0.67	1.13	<b>2.84</b>

**Source:-** survey, Feb /2020

This section deals with OSH in the tanneries, to check for compliance and understanding among workers about the issue.

Regarding whether the tannery has taken the necessary measures to safeguard adequately the occupational Health and safety of workers as stated by the proclamation, of the respondents 10(9.80%) strongly agree,12(11.76%) agree and 11(10.70%) are neutral, 34(33.33%) disagree, 35(34.31%) strongly disagree. The mean scale is 3.71 close to disagreeing and the majority (67.64%) tends to state that both tanneries lack the necessary measures to implement the OSH at working place.

For the issue on ‘the management has assigned safety officer and established occupational health and safety committee with proper representation of workers in the tannery’ of the respondents 9(8.82%) strongly agree, 9(8.82%) agree and 8(7.84%) are neutral, 40(39.22%) disagree and 36(35.29%) strongly disagree. The mean scale is 3.71 close to disagreeing. The result indicates that

OSH has not taken with due consideration and no occupational safety officer assigned in both tanneries, respondents mentioned cases of finger cut, hands injury, eye damage, headache, allergic & kidney infections.

During a discussion with management, labour union leaders, the labour and social Affairs office experts of Modjo Town, all explained that the safety officer is not in place and they use a safety committee (with 6-7 members with the chair from labour union) to take this role. As the committee does not have the expertise required, it can't serve properly, no proper training on OSH and one of the environmental experts said it, "the safety committee is just a formality".

Regarding the use of PPE, clothing, and other materials which they use it when performing their duty, 15(14.74%) of the respondents strongly agree, 17(16.67%) agree and 11(10.78%) are neutral, 25(24.51%) disagree and 34(33.33%) strongly disagree. The mean scale is 3.45 close to disagreeing that the result indicates a lack of provision of PPE necessary for their duty. In discussion with the Modjo Town labour and Social affairs office experts, they do check the compliance with OSH by factories, such as the provision of Safety equipment, clothing, and footings for those who work on machine and chemicals, all have to comply with the regulation basic terms, which are put in the negotiation and collective agreement. If observed non-compliance they report it, issue a warning, and follow it up for improvement.

Related to the above issue, it was asked whether "the workers always make use of safety devices and other appliances furnished for protection of health and safety" of the respondents 15(14.74%) strongly agree, 20(19.61%) agree and 12(11.76%) are neutral, 23(22.55%) disagree and 32(31.37%) strongly disagree. The mean scale is 3.36 towards disagree, indicating a gap in the use or provision of PPE. For the open-ended question that raised this issue, most replied the PPE is not provided timely, as it was stated on the collective agreement to be provided every 6 months or twice per year.

Regarding whether "the labour union has been consulted and participated in the formulation of work rules regarding the safeguard of workers' health and safety at work and implementation of it", of the respondents 14(13.73%) strongly agree, 20(19.61%) agree and 12(11.76%) are neutral, 21(20.59%)

disagree, 35(34.31%) strongly disagree, the mean scale is 3.42, the result shows less participation of the workers. According to the respondents, there is less consultation with workers.

As of whether the workers are properly instructed and notified concerning hazards that may occur during performing daily activities in the tannery and report any related accidents 12(11.76%) strongly agree, 8(7.84%) agree and 14(13.73%) are neutral, 31(30.39%) disagree and 37(36.27%) strongly disagree. The mean scale is 3.72 close to disagreeing. This result also shows no proper instruction and notification provided for workers, supporting this matter was related response for the open-ended question, that a worker stating “no one has told me this/or that chemical is hazardous” and another worker replied “I haven’t heard of hazardous chemicals, we do not know”. But most of the respondents have mentioned Sulfuric acid, formic acid, ammonia, chrome sulfide, and hydrogen peroxide as hazardous chemicals that are in use in the tannery.

In case of accidents or injury, the management provides proper first aid in time and appropriate means of transport to the nearest medical center 33(32.35%) strongly agree, 26(25.49%) agree and 9(8.82%) are neutral, 21(20.59%) disagree, 13(12.79%) strongly disagree. Regarding the issue of the workers who have been injured by accidents on the job the management covers all medical service and medicine expense and also provide proper compensation for any disablement as per the proclamation- of the respondents, 27(26.47%) strongly agree, 25(24.51%) agree and 10(9.80%) are neutral, 17(16.62%) disagree, 23(22.55%) strongly disagree. The mean scale is 2.56 near to agree.

The result as per the survey in both the above cases indicate good performance, the discussion with the management also shows a similar result that, although they do not have a clinic and health officer, they do have a contractual agreement with a nearby health center, which assist in case of an accident, they directly take the victim to the center. If the case is serious, compensation is made as per the proclamation and collective agreement. In the open-ended question, no one raised a problem with this issue.

From the 8 question set for this issue- only in two of them that the respondents agree with the statement, the assistance provided in case of accident to get to the clinic and the management covers all medical service and medicine expense and provides proper compensation for any disablement as

per the proclamation and collective agreement. In 6 of the statements- respondents disagree that- Occupational safety officer not assigned (use a safety committee) in both tanneries, respondents mentioned cases of finger cut, hands injury, eye damage, headache, allergic & kidney infections.

#### 4.5. Relationship with Stakeholders

This section deals with the relationship the Labour union has/should have with stakeholders, such as EFCC office, MoLSA, NGO, Tax authority, and community. As workers or labour union can not do much without stakeholders in the prevention and reduction of pollution, even mostly there is a need for initiation to come from the stakeholders' side to engage them. So in this part the questions set to gage the presence of involvement and level of participation of the relevant stakeholders concerning environmental pollution.

**Table:-7.** Perception of workers on the relationship with stakeholders

No	Questions	Scale	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Total
			1	2	3	4	5	
1	The tannery management has a smooth relationship with labour union, stakeholders and proud to be exemplary in the industry	Fre	10	17	14	32	29	<b>102</b>
		%	9.80	16.67	13.73	31.37	28.43	<b>100.00</b>
		Mean scale	0.10	0.33	0.41	1.25	1.42	<b>3.52</b>
2	Stakeholders have a good relationship with labour unions in supporting both management and union leaders to reach agreement in the protection of workers' interest.	Fre	7	13	12	35	35	<b>102</b>
		%	6.86	12.75	11.76	34.31	34.31	<b>100.00</b>
			0.07	0.25	0.35	1.37	1.72	<b>3.76</b>
3	Activity that the management has done so far to achieve its environmental and social responsibility, such as services for the community, engagement in	Fre	11	7	18	35	31	<b>102</b>
		%	10.78	6.86	17.65	34.31	30.39	<b>100.00</b>
			0.11	0.14	0.53	1.37	1.52	<b>3.67</b>

	public services							
4	Labour union leaders have good relationships with stakeholders and harvest the opportunity they provide, like training and awareness creation to workers in matters related to employment, environment, and social	Fre	9	11	13	34	35	<b>102</b>
		%	8.82	10.78	12.75	33.33	34.31	<b>100.00</b>
			0.09	0.22	0.38	1.33	1.72	<b>3.74</b>
5	The tannery management do not have a good track record of compliance with authority laws ( environmental protection OHS, tax, etc.) that tries to avoid relations with stakeholders	Fre	24	28	17	16	17	<b>102</b>
		%	23.53	27.45	16.67	15.69	16.67	<b>100.00</b>
			0.24	0.55	0.50	0.63	0.83	<b>2.75</b>
6	The stakeholders have good collaboration with labour union in the prevention and control of environmental pollution.	Fre	13	16	12	26	35	<b>102</b>
		%	12.75	15.69	11.76	25.49	34.31	<b>100.00</b>
			0.13	0.31	0.35	1.02	1.72	<b>3.53</b>

**Source:-** survey Feb/ 2020

Regarding whether the tannery management has a smooth relationship with stakeholders and proud to be an exemplary in the industry, 10(9.80%) of the respondents strongly agree, 17(16.67%) agree and 14(13.73%) are neutral, 32(31.37%) disagree and 29(28.43%) strongly disagree. The mean scale is 3.52 near to disagree, indicating that, the relationship with stakeholders is poor.

In the case of the statement ‘‘stakeholders have a good relationship with labour union in supporting both management and union leaders to reach agreement related to employment issues and in the protection of workers interest’’, 7(6.88%) of the respondents strongly agree, 13(12.75%) agree and 12(11.76%) are neutral, 35(34.31%) disagree and 35(34.31%) strongly disagree. The mean scale is 3.74 close to disagreeing. As a result, stakeholders are not assisting the labour unions in this aspect.

In the discussion with the Labour and Social Affairs of Modjo Town experts, they do assist when they bring in a draft collective agreement, advise both labour union and the management, and try to

make both agree on points based on the labour proclamation. Apart from this on the implementation of the agreement, anyone in a grievance can bring the case to the established Zonal Labour Court in East Shoa zone; otherwise, they do not interfere.

On the point that the activities that the tannery management has done so far to achieve its environmental and social responsibility, such as services for the community, engagement in public services-11(10.78%) of the respondents strongly agree, 7(6.86%) agree and 18(17.65%) are neutral, 35(34.31%) disagree and 31(30.39%) strongly disagree. The mean scale is 3.67 near to disagree. The result of the survey shows that the tannery has not served much in the area of Social Responsibility. But in the discussion with the labour and Social affairs officers, they mentioned that both tanneries have been participated and contributed, upon a call by Modjo Town Municipality, for the construction of both asphalt and Cobblestone roads in the town, and also for the rehabilitation of Oromo people who have been displaced from Somali regional state, they have built houses in collaboration with other investors in the town.

Regarding whether “ the labour union leaders have good relationships with stakeholders and harvest the opportunity they provide, like training and awareness creation to workers in matters related to employment, environment and social matters- 9(9.82%) of the respondents strongly agree, 11(10.78%) agree and 13(12.75%) are neutral, 34(33.33) disagree and 35(34.31%) strongly disagree. The mean scale is 3.53 close to disagreeing. On this issue, those disagree and strongly disagree constitute 67.64% indicating no or poor relationship and no grasped opportunity to be mentioned.

With the statement “The tannery management do not have a good track record of compliance with authority laws (environmental protection, occupational health, and safety, tax, etc.) that tries to avoid relations with stakeholders”- 24(23.53%) of the respondents strongly agree, 28(27.45%) agree and 17(16.67%) are neutral, 16(15.69) disagree and 17(16.67%) strongly disagree and the mean scale is 2.75 towards agree. The result indicates 50.98% agree with this point that the management/owners try to avoid stakeholders. Regarding whether “the stakeholders have good collaboration with labour union in prevention and control of environmental pollution” 13(12.75%) of the respondents strongly agree, 16(15.69%) agree and 12(11.76%) are neutral, 26(25.49) disagree

and 35(34.31%) strongly disagree. The result shows that there is weak collaboration as per the survey result.

Among the relevant stakeholders, contacted for discussion none of them considered the labour union as a stakeholder to play a major role in pollution prevention, but they regret not to do so. The Modjo Town EFCC authority officer mentioned, we have not involved them as a stakeholder, as we do not believe them assuming that they spy for management of the tannery and, labour union, not seen as a stakeholder.

In all the 5 points related to the relationship with stakeholders the respondents disagree- that indicates: Stakeholders are not assisting and involving the labour unions of both tanneries in pollution prevention and bargaining with management for their members' interest.

#### **4.6. Challenges of labour union**

**Membership issue-** Based on the discussion made with labour union representatives from total workers who can be members (Permanent and contractual workers) only 37(39.78%) and 65(68.42%) are members of the labour union in East Africa and Modjo Tannery respectively. Both indicating a low labour union density, especially in East Africa Tannery as the majority of workers are not a member of the union, for example, it will be hard to call up a strike to impose management acceptance of workers viewpoint/negotiation points.

Of those 23(22.55%) non-member respondents from the survey, the ones replied for the question asked the reason why they did not become a member of the labour union, only 12(52.17%) are responded as, 4 of them said being contractually employed (worked as such 3- 6 Years), they do not want to be a member, as they lose the membership fee they contribute when their contract period ends as they leave the tannery. And 3 respondents mentioned, no one asked them to be a member, assuming that the membership is allowed for permanent workers only. Others said, working in the tannery is too hard and they want to leave if they find another job elsewhere (2 respondents). The management and owners are not in favor of labour union members, no benefit of being a member, those who are members have no right to ask and speech (2 respondents). And 1 respondent stated being on the prohibition period, yet no right to be a member of labour union.

**Management Threat-** The presence of management treat on labour union leaders and member workers is expressed in transfer to branch offices like Addis Ababa, where there is an unaffordable living condition or demotion from the position. Another point raised is scapegoating on a different reason for non-compliance with the collective agreement (timely improvement of benefits), like less profitability of the tannery, the changes of management and owners in both tanneries.

**Financial matters-** Less number of labour union members imply, limited finance as the main source of finance is a membership fee. The membership fee charged is 1% of the basic salary of which 40% is shared with the Ethiopian Trade union Confederation. It was mentioned in both tanneries that there is some free provision of used containers, cartoons that the union members collect and sell to raise finance. But its amount is based on the level of production and quality of the used materials mostly, broken items during loading and unloading which makes the materials too cheap.

**Low level of education** – As indicated from the survey on educational background 72.55% of respondents are 12 grade complete and less, as most of the workers serving in factories that use more labour intensive, some of them are with less knowledge and do not have much interest to join the trade union to ask for their rights.

## CHAPTER FIVE

### 5. Conclusion and recommendations

#### 5.1. Conclusion

The research objective was to assess the role of labour union and their working relationship with stakeholders in preventing environmental pollution, the related national environmental policy, environmental proclamations, and regulations issued at different times and that there is no such a gap in the availability of policy frameworks. And also with the labour union, there is labour proclamation that pinpoints the rights and obligations and responsibilities of the employer and employee, almost align with international labour laws.

However, the institutional arrangement and commitment, as well as coordination to address important environmental regulations and standards implementation, were not as expected as it should be. The capacity issue and commitment of the institutions to conduct proper follow-up and control to find out non-compliance, taking appropriate and timely action was limited that environmental degradation of different extent and community grievances heard at different levels. A good example is the closure of many tanneries in different parts of the country, after the pollution effect is beyond the limit, just leaving the tannery useless, workers jobless, and the affected environment without rehabilitation. It was mostly based on community grievances that the closure decision comes out, but how about the voiceless, natural environment- the aquatic and wildlife, which is much affected and may be beyond recovery.

As indicated in the literature reviewed, the labour union has to play its role for two main reasons, the first it is their members' interest that is affected if a tannery is to be closed due to its pollution and workers become jobless, the second is the labour union has to play their role of serving the public interest and protecting the environment to contribute to sustainable development that they have to actively participate and collaborate with stakeholders in preventing or reducing pollution that result from their respective tannery, to enable this labour union has to be encouraged by management of the tanneries, participate in the decision-making process and have an updated collective agreement.

As stakeholders are any group or individual who can affect, or is affected by the achievement of the organization's purpose, but among concerned stakeholders EFCCC, Environmental society, and others have a loose relationship with labour union regarding environmental pollution control, where organized labour union could make so much change from proper clean housekeeping to major researches to prevent/reduce pollution at source, using their knowledge and experience in the area of their expertise. It is the labour union and its member workers who are implementing their function in the manner that the investor/management orders to do it, whether in polluting or environmentally friendly ways. So inspectors or environmental protection officers have to collaborate with unions to be effective in pollution control and enforce environmental regulations.

Another point is the issue of coordination and relationship with stakeholders, from the survey it can be concluded that weak relationship and poor coordination resulted in the loss of potential synergy from labour union to act in preventing pollution from tanneries. The Modjo Town EFCC authority and labour and Social Affairs offices have not built trust in the union, even suspect them to work for the management, on something that affects the labour union interest, extreme pollution by tanneries that could result in closure and make the workers jobless. They have no regular forum or a means to have formal relationships with labour union.

Although there is some improvement from the previous years, as all the tanneries built secondary treatment plants, still the wastewater discharge that has been affecting human and animal health, generally the downstream ecology of Modjo River. The tanneries have not done their social responsibility adequately in keeping safe the surrounding environment as required by the environmental proclamation and standards, and to be more successful all measures that assist in pollution prevention/reduction has to be targeted by the government concerning building the capacity of implementers and collaboration of stakeholders.

As per the discussion with the LIDI environmental directorate director, with the MoTI, the Institute has to take the role of coordinating training and awareness creation programs among the stakeholders, but as of to date the progress of MLIP is too slow, mainly due to the frequent changes in leadership in Modjo municipality and some other stakeholders, made coordination difficult to progress and the issue of land availability and compensation for the farmers in two farmers

associations who are bordering the proposed project area and the source of funding has not agreed yet.

Generally, the result shows that there is a gap in the implementation of the environmental regulation and standards by the tanneries, in involving the labour union to play a proper role in preventing environmental pollution and collaboration with stakeholders. The issue of environmental pollution prevention is a major global concern, because of the harmful effects of pollution on human health and the environment, in the case of pollution from tanneries it a source for all forms of pollution air, solid and liquid wastes that impact on human health and the natural environment. So, stakeholders are not limited to those directly in the industry, but each person can contribute something to advance environmental pollution mitigation measures.

Therefore due attention is required to enhance labour union role and participation to enable reduce or prevent environmental pollution, attain a secured job for workers in the tanneries, and more collaboration of relevant stakeholders to contribute to sustainable development.

## **5.2. Recommendations**

The following recommendations are made for policymakers and other stakeholders who are involved in different activities related to the research topic. It enables the more rigorous implementation of environmental standards and policies, as well as the OSH issue has to be monitored regularly, sometimes a surprise sample test of effluent discharge has to be done, by enhancing the supervision capacity of EFCCC, and MoLSA experts.

- EFCCC and MoLSA to provide training and awareness-raising programs to the labour union and workers build a strong relationship and arrange a formal and regular way of communication between the union and workers and stakeholders, to involve and empower them to protecting their interest, including environmental pollution prevention.
- EFCC should build Institutional capacity and effective coordination mechanism between the Federal, Regional offices and stakeholders should be emphasized in dealing with permission, evaluation, rectifying, and implementation of EIA/EMP and supervision/control of chemical-intensive industries, like tanneries in an ethical manner.

- The labor union and management of Modjo and East Africa tanneries need to establish a well-developed collective agreement, updated on a timely basis that helps to maintain the right and the interests of employees, employer and to include environmental protection issues as well.
- Modjo Town municipality has to find out the proper area and construct a landfill, with possible waste recycling and sewerage treatment system urgently, considering its future coordination with MLIP.
- The MoTI/LIDI should support the leather industries in the realization of the proposed MLIP, for proper implementation of the waste management system and the overall prevention of environmental pollution from industries in Modjo Town.
- The government must establish a system to incentivize and motivate those well-performing tanneries based on their environmental performance, including tax incentives for importing chemicals used in production and wastewater treatment plants.
- Further study is required at the federal level to include, Environment, Forest and Climate Change Commission, Ministry of Labour and Social Affairs, Ministry of Trade and Industry, Ethiopian Trade Union Confederation, NGOs, and Environmental Societies to make use of international best practices of involving labour union in preventing environmental pollution as a policy issue and enforce implementation not only at the individual industry level but in all industries as well.

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## Annexes

### Annex-1:- Profile of respondents

<b>Tannery</b>	<b>Modjo</b>		<b>East Africa</b>		<b>Total</b>	<b>%</b>
<b>Characteristics</b>	<b>Fer</b>	<b>%</b>	<b>Fer</b>	<b>%</b>		
<b>Gender</b>						
Male	36	58.06	26	65.00	62	60.78
Female	26	41.94	14	35.00	40	39.22
<b>Total</b>	<b>62</b>	<b>100.00</b>	<b>40</b>	<b>100</b>	<b>102</b>	<b>100.00</b>
<b>Age</b>						
18-20	5	8.06	5	12.50	10	9.80
21-30	30	48.39	22	55.00	52	50.98
31-40	16	25.81	10	25.00	26	25.49
41-50	8	12.90	2	5.00	10	9.80
51- 60 & Above	3	4.84	1	2.50	4	3.92
<b>Total</b>	<b>62</b>	<b>100.00</b>	<b>40</b>	<b>100</b>	<b>102</b>	<b>100.00</b>
<b>Educational Status</b>						
PhD	0		0			0
MA/MSc	0		0			0
BA/BSc	4	6.45	3	7.50	7	6.86
Dipoma	10	16.13	8	20.00	18	17.65
Certificate	3	4.84		-	3	2.94
12 Grade	14	22.58	4	10.00	18	17.65
10 Grade	16	25.81	20	50.00	37	36.27
Less than 10 Grade	15	24.19	5	12.50	19	18.63
<b>Total</b>	<b>62</b>	<b>100.00</b>	<b>40</b>	<b>100.00</b>	<b>102</b>	<b>100.00</b>
<b>Department</b>						
Production and quality Control managers	11	17.74	7	17.50	18	<b>17.65</b>
Waste Management and Effluent treatment plant	7	11.29	3	7.50	10	<b>9.80</b>
Tannery process and shift leaders	20	32.26	12	30.00	32	<b>31.37</b>

Supervisors, operators, other workers	24	38.71	18	45.00	42	<b>41.18</b>
<b>Total</b>	<b>62</b>	<b>100.00</b>	<b>40</b>	<b>100.00</b>	<b>102</b>	<b>100.00</b>
<b>Tannery</b>	<b>Modjo</b>		<b>East Africa</b>		<b>Total</b>	<b>%</b>
<b>Work experience</b>						
0-5 years	22	35.48	23	57.50	45	<b>44.12</b>
6 to 10	26	41.94	13	32.50	39	<b>38.24</b>
11 to 15	5	8.06	2	5.00	7	<b>6.86</b>
16- 20	4	6.45	1	2.50	5	<b>4.90</b>
Above 21	5	8.06	1	2.50	6	<b>5.88</b>
<b>Total</b>	<b>62</b>	<b>100.00</b>	<b>40</b>	<b>100.00</b>	<b>102</b>	<b>100.00</b>
<b>Membership in labour union for .. Years</b>						
Less than 1 year	4	6.45	8	20.00	12	<b>11.76</b>
2 to 5 years	27	43.55	10	25.00	37	<b>36.27</b>
6 to 10	13	20.97	7	17.50	20	<b>19.61</b>
More than 10 years	10	16.13		-	10	<b>9.80</b>
Not a member	8	12.90	15	37.50	23	<b>22.55</b>
<b>Total</b>	<b>62</b>	<b>100.00</b>	<b>40</b>	<b>100.00</b>	<b>102</b>	<b>100.00</b>

**Source:-** Survey Feb/ 2020

**Survey Questionnaire to be filled by Tannery Workers**

**Addis Ababa University College of Development Studies, Center for Environment and Development, MA in Environment and Sustainable Development.**

**Title:- To Assess the Role of Labour Union in Preventing Environmental Pollution; the Case of Modjo and East Africa Tanneries in Modjo Town.**

This questionnaire is designed to gather information from labour union members/workers on the role of the labor union in preventing environmental pollution at source, the case of tanneries in Modjo Town. It tries to show how the interest of workers and the environment is affected by pollution and provides a recommendation.

Therefore, I kindly request you to take some time and to fill out this questionnaire survey. I would like to assure you that the information you provide will be kept strictly confidential and used only for this research purpose.

Please try to give valid and reliable information, every response is really important.

Thank you in advance for your cooperation.

Shasho Mekonnen Waktole Tel +251911 46 21 94

E-mail:- [shashomekonnen@yahoo.com](mailto:shashomekonnen@yahoo.com)

**Instruction**

- Please, read the whole question before starting to answer.
- Do not write your name.
- Close-ended questions are answered by placing (√) mark within the box.
- Open-ended questions are answered by writing on the space provided.

**Name of Tannery:** - .....

**Department**

A/ production and quality control managers

B/ Waste Management and Effluent treatment plant

C/ Tannery process shift leader

D/ Supervisors, operators, other workers

## Part I. Demographic Profile of Respondents

### 1. Gender

Male

Female

### 2. In which age group is you in?

18 to 20

21 to 30

31 to 40

41 to 50

51 to 60

Above 61

### 3. Your highest and recent educational status.

Third-degree (Ph.D.)

Second degree (MA/MSC)

First degree (MA/BSC)

College diploma

Certificate

12 grade complete

Below grade 12

### 4. Years of experience in the tannery

0-5 years

6-10 years

11-15 years

16-20 years

21 years and above

### 5. How long have you been a member of the labor union?

1 year or less

2 to 5 years

6 to 10 years

Over 10 years

Not a member of the labour union.

If not a member, what is your reason not to be a member?

.....

**Part II. Regarding Labour union members’ interest, OHS, and environmental pollution prevention and Stakeholders Relationship**

A) Perception of workers regarding labour union leadership serving members’ interest

No	Questions	Strongly agree	Agree	Neutral	Dis-agree	Strongly disagree
1	The Labour union is effective in handling grievance and complaint of workers and always stands to serve the members’ interests.					
2	The labour union is playing a vital role in supporting both employees and management to know their rights and responsibilities and in allowing better communication between workers and management.					
3	The labour union has a significant role in facilitating workers’ participation in the decision-making process, i.e workers are empowered to deal with the matters that affect them					
4	The labour union is strong in bargaining, negotiating, and convincing the management towards offering better terms and conditions of employment					
5	The management has positive thinking towards labour union and organized movement of workers and usually willing to deal with the union to solve any problems related to workers.					
6	There is mutual understanding, trust, and cooperation between labour union leaders and the management					

7. Have you encountered any problem from the management side for being a member of the Labour Union?

If yes, mention the major ones? .....

8 What should be done or you recommend improving the employment relation both by the management, workers, and labour union?  
 .....

B) Perception of workers and the role of the labour union in preventing pollution

No	Questions	Strongly agree	Agree	Neut ral	Dis-agree	Strongly disagree
1	The tannery applies Environmental guidelines and standards as set by the Environment, Forest and Climate Change Commission/Ministry of Trade and Industry for the leather Industries labour unions and workers comply with it					
2	The tannery has established a treatment plant as required by the standard, it always functions, and the wastewater released is analyzed for its chemical content before discharging to a water body.					
3	There is daily measurement and registration of wastes segregated into solid and liquid waste types and reported timely to the environmental authority.					
4	There is a waste management system that helps to <b>Prevent, Reduce, Reuse and Recycle</b> waste generated by the tannery and labour union follows up implementation					
5	An environmental expert is assigned in the tannery and is responsible for the implementation of environmental policy and environmental management plan in the tannery					
6	There are continuous training/ awareness creation programs by labour union for employees on areas of environmental protection, use of chemicals, and related					

	hazards					
7	There is a system for proper handling, storage, and disposal of expired chemicals that are used in the tannery process					
8	Labour union members/workers have a full understanding of the cost and consequence of environmental pollution from their tannery and always take care not to release waste to the environment?					

9. What are the main challenges in using waste treatment plants by your tannery? (Circle one or all as your answer may fits)

a) Lack of finance b) Lack of knowledge and skills to operate the treatment plant

c) Unwillingness of tannery management/owner to install the treatment plant

d) Mention any other challenges.....

10. If the tannery is under threat of closure due to the challenges, for example, noncompliance with environmental standards, the interest of workers is highly affected due to loss of a job, what will be the role of the workers and labour union, before this comes to happen regarding pollution prevention?.....

11. Any other challenges in the tannery regarding pollution prevention? .....

.....

C) Occupational Health and Safety at work , tannery workers perception

No	Questions	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1	The tannery has taken the necessary measures to safeguard adequately the Health and safety of workers as stated by the proclamation?					
2	The management has assigned a safety officer and established occupational health and safety committee					

	with proper representation of workers in the tannery					
3	Workers are provided with all necessary personal protective equipment, clothing, and other materials which they use when performing their duty					
4	Workers always make use of safety devices and other appliances furnished for the protection of health and safety.					
5	The labour union has been consulted and participated in the formulation of work rules regarding the safeguard of workers' health and safety at work.					
6	Workers are properly instructed and notified concerning hazards that may occur during performing daily activities in the tannery and report any related accidents					
7	In case of accidents/ or injury the management provides proper first aid in time and appropriate means of transport to the nearest medical center					
8	For workers who have been injured by accidents on the job the management covers all medical service and medicine expense and also provide proper compensation for any disablement as per the proclamation					

9. Are there chemicals that are hazardous to human health and environment that the tannery has warned to take care of when you are working with?

List some of them.....

10. Any challenges regarding occupational health and safety in the tannery and solution you may recommend. ....

D) Perception of workers on the relationship with stakeholders

Stakeholders to include The Environment, forest, and climate change commission/authority, the labour and social affairs, labour union federation, City administration, the environmental society, the community, and NGOs, you can consider others, to be relevant here)

No	Questions	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1	The tannery management has a smooth relationship with stakeholders and proud to be exemplary in the industry					
2	Stakeholders have a good relationship with labour unions in supporting both management and union leaders to reach agreement related to employment issues and in the protection of workers' interest.					
3	Activity that the management has done so far to achieve its environmental and social responsibility, such as services for the community, engagement in public services					
4	Labour union leaders have good relationships with stakeholders and harvest the opportunity they provide, like training and awareness creation to workers in matters related to employment, environment, and social matters					
5	The tannery management do not have a good track record of compliance with authority laws (environmental protection, occupational health, and safety, tax, etc.) that tries to avoid relations with stakeholders					
6	The stakeholders have good collaboration with labour union in preventing and control of environmental pollution.					

7. Any challenge you may know with the relationship with stakeholders and that needs improvement.

.....

**Checklists for Key Informant Interview**

The objective of this study is to assess the role of labour unions in preventing environmental pollution and assess their relationship with stakeholders in achieving this role. This requires your genuine response to the research questions posed in any form. It is worthwhile to confirm that any information you provide/ orally or in copies of documents/ will be maintained confidential and only used for this research purpose. So, your open contribution is highly appreciated.

**A. Ministry of Labour and Social Affairs/Zone/ Town office**

**Name of respondent:-** \_\_\_\_\_

**Title:-** \_\_\_\_\_

- 1) What is the main role of the Labour and Social Affairs office concerning the labour union in general and workers in tanneries in particular?
- 2) What types of support does your office provide for the formation of trade unions in companies required by labour proclamation to have trade unions?
- 3) How do you assist the trade unions in having a collective bargaining agreement to protect member/worker's interest? What measure can you take if the agreement is not reached between trade union leaders and the management of the company?
- 4) Is there a labour Board established and trade union sufficiently represented and participate in decision making?
- 5) How do your office follow-up compliance of employers with labour laws and regulations?
- 6) Are there enough experts assigned on the role of inspectors to do timely oversight on the factories, especially the tanneries for their compliance with OHS regulation?
- 7) Do the inspectors have a checklist/guidance when doing the follow-up function? And produce a report on their findings?
- 8) Is there a proper follow-up mechanism on the recommendation based on the findings, and proper take action on non -compliance?
- 9) What are the challenges in the area of compliance with OHS:
  - a) From your office side
  - b) From the Employer side
  - c) From the trade union and employees side
  - d) Other relationships with stakeholders.

10) Have you considered labour union as a stakeholder in dealing with tannery matters?

11) Any other issue you may have to raise related to the research topic?

**Thank you very much.**

**B. Modjo Town environmental protection office**

Name of respondent:- \_\_\_\_\_

Title:- \_\_\_\_\_

1. How do you evaluate implementation compliance and enforcement of environmental policies, regulations, and legislation?
2. How your office follows up the implementation of the Environmental policy guideline in the leather Industries?
3. The status of Modjo tannery and East Africa tannery in polluting the downstream river and the environment in general?
4. What types of supports you have provided for the tanneries to implement environmental protection, both for the management and Trade union?
5. Is there any training and awareness creation provided for Trade unions/workers related to environmental protection?
6. How your ministry is integrated with the Ministry of Industry (MoI), Leather Industry Development Institute, Oromia environmental protection bureau, and Tanneries to prevent environmental pollution to assure community welfare?
7. Do you make use of the trade union as a stakeholder in preventing pollution in their tanneries?  
Such as sharing information, exposing noncompliance with environmental laws and regulations?
8. What are the main challenges implementing the Environmental policy guideline to the leather Industry?
9. Future recommendations or plans for minimizing environmental pollution by the Tanneries?
10. Any other issue you may have to raise related to the research topic?

**Thank you very much.**

**C. Leather Industry Development Institute/LIDI/- Environment protection**

**Directorate**

1. Role of the Institute development of leather industries?
2. The Emphasis of LIDI in implementing environmental policy to leather Industries?
3. What is your perception of sustainable development issues concerning waste management in general and wastewater management in particular?

4. What support does LIDI provide the tanneries in building treatment plants? Is the effluent treatment plants, the tanneries built and operating with is sufficient to the level it will enable to prevent environmental pollution as the set standard requires?
5. What is your expectation from the tanneries trade union in preventing pollution?
6. Challenges and opportunities of working with tanneries and sectorial government bodies concerning environmental protection?
7. Recommend best possible mechanisms and Incentive schemes for Tanneries in using effective waste treatment plants? The issue for construction of the Modjo Leather Industry complex?
8. Any other issue you may have to raise related to the research topic?

**Thank you very much.**

#### **D) Observation Checklist**

1. Look for the neatness of the factory premise; take notes, pictures/photographs.
2. Look at the neatness in the machinery, water processing/chemicals spill off on the ground.
3. Look at solid waste, its segregation and measurement, how it is transported, and where it is to be disposed of.
4. Look at the chemical handling, storage, and aeration, space, staff assigned responsibility, how he/she is working with it. Separate store for expired chemicals?
5. Look at the effluent treatment plant, the stages it passes through, ask for whether it is always functional or not? Ask for the chemical content analysis laboratory, if any, or how they know that after treatment the wastewater is ready to discharge to the water body at last. Take note, photo of important stages, look at the last point of discharge to the river, or where?
6. The plantation in the compound if any, who planted it, how it conserved?
7. The Waste Management System- **Prevention, Reduction, reuse, and recycling** effort of waste in the tannery, which items are passing through this process.
8. The use of Energy (Electricity, Solar power, and water (groundwater) from sustainable sources.
9. Observe worker's use of safety equipment and not be exposed to an accident. Watch out any matter with the machinery that may pose risk.
10. Observe Hazard indicators and Cautions, Emergency exit routes and service, first aid kits, fire extinguisher, etc.

**February/2020**











### E) Background of the interviewees and officials contacted

No	Institution	Name of Interviewee	Responsibility
1	Modjo Tannery	Mr. Gizaw Bachere	Deputy General Manager
2		Mr. Ashenafi Guluma	Labour union chairperson
3		Mr. Akililu Tezera	Environmental office
4	East Africa Tanner	Mr. Solomon Temesgen	Human Resource Manager
5		Mr. Tesfaye Dame	Labour union vice-chairperson
6		Mr. Firomsa Ishetu	Environmental officer
7	Modjo Town EFCC office	Mr. Niway Alemu	Modjo Town EFCC office Head
		Mr. Worku Nigatu	Environmental regulations compliance controller and follow-up Officer
8	Modjo Town Labour and Social Affairs office	Mr. Tesfaye Gonfa Mr. Dereje Moti	Civic Associations follow up officers
9	LIDI	Mrs. Zerfe Mersha	Environmental protection Director
10	Lume woreda EFCC office	Mr. Ganamo Abdi	Environment officer
11	EFCCC	Mr. Addisu Tibabu	The environmental pollution control officer
12	OFAG	Mr. Aweke Tenaw	Acting Training and Education Director

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## Sources included in the report

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